

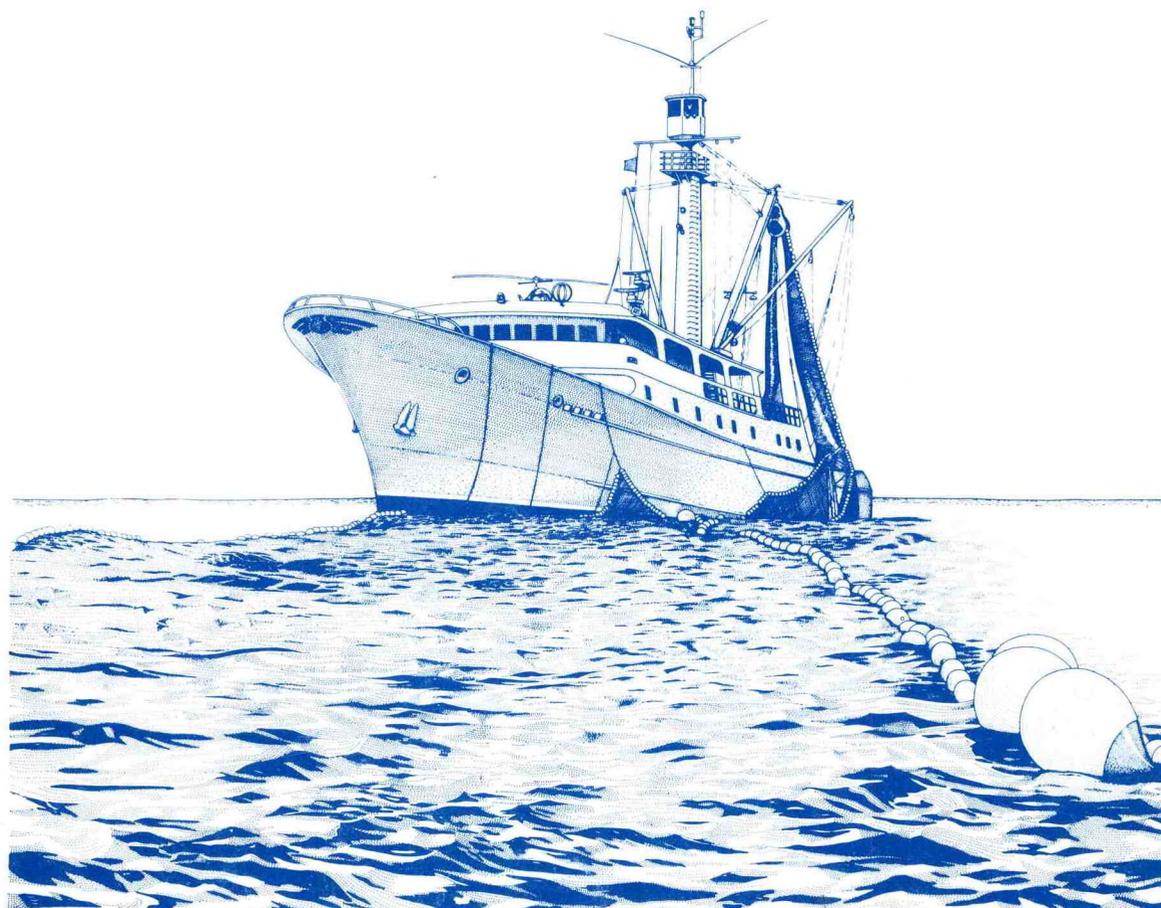
World Fishing Fleets

An Analysis of Distant-water Fleet Operations

Past - Present - Future

Volume IV

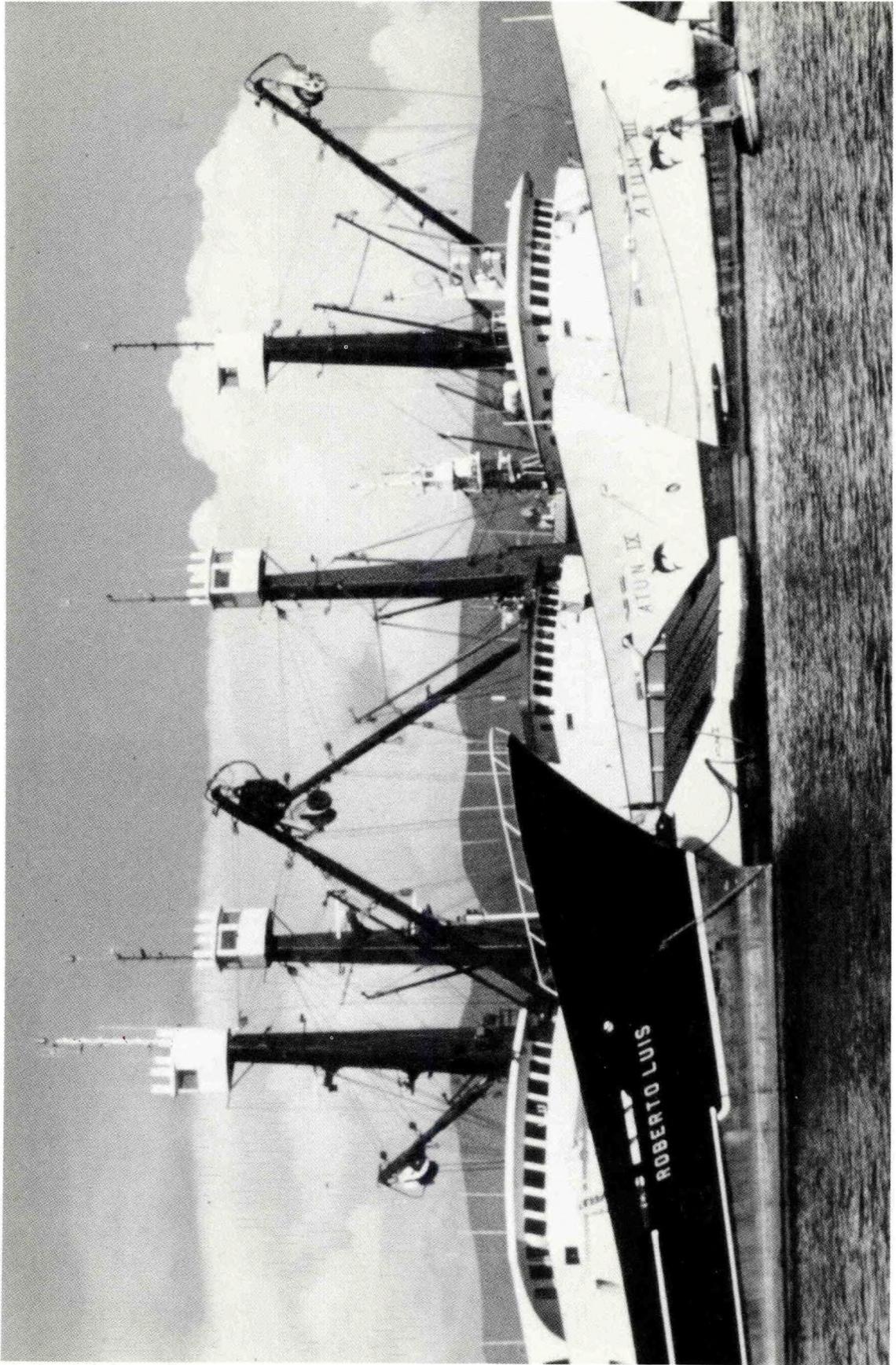
Latin America



NATIONAL MARINE FISHERIES SERVICE

National Oceanic and Atmospheric Administration

U.S. Department of Commerce



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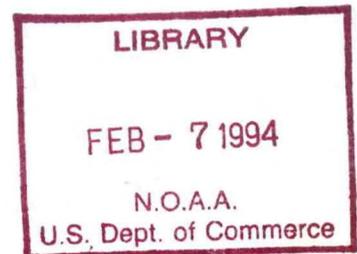
**An Analysis of Distant-water Fleet Operations
*Past - Present - Future***

Volume IV

Latin America

Prepared by
The Office of International Affairs

Dennis M. Weidner
David L. Hall



November 1993
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NATIONAL MARINE FISHERIES SERVICE
National Oceanic and Atmospheric Administration
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November 1993



Prepared by:

Division of International Science, Development, and Foreign Fisheries Analysis (F/IA2)
The Office of International Affairs
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
1335 East West Highway
Silver Spring, Maryland 20910
U.S.A.

Telephone: (301) 713-2286

FAX: (301) 713-2313

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PERSONAL VIEWS

Latin America has assumed its responsibilities in the promotion of the new juridical regime of the seas. Our efforts are focused now on promoting before the international community the full force of the new regime for the benefit of humanity.

-- Lic. Pedro Ojeda Paullada, Mexican Secretary of Fisheries, 1985

It is ... evident that the expectations from the (1982) UN Convention on the Law of the Sea (UNCLOS) have not been realized within the decade. The distant-water fleets which operated prior to the extensions in fisheries jurisdictions, have not retreated; they shifted the areas of operations to the eastern central Pacific, the southeast and southwest Atlantic, southeast Pacific, and the north Pacific.

-- FAO Department of Fisheries, 1992

The days of foreign fishing companies enriching themselves in Peruvian waters have ended.

-- Alan García, Peruvian President, 1985.

Peru does not need joint ventures with foreign companies in order to catch or process its fishing riches. The reason is that Peru is not an underdeveloped country in fishing.

-- Alejandro Bermejo, Editor of *Pesca*, 1977.

Our fish die of old age because no one catches them while at the same time in our country, children die of hunger.

-- Romulo León Alegria, Peruvian Fisheries Minister, 1989

The Soviet Union owes Peru \$22 million for failing to comply with contractual arrangements. The Soviet fleet is left with two options: pay what it owes and sign--if it desires--a new contract; or refuse to pay and leave Peruvian waters.

-- Félix Canal Torres, Peruvian Fisheries Minister, 1991

The Government should not renew the agreement with the Soviet Union because after 20 years of fisheries cooperation Peru has received no benefits.

-- Ismael Benavides Ferreyros, Congressman and former Peruvian Fisheries Minister, 1991

Vessels from [Soviet] bases are at work from the Arctic to the Antarctic--and everywhere they are decimating the world's fish stocks.

-- Vladil Lysenko, Soviet fishing vessel captain, 1983

Let me make it very clear that we fully intend to strictly enforce the Argentine Exclusive Economic Zone.

-- Marcelo Regunaga, Argentine Undersecretary for Fisheries, 1991

The world fishery resources have been ravished with the consequent decline in the catch of the most desirable species. The major fishing countries, which are also the major consuming countries, have exhausted their traditional grounds. Our rich continental shelf, currently exploited at less than its full biological potential, provides us the opportunity to expand production and exports.

-- Cpt. Milciades Espoz Espoz, President, Fundación Atlántica, 1985

Most of our joint ventures were perfectly sound, but one in particular went badly wrong. We have had to revise our plans to rapidly develop the fishing fleet, but it remains a long-term goal.

-- John Barton, Falklands Fisheries Director, 1993

Joint ventures have had a mixed impact on our fishing fleet. Some have played an important role in transferring technology. We have taken measures to ensure that the acquisition of modern efficient vessels does not over stress available fishery stocks.

-- Dr. Juan Rusque, Chilean Director Nacional de Pesca, 1993

Mexico has made major investments in its tuna fleet, which is now one of the world's largest. We are determined to deploy the fleet to produce food for our people and earn export revenue. At the same time, the tuna fleet has implemented one of the most effective dolphin protection programs in the world. Working with the Secretaría de Pesca, we have substantially reduced dolphin mortalities in just a few years. I do not know of a single country, including the United States, that has so rapidly reduced mortalities. It has required a major commitment of time and energy, but we have done so as part of our country's firm commitment to environmental protection.

-- Carlos De Alba Pérez, Director, Programa Atún-Delfín, Cámara Nacional de la Industria Pesquera (CANAINPES), 1993

The Cayman Islands Government has decided to cease issuing flag-of-convenience registrations to foreign-owned fishing vessels because of the impracticality of regulating non-domestic vessels.

-- S.R. Fordham, Chief Marine Surveyor, Cayman Islands Government, 1993

PREFACE

The development of modern commercial fisheries in Latin America has many economic and commercial implications. The evolving Latin American fishing industries offer opportunities for U.S. shipyards, manufacturers (gear, electronic instruments, and processing equipment), consultants, fishermen, brokers, investors, etc. The information in this report may be of interest to those U.S. companies trying to access market opportunities in Latin America. Fisheries used to be an economic backwater in much of region. That has changed over the past two decades. In several countries the fishing industry is now one of the most dynamically growing sectors of the national economy. Fishery products have become a major regional export commodity. The industry is creating jobs, producing food, and increasing export earnings. Several countries have resources that are not yet fully utilized and could permit continued industry expansion during the 1990s.

Available fishing fleet and catch data graphically show that Latin American fishermen are steadily expanding the fishing industry. One country (Chile) now exports more than \$1 billion worth of fishery products annually. Most countries in the region have the potential to significantly increase both the quantity and value of production, both for domestic and export markets. Almost all country's are steadily increasing fishing effort and the pressure on available resources is intensifying. As a result, the need to effectively manage marine resources is becoming increasingly apparent. Several countries have passed new fishery laws implementing carefully conceived new national management regimes.

Many countries in the Western Hemisphere, including the United States, have a mutual interest in managing shared resources. Effective management requires that the country's involved coordinate regulatory regimes on increasingly heavily fished resources. The United States and Mexico have for years been pursuing cooperative research programs with Mexico (MEXUS-Gulf and MEXUS-Pacifico). Actual management cooperation between countries of the region, however, is just beginning. Coordinated

management of heavily fished shared stocks is a challenge that the governments involved will eventually have to address if they are to achieve the optimal economic and social benefit from their marine resources.

Latin America is a major fishing ground for distant-water fishermen. Overall foreign fishing has declined in recent years because of the withdrawal of the Soviet and other state-owned distant-water fleets. Several Latin American countries currently license foreign fishermen. One country (Argentina) plans to substantially expand foreign access to coastal waters. Some other countries are considering similar programs. Most Latin American countries, however, are reserving allocations for domestic fishermen and are unlikely to significantly expand access for foreign fishermen.

The international community is currently addressing many difficult fishery issues, including high-seas fisheries, reflagging, straddling stocks, and responsible fishing. Talks are underway seeking to establish accepted international norms. These talks will hopefully lead to agreed international guidelines, but the complexity of the issues and the conflicting interests involved suggest that it will not be an easy process. The data in this book is designed to provide some basic information to the government officials participating in these important discussions.

The authors stress that this is not a scientific paper. The principal objective of the report is to provide and analyze timely statistical data for U.S. Government officials, company executives, consultants, academic groups, and others interested in Latin American fishery developments. The authors have sought to inform U.S. groups as to the full scope of opinions expressed in each country concerning fishing fleet developments. For this reason unverified press reports have been used extensively because they provide an indication of prevailing opinions and the range of ideas expressed in policy debates. A timely synthesis of available commercial, economic, and scientific information is needed to fully understand local fishing industries. The time required to prepare a thoroughly evaluated scientific paper would make the economic and commercial data in the report so dated that it would be of little interest to U.S. readers. The authors have decided instead to provide "snap shots" of selected countries giving the reader data as well

as available opinions and projections on this rapidly evolving industry. In some cases opinions have been presented that can not be substantiated by available data. In other instances the authors have presented opinions with which they disagree. U.S. businessmen and researchers working in Latin America, however, need to be aware of the full range of the discussions currently underway and diversity of opinions among officials, researchers, and businessmen in the region.

The authors have chosen to provide detailed notes to each of the reports in this volume. The level of documentation is admittedly unusual for a Government or even academic paper. The authors have decided to make such elaborate citations for the following reasons: 1) Each country report, even the longer chapters, is only a superficial analysis of the fishing fleets. The references thus provide interested researchers a detailed account of sources so they can pursue specific subjects on their own in greater detail. 2) The authors have been unable to obtain hard data on specific subjects and countries. In many cases such data simply does not exist. Even some of the more important countries (for example Argentina and Brazil) do not publish annual statistical fishery reports. Often the authors had to rely on the opinions of local officials and industry leaders. The notes identify those sources to help the reader evaluate the specific statements. 3) The authors have received many varied, and frequently conflicting, appraisals on the current situation from different local observers. In many instances, it was not possible to fully assess those appraisals. As a result, the authors have often presented a synthesis of different reports to give the reader an idea of the range of assessments. 4) Much of the information did not come from published sources, but rather from telephone conversations and personal interviews, usually in Spanish. As neither of the authors are native Spanish speakers, this creates the possibility for some misunderstanding. The authors, as a result, felt it important to identify the individual source and date much more thoroughly than if more detailed published information had been available.

The reader should not take the information on vessel imports, vessel construction, or joint ventures, and other matters as complete lists. While the authors attempt to follow such developments in fishery journals, many such developments are only reported in local newspapers which the authors can

rarely obtain. Often such developments are not publicly reported at all. Thus the listings in this study are often incomplete and in many cases dated. While they can not be used as a complete inventory of such developments, they do provide a useful overview of the range and diversity of the activities involved. The authors have not excluded specific companies, shipyards, joint ventures out of any policy decision, but rather because of the limited information. Individual companies that think their activities should be mentioned in possible future assessments are encouraged to provide details on their operations to the authors.

The preparation of this report has been significantly impaired by the paucity of reliable statistical and other published information. This is due to several factors: 1) The industries involved are relatively new, and effective industry trade groups exist in only a few countries. 2) The Government agencies in many countries do not publish extensive fleet data. Many countries have actually reduced data collection services during the 1980s as part of the overall economic retrenchment. 3) Industry sources in some countries are reluctant to provide information. This is partially due to the concern that such data will be used by Government officials to enforce tax and exchange rate regulations and partly out of a general unwillingness to release information for public dissemination. Whatever the reason, their reluctance has made it difficult to obtain accurate information on fishing fleets in several countries. 4) General surveys of national fishing fleets are rare. Few local observers have published detailed assessments synthesizing available scientific, commercial, economic, and social data.

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The study of Latin American fishing fleets has proven to be an exciting and rewarding challenge. One of the most gratifying aspects of our research project has been the opportunity to exchange information with the many supportive individuals who have assisted us at various stages of our project. We are deeply indebted to all of them. The opportunity to thank them is one small way of acknowledging their many contributions.

Numerous individuals have played important roles in the preparation of this book. The overall study was conducted under the direction and support of the National Marine Fisheries Service Senior Scientist, Dr. Michael Sissenwine; the Office of International Affairs Director, Henry Beasley; and the Division Chief for International Science, Development, and Foreign Fisheries Analysis, Frederick Beaudry. The research design and project implementation was carried out by the principal authors, Dennis Weidner and David Hall. The authors were assisted in the research effort by Sylvia Gaylord, Daniel Talliant, and Michael Weiner. Lance Samuels did a splendid job preparing graphics to help illustrate key points. Norman Sutter diligently prepared statistical tables and assisted with graphics. Nina Loewinger patiently edited the text. The Division's secretarial support team, consisting of Carolyn McDonald, Suzanne Curtis, Ruth Ware, and Doretha White, typed and checked many of the statistical tables.

The authors are indebted to a much longer list of individuals than we can even begin to mention here for information and guidance. The authors relied heavily on the FAO Department of Fisheries for both vessel and catch data. The efforts of Ms. Adele Crispoldi, who so diligently prepares the *Yearbook of Fishery Statistics*, the irreplaceable central data base on world fishery trends, were especially appreciated. The energetic FAO GLOBEFISH staff also provided useful information. The authors made great use of vessel data supplied by Lloyd's of London and the U.S. Office of Naval Intelligence. U.S. diplomatic posts in several countries were particularly helpful in responding to our extensive requests for basic information as well as reviewing the individual country chapters. In several countries the authors had few alternative sources to the information collected by the posts.

Many gifted and energetic officials, researchers, and businessmen, who are developing an important new industry in their respective countries, have generously devoted their time and energy to help obtain information and share their views with us. They have provided information on current fleet trends, policies, and regulations, as well as statistical data. The study has greatly benefitted from their contributions, suggestions, and encouragement. The authors are grateful for the cooperation of all those individuals who have so copiously provided information and advice. Many individuals deserve special recognition for sharing their time and expertise with us:

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1. LATIN AMERICA

Latin America



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LATIN AMERICAN OVERVIEW

Few Latin American countries currently conduct significant distant-water fisheries or are likely to initiate them in the foreseeable future. While Latin American countries pursue mostly coastal fisheries, a few are capable of distant-water/high-seas operations. **Chilean** fishermen currently conduct relatively limited distant-water operations, but the country's dynamic fishing industry is gradually expanding high-seas longline operations in the southeastern Pacific and trawl fisheries off the Falklands and other southern Atlantic islands. **Cuba** conducted Latin America's largest distant-water fishery during the 1980s on various Atlantic and Pacific grounds. The termination of the Soviet oil subsidy, however, has forced the Cubans to end almost all of these operations. **Mexico** has a modern fleet of tuna purse seiners which is capable of distant-water operations. The fleet is primarily deployed off the country's own coast and off neighboring countries in the eastern tropical Pacific. Some vessel owners are currently seeking alternative distant-water grounds because of the problems associated with marketing eastern Pacific tuna. The Government has heavily subsidized the industry in the past, but the current Administration has terminated such support. It is unclear if Mexican tuna companies will be able to initiate new distant-water fisheries without Government subsidies. **Venezuela** also deploys tuna seiners in the eastern tropical Pacific and faces many of the same problems Mexican tuna fishermen confront. Venezuelan fishermen also deploy a variety of tuna and other vessels off neighboring countries in the Caribbean and on the Guianas Banks.

Foreign fishermen deployed substantial effort off Latin America during the 1980s. Foreign catches peaked at about 2.5 million metric tons (t) in 1989-90 (appendix C4a). Much of this catch was harvested by the heavily subsidized state-owned fleets of the communist countries (**Bulgaria, Cuba, Poland, and the USSR**). When the Soviet Union disintegrated in 1991 and the Soviet oil subsidy was no longer available,¹ these countries could no longer continue to support unprofitable distant-water activities. Other countries continue much smaller, but more lucrative, operations. **Japan and Korea** exhibit remarkably similar fishing patterns off Latin America. The two countries conduct substantial longline fisheries for tuna and billfish off the western coast of South America and shrimp fisheries along the northern coast. They initiated a squid fishery off the Falkland Islands in the early- and mid-1980s and off Peru and Ecuador in 1991. Both countries reported sharp overall catch increases off Latin America in 1991 (appendix C4a). **Taiwan** fishermen also conduct tuna longline fisheries and initiated significant squid fishing off the Falklands in 1986. **Spain** initiated a significant squid fishery in 1986 off the Falklands. **United States** fishermen have reduced effort in recent years and currently conduct only limited longlining in the Caribbean, shrimp trawling off Guyana, various fisheries off Colombia, and scattered operations off other countries.

Latin American countries pursued highly restrictive policies toward foreign fishermen during the 1970s-80s. Most countries (especially **Brazil, Chile, and Mexico**) are likely to continue pursuing such policies during the 1990s, but other countries are providing access for foreign fishermen to generate revenue and/or acquire modern fishing vessels and technology. **Argentina** began to license foreign fishermen from non-communist countries (Japan and Taiwan) in 1992 under a new vessel charter arrangement and has signed an agreement with the

European Community (EC) that may provide access for up to 70 vessels and allocations of up to 250,000 tons. As part of the access arrangements most of the vessels would be eventually transferred to Argentine owners. The pending EC agreement and current vessel chartering arrangement have yet to be fully tested in Argentina and it is unclear if either will become long-term policies. Argentine officials are constrained by Falkland policies because both are granting licenses to fish shared stocks. **Colombia** licenses about 150 foreign vessels, but is unlikely to increase allocations because of resource limitations (Colombia, appendix E). **Ecuador** has since 1985 permitted 18-32 foreign vessels to operate in association or under licensing arrangements with domestic companies. The Government sharply reduced the number of licenses in late 1992 because of concern over squid stocks (Ecuador, appendix D).² The **Falkland Islands** has, since 1987, licensed (mostly 4-6-month periods) about 300 foreign vessels annually.³ The income generated has become a major revenue source for the Falklands Island Government (Falklands, appendix B1a). Falkland officials may have to curtail future allocations because Argentina in 1992 also began to approve charters for foreign fishermen. **Guyana** issued over 100 fishing licenses to foreign fishermen in 1992 (Guyana, appendix A). The Government is unlikely to increase the number of licenses issued and has been gradually reducing the number in recent years due to resource problems.⁴ **Panama** licenses foreign tuna vessels and issued about 30 licenses in 1993. **Peru** has provided access to foreign fishermen in the past, but domestic fishermen have sharply criticized such arrangements. The Fujimori Administration has reported significant income from the sale of about 50 (3-4 month periods) licenses annually for surplus stocks (squid). The licenses are offered through competitive bidding and Peru earned nearly \$20 million in 1992.⁵ The Fujimori Administration is unlikely to increase license sales until more is known about squid stocks. The Administration also faces criticism from industry groups opposed to foreign fishing. **Suriname** has since 1985 annually issued 120-180 licenses to foreign fishermen (mostly Japan, Korea, and Venezuela), but in 1992 issued more than 220 licenses (Suriname, appendix A).⁶ **Trinidad** licenses a small number of foreign fishermen annually. Since 1991 the number has varied from two to six.

Many foreign owners have registered their fishing vessels in Latin American countries to obtain flag-of-convenience registrations. Such registrations are complicating both national and international fishery management efforts. The authors have only limited data on the extent and motivation for this activity. The number of vessels and capacity involved, however, is significant. The foreign distant-water effort is especially disturbing because the fishermen are concentrating their effort on a relatively small number of high-value species (billfish, cod, salmon, squid, swordfish, tunas, and others). Most of these species are already heavily utilized by coastal countries and the growing distant-water effort on the high seas thus represents a potentially serious threat to both national and international management efforts.

Concentration in Latin America: Many of the foreign vessels owners seeking flag-of-convenience registrations appear to have selected Latin American countries. The authors cannot fully explain why so many foreign owners have chosen to obtain the registrations in Latin America. Other countries (Cyprus, Liberia, Malta, Mauritius, Sierra Leone, Singapore, etc.) also register foreign-owned vessels. It may be that the Latin American countries offer more secure communications, better established bureaucratic systems, and superior financial services than do the African countries and are more distant from the country of origin than countries like Cyprus, Malta, and Singapore. Another key factor is that two of the most important Latin American countries making flag-of-convenience registrations (Panama and Honduras) still maintain diplomatic relations with Taiwan rather than China. Such relations permit Taiwan fishermen seeking flag-of-convenience registrations to more easily do business and to obtain assistance from their Government.⁷

Country selection: The primary Latin American countries making flag-of-convenience registrations include: Panama, Honduras, St. Vincent, and the Caymans, but other countries also register smaller numbers of vessels. Each of these countries decided to offer flag-of-convenience registrations as an income-generating activity. It is unclear why foreign owners have selected these specific Latin American countries other than their willingness to accept fee payments for such registrations. Individual countries do, however, offer some advantages. The most significant factor may be that some countries (Panama and Honduras) still maintain diplomatic relations with Taiwan. Other vessels owners may have selected countries (Panama) with important banking and communications hubs. Some countries (the Caymans and Panama) have tight bank secrecy laws. Other choices (the Caymans) offer stable governments and dependable legal systems. One country (Panama) even uses U.S. dollars, facilitating financial dealings.

Registrations increasing: The licensing of fishing vessels in Latin America to obtain flag-of-convenience registrations appears to have increased significantly since 1986. Available Lloyd's time-line data suggests that the number of large fishing vessels (500 GRT or over) registered in the four countries increased from only 70 vessels in 1986 to 170 vessels in 1992 (appendix B5a1), or by nearly 150 percent. While the Lloyd's data give some idea of annual trends, their numbers probably under estimate the actual number of vessels involved.⁸ Some countries appear to be changing their vessel registration policies. Cayman officials modified their policy in 1989 and no longer offer flag-of-convenience registrations for foreign fishing vessels. Honduran officials are currently assessing their policy. On balance, however, the countries involved are registering an increasing number of foreign-owned fishing vessels.

Number of vessels: The number of large fishing vessels (500-GRT or greater) with Latin American flags-of-convenience registrations probably totals about 250 vessels (appendix B5b1). A full estimate of the number of vessels involved would have to include the nearly 750 medium-sized vessels (100-499 GRT) which have also been registered in Latin America by foreign owners. Some existing international vessel registries appear to significantly under estimate the number of vessels involved. The authors estimate, however, a Latin American flag-of-convenience fleet totaling nearly 1,000 fishing vessels.

Catch: Virtually no data exists on the catches achieved by the flag-of-convenience vessels. Most of the fishermen do not report their catches to the country where they are flagged or to international bodies. The authors estimate, however, that the large flag-of-convenience vessels probably catch over 0.8 million t and the medium-sized flag-of-convenience vessels probably catch about 0.6 million t annually. This means that the total catch of the Latin American flag-of-convenience vessels could total 1.4 million t annually (appendix C5). This is a huge catch, but it may understate the actual impact of these vessels. Since distant-water operations are expensive to conduct, the fishermen involved target high-value stocks, many of which are already heavily fished.⁹ Focusing this massive effort on such stocks may be having a major adverse impact on both national and international management efforts.

Owners: Many of the flag-of-convenience vessels are owned by Taiwan companies or overseas Chinese located in other countries. Taiwan owners have been especially active in seeking flag-of-convenience registrations. This is partly because that many coastal countries (especially India, Myanmar, and Sri Lanka) recognize China and thus refuse to grant fishing licenses to Taiwan flag vessels or allow private companies to sign joint venture or leasing contracts permitting the operation of Taiwan-flag vessels. Most of the Taiwan companies involved own and operate only 1-2 vessels; but operate as part of what Taiwan officials refer to as "relative" enterprises.¹⁰ Companies in a relatively small number of countries (especially Korea, Russia, and Spain) have also registered substantial numbers of fishing vessels, although about 15 other countries register smaller numbers of vessels.

Motivation: Foreign owners have a variety of reasons for registering their vessels in other countries. The problem Taiwan owners face because many countries do not recognize their government partially explain why so many Taiwan vessels have been reflagged. Taiwan and other vessel owners have, however, many other motivations for such transfers. Some foreign fishermen obtain flags-of-convenience to facilitate access to fishery resources, in some cases by circumventing various international and national fishery management regimes. Many other possible motivations, however, affect the decision. (See section IIIB. Flag-of-convenience fleets.) Little information is available on the motivation of individual vessel owners.

Deployment: Few of the vessels are deployed off Latin America, but they have been observed on virtually every important world fishing ground. In most cases the vessels never transship their catch through or call at the Latin American country in which they are registered.

Transfers: In some cases the vessels are being deployed with the knowledge and approval of the originating government. Some governments (Korea and Taiwan) appear to encourage the practice. In other cases, the originating government is concerned over these reflaggings and has neither approved the reflagging or authorized the vessels concerned to conduct high-seas fisheries. Russian officials in particular are troubled about the transfer of state-owned fishing vessels to other countries. The vessels involved were the property of Russian state companies, but at least some have apparently been transferred with little or no payment to the Government. More than 80 large Russian/East European-built vessels have been transferred to Latin American countries (appendix B6).¹¹

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of the importance of a small number of highly variable small pelagic species (anchovy, sardines, and jack mackerel).¹³

The major Latin American fishing countries are Chile and Peru. The catches of these two countries, bolstered by massive harvests of small pelagics, usually account for 75 per cent or more of the entire regional catch. Both countries have reported relatively stable catches in recent years, even through the 1992 El Niño event. **Chilean** fishermen should report major catch increases in 1994 as a result of new investments in the fishmeal industry.¹⁴ Aggressive Chilean companies are also making substantial progress in diversifying their catch into much more valuable edible species. **Peruvian** catches have changed little since 1988. The country's difficult economic situation and statist economic policies have impaired the fishing industry's development. The Fujimori Administration since 1990 has made major changes in fisheries policy, privatizing state companies and promoting the private sector (Peru, appendix L). Peruvian companies have so far, however, made only limited progress in diversifying away from dependence on the fishmeal industry (Peru, appendices M1-2). Mexico, **Brazil**, **Argentina**, and **Ecuador** also report important catches (appendix C2a2). The catch of these countries are much more diverse than those of Chile and Peru and include substantial quantities of high-value species (hake and other groundfish, snappers, tunas, shrimp, lobster, squid, etc.) Argentina has achieved impressive catch increases in recent years, but the other major producers (Mexico, Brazil, and Ecuador) have reported stable or declining catches.

Latin American companies currently produce a relatively limited range of fishery commodities. Most of the catch is reduced to fishmeal and oil. Some of the catch is marketed fresh in the domestic markets, usually at prices and quality standards below world market levels. Much of the high-value species (hake, snapper, shrimp, lobster, squid, etc.) is exported frozen as blocks or IQF product with virtually no value-added processing. Some countries have

I. LATIN AMERICAN FISHERIES

Latin American coastal waters are one of the world's major fishing grounds. Latin American fishermen have significantly expanded their fishing industries in recent years. Regional fishermen have increased fishery catches from only 6.9 million metric tons (t) in 1975 to a record 18.0 million t in 1989 (appendix C1). Since 1989 the regional catch has fallen somewhat to only about 17.0 million t in 1992. Latin American catches since 1985 have ranged from 13.2 million (1985) to 18.0 million t (1989), or from 15-18 percent of the overall world fisheries catch (appendix C1).

The principal Latin American fisheries are for small pelagic species, but fishermen in the area also conduct important fisheries for hake and other demersal finfish, shrimp, lobster, tuna, squid, snappers, and a variety of other species.¹² The Latin American catch can fluctuate sharply because

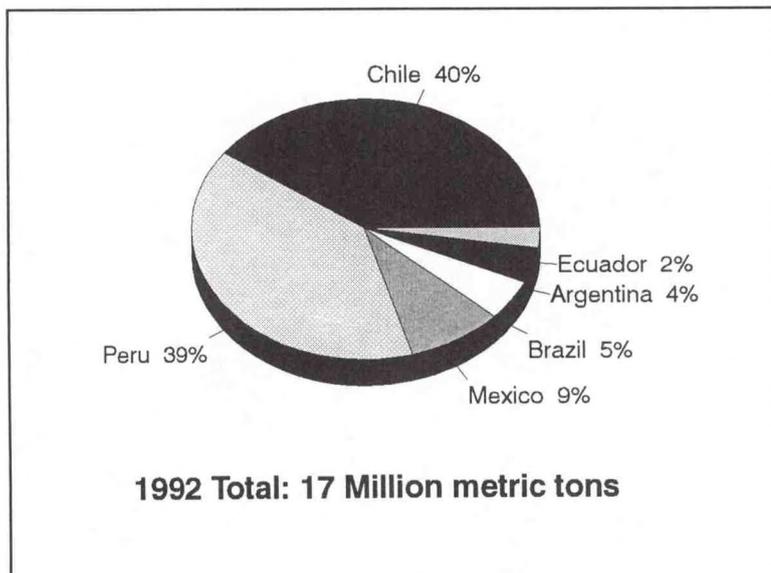


Figure 1.--Peru and Chile dominate the Latin American fisheries catch.

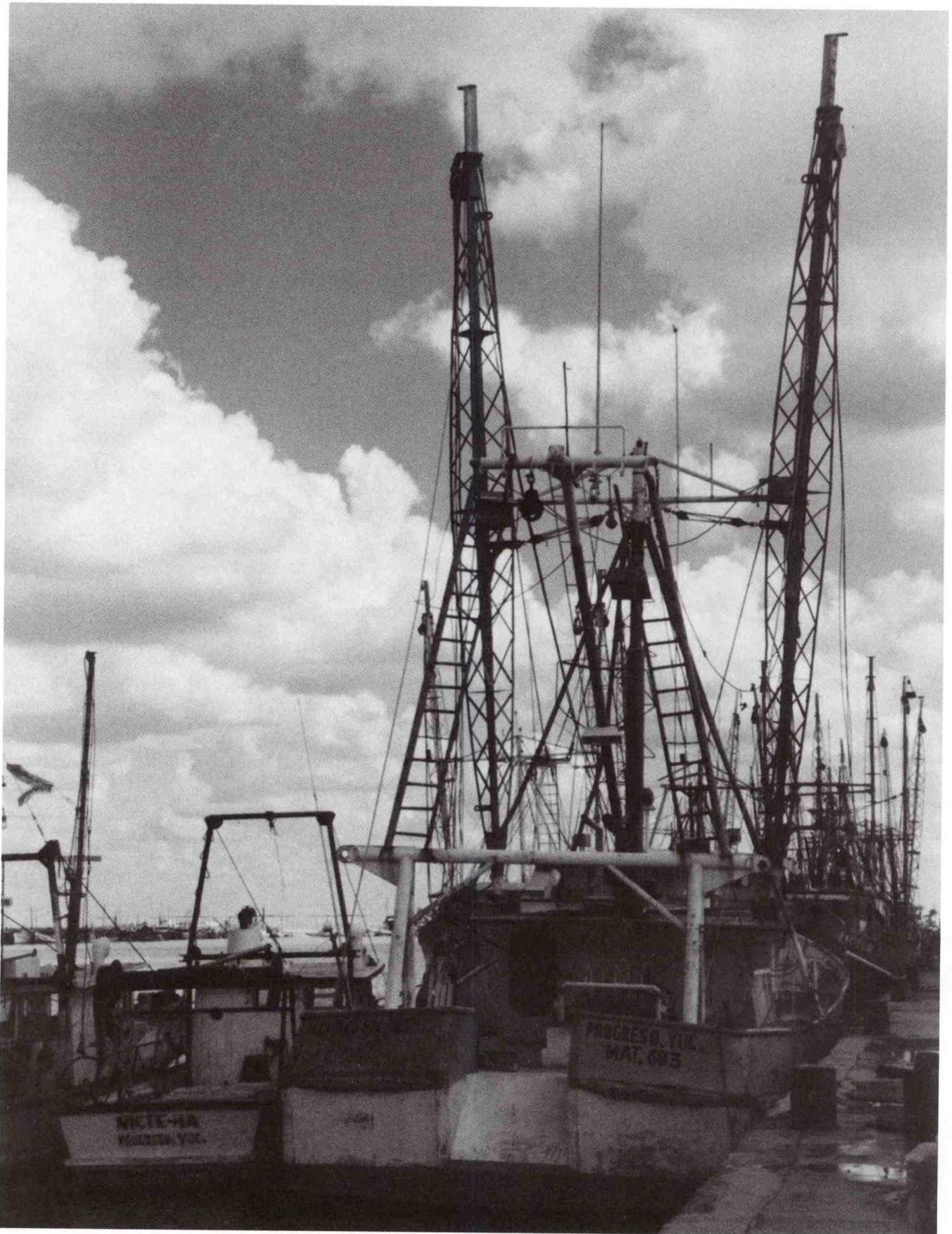


Photo 1. Latin American fishermen conduct primarily coastal fisheries with small vessels like these shrimp trawlers. Dennis Weidner

small canning industries which produce primarily for their own domestic market or markets in neighboring Latin American countries. Some Latin American observers are convinced that regional fishery resources could be better utilized and that the development of a modern fisheries industry in Latin America would not only produce more food but also generate substantially increased revenue as well.¹⁵

Latin American countries have expanded their fisheries catch, primarily through determined private sectors. Various countries (Brazil, Colombia, Cuba, Ecuador, Mexico, Nicaragua, Panama, Peru, and Venezuela) during the 1970s and 80s implemented costly, but marginally successful, government-sponsored fisheries development programs. Several countries (Colombia, Cuba, Ecuador, Guyana, Mexico, Nicaragua, Peru, Suriname, Trinidad, and Uruguay) established state fishing companies to promote development. Few of these companies achieved their established goals. The industry is now almost entirely conducted by private companies. Most governments have sold off, or are trying to sell off, their debt-ridden state fishing companies.

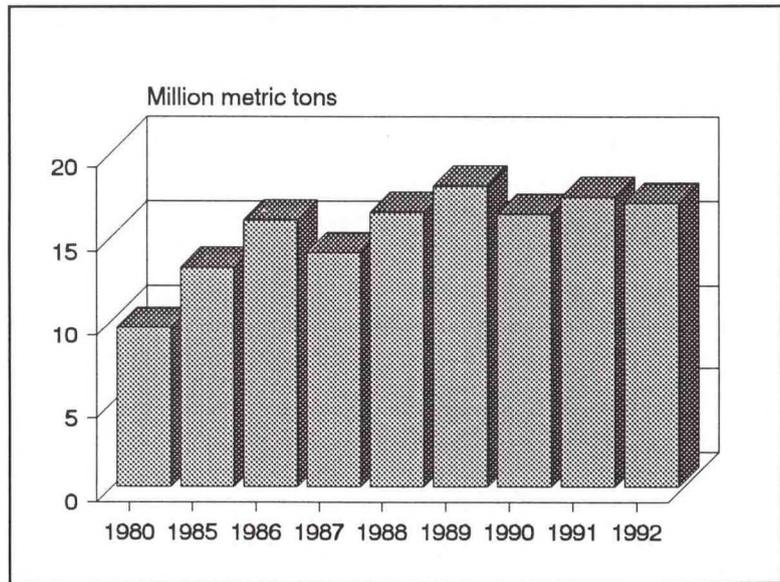


Figure 2.--Latin American countries have reported major increases in their fisheries catch during the 1980s.

Much of the Latin American catch is marketed in export markets. Many Latin American countries have only small domestic markets. Consumers in most countries have not developed the habit of consuming fresh or frozen seafood and generally prefer poultry and beef, probably because of historical dietary patterns established when there were quality control problems transporting seafood from ports to inland population centers. Latin American markets currently offer a wide variety of seafood, but quality standards are still inconsistent. Seafood consumption is growing, but the small domestic populations of several important producing countries (like Chile) mean that the industry is highly dependent on export markets.¹⁶

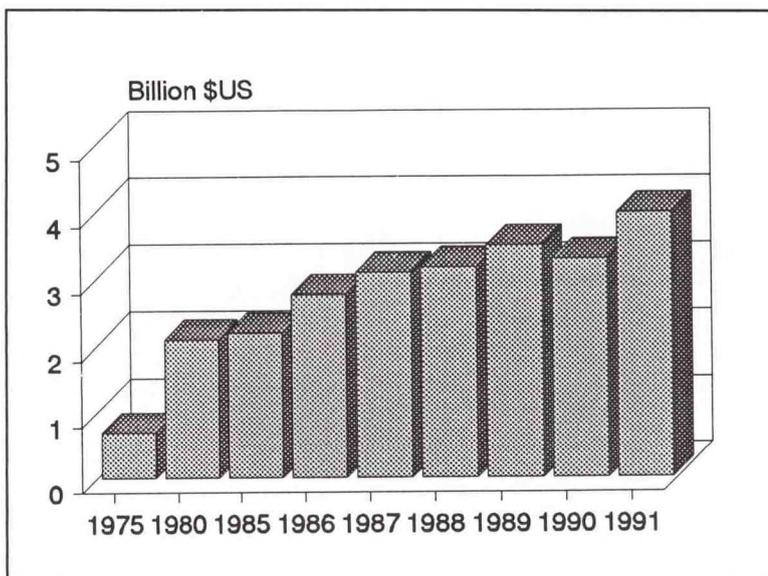


Figure 3.--Latin American exporters have achieved impressive increases in export shipments during the 1980s.

The impressive growth of Latin American fishing industries can clearly be seen in the expanding regional export trade. Exports have increased from only \$0.4 billion in 1975 to \$4.0 billion in 1991, or by 900 percent (appendix E3). Even discounting inflation, this is a substantial increase. Five countries (Chile, Ecuador, Peru, Argentina, and Mexico) dominate the regional export trade and each export at least \$0.2 billion worth of fishery products annually (appendix E2). Since 1985,

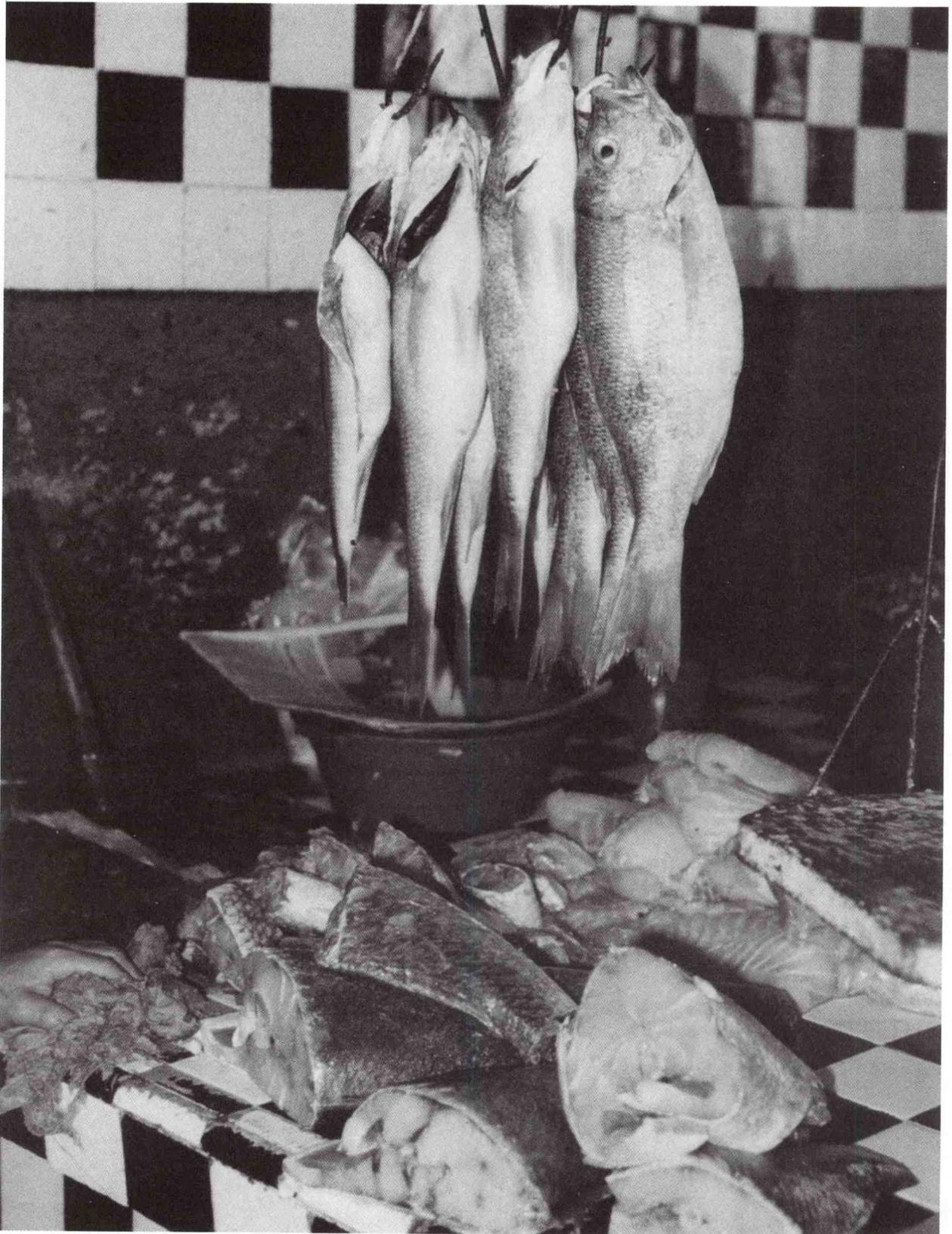


Photo 2.--A tremendous diversity of seafood is available in Latin American seafood markets, but the quality is often inconsistent. Dennis Weidner

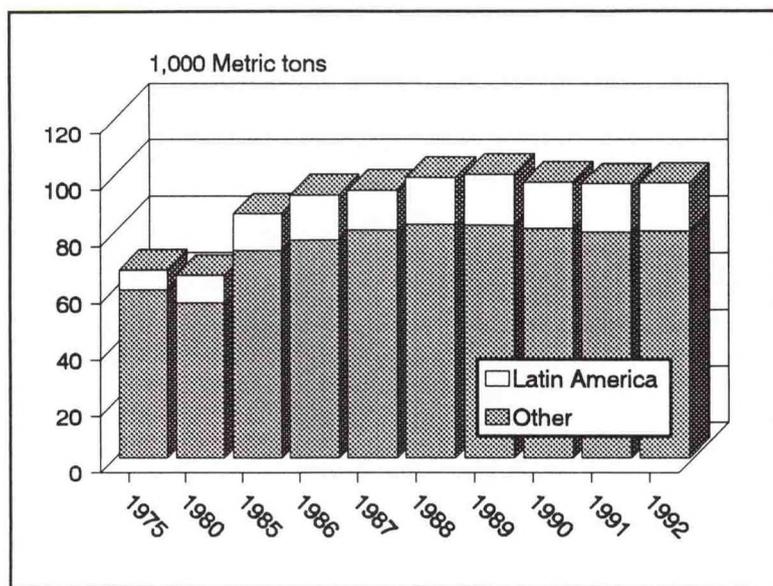


Figure 4.--Latin American fishery catches constitute a small, but important part of the overall world catch.

Chile has emerged as the leading exporter, Chilean fishery shipments exceeded \$1 billion for the first time in 1991, about one-fourth of all Latin American export shipments. The primary Latin American export commodities are fishmeal, shrimp, hake and other groundfish, snapper/grouper, various other marine finfish, lobster, tuna, squid, and a variety of additional products.

Latin American coastal waters comprise four major FAO statistical ocean areas.¹⁷ One of those areas, the southeastern Pacific, is a primary world fishing ground.

Southeastern Pacific (FAO area 87): The southeastern Pacific is the world's second most important ocean fishing area (appendix C3a2). Strong coastal upwelling combined with the northerly flowing Humboldt current create a tremendously productive marine ecosystem. Fishermen caught 14.2 million t in the area during 1991, or about 15 percent of the entire world catch. Coastal fisheries in the area are dominated by Chile and Peru. Foreign fishermen also report substantial catches (appendix C4g1). The catches have historically been primarily low-value

small pelagic fisheries (anchovy, sardines, and mackerels) used for reduction to fishmeal and oil. In recent years fishermen, especially in Chile, have begun to diversify the industry by launching new fisheries for a variety of much higher-value species for human consumption, including hake and other demersal species, tunas, swordfish, and squids.

Southwestern Atlantic (FAO area 41): Fishermen in the area generally catch more than 2 million t (appendix C3a1). The extensive Patagonian shelf offers an ideal habitat for important demersal stocks. Coastal fishing in the area is dominated by Argentina and Brazil. The most important fisheries conducted off Argentina and the Falklands are for hake, squid, croaker, and a variety of demersal finfish. Brazil conducts important fisheries for tuna, codling, and small pelagics. Foreign fishermen also report substantial catches (appendix C4d1).

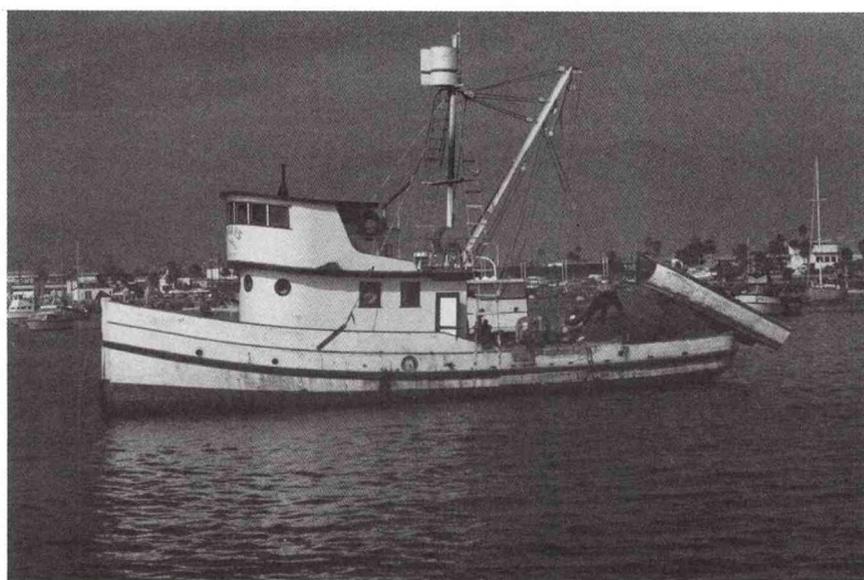


Photo 3.--Much of the Latin American catch is taken by small seiners like this Mexican vessel. The catch is primarily used for reduction to fishmeal. Dennis Weidner

Western Central Atlantic (FAO area 31): Fishermen in the area since 1987 have caught less than 2 million t annually (appendix C3a1). The warm-water fisheries in the Caribbean are less productive than fisheries in more temperate areas and the catches are more diverse. The leading fisheries are for shrimp, lobster, snapper/grouper, tunas and billfish, and small pelagics. The catch is divided among a large number of countries, but the most important are Brazil, Mexico, Venezuela, and Cuba.

Eastern Central Pacific (FAO area 77): Fishermen in the area report catches averaging about 1.6 million t annually (appendix C3a1).¹⁸ The leading country is Mexico, but Panama also reports sizeable catches. The most important fisheries are for shrimp, tunas, small pelagics, squids, and shrimp. The eastern central Pacific is one of the most productive tuna fishing grounds in the world. The relatively shallow thermocline and the, still not fully understood, association between dolphins and tunas enables fishermen to set purse seines on easily observable dolphin schools. This has proven an efficient method of harvesting the tuna, but results in dolphin mortalities. While Latin American tuna fishermen have made substantial progress in reducing such mortalities, countries which continue to set on dolphins are finding it increasingly difficult to sell their catch in export markets.

II. VESSEL SOURCES

Some Latin American countries have developed substantial ship building industries. Some of the shipyards in the region specialize in fishing vessels. Latin American countries occasionally appear among the most important fishing vessel builders. Peru in 1991 was the world's tenth leading builder of fishing vessels (appendix A1) and Chile ranked tenth in 1990.¹⁹ The most important Latin American yards are located in Argentina, Brazil, Chile, Mexico, and Peru (appendix A2). The Argentine yards specialize in small trawlers, the Brazilians shrimp trawlers and lobster boats, the Chileans purse seiners, the Mexicans shrimp trawlers and small purse seiners, and the Peruvians small purse seiners. The largest fishing vessels have been built by yards in Chile, Mexico, and Peru, mostly tuna and small pelagic seiners.

Latin American countries generally import large fishing vessels. Most of the large trawlers and tuna purse seiners, for example, have been imported from United States, European, and Japanese shipyards. Several countries have imported large numbers of used vessels (Argentina, Peru, and Venezuela) while other countries have imported mostly new vessels (Chile, Cuba, and Mexico). The imports have permitted several countries (Argentina, Chile, Cuba, and Mexico) to acquire relatively modern fleets. Other countries (especially Peru) have reported considerable difficulty conducting profitable operations with the imported vessels.

The over capacity of the world fishing fleet has meant that increasing numbers of foreign fishermen would like to deploy, or sell, their vessels to developing countries like those in Latin America. Studies by the Food and Agriculture Organization (FAO) of the United Nations suggest that the world fishing fleet is badly over capitalized. FAO estimates that the fleet of decked vessels increased from 0.8 million to 1.2 million vessels and from 19.8 million to 25.5 million gross registered tons (GRT)

between 1980 and 1989. Combined with a smaller increase of undecked vessels this represents a massive expansion of world fishing capacity. FAO estimates that this represents a relative increase in fleet size more than twice the increase in the fisheries catch over the past 20 years.²⁰ This massive increase in capacity has carried with it enormous capital costs. FAO estimates that the replacement value of the world fleet probably totals about \$330 billion. A nominal return on capital

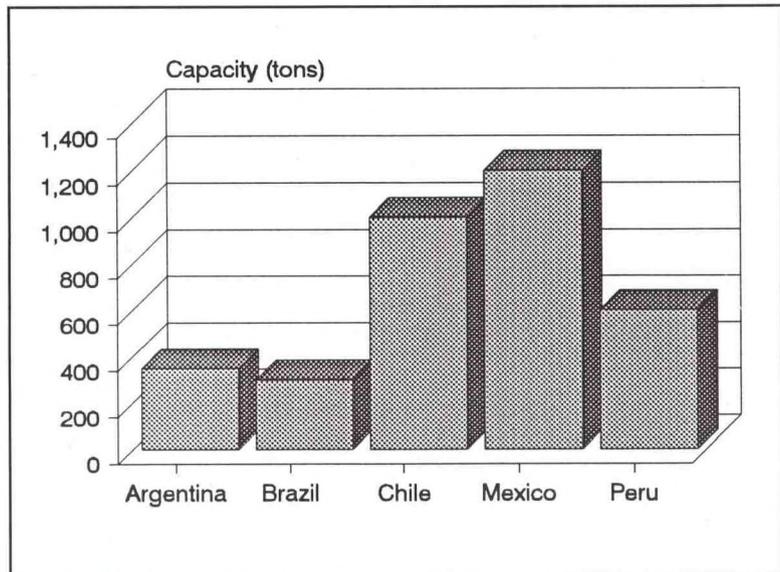


Figure 5.--Latin American shipyards construct mostly small coastal vessels, but a few yards in Chile, Mexico, and Peru can construct larger vessels.

would yield fishermen about \$33 billion annually, or 10 percent. FAO further estimates, however, that the \$70 billion landed value of the world catch does not even cover estimated operating costs totaling \$85 billion annually. This means that world fishermen are operating at a \$15 billion annual deficit--even discounting the initial capital costs. The deficit has been made up by massive government subsidies. The grossly inefficient Soviet and other communist country (Bulgaria, Cuba, Germany-GDR, Poland, and Romania) fleets accounted for a substantial part of the theoretical operating deficit estimated by FAO, but many countries with market economies (especially Canada, the European Community, Japan, Korea, Iceland, and Norway) also heavily subsidize their fishing industries.

The over capacity of the world fishing fleet has meant that two major developments in the late 1980s and early 1990s have had a great impact on world fleet trends. Increasing numbers of relatively modern fishing vessels are available to the Latin Americans, for outright purchase, licensing, joint venture partnerships, or leasing by local companies.

Disintegration of the USSR:

The breakup of the Soviet Union and the fall of communist governments in Eastern Europe is forcing their massive, state-subsidized fleets to face the realities of market economics. As a result, these countries find themselves with large numbers of vessels which they cannot profitably deploy.

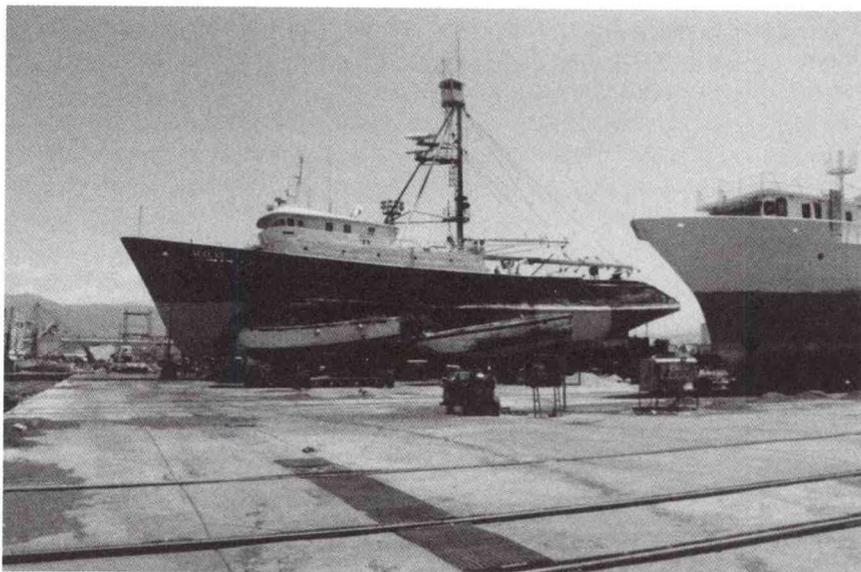


Photo 4.--Shipyards in Mexico have primarily built small seiners and shrimp trawlers. David Hall

Ineffective fisheries management: Major fishing countries (Canada, the European Community, Japan, Norway, the United States, and others) are



Photo 5.--Foreign-built vessels have been sold or reflagged in Latin America because of the large number of surplus fishing vessels in major world fishing countries.

having to face serious fisheries management problems (declining yields in heavily fished stocks). These problems have resulted from an over-capitalized fleet and the intense fishing effort permitted in current fishery management plans. The result has been to force fishermen in those countries to seek alternative grounds and investment opportunities in distant-water fisheries.

Distant-water fishermen have targeted virtually every ocean fishing area, including grounds off Latin America. The fishermen have deployed their vessels on the high seas off Latin America, purchased licenses, leased vessels, and entered joint ventures. Other fishermen have sold their vessels outright to Latin American companies. The Russians may have difficulty disposing of their older vessels because many were not built with the economies necessary for unsubsidized operation. Many of the Japanese and European vessels, however, could be used in many countries to upgrade existing operations as well as launch new fisheries.

III. LATIN AMERICAN FLEETS

The Latin American fishing fleet is composed primarily of small vessels targeting coastal species, mostly small pelagics, demersal finfish, shrimp, and lobster. A few countries have acquired small fleets of larger vessels (500 GRT or over) capable of distant-water operations (appendix B2a3). Some of these countries are using the vessels to more fully utilize fishery stocks in their coastal 200-mile Exclusive Economic Zones (EEZ) and to initiate high-seas/distant-water fisheries on a small scale (Chile, Argentina, Cuba, Mexico, and Venezuela). Other countries are registering vessels owned by foreign concerns, but these flag-of-convenience registrations (Panama, Honduras, St. Vincent, and the Cayman Islands) appear to have little or no connection with the domestic fishing industries.

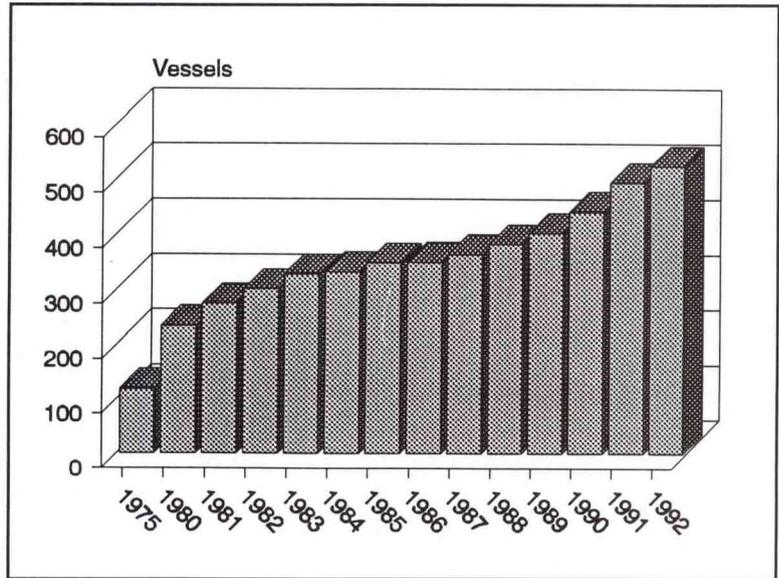


Figure 6.--Latin American countries have steadily increased the number of large fishing vessels (500 GRT or larger) in their fleets during the 1980s.



Photo 6.--Argentine companies have acquired many modern foreign vessels, like this Spanish trawler, in recent years and are significantly increasing their fisheries catch.

A. National fleets

The major Latin American fishing countries have substantially expanded their fleet of large vessels, enabling most of the countries to significantly increase their fisheries catch (appendix C2a1). Few of the countries conduct significant distant-water operations, although some have initiated limited operations and are acquiring the capability to conduct such operations in the future.

Argentina: Argentine fishing companies have reported a very substantial expansion of the country's fleet of large vessels. Fishermen have increased their fleet from a mere 9 vessels in 1975 to 70 in 1992 (appendix B2a3). Many of the vessels have been imported used, but they have enabled Argentine companies to significantly expand demersal fisheries on the Patagonian shelf off the country's central and

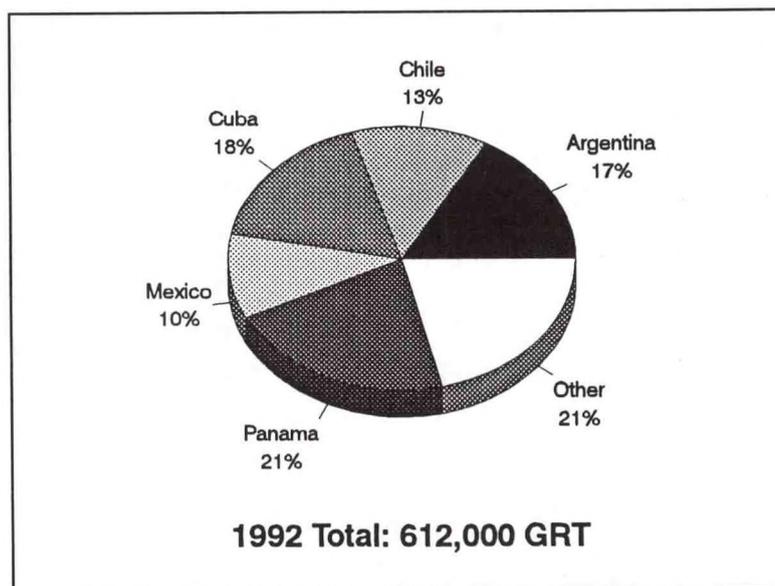


Figure 7.--Most of the large Latin American fishing vessels are registered in only five countries.

southern coast. Some of the vessels have apparently been obtained through joint venture arrangements with Spanish and other foreign companies, but few



Photo 7.--Cuba has given considerable priority to fisheries development and has used scarce foreign currency reserves to import vessels for deployment in distant-water fisheries.

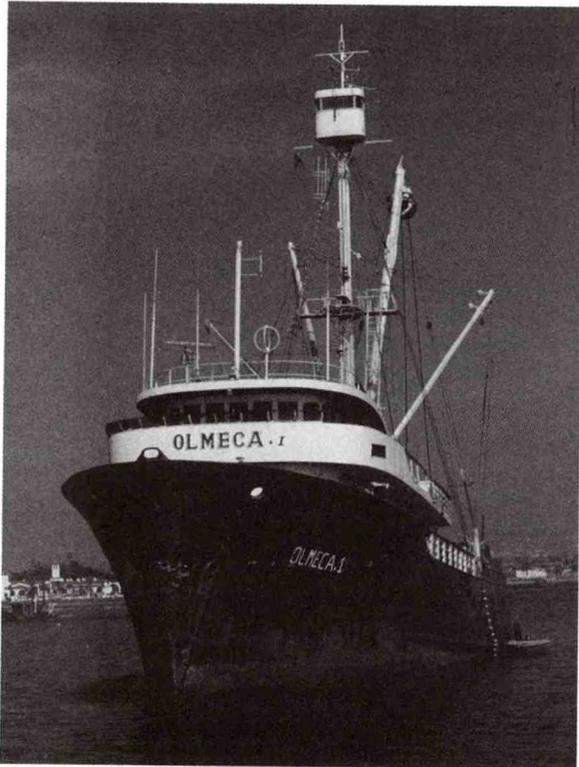


Photo 8.--Mexico has replaced many of its older tuna vessels with modern super seiners. Dennis Weidner

details are available. The fleet expansion has enabled Argentine fishermen to report major catch (appendix C2a1) and export (appendix E1) increases since 1989.

Chile: Chile's dynamic private companies have expanded their fleet of large vessels tremendously since 1975. The country's fishermen reported only 2 large fishing vessels in 1975, but by 1992 had a fleet of nearly 90 such vessels (appendix B2a3). Most of these vessels are large modern seiners targeting small pelagic species. The vessels have enabled Chilean small pelagic fishermen to catch large quantities of offshore jack mackerel rather than just coastal anchovies and sardines. The Chileans have targeted the jack mackerel stocks that the Soviets formerly harvested (Chile, appendix F). Chilean seiners are believed, however, to fish mostly within coastal waters because catch rates are higher and the lack of refrigerated holds makes it difficult to land high quality

product when they operate at any distance from port. The large Chilean vessels include trawlers which are being deployed in expanding demersal groundfish fisheries off southern Chile. The country's fishermen have also initiated limited distant-water/high-seas fisheries in the southwestern Atlantic, Antarctic, and southeastern Pacific.

Cuba: Cuba has acquired a substantial fleet of large vessels, mostly operated by the Cuban distant-water fleet, the Flota Cubana de Pesca (FLOCUBA). The Cuban Government gave high priority to its fishing industry and scarce hard-currency was allocated to build large vessels in Spanish and other foreign shipyards (Cuba, appendix D). FLOCUBA deployed few vessels in Cuban coastal waters, but has conducted important fisheries in the southeastern Atlantic, the southeastern Pacific, and the northeastern Atlantic (Cuba, appendix E). The Cuban fleet of large vessels totaled 68 vessels in 1992. Most are vessels built in the 1960s and 1970s and because of their age are becoming increasingly costly to maintain, especially securing the hard currency to import needed spare parts. The difficulties in acquiring access and the cost of operating distant-water vessels, especially obtaining diesel oil, has had a devastating impact on FLOCUBA. The collapse of the Soviet Union was a major cause of the company's current problems. The Russians ended the critical Soviet fuel subsidy. FLOCUBA, left

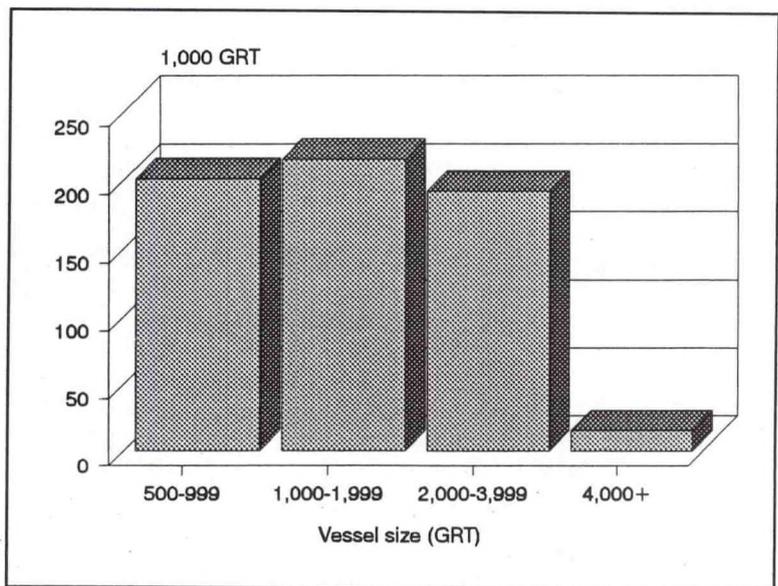


Figure 8.--Most of the large fishing vessels registered in Latin America fall into the 500-3,999GRT class.

without access to subsidized fuel, has been forced to tie up most of its distant-water vessels which are currently idled in port.

Mexico: Mexican fishing companies have increased the country's fleet of large vessels from 8 in 1975 to over 60 in 1992 (appendix B2a2). Almost all of these new vessels are large modern tuna purse seiners and Mexico now has one of the largest and most modern tuna fleets in the world. Many of



Photo 9.--Mexico has acquired one of the largest and most modern fleet of tuna purse seiners in the world. David Hall

these seiners are capable of distant-water operations. The Mexican fleet operates, however, primarily in the country's own 200-mile EEZ and off the coasts of neighboring countries in the eastern tropical Pacific (ETP). Mexican tuna fishermen primarily fish on dolphins and for that reason the industry faces serious problems. Despite enormous progress in reducing dolphin mortalities, the concern in the United States and Europe over even limited dolphin mortalities has caused enormous marketing difficulties. As a result, Mexican tuna fishermen are now studying the possibility of distant-water operations outside the ETP where dolphin interactions would be minimal.

Peru: Peruvian private and state companies attempted during the 1980s to diversify the fishery away from reliance on small seiners to harvest anchovy and sardines for reduction to fishmeal. Peruvian companies acquired several large vessels,

mostly used trawlers and expanded the fleet from only 1 large vessel in 1975 to 26 in 1992 (appendix B2a2). Some companies acquiring the vessels, however, especially the now defunct state-owned fishing fleet--the Flota Pesquera Peruana (FLOPESCA), reported unprofitable operations. Many of the large vessels currently reported in the fleet are believed to be idled. Several have been scrapped and others are in such poor condition that they will never be reactivated. The Government is currently assisting fishermen modernize the fleet through the Fondo Nacional de Desarrollo Pesquero (FONDEPES).²¹

Venezuela: Venezuelan fishing companies have increased the country's fleet of large vessels from 2 in 1975 to over 15 in 1992. Like Mexico, most of these new vessels are believed to be large, tuna purse seiners. Most of the vessels are deployed in ETP distant-water operations. The fishermen primarily fish on dolphins which has created marketing problems because of the concern in the United States and Europe over the resulting dolphin mortalities. Venezuelan fishermen also conduct distant-

water operations in the Atlantic, primarily on the neighboring Guianas Banks.

B. Flag-of-convenience fleets

Several Latin American countries in the 1980s began to register foreign-owned fishing vessels for operations on the high seas. The countries involved (Panama, Honduras, St. Vincent, Cayman Islands, and others) have registered substantial numbers of flag-of-convenience vessels. These vessels are not permitted to fish in local waters and most appear to have little or no connection with the local fishing industry.²² The primary motivation on the part of the Latin American governments appears to be the income generated from the registration and other fees. Besides the actual fees, other income is generated as the owners often have to hire lawyers and in some case establish local offices and companies. The authors have no data on the fee structure or income generated, but officials in distant-water countries report that the fees are substantial.²³ Some of these countries appear to be reassessing their registration policies. The Cayman Islands stopped making flag-of-convenience registrations in 1989. Honduras is studying its current policy. Other countries appear to be initiating new flag-of-convenience licensing programs. The overall pattern since 1987 has been steady increases in the numbers of flag-of-convenience registrations issued in Latin America (appendix B5a1).

Latin American countries appear to be registering most of the foreign-owned flag-of-convenience vessels. Some foreign owners also register vessels in a variety of other developing countries (Cyprus, Liberia, Malta, Sierra Leone, Singapore, and others), but the largest numbers are registered in Latin America. Many developing countries often have extremely lax vessel standards, in some cases none at all. The standards that do exist are often not strictly enforced. The authors do not fully understand, however, why so many foreign vessel owners have chosen Latin America countries instead of other developing countries, but some of the reasons include:

Diplomatic relations with Taiwan: Two of the principal Latin American countries (Panama and Honduras) granting flag-of-convenience registrations still maintain diplomatic relations with Taiwan. As so many of the foreign vessels are Taiwan owned, this appears to be a key factor explaining such a large number of flag-of-convenience vessels are registered in Latin America. Formal diplomatic relations facilitate obtaining the registrations and permits the Taiwan Government to assist their vessel owners obtain the registrations.

Financial centers: Some Latin American countries have important financial centers (Cayman Islands and Panama) which operate under strict bank secrecy laws.



Photo 10.--Many of the fishing vessels reflagged in Latin America, like this longliner, are owned and operated by Taiwan companies.

Location: The location of the countries (especially Panama) facilitating communication and transportation may be another important factor. The fact that most of the vessels involved never call at local ports or transship through local ports, however, suggests that location is not a major factor in many instances.

Stability: Some of the Latin American countries offer relatively stable political and economic conditions. One Government (the Cayman Islands) is a British Crown Colony. Another country (Panama) uses U.S. dollars as the local currency.

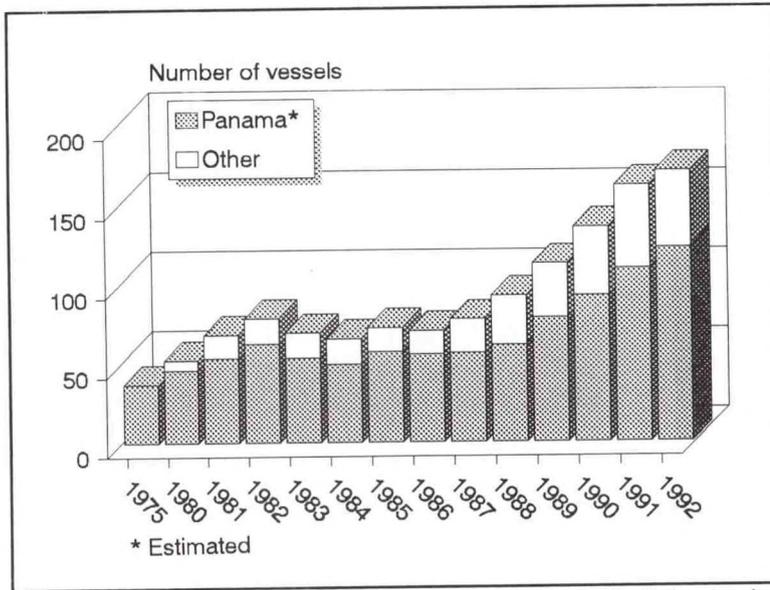


Figure 9.--The number of flag-of-convenience vessels registered in Latin America, primarily Panama, has increased significantly since 1986.

Colonial relationship: Many African countries display considerable deference to the former colonial country and in many cases still receive considerable financial and administrative support as well as a variety of trade advantages. The Latin American countries, on the other hand, have a more independent relationship with foreign countries.

Cultural reasons: Some vessels owners, especially the Spanish, may have chosen Latin American countries for cultural reasons. The Spanish, for example, may find it easier to operate in countries where business can be conducted in Spanish and where there may be already existing commercial and kinship ties.

Foreign owners have registered very significant numbers of fishing vessels in Latin America. While the reasons are not fully understood, the number of vessels involved is striking. The authors conservatively estimate that nearly 1,000 medium (100-499 GRT) and large (500 GRT and greater) foreign-owned fishing vessels and an unknown number of foreign support/transport vessels are now registered in Latin American countries (appendices B5b1 and B4a1).²⁴ The tonnage of the fishing vessels involved alone totals nearly 0.5 million GRT (appendix B5b2), a larger fleet than deployed by any Latin American country. About 250 of these fishing vessels are large vessels with a

total tonnage approaching 0.3 million GRT (appendices B5b1-2). Available statistics suggest that these vessels may constitute one-third to one-half of all large fishing vessels deployed by Latin American countries (appendix B5c).

Countries vary substantially concerning efforts by their citizens to register fishing vessels in other countries.

Approval: Many countries do not restrict flag transfers. Vessel owners have in some cases transferred their vessels with the knowledge and support of the government where the owner resides. Korean officials, for example, appear to have authorized their nationals to conduct high-seas fisheries under foreign flags.²⁵ Taiwan officials

as a matter of policy have actively assisted their fishermen in obtaining flag-of-convenience registrations.²⁶

No definitive policy: Many countries have taken no strong position on such transfers. Some vessels have been reflagged without following the appropriate policies of their home government. In most instances, the governments involved have not attempted to prevent their nationals from reflagging and even where the appropriate formalities have not been followed, have taken little or no action against the individuals involved.

Disapproval: Some owners have transferred vessels in violation of strict regulations in the originating country. Russian officials, for example, are especially concerned about the transfer of Russian-flag vessels to other countries without Government approval.²⁷ Relatively large numbers of Soviet/Russian and other former communist-country vessels have been transferred to Latin American countries.²⁸ It is unclear who currently owns these vessels, but some may have been transferred with little or no payment to the Russian or other state company which owned the vessel.

Foreign owners have found it advantageous to register their fishing vessels in other countries for a variety of reasons.

Diplomatic reasons: Some vessel owners have reflagged their vessels because of problems their government may have with coastal countries off which they desire to operate. Taiwan owners, in particular, have been especially active in seeking flag-of-convenience registrations. This is partly because many coastal countries (especially India, Myanmar, and Sri Lanka) recognize China and thus refuse to grant fishing licenses to Taiwan-flag vessels or allow private companies to sign joint venture or leasing contracts permitting the operation of Taiwan-flag vessels.²⁹ This probably also explains why Taiwan vessel owners have formed companies in foreign countries so that not only will their vessels fly a foreign flag, but so they will also be owned by a foreign-chartered company.³⁰ Taiwan vessels operate extensively virtually all over the world. Often unscheduled port calls are necessary because of collisions, storms, or medical and other emergencies. A Taiwan registration could cause difficulties for a Taiwan vessel captain forced to make port calls in certain countries. Such diplomatic reasons are an especially important factor given the number of vessels Taiwan owners have reflagged.

National fishery management regimes: Vessel owners in many northern hemisphere countries are being adversely affected by strict limits on fishing effort because many important stocks have been badly depleted by over fishing.³¹ The vessel owners thus face a variety of domestic effort restrictions (seasonal closures, gear restrictions and prohibitions, proscribed areas, catch quotas, size limits, bycatch constraints, etc.) which can significantly increase operating costs. Some vessel owners that cannot obtain an adequate allocation off their own coast have concluded that they could avoid these constraints by transferring their registration.

International fishery management regimes: Various international fishery management commissions, such as the Baltic Sea Commission, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the International Commission for the Northeast Atlantic Fisheries (ICNEAF), Northwest Atlantic Fisheries Organization (NAFO), the North Atlantic Salmon

Commission (NASCO), and others have imposed a variety of management regimes.³² The effort restrictions associated with these regimes are generally enforced by each member country regulating those vessels registered under its own flag. As a result, vessel owners are registering their vessels in non-member countries which have no interest in enforcing the management regimes in question.

Bilateral fishery understandings: Several countries have negotiated formal bilateral agreements such as the International Pacific Halibut Commission (Canada and the United States) and the Argentine-Uruguayan fisheries agreement. The area of some of these formal management agreements may extend to high-seas areas. There are also several informal understandings between bordering countries affecting high-seas areas or overlapping jurisdictions. Such disputed areas include the "donut" and "peanut" hole in the northern Pacific and the "loophole" between Norway and Russia in the Barents Sea. Foreign vessel owners are attempting to avoid both formal and informal management regimes adopted by various coastal countries through flag-of-convenience registrations.

Other national regulations: Many countries have strict vessel regulatory standards involving vessel safety, crew nationality, working conditions, sanitation, pollution control, and a variety of other matters. Some of these regulations can be very expensive to comply with, especially for older vessels. Owners appear to be avoiding such regulations by choosing flag-of-convenience countries with less strict or, in many cases, no such regulations with which they have to comply.

Operating costs: Some owners face high operating costs (wages, benefit packages, supplies, insurance, fuel, etc.) in their own country. (Some of these costs are determined by market forces, but national regulations mentioned above often set or affect costs.) In many cases such costs do not permit profitable (as perceived by the owner) operations and vessel owners thus seek to register their vessels in countries with lower costs.

Tax reasons: Some owners may register their vessels in other countries to avoid high taxes in their own country.

Ownership complications: Some individuals or organizations may be registering vessels in other countries to establish ownership. This may be a special problem associated with the state-owned vessels of the former Soviet Union and eastern European countries, a substantial number of which have been reflagged in other countries. ONI estimates that about 80 such vessels appear to have been transferred to Latin American countries (appendix B6). The authors have few details on the privatization process in Russia and the eastern European countries.³³ In some cases the vessels may have been reflagged and the title transferred with only minimal payment to the state company which owned the vessel. This may be one of the primary concerns of Russian officials who object to the flag transfers.³⁴

Investment problems: Some investors are hesitant to commit funds to acquire vessels registered in specific countries. Many European investors, for example, are unwilling to invest in Russian- or Ukrainian-flag vessels out of concern over the tenuous legal systems and political instability in those countries. They are worried that if a dispute developed with their Russian/Ukrainian partners, they would have difficulty pursuing any necessary legal actions through local courts.

Illegal activities: Some of the flag-of-convenience vessels have been involved in illegal activities beyond violation of fishery management regimes. Honduran-flag vessels, for example, have been reportedly smuggling illegal Chinese aliens into the United States. Further, some of the flag-of-convenience vessels are presumably being used for drug trafficking.

Coastal country requirements: Owners may reflag their vessels in a country where they desire to obtain access to coastal stocks. Some countries require fishing vessels to be fully owned by their citizens. Other countries permit foreigners to own fishing vessels, most commonly as minority partners in joint ventures.

Image: Some owners believe that

their high-seas operations may cause less negative reaction if they are registered in a small developing country rather than a country conducting large-scale distant-water fisheries. Other countries may object to vessels registered in countries with which they may have security concerns, such as communist countries during the 1980s.

Market access: Owners have registered vessels in countries which have advantageous tariff or other market access arrangements with leading importing countries. The EC and Japan in particular provide advantageous access terms to countries which have negotiated joint ventures with their fishing companies. The EC also provides extensive assistance and market access to the former colonies of member countries (Lome Convention).

The major Latin American flag-of-convenience countries include:

Panama: Many foreign owners have chosen to register their vessels in Panama. While the reasons for selecting Panama are not fully understood, the country does offer several advantages to foreign owners:

- First, Panama is relatively stable politically.
- Second, there are no currency problems as the country uses the U.S. dollar.
- Third, the Panama Canal makes the country a world transportation hub, facilitating both

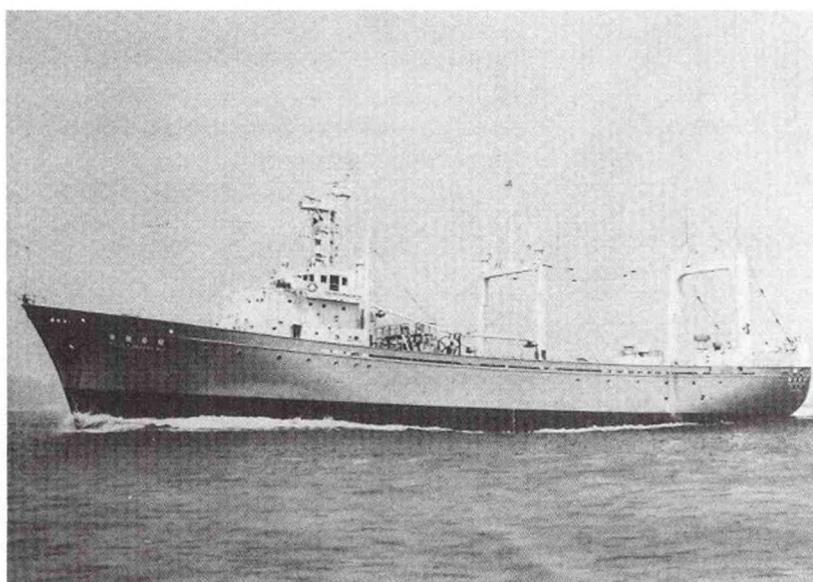


Photo 11.--Most of the flag-of-convenience vessels, like this Japanese-built stern trawler, have been registered in Panama.

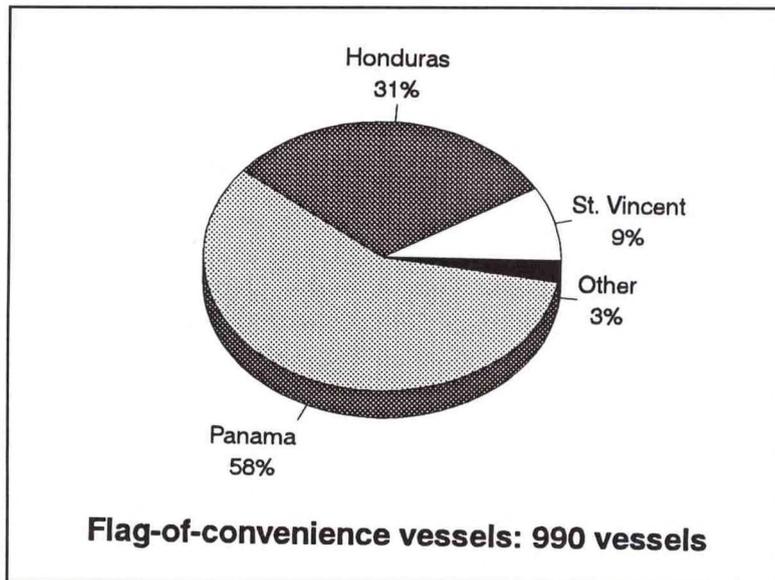


Figure 10.--The flag-of-convenience fishing vessels registered in Latin American countries constitute a fleet of about 1,000 medium- and large-sized fishing vessels.

communications and transportation.

- Fourth, the country is an international financial center with bank secrecy laws.

- Fifth, the Government maintains diplomatic relations with Taiwan, the most important country seeking flag-of-convenience registrations. Whatever the reasons, foreign owners have registered substantial numbers of vessels in Panama. No complete listing is available as Panamanian officials decline to release such data. The authors conservatively estimate, however, that 125 large fishing vessels and 450 medium-sized vessels with a total tonnage of 260,000 GRT (appendices B5b1-2) are registered in Panama. Foreign owners have also registered 17 large fishery support/transport vessels in Panama with a total tonnage exceeding 120,000 GRT (appendices B4b1-2). Notably the number of these registrations has increased sharply since 1988.³⁵

Fishing vessels: The authors have very little information on the Panamanian flag-of-

convenience vessels, but they appear to be a wide variety of vessel types owned and operated by several different European (primarily Spanish) and Asian countries. Notably, Taiwan-owned vessels do not seem to be as important as in Honduras.³⁶ No accurate data on the fishing vessel types are available, but they apparently include trawlers, factory trawlers, seiners, and longliners. The Panamanian-flag vessels have been observed operating in virtually every major ocean fishing area, including the Atlantic (northwestern and eastern central), Pacific (northern and southeastern), and the Indian (western) Oceans.

Support vessels: Panama has registered a large number of fishery support vessels (appendix B4a1 and Panama, appendices A and B). These support/transport vessels were mostly built in (Germany [GDR] and the USSR).³⁷ Some of these vessels (especially the vessels built in Germany-GDR and the Ukraine) are modern vessels built in the late 1980s and early 1990s.³⁸ The transfer of these modern vessels suggests that an unidentified company (or companies) is conducting an important fisheries transshipping/transport operation. The operation clearly involves substantial capital outlays and is part

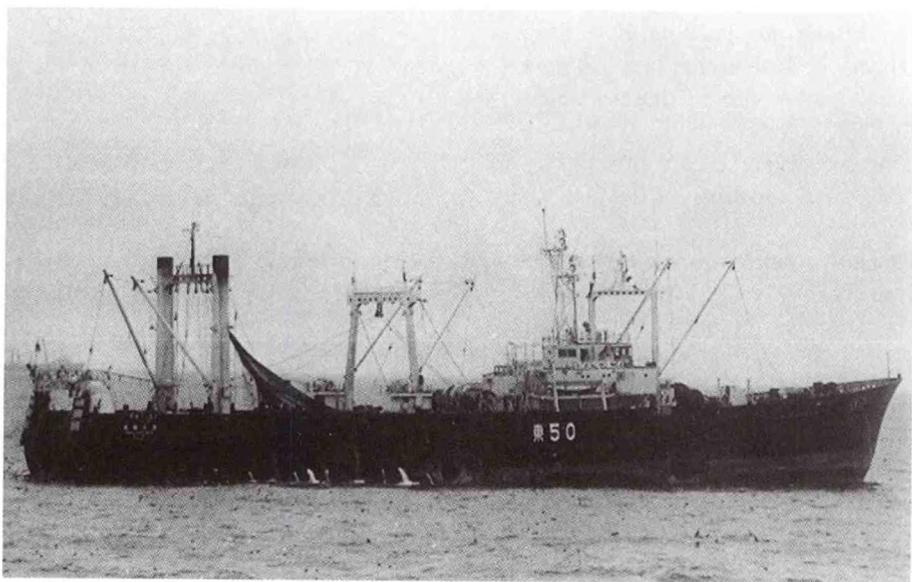


Photo 12.--Many foreign vessels owners have also chose to obtain flag-of-convenience registrations in Honduras.

of a carefully conceived commercial venture. Little information is available, however, on current ownership or operations. Panamanian-flag vessels appear to play an important role in transshipping of various high-seas fisheries. The authors have specifically noted, for example, Panamanian flag vessels transporting the catch of Taiwan-owned high-seas vessels, but few other details are available.

Honduras: The authors cannot explain why so many foreign owners have decided to register their vessels in Honduras. One key factor, however, is the fact that the Honduran Government continues to maintain diplomatic relations with Taiwan. Very large numbers of vessels are involved. Foreign owners have registered 86 large fishing vessels and 217 medium-sized vessels with a total tonnage of over 135,000 GRT (appendices B5b1-2). The authors have little information on the vessels, but



Photo 13.--Several vessels built in the former-Soviet Union and eastern Europe, like this Polish-built vessel, have been reflagged in Honduras and other Latin American countries.

they do appear to include a wide variety of vessel types, including trawlers, factory trawlers, longliners, jiggers, and others (Honduras, appendix E). Most of the large vessels (over 60 vessels) were built in Japan, but are now owned and operated chiefly by Taiwan companies, including probable Taiwan groups based in Singapore and other countries (Honduras, appendix B). Little is known about these companies, most of which may have been created for the express purpose of operating only one or two vessels, but are operated as part of

larger "relative" enterprises. The largest operation is a Taiwan group based in Belgium (Lubmain International) which operates a fleet of seven vessels. Few details are available on actual fishing operations, but Honduran-flag vessels have been observed in the eastern central Atlantic, the northern Atlantic, the southwestern Atlantic, and the western Pacific. Some Honduran officials question the country's registration policy, but the income earned has generated support for the policy on the part of other officials.

St. Vincent: The authors cannot explain why foreign vessel owners have chosen St. Vincent to register their vessels. St. Vincent officials do appear to have promoted the registration of foreign vessels (especially cargo vessels) as an income generating activity. Foreign-owners have registered 24 large fishing vessels and 63 medium-sized vessels with a total tonnage of nearly 31,000 GRT (appendices C5b1-2). The authors have little information on these vessels, but some are reportedly owned by Faroese interests. The vessels were primarily built in Italy and Korea, but the authors have no details on the current owners. St. Vincent-flag vessels have been observed operating in the eastern central Atlantic, the northeastern Atlantic, and the northwestern Atlantic (Barents Sea).

Cayman Islands: Cayman officials issued flag-of-convenience registrations during the 1980s, but since 1989 have ceased making such registrations and are now deleting many of these vessels from their registry. Cayman registration must have appealed to some foreign

owners because it is an important offshore financial center with strong bank secrecy laws. Foreign-owners registered 19 large fishing vessels and 32 medium-sized vessels with a total tonnage of nearly 31,000 GRT in the Caymans (appendices C5b1-2). The vessels involved appear to have been primarily trawlers, factory trawlers, and tuna seiners (Cayman Islands, appendix A). The larger vessels were mostly built in North American and European shipyards and unlike some of the other Latin American flag-of-convenience fleets (Honduras and

Panama), do not seem to be owned or operated primarily by Asian companies. The larger vessels have been observed operating on several distant-water grounds, including the Atlantic (northern, southern, and eastern central) and Pacific (eastern) Oceans. Several medium-sized vessels were of Nicaraguan origin. Caymans officials report that as of 1993 only about 15 flag-of-convenience vessels remain on the registry (appendix B5b1).

Others: Small numbers of foreign-owned vessels have also been registered in a few other Latin American countries, including Belize and the Dominican Republic (appendices C5b1-2). Local sources indicate that the Belizian Government has begun to grant increasing numbers of flag-of-convenience registrations.³⁹ Very little data, however, is available on Belizian registrations (Latin America, appendix B5b1 and Belize, appendix A).

Several distant-water countries are involved in the vessel reflagging in Latin America. Companies in a small number of countries (primarily Korea, Spain, Taiwan, and the former USSR) have obtained most of the flag-of-convenience registrations. This is partly because these countries had large distant-water fleets and many of the fishermen have lost access to traditional fishing grounds because of the increasingly stringent access policies of coastal countries.

Korea: Korea had a large distant-water fleet and is having increasing difficulty maintaining access to traditional grounds.⁴⁰ The Korean Government appears to be promoting the operations of its fishermen on distant-water grounds, including the fishermen working on reflagged vessels. Few details are available, however, explaining why the Korean owners have obtained so many flag-of-convenience registrations.

Spain: Spain had one of the world's largest fishing fleets. Fishermen have been severely affected by actions of coastal countries (Argentina, Canada, Namibia, the United States, and others) limiting foreign fishing. The European Community is currently promoting a major fleet restructuring program under which Spain has to sharply reduce its fleet.⁴¹ As a result, many Spanish vessel owners have found it advantageous to register their vessels in other countries.

Taiwan: Taiwan is another country with a large distant-water fleet which is having difficulty maintaining access to traditional grounds.⁴² The number of Taiwan-owned vessels registered in Latin America is particularly striking. The authors estimate that about a third of the flag-of-convenience vessels registered in Latin American countries are owned by Taiwan companies. This is, at least in part, due to the special diplomatic problem faced by Taiwan fishermen--few countries recognize their Government. Other reasons why individual Taiwan owners have reflagged their vessels are unknown, but include many of the motivations described above.⁴³ Notably, Taiwan companies usually own only 1-2 vessels. The Taiwan owners have created these small companies for a variety of reasons. Cultural factors obviously affect investment patterns and many Taiwan companies appear to be relatively small family-run operations.⁴⁴ Small companies have also been created to more easily obtain credit for operating expenses and for tax advantages under the Taiwan tax code. In many instances, the same owner may be active in several different small companies associated with what Taiwan officials refer to as "relative" enterprises. The association of the small companies with "relative" enterprises can be observed because they use similar Chinese words as their vessel names.⁴⁵ The individual company vessels associated with these "relative" enterprises are often managed, maintained, and operated as part of a large, unified distant-water operation.

USSR: Groups in the former USSR and other former communist countries have been active in registering vessels in Latin America. Many of these vessels were part of the huge state-owned distant-water fleets that can no longer be supported with state subsidies. Some of the vessels involved, however, are modern, recently built vessels. This activity may be associated with the "ownership complications" described above.

Other countries: Companies in a much larger number of countries (Belgium, the Faroes, France, Germany, Greece, Japan, Mauritius, Poland, Portugal, Russia, Singapore, Thailand, Ukraine, the United Kingdom, the United States, Vanuatu, and other countries) have reflagged at least some vessels. In some of the countries (especially Singapore), the actual owners may be Taiwan companies or other overseas Chinese.

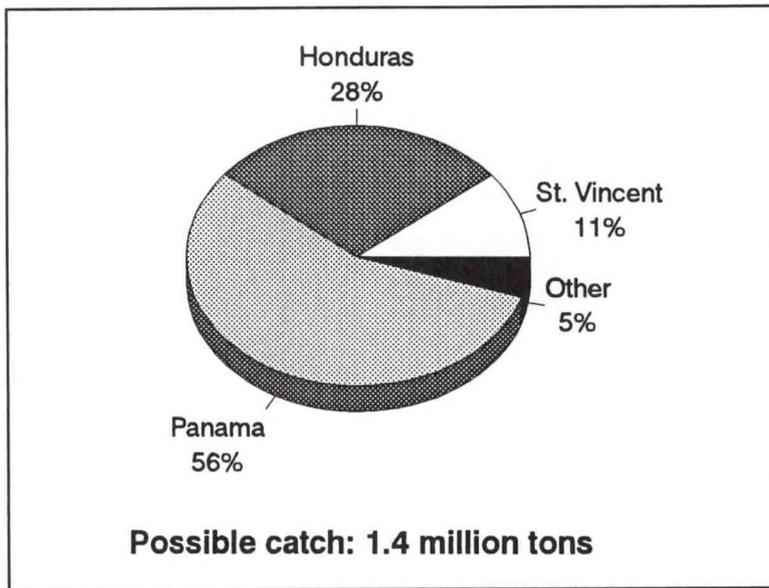


Figure 11.--The flag-of-convenience fishing vessels registered in Latin America have the capability of catching sizeable quantities. Much of the effort is focused on high-value species on the high seas.

Most of the vessels registered by foreign owners in Latin America have been deployed in various high-seas and coastal fisheries outside the Latin American area. The authors have noted some fishing or transshipping activity in two Latin American coastal areas (the southwestern Atlantic and southeastern Pacific), but relatively small numbers of vessels appear to be involved.⁴⁶ Most of the fishing activity appears to be conducted in the non-Latin American ocean fishing areas: Atlantic (northern, eastern central, and southeastern), Pacific (northern and western), and Indian Ocean. Only limited data exists, however, detailing the precise level of activity in each ocean area.

The limited data available on the reflagging in Latin America makes it impossible to accurately estimate the level of activity involved. Given the number (about 1,000 vessels) and capacity (approaching 0.5 million GRT) of the fishing vessels (appendices B5b1-2), the overall flag-of-convenience catch almost certainly exceeds 1 million t and may total as much as 1.4 million tons.⁴⁷ Even this substantial quantity, however, understates the potential adverse impact of the flag-of-convenience vessels on national and international fisheries management regimes. Such large catches can have an especially serious impact because they are concentrated in a few fisheries targeting a small

number of high-value species. Distant-water fisheries are expensive to conduct, forcing the fishermen in countries with market economies to target high-value species.⁴⁸ It is precisely these species, however, that are depleted and the focus of national and international efforts to more effectively manage. The full impact of the flag-of-convenience vessels may thus be impairing the effectiveness of current management regimes.

IV. FOREIGN FISHING

Many Latin American countries initiated strenuous efforts in the 1960s and 1970s to stop foreign distant-water fishing. Several countries (Argentina, Chile, Ecuador, and Peru) unilaterally declared 200-mile zones and sharply curtailed foreign fishing. The precedents established by these countries eventually led to the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and general international acceptance of 200-mile EEZs strengthening coastal state jurisdiction over marine resources. International acceptance of this principle has had a major impact on world fishing patterns, including foreign operations off Latin America.⁴⁹

A. Importance

Latin America is an important fishing area for foreign distant-water fishermen. Foreign fishing was limited during the 1960s, consisting primarily of Japanese and U.S. tuna and shrimp fisheries.

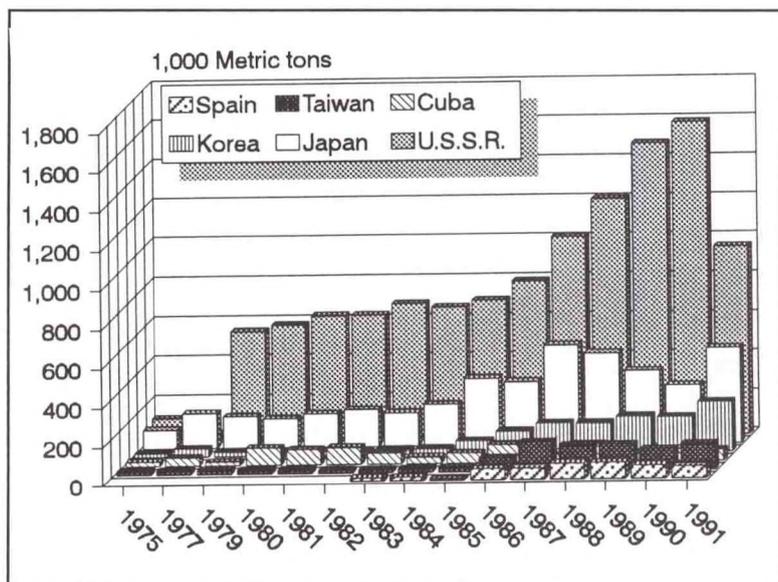


Figure 13.--More than half of the distant-water catch off Latin America has been harvested by the Soviet Union.

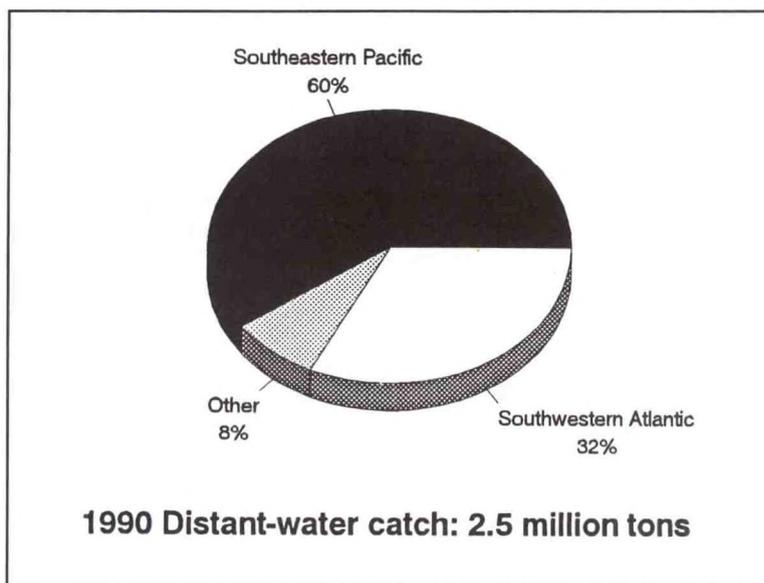


Figure 12.--Most of the foreign catch off Latin America during the 1980s was taken in the southeastern Pacific, but this has changed in 1991-92 with the withdrawal of the Soviet/Russian fleet.

Foreign fishing increased during the early 1970s when Cuba and Poland signed joint ventures with Peru and much more significantly after 1977 when the Soviet Union launched a major high-seas fishery in the southeastern Pacific off Chile and Peru. The authors estimate that foreign fishing off Latin America probably peaked at about 2.5 million t in 1989-90, or 13 percent of the 19.3 million t harvested in the four FAO ocean areas involved (appendix C4a). The foreign catch declined in 1991 to only 2.0 million t and declined further in 1992, probably to about 1.0 million tons--although precise data are not yet available. The 1991-92 declines are due principally to the Soviet/Russian withdrawal from the southeastern Pacific. Future catches will probably continue at these levels in the 1990s. The Russians are unlikely to resume their mid-water fishery for jack mackerel, simply because it was unprofitable in market terms. Other countries are conducting profitable longline fisheries on the high seas (Japan, Korea, Spain, and the United States) as well as new coastal squid fisheries (Japan and Korea). These fisheries are likely to continue.

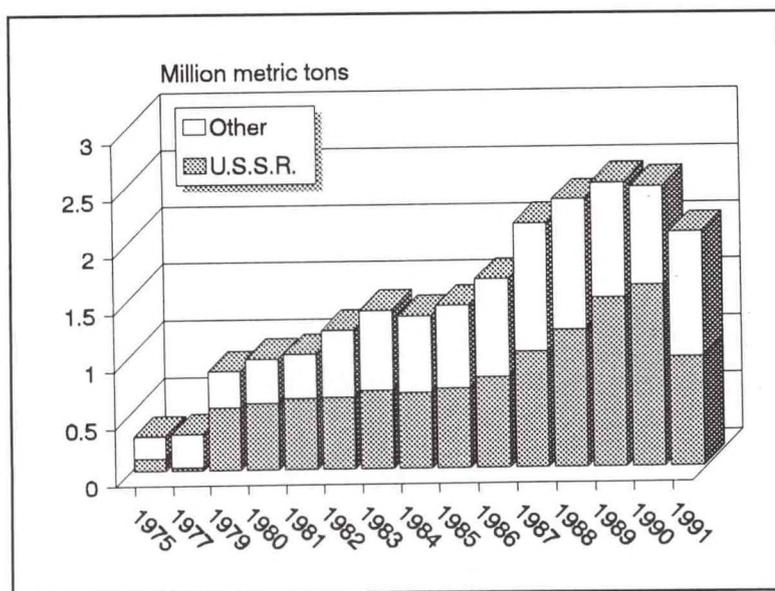


Figure 14.--The Soviet Union was the principal distant-water fishing country off Latin America during the 1980s. Soviet/Russian officials have sharply reduced effort in 1991-92.

Foreign fishermen conduct fisheries in all four major Latin American ocean fishing areas. The largest catches during the 1980s were reported in the southeastern Pacific, but the foreign fishermen may have taken a more valuable catch in the southwestern Atlantic. Since 1991 when the large Soviet/Russian mid-water fleet completed its withdrawal from the southeastern Pacific, the largest foreign catches are being reported in the southwestern Atlantic.

Southeastern Pacific (FAO area 87):

The Soviets reported a massive mid-water trawl fishery during the 1980s, primarily for jack mackerel and other pelagic species.⁵⁰ Other communist countries (Bulgaria, Cuba, and Poland) deployed smaller fleets.⁵¹ Most of the foreign catch was taken on the high seas, but Peru permitted some fishing within its 200-mile zone. The enormous Soviet southeastern Pacific fishery peaked at 1.3 million t in 1991 and the high-seas fishery has since been terminated by the Russians who found it impossible to sustain without massive subsidies. Smaller quantities of tunas and billfish have been taken by the Japanese and Koreans. These two countries in 1990 launched important

new fisheries for squid off Ecuador and Peru which in 1992 may have exceeded 0.3 million t annually.

Southwestern Atlantic (FAO area 41):

The foreign catch peaked at 1.1 million t in 1989 and has since declined to 0.8 million t in 1991. Six different distant-water countries (the USSR, Korea, Taiwan, Japan, Spain, and Poland) report significant catches in the southwestern Atlantic (appendix C4d2). The relative importance of each country has varied from year to year. The Soviet Union was the leading country in 1991 and took 0.2 million tons. This probably changed in 1993 when the Argentine-Soviet fisheries agreement expired, but no details are currently available on where the Russians will redeploy the vessels that formerly operated off Argentina.⁵² Most

countries have reported declining catches in recent years, but Taiwan, which fishes extensively on the high-seas, reported a substantial 1991 increase. Foreign distant-water fishermen take important quantities on the high seas, but the Falkland Islands, and to a lesser extent Argentina, also permit foreign fishing within their coastal zones. Much of the foreign catch is squid (*Illex* and *Loligo*), but substantial quantities of demersal finfish are also

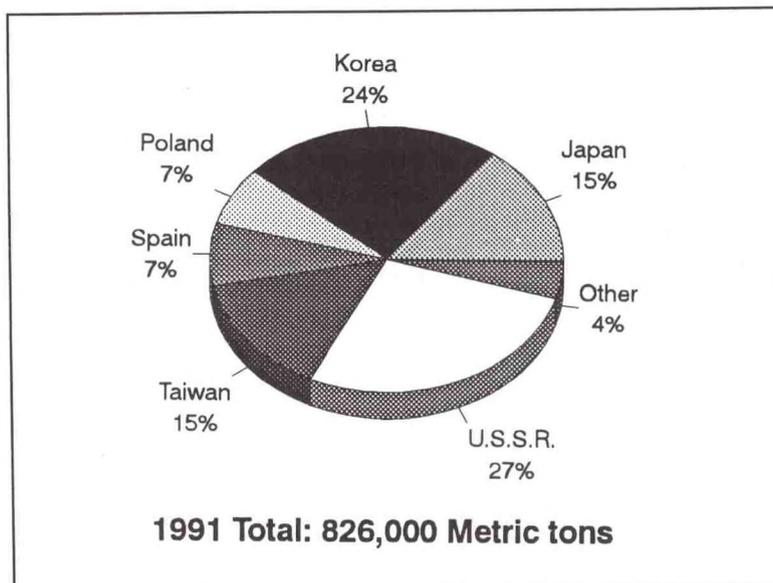


Figure 15.--Several different distant-water countries are active in the southwestern Atlantic.

taken.

Western Central Atlantic (FAO area 31): Foreign catches in the western central Atlantic are minor, totaling only 8,000 t in 1991. Catches are evenly distributed among five countries (Japan, Korea, Spain, Taiwan, and the United States) (appendix C4c). The primary target species are tunas, swordfish, and other billfish.

Eastern Central Pacific (FAO area 77): Foreign fishing in the eastern central Pacific totaled about 0.2 million t in 1991, but substantial quantities of this was taken off several South Pacific islands rather than off Latin America.⁵³ Almost all of the catch is taken by Japan and to a lesser extent Korea (appendix C4f). The primary species involved are bigeye tuna and squid.

B. Policies

Latin American countries pursue a wide variety of policies toward foreign fishermen. Most Latin American countries have implemented highly restrictive foreign fishing policies.⁵⁴ Unlike some developing countries (especially African countries), many Latin American countries have the enforcement capability to prevent, or at least significantly limit, foreign fishermen in their coastal waters. Several Latin American countries (primarily Argentina, Chile, Ecuador, and Peru) led the effort during the 1960-70s to establish 200-mile coastal zones and curtail foreign fishing. Other countries have been much more open to foreign fishing (Colombia, Guyana, and Suriname). Some countries (especially Peru) have had difficulty establishing a national consensus on the appropriate policies toward foreign fishermen and the country's policies, as a result, have varied from administration to administration. Most Latin American countries have ratified the 1982 U.N. Law of the Sea Convention (UNCLOS) and accept the principle of maximum utilization of marine resources. Many

countries have shown, however, a great reluctance in practice to allocate available resources to foreign fishermen, even resources not being fully utilized by domestic fishermen. Some countries (Argentina, Brazil, and Chile) have pursued especially restrictive policies. The licensing of foreign fishermen has surfaced as a highly charged political issue in several countries (Argentina, Ecuador, Mexico, and Peru).

Some opportunities exist for foreign fishermen off Latin America. Several countries (Colombia, Ecuador, the Falkland Islands, French Guiana, Guyana, and Suriname) have licensed foreign fishermen or facilitated charter contracts with local companies. Other countries have recently revised their foreign fishing regulations (Argentina and Peru) in an effort to generate income or acquire more modern fishing vessels. These new policies are in several cases associated with the free market economic reforms that a new generation of Latin American leaders (President Menem, President Fujimori, and others) are introducing. As a result, both countries (Argentina and Peru) have shifted their foreign fishing policies from a focus on relations with the USSR and other communist countries to promoting commercial ties with companies in countries with market economies. Peru ended its Soviet joint venture in 1991 and Argentina in 1993.

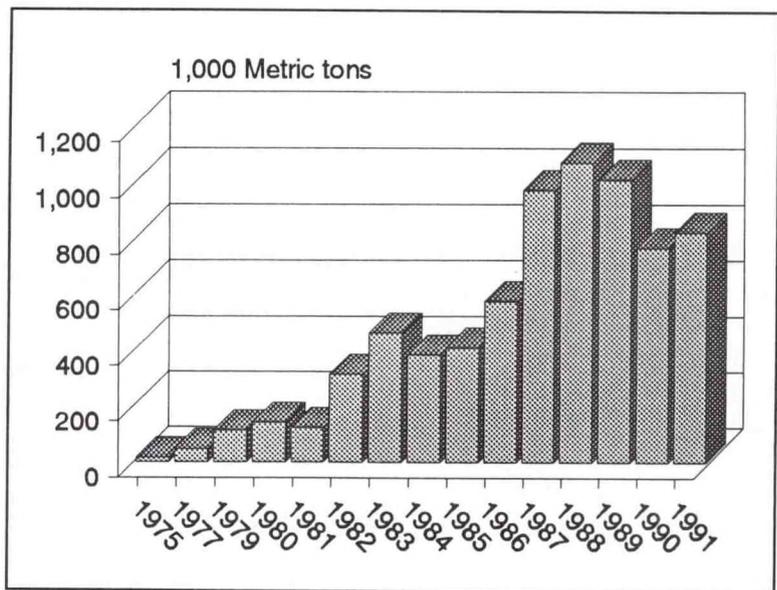


Figure 16.--Foreign fishing in the southwestern Atlantic increased sharply during and after the 1982 Falklands conflict and did not level off until the British began to manage Falklands fisheries in 1987.



Photo 14.--Argentina signed a bilateral with the Soviets in 1986 and until 1993, when that bilateral expired, much of the Soviet fishing in the southwestern Atlantic was within Argentine waters.

Argentina: Argentina pursued highly restrictive foreign fishing policies during the 1980s. While the Government desired to negotiate fishery agreements with foreign countries as part of its overall Falklands policy, it did not offer access arrangements sufficiently attractive to interest unsubsidized foreign fishermen from non-communist countries. Only the Soviet Union and Bulgaria, countries with heavily subsidized fleets, signed access agreements during the 1980s. The Menem Administration's economic policies appear to have helped Argentine companies establish a variety of contacts with European companies allowing them to significantly expand the number of large fishing vessels in the fleet, but few details are available. The Administration in 1992 issued new vessel chartering regulations (a licensing regime in all but name). Taiwan and Japanese fishermen have already purchased licenses. The Administration has also signed a bilateral agreement which will theoretically provide access for up to 70 European Community vessels. These arrangements appear to have the support of the country's major fishery trade associations.⁵⁵ It is not clear, however, what the industry's reaction will be if large numbers of EC fishermen actually began fishing off Argentina. Foreign fishing has in the past proven politically contentious in Argentina and other Latin American countries. It is unclear if the Menem Administration will continue to pursue the current policy if criticism of the foreign fishermen escalates.

Argentina has to contend with the Falklands which also licenses foreign fishermen. Some of the resources involved, especially squid, are shared stocks and unless Argentine and the Falkland officials reach a mutually beneficial understanding, it will be impossible to effectively manage the stocks which are also heavily fished on the high seas.

Colombia: Colombia conducts one of the largest licensing programs in Latin America through vessels contracted by Colombian fishing companies.⁵⁶ The country has a very small fishing industry despite substantial potential resources. The Government, as a result, licenses about 150 foreign vessels to supply Colombian processing plants (Colombia, appendix E).⁵⁷ Most of the vessels are tuna seiners and small shrimp, lobster, and other fishing vessels. Biologists have expressed some concern about the status of several important stocks and the Government is unlikely to significantly increase the number of licenses issued.

Ecuador: Ecuador issued licenses to foreign tuna fishermen during the 1970s-80s, but since 1991 has required that all foreign fishermen interested in access work through Ecuadorean companies. The Ecuadorean company can either lease foreign vessels or negotiate an association agreement. Leased or associated vessels can then operate in Ecuadorean waters and for the most part be treated as an Ecuadorean-flag vessel. The leasing arrangements were common in the mid 1970s, but since 1978 most foreign fishermen have operated under association contracts (Ecuador, appendix D).⁵⁸ Tuna was the primary target species during the 1980s, but Japanese and Korean fishermen initiated a new squid fishery in 1991. About 24 foreign vessels operated under such contracts in 1992, although the Government reportedly closed the squid fishery in October 1992, causing 12 foreign vessels to withdraw.⁵⁹

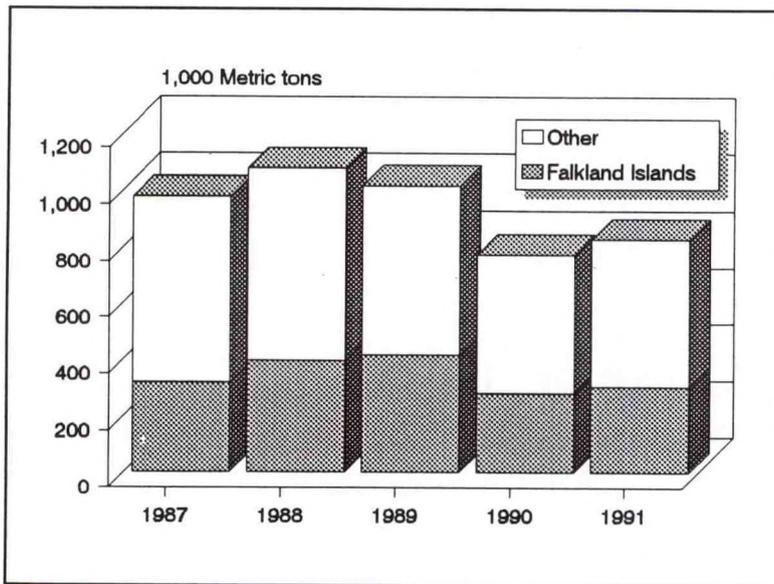


Figure 17.--A substantial part of the distant-water catch in the southwestern Atlantic is taken off the Falklands.

El Salvador: The Salvadoran Government has implemented a licensing program for foreign fishermen, but to date no such licenses have been issued.⁶⁰

Falkland Islands: Falkland officials have since 1987 allocated 280,000-314,000 t of squid and fish annually (appendix C4d5). The sale of these licenses has become a major source of income for the Falkland Islands Government (FIG). Some British biologists are concerned about the status of stocks, in part because of extensive high-seas fishing outside the Falklands Islands Interim Fisheries and Conservation Zone (FICZ). FIG reduced the number of licenses issued in 1990 because of those concerns (Falkland Islands, appendix B1a). Officials are still concerned about stocks and are unlikely to increase the number of licenses issued. FIG may, in fact, have to further reduce license sales to preserve stocks if Argentina licenses increased numbers of vessels.

Guyana: Guyana is one of the few Latin American countries that issues licenses directly to distant-water fishermen. The Government issues more than 100 licenses annually to foreign fishermen, but has been steadily

reducing the number each year (Guyana, appendix A). The number issued in 1992 was 103.⁶¹ The Government is unlikely to significantly increase the number of licenses issued during the 1990s.

Panama: Panama has the most developed fishing industry in Central America. The country's fishermen are fully utilizing most available resources. The country does license some foreign fishermen, but the U.S. Embassy reports that such licenses are restricted to tuna. The Government issued 30 licenses in 1993, but no data is available on the nationality of the fishermen.⁶²

Peru: Several different Peruvian administrations tried to formulate access arrangements for foreign fishermen so the country could obtain some benefit from the massive foreign effort deployed in the southeastern Pacific. Sharp criticism of these efforts, especially arrangements for Soviet and other state fishing fleets, by a broad spectrum of Peruvians eventually resulted in the termination of most access arrangements and discouraged many foreign fishermen from seeking access. The Garcia Administration allowed some foreign fishermen, mostly Japanese and Korean tuna fishermen, to

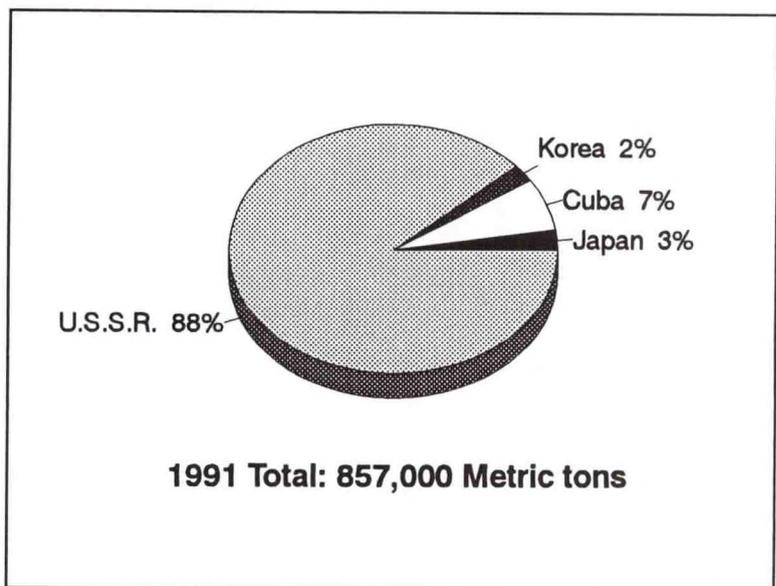


Figure 18.--Foreign fishermen have harvested large quantities off Chile and Peru. Peru has negotiated joint ventures and sell licenses for some fishing within its 200-mile limit.

continue purchasing licenses and attempted unsuccessfully to negotiate bilateral agreements. The Japanese and Korean fishermen have recently developed a new fishery for giant squid off Peru. The Fujimori Administration has radically changed Peruvian licensing policy and believes that it is not in Peru's best interest to negotiate bilateral government to government fisheries access agreement.⁶³ The Administration instead is attempting to generate income from sales to individual fishermen. The Administration offers very substantial squid allocations and requires interested foreign and domestic fishermen to bid for them competitively, earning nearly \$20 million in 1992.⁶⁴ Domestic fishermen have criticized the policy and are urging the Administration to modify it so as to ensure that they receive favorable treatment in the bidding process. Peruvian officials are unlikely to significantly increase the number of licenses issued until studies assessing the resource can be completed.⁶⁵

Suriname: The Surinamese Government since 1985 has annually issued 120-180 licenses to foreign fishermen (mostly Japan, Korea, and Venezuela), but in 1992 issued more than 220 licenses (Suriname, appendix A).⁶⁶ Most of the foreign fishermen are required to land at least part of their catch in Suriname. As a result, a substantial part of the fish available in Surinamese domestic markets is the incidental catch of these foreign fishermen.

Trinidad: The Trinidadian Government licenses only a small number of foreign fishermen annually. Since 1987 the number has varied from two to six. Many of the fishermen applying have been U.S. fishermen, but for unknown reasons many of the fishermen receiving licenses never deployed their vessels (Trinidad, appendix A).⁶⁷

Many other Latin American countries (Brazil, Chile, and Mexico) continue to discourage foreign fishing:

Brazil: Brazil has strictly limited foreign fishing since the 1970s. Some access was possible for foreign fishermen (especially the Japanese and Koreans) by leasing vessels to Brazilian companies (Brazil, appendix B). Such arrangements have declined during the 1990s and the authors know of few foreign vessels currently under contract.

Chile: Chile has also excluded foreign fishermen since the early 1970s. The country does not license foreign-flag fishermen for operations within coastal waters.⁶⁸ Some limited "research/experimental" fishing has been allowed off the southern coast, but this activity has been significantly scaled back in recent years.

Mexico: Mexico has sharply curtailed foreign fishing off its coast since declaring a 200-mile EEZ in 1976. Currently the only authorized foreign fishing is conducted by the Cubans who are given an annual grouper allocation off the Yucatan.⁶⁹ Some individual foreign companies are permitted to conduct "experimental" fisheries, under contract with Mexican companies, for species not fully utilized by Mexican fishermen. The largest such activity currently underway is conducted by more than 10 U.S. fishermen who are longlining tuna and related species in the southern Gulf of Mexico and Caribbean.

C. Enforcement

Several Latin American countries report significant enforcement problems. Officials are concerned about both unauthorized foreign fishing in their 200-mile zones as well as fishing on the high-seas targeting straddling stocks.

Argentina: The Argentine Navy conducts extensive enforcement patrols and regularly reports seizures of foreign fishing vessels (Bulgaria, Japan, Korea, Poland, Spain, and the USSR) operating near the outer periphery of the country's 200-mile zone. In several instances the Navy has fired on violators. Substantial foreign fishing is believed to take place just beyond the 200-mile zone on the high seas north of the Falklands. Much of this activity is for squid and such high-seas fishing is believed to have a significant adverse impact on catches in both Falklands and Argentine waters.

Brazil: Brazilian officials are concerned about foreign longlining (especially Spanish) on the high seas off Brazil. Authorities report increasing port calls by foreign vessels and believe that the fishermen are using such calls as excuses to fish in

Brazilian waters.

Chile: Chile rarely reports vessel seizures within its 200-mile zone, except for occasional Peruvian vessels off the northern coast. The Government is concerned, however, about foreign fishing on the high seas. The level of activity on the high-seas off Chile has declined significantly since the withdrawal of the Soviet/Russian fleet in 1991-92. Some foreign fishing continues (mostly longlining for tunas, swordfish, and other species). The Government has tried to restrict this effort by preventing foreign fishermen (mostly U.S. and Spanish) from transshipping the catch of species also fished by Chilean fishermen (swordfish and jack mackerel) through Chilean ports. Government officials have discussed the possibility of declaring some jurisdiction over waters beyond the current 200-mile limit, but are currently participating in the United Nations high-seas talks.

Mexico: Mexico reports occasional seizures of foreign fishing vessels, mostly shrimp trawlers in the Gulf of Mexico. The number of such seizures has declined sharply from the early 1980s because of Mexican enforcement patrols and efforts by U.S. officials to discourage such illegal fishing through enforcement of the Lacey Act. U.S. officials are concerned about continued unauthorized Mexican fishing in U.S. waters, mostly small shark vessels in the Gulf. The two countries have held preliminary discussions about the possibility of correlating enforcement efforts to avoid violent actions at sea.

Peru: The authors have noted few recent Peruvian seizures of foreign fishing vessels. Some Peruvian observers were convinced that the Soviet and other communist state fishing fleets were catching substantial quantities in Peruvian waters without licenses.⁷⁰ The authors cannot, however, confirm the Peruvian claims. The Soviets/Russians have since terminated their massive mid-water fishery on the high-seas in the southeastern Pacific.

Venezuela: Venezuelan officials report seizing about 20 foreign vessels for illegally fishing without licenses.⁷¹

D. Transshipments

Foreign distant-water fleets transship substantial quantities of seafood through various Latin American countries. The authors, however, have been able to acquire very little information on this activity.

Argentina: Argentina generally restricted foreign transshipments through its ports during the 1980s. The Argentine Government acted to curtail transshipments when Polish fishermen began transship large quantities taken off the Falklands during the early 1980s. Presumably the Argentine Government is now allowing the Japanese and Korean jiggers which obtained licenses (charters) in 1992 to transship, but information is not yet available confirming this.

Brazil: Brazil strictly prohibits fishery transshipments.

Cayman Islands: Foreign fishermen are reportedly transshipping lobster and other species, but few details are available.⁷² Some observers believe that Cuban or Nicaraguan fishermen may be transshipping product through the Caymans.

Chile: Some foreign fishermen are transshipping their catch through two Chilean ports, Punta Arenas in the south and Arica in the north. Punta Arenas is primarily being used by foreign vessels fishing in the South Atlantic to obtain supplies and repairs, but some transshipping also occurs. Arica is being used by various countries (Japan, Korea, Ukraine, and others) to transship their catches taken in the southeastern Pacific outside of the Chilean 200-mile zone. The Chilean Government, however, prohibits transshipping of species which Chilean fishermen target (such as swordfish and jack mackerel).⁷³

Costa Rica: One local source reports that no transshipping has occurred through Costa Rica during 1992-93. Foreign fishermen used to transship some tuna through Costa Rica. Most of the transshipments were large yellowfin, but transshipping activity has reportedly decline as greater emphasis has been placed on dolphin safe operations. Additionally, the decision by major European importers to avoid ETP-origin tuna has further reduced transshipping activity. Some

foreign-caught tuna is being landed in Costa Rica for loining and then exported as Costa Rican-origin product.⁷⁴

Dominican Republic: The Dominican Government does not permit foreign fishermen to transship through Dominican ports.⁷⁵

Ecuador: Ecuador permits transshipping only through one of its "maquila" plants.⁷⁶

Falklands: Some of the foreign fishermen operating with Falklands licenses transship through Port Stanley, but this is believed to be a relatively limited part of the catch. Many vessels conduct at sea transfers to refrigerated fish carriers or call at Montevideo.

Panama: Foreign tuna fishermen transshipped their ETP catches off Panama's Taboga islands during the 1970s and 1980s. This activity has apparently declined in recent years, but there is still significant transshipping activity through Balboa and Vacamonte. Nearly 20 countries transship fishery products through Panama, but seven countries are extensively involved (Colombia, Cyprus, Ecuador, the United States, Mexico, Vanuatu, and Venezuela) (Panama, appendices C and G). Much of the product involved appears to be the yellowfin catch of the international tuna fleet, but other species are also transshipped. The Soviets, for example have been transshipping lobster.⁷⁷

Peru: Foreign fishermen are permitted to transship their catch through Peruvian ports. One local observer indicates that some foreign fishermen avoid doing so because of the cholera problem which adversely affects the prices of product shipped from Peruvian ports.

St. Lucia: Taiwan tuna longliners operating in the central Atlantic transship some of their catch through St. Lucia. The Taiwan fishermen reportedly operate from 30-40° N to 20-70° W from October to February they then shift operations to 15-25° N to 20-60° W from April to August. Other Taiwan transshipment points include Las Palmas, Saint Martin, and Trinidad.

St. Martin: Taiwan longliners operating in the central Atlantic transship through St. Martin. (For details see St. Lucia above.) Dated reports indicate

that the Korean longline fishermen also transshipped through St. Martin, but no current information is available.

St. Vincent: Japan has financed the construction of a new fishing port in St. Vincent. There does not appear, however, to be significant transshipments through the port. Tuna and other species are being shipped from St. Vincent, but this may be mostly the catch of five longliners that the Japanese have sold to local fishermen.⁷⁸

Trinidad: Foreign fishermen transship their catch through the facilities of the state-owned National Fishing Company. The principal country involved is Taiwan which transshipped a record 4,100t in 1990 (Trinidad, appendix B).⁷⁹ For details on Taiwan operations see St. Lucia above. Korea reportedly transshipped through Trinidad in the early 1980s, but this activity has declined in recent years.

Uruguay: Uruguay has for years permitted foreign longliners operating in the South Atlantic for albacore and other species outside the Uruguayan 200-mile zone to transship their catch through Montevideo. Many of the foreign vessels operating off the Falklands and in international waters off Argentina also transship through Montevideo. The port is attractive not only because of the good port facilities and regular cargo traffic, but because the city offers many recreational diversions for the fishermen who have been at sea for months. The foreign vessels operating in the South Atlantic also reportedly use Port Stanley (Falkland Islands), Durban (South Africa), and Punta Arenas (Chile).

Venezuela: Taiwan and other distant-water fishermen are transshipping tuna, swordfish, and other species through Venezuela. Most of the transshipping is currently taking place at La Guira. No data is available, but Venezuelan officials believe that the capacity is significant.⁸⁰

V. JOINT VENTURES

Latin American countries have employed a variety of joint venture programs as part of their overall fishery development efforts. Joint venture companies with foreign equity investment were formed during the 1960-70s. These ventures have in some countries (especially Argentina and Chile) played an important role in developing the local fishing industry. In many other countries, however, the ventures appear to have had little long-term impact. Several coastal and distant-water countries have reported generally unsatisfactory experiences. Many coastal countries appear to have had very high, perhaps unrealistic, expectations for the ventures. Government officials and company executives were generally dissatisfied with a host of matters, including fish deliveries, fee payments, profits realized, training, capture and processing technology transfer, and vessels and equipment received. Their ensuing disappointment with the results achieved led to legal actions, litigation, financial losses and even business failures, and prosecutions which have been widely publicized in the press. The problems which developed confirmed a widely held distrust in many countries toward foreign investors. Foreign investors and fishermen, on the other hand, complain of various difficult problems associated with conducting business in some countries. They especially object to incident where local partners and government officials, after contracts had been finalized, sought to revise the arrangements resulting in losses and, in some cases, prosecutions and the seizures of assets.

Latin American officials, convinced that foreign investors and fishermen, were not sharing their profits equitably, established special legal requirements for joint ventures. Many Latin American countries implemented joint venture regulations setting standards for local ownership, taxes, profit repatriation, and other matters. In

many cases the fishery joint venture regulations were more strict than for most other ventures. The regulations governing vessel ownership, for example, often preclude foreigners from owning a majority share. Other countries (such as Mexico) passed laws and regulations excluding foreign investors, and domestic investors as well, from important sectors of the fishing industry.⁸¹ As a result, many foreign investors generally avoided equity investments under the restrictive terms established. The financial crisis



Photo 15.--Argentina has acquired many foreign-built fishing vessels through joint ventures.

experienced by many Latin American countries (especially Argentina, Brazil, and Mexico) during the 1980s further discouraged foreign investors. The authors cannot validly evaluate the conflicting claims with available information. It is clear, however, that restrictive government regulations generally discouraged equity ventures in Latin American fisheries during the 1980s.

The primary foreign interest in Latin American fisheries has been access for distant-water fishing. Hard pressed European and Asian fishermen have been especially interested in access to Latin American coastal waters. Many Latin American countries specifically prohibited foreign fishermen from gaining access through joint ventures. Most Latin American countries, require vessels deployed by national or joint venture companies to be majority owned by local nationals. Officials have decided that while licensing foreign-flag fishermen was not in the country's interest, they would be



Photo 16.--Joint ventures have helped introduce needed technological advances in Latin American fisheries.

interested in arrangements through which the foreign fishermen could contribute to the development of the local fishing industry. Many Latin American countries maintained such strict requirements, however, that few private fishing companies concluded that equity ventures could be profitable.

Several Latin American countries during the 1980s allowed foreign fishermen interested in access to sign leasing or other contracts with local companies. Foreign fishermen have shown considerable interest in these leasing arrangements (Argentina, Brazil, Colombia, Ecuador, Mexico, Peru, and Suriname). In some countries the foreign fishermen were required to form joint companies with local participation to obtain allocations. Such ventures have generally not required foreign equity investment, other than furnishing vessels, and in most instances the foreign owners have been allowed to retain title to the vessels provided. Such ventures, which rarely included investments in shore facilities, however, have provided limited long-term benefits to the coastal country. The more limited joint venture approach of providing allocations to

foreign fishermen who are operating under contract to local companies is generating income through the sales of licenses. In Peru alone, such sales appear to have earned the Government nearly \$20 million in 1992 and more than double that amount in the first half of 1993 alone.⁸²

The long-term impact of these association/lease contracts in such areas as technology transfer is yet to be seen. The overall impact of Latin American joint venture policies appears to have generally been to discourage foreign equity investment in the small local industries. This has substantially reduced exchanges with some major world fishing countries (Japan, the EC, and the United States) which are also the major markets for Latin American fishery exports. Thus, the restrictive joint venture policies pursued have not only limited investment, but have also curtailed technology transfer. The restrictions also discouraged foreign contacts which could have helped improve market access and the development of high-quality, value-added products.

The joint venture experience in major Latin American countries has been as follows:

Argentina: Joint ventures during the 1960s and 70s played an important role in the development of the local fishing industry. The difficulty of doing business in Argentina and the country's economic crisis during the 1980s, however, generally discouraged foreign companies in countries with market economies from forming equity joint ventures. The Government attempted to interest foreign companies in new ventures during the mid-1980s, but the requirements were so rigorous and economic conditions so discouraging that only communist countries (the USSR and Bulgaria) with subsidized fleets were able to accept Argentine terms. These ventures, while beneficial to the Argentine companies involved, offered little long-term assistance in modernizing the Argentine fishing industry or helping to improve processing standards. Many observers believe that upgrading industry standards could help make Argentina more competitive in world markets and substantially increase export earnings. The Menem Administration (1989-to date) has implemented reforms which have apparently attracted more interest by foreign companies. Improved Argentine economic conditions and the falling cod stocks in

the northern Atlantic have created significant market opportunities for Argentina.⁸³ Joint ventures and other associations with foreign companies, especially Spanish companies, have assisted Argentina in significantly expanding the fleet since 1989 (appendix B6).⁸⁴ Few details, however, are available on these associations. Foreign associations have helped modernize both the fleet and processing standards as well as initiate a new surimi industry. The Menem Administration's 1992 vessel leasing program and EC agreement are designed in part to promote the formation of joint ventures.

Brazil: The Brazilian Government in the 1970s insisted that foreign fishermen interested in access form joint ventures. The Government required the transfer of both the vessel flag and ownership and, as a result, few successful joint ventures were formed. Several companies leased foreign vessels (primarily Japanese and Korean),⁸⁵ but these associations did not involve equity commitments and have been of little help with efforts to modernize the Brazilian fishing fleet. Foreign equity joint ventures in Brazil are currently believed to be very limited. One U.S. company is involved in the canning industry, including sardines and tuna, but actual active fishery joint ventures are limited. The lack of involvement with foreign companies is one factor explaining the limited progress in

modernizing the industry. Important fisheries are still conducted by artisanal fishermen and their often primitive handling procedures affect both the quality and the value of the catch.⁸⁶ Brazil consumes more of its fishery production (especially shrimp) than many other Latin American countries. While export earnings are still important, the country, unlike most other Latin American countries, has made little progress in expanding export shipments during the 1980s (appendix E1).

Chile: Chile has been more open to foreign investment than most other Latin American countries. Some joint ventures have been helpful in attracting foreign capital and modern technology. Foreign companies have played especially important roles, especially with the demersal trawl fishery, krill fishery, surimi production, and salmon aquaculture. The country's free market approach, however, has probably been the key factor in helping well-financed and managed fishing companies build the most modern, profitable fishing industry in Latin America. The results show in the steadily increasing export earnings during the 1980s (appendix E1).

Mexico: The Salinas Administration (1988-94) has had a major impact on the Mexican economy, including the fishing industry. While the administration has made considerable progress in creating the legal basis for a modern fishing industry and selling off inefficient state companies, it has not yet succeeded in attracting significant foreign investment in fisheries. The Administration has reported considerable success in attracting foreign investment in other sectors, but little of that investment appears to have gone into fishery projects. Some foreign investors (primarily United States) have made limited investments and forged extensive contacts with Mexican companies and brokers, but the authors know of no formal fishery joint venture formed during the Salinas Administration. The Administration has conducted extensive trade missions in Asia and Europe and is planning one in the United States, but has not yet



Photo 17.--Several Latin American countries are promoting joint ventures to obtain investment capital and technology needed to modernize the fishing fleet and processing plants.
Dennis Weidner

succeeded in stimulating increased foreign investment in the fishing industry.

Peru: Peruvian hostility to foreign investment has caused the joint venture issue to emerge as a contentious political issue. Several Peruvian administrations (Velazco, Belaúnde, and García) have been criticized for signing supposedly unrewarding agreements with foreign fishermen. The political controversy over foreign participation, nationalization of assets, unfavorable regulations, and Peru's economic crisis have generally precluded the formation of fishery joint ventures during the 1980s. The Fujimori Administration (1990-to date) is revising joint venture regulations. The Administration is actively seeking foreign investment.⁸⁷ Full details on the new regulations are not available, but they do appear to be attracting considerable foreign interest. The joint venture issue continues to be controversial in Peru and it is unclear whether the new approach will become long-term Government policy or just the latest in a series of short-lived approaches to the problem.

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Note: The information in this Latin American overview was heavily drawn from the various country chapters. Individuals and published documents of special assistance in preparing this section are as follows:

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ENDNOTES

INTRODUCTORY SECTION

1. The Soviet Union began increasing oil prices to its Eastern European allies during the 1980s, computing prices on a 3-year rolling average that was still well below prevailing world market prices. The Soviets delivered oil to Cuba under even more favorable arrangements, supplying almost the entire Cuban oil requirements. The Soviets supplied the oil through barter arrangements which over-valued Cuban sugar and other exports. In effect, the oil was delivered at very low prices and is a major component of the massive Cuban debt to the Soviets (Russians) which almost certainly will never be repaid.

2. U.S. Embassy, Quito, September 30, 1993.

3. Falkland officials issued more than 300 licenses annually during 1987-89, but since 1990 have issued less than 300 licenses each year (Falklands, appendix B1a).

4. U.S. Embassy, Georgetown, July 15, 1993.

5. Ing. CIP Henry Hartley y Soto, Director General, Oficina de Economía Pesquera, Ministerio de Pesquería, "Pesquería en el Perú: Re-estructurando el sector y fomentando las inversines nacionales y extranjeras," unpublished report, August 23, 1993.

6. U.S. Embassy, Paramaribo, June 30, 1993.

7. Cheng-Fei Huang, Fisheries Specialist, Taiwan Coordinating Council for North American Affairs, personal communications, October 21, 1993.

8. The authors have used the Lloyd's estimates here because it provides time line data. The authors believe, however, that some of the Lloyd's country entries omit a fairly large number of vessels. The authors current estimates of the flag-of convenience vessels are summarized in appendices B5a-c.

9. The Soviet Union and other communist countries during the 1980s were able to harvest low-valued species because of state subsidies. Inexpensive diesel fuel was the major component of the subsidy, but the Soviets supplied vessels, spare parts, gear, supplies, etc. to the fishing companies with minimal cost accounting. The Soviet companies paid fishermen and workers extremely low salaries, in effect a subsidy to the state enterprises. Some details on the economics of Soviet state fishing companies are available in Vladil Lysenko, *A Crime Against the World*, (Victor Gollancz: London, 1983), 254 p. Fishermen from countries with market economies (Japan, Korea, and Spain), however, have to target high-value species to justify costly distant-water operations.

10. Huang, personal communications, *op. cit.*, October 21, 1993.

11. Available information indicates that most of the transferred vessels were built in Germany (GDR) or Poland. The authors believe, however, that many of these vessels were built for Soviet companies and the property of Soviet/Russian state-owned companies when transferred to Latin American registration.

SECTION I. (Latin American Fisheries)

12. For an overview of Latin American fisheries see Dennis Weidner, "Las pesquerías latinoamericanas," *Pesca*, January-February, 1990, pp. 25-33. More current reports on the fishing industries of many individual countries have been prepared by the appropriate U.S. embassies. These reports are available through the National

Technical Information Service. For details see Dennis Weidner, "Available foreign fishery reports," *International Fishery Reports*, (IFR-93/01), February 12, 1983.

13. Part of this substantial catch increase is due to the industry recovery from the massive 1972 El Niño event, but much of it is also due to the expansion of the Latin American fishing industry during the 1970s and 80s.

14. Carlos Capurro, U.S. Embassy, Santiago, personal communications, September 16, 1993.

15. See for example, OLDEPESCA, "Estudio prospectivo para la ordenación y desarrollo pesquero en America Latina y el Caribe, *Documento de Pesca*, No. 9, Lima, 1990.

16. Good overviews of the Latin American seafood market are available in Julio Luna, "Mercados de productos pesqueros de America Latina en la decada de los noventa," Instituto Interamericano de Cooperación para la Agricultura, unpublished report, 1990, and FAO, "Consulta Tecnica sobre utilización y mercado de pescado en America Latina," *Informe de Pesca*, No. 421 suplemento, 1989.

17. The FAO areas do not provide precise Latin American catch data. The northern zones, for example, of the western central Atlantic (FAO statistical area 31) and the eastern central Pacific (FAO area 77) include some of the southeastern and southwestern U.S. catch. In addition the eastern central Pacific extends far beyond Latin American coastal waters into the south Pacific (175°W). Even so, they are the best available rough estimates of fishing activity off Latin America.

18. The eastern central Pacific extends into areas of the central Pacific (175°W) and thus some of the catch taken in the area is not taken off Latin America.

SECTION II. (Vessel Sources)

19. D. Ya Eidel'man, "World construction of fishing vessels in 1991," *Rybnoe Khoziastvo*, No. 2, 1993, pp. 17-18.

20. FAO, Fisheries Department, "World fisheries situation," report prepared for the International Conference on Responsible Fishing, Cancun, Mexico, May 6-8, 1992.

21. Hartley y Soto, "Pesqueria en el Peru," *op. cit.*

22. See for example Gabino Edgardo Zuñiga, Director General, Dirección General de Pesca y Acuicultura, Secretaría de Recursos Naturales, personal communications, July 6, 1993.

23. Taiwan officials, for example, report that a "great" amount is periodically paid for flag-of-convenience registration fees. Cheng-Fei Huang, Fisheries Specialist, Taiwan Coordinating Council for North American Affairs, personal communications, October 21, 1993.

SECTION III. (Latin American Fleet)

24. The authors believe that this estimate is conservative because no complete listing of Panamanian registrations is available. The Lloyd's/ONI data used to estimate Panamanian flag-of-convenience registrations is probably incomplete. In addition, it is not possible to calculate the number of foreign-owned flag of convenience transport vessels. Available Lloyd's data combines both fish carriers and factory vessels (appendices B4a1-2).

25. John Barton, Director of Fisheries, Falkland Islands Government. August 13, 1993.

26. Huang, personal communications, *op. cit.*, October 21, 1993.

27. "Russian vessels raise 'pirate' flags," *Izvestiya*, June 4, 1993.

28. The U.S. Office of Naval Intelligence (ONI) estimates that about 80 large former communist vessels have been transferred to Latin American countries (appendix B6). The available data probably understates the importance of the transfer of Soviet/Russian vessels as it indicates only where the originating vessel was built. Many of the Polish and German (GDR) built vessels, for example, were built for Soviet companies. Thus many of those transfers indicated in appendix B6 were from the USSR/Russia not Germany (GDR) or Poland.

29. Huang, personal communications, *op. cit.*, October 21, 1993.

30. A good example of this is Lubmain International, a company incorporated in Belgium, but which operates Taiwan-owned vessels. Almost certainly the company is owned by Taiwan investors. Another such company is Swillington Ltd., incorporated in Singapore, but apparently operating vessels owned by Taiwan or overseas Chinese investors. (Honduras, appendix B).

31. A review of U.S. fishery stocks, for example, indicates that many are heavily fished or depleted. See NMFS, *Our Living Oceans*, (NMFS: Silver Spring, MD, 1993). Many other important fishing countries, including Canada, Japan, EC countries, Eastern European countries, and the USSR face similar problems. For details on the situation in these areas, see the individual country reports in the other volumes of this book.

32. A summary of international living marine resource agreements of interest to the United States is available from the NMFS Office of International Affairs.

33. For available details see Milan Kravanja and Ellen Shapiro, "Russia and Eastern Europe," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations: Past-Present-Future*, Vol. 5 (NMFS: Silver Spring, MD., 1993). The privatization process is extremely complex and varies from country to country. Many of the countries involved have not yet decided which enterprises they plan to privatize or how to carry out the privatization process. Available press reports suggest that the countries involved are just beginning to address the issues involved. One report indicated that a the Polish high-seas fishing company, Odra, is being transferred to a one-share holder limited liability company. The one shareholder in accordance with the Privatization Act (July 13, 1990) will be the Polish Treasury. The Treasury will then proceed with the privatization process, but that may prove difficult because of the company's poor financial state. "Polish fishing company moves toward privatization," *Eurofish Report*, May 23, 1991, p. FS/5.

34. "Russian vessels raise 'pirate' flags," *op. cit.*

35. Some Panamanian observers report that the number of new Panamanian flag-of-convenience registrations is declining because of rising fees. Armando Martinez, OLDEPESCA, personal communications, October 25, 1993. Some vessel owners are looking at alternative countries, such as Belize.

36. For further details see the Honduran and Panamanian chapters of this report. The authors believe, however, that the available list Panamanian vessels compiled from ONI data (Panama, appendix A) may be incomplete. The vessels are listed by the country of construction, thus many vessels currently owned by Taiwan companies are listed under the country where constructed. Even so, the number of Taiwan-owned vessels (presumably vessels with Chinese names) is less than the authors had expected to find. ONI does lists several Taiwan-owned vessels smaller than 500 GRT that the authors have excluded from the list of large vessels.

37. Almost all the vessels exceeding 3,000 GRT were built in communist countries (Panama, appendix A).

38. The 12,000GRT refrigerated cargo vessels built in the GDR and reflagged in Panama were built from 1984-89. A Ukrainian refrigerated cargo vessel was built in 1992 (Panama, appendix A).

39. Belizian sources indicate that foreign vessel owners are seeking alternatives to Panama because of rising registration fees. Dr. Albert Jones, NMFS, personal communications, October 25, 1993.

40. For details see Mark Wildman, "Asia," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 3, (NMFS: Silver Spring, MD., 1993).

41. For details see William Folsom, David Rovinsky, and Dennis Weidner, "Western Europe and Canada," Vol. 6, *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, (NMFS: Silver Spring, MD., 1993).

42. For details see Mark Wildman, "Asia: Taiwan," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 3, (NMFS: Silver Spring, MD., 1993).

43. The authors cannot fully explain why so many Taiwan companies have registered their vessels in Latin American countries. In some individual instances it appears to be, at least in part, an effort to avoid international fishery management regulations. Broadly speaking, the Chinese have shown less respect for government institutions than some other Asian countries. Citizens in other Asian countries with important distant-water fleets (such as Japan and Korea) have generally shown a more deferential attitude toward their government. Mark Wildman, NMFS, personal communications, *op. cit.*, September 30, 1993.

44. Mark Wildman, NMFS, personal communications, *op. cit.*, September 30, 1993.

45. See for example Honduras appendix B.

46. The authors have noted numerous press references to Taiwan, Russian, Korean, Japanese, and Spanish vessels and assume they generally refer to the flag under which the vessel is registered. Only rarely have press reports referred to Panamanian, Honduran, or other flag-of-convenience registration. The authors believe this is because few are involved. It may be, however, that press reports refer to the nationality of the owners or crew. It is possible that some newspaper reporters observing a Taiwan, Russian, or Korean crew may be ignoring the flag of registry.

47. Available yield data (appendices D1-3) suggests that an annual yield of 3 t per vessel GRT is a reasonable estimate of the distant-water capability. It is admittedly, however, a very crude guide. Yields vary significantly between countries and among fisheries/vessel types/fishermen within countries. The time-frame in which this report was prepared, however, does not permit the authors to prepare a more complete assessment of distant-water yields, but it is a subject which needs to be pursued in more detail.

48. This was not the case of the Soviet Union and other former communist countries which targeted many low-value species. Such operations were only feasible because they were heavily subsidized.

SECTION IV. (Foreign Fishing)

49. A good review of international fishing patterns and the impact of extended jurisdiction is available in Lawrence Juda, "World marine fish catch in the age of exclusive economic zones and exclusive fishery zones," *Ocean Development and International Law*, Vol. 22, 1991, pp.1-32.

50. Details on the Soviet operations in the southeastern Pacific and in other Latin American fishing areas are available in Donald Jacobson and Dennis Weidner, "Soviet-Latin American fishery relations, 1961-89," *International Fishery Relations, 1961-89*, (IFR-89-39), May 5, 1989.

51. For details on Cuban operations off Latin America see Tracey Thomas and Dennis Weidner, "Cuban Fishery Relations in the Americas, 1959-88," *International Fishery Reports*, (IFR-88/59), June 29, 1988.

52. Falklands officials report that Russian fishing companies have expressed an interest in Falklands licenses, but have not yet submitted applications. Barton, *op. cit.*

53. A statistical breakdown by zone for the catch within each FAO area is not available to the authors.

54. A good comparison of the foreign fishing policies of individual countries is available in Gerald Moore, "Coastal state requirements for foreign fishing," *FAO Legislative Study*, No. 21, Rev. 3, 1988, 393 p. More current details are available in the individual country chapters of this report.
55. Cpt. Miliciades Espox Espox, Presidente, Fundación Atlántica, personal communications, October 7, 1993.
56. U.S. Embassy, Bogota, July 7, 1993.
57. Alejandro Londoño García, Gerente General, Instituto Nacional de Pesca y Acuicultura, personal communication, August 5, 1993.
58. Ing. Luis Torres Navarrete, Asesor Técnico, Subsecretaría de Recursos Pesqueros, personal communications, October 8, 1993.
59. U.S. Embassy, Quito, September 30, 1993.
60. U.S. Embassy, San Salvador, August 12, 1993.
61. U.S. Embassy, Georgetown, July 15, 1993.
62. U.S. Embassy, Panama City, July 2, 1993.
63. Jaime Sobero Taira, Ministro de Pesca, "Entrevista al Ministro de Pesquería," *El Armador*, May-June, 1993, pp. 17-20.
64. Hartley y Soto, "Pesquería en el Perú," *op. cit.*
65. Alfredo García, Vice-Ministro de Pesca, as cited in "Peruvian fishery can yield more," *Fishing News International*, September, 1993, p. 25.
66. U.S. Embassy, Paramaribo, June 30, 1993.
67. Mervyn La Croix, Director of Fisheries, personal communications, June 29, 1993.
68. Andrés Couve, Under-Secretary for Fisheries, personal communications, July 29, 1993.
69. U.S. Consulate, Merida, July 8, 1993.
70. César Awapara, "Perú: Un país que se muere de hambre sobre un banco de Pesca," *Pesca*, January-February, 1990, pp. 10-11 and Ismael Benavides, "Barcos Sovieticos en Chile y Perú," *Chile Pesquero*, September, 1990, p. 5.
71. U.S. Embassy, Caracas, September 8, 1993.
72. Gene Parsons, Fisheries Director, personal communications, October 5, 1993.
73. Dr. Juan Rusque, Director Nacional de Pesca, personal communications, October 13, 1993.
74. Odin Thaanum, Sardimar, personal communications, October 23, 1993.
75. U.S. Embassy, Santo Domingo, July 30, 1993.
76. David Seckler, U.S. Embassy, Quito, personal communications, October 8, 1993.
77. Roy Cardoze, Director, Dirección General de Recursos Marinos, as cited in U.S. Embassy, Panama City, July 2, 1993.

78. The Japanese sold the vessels with only small capital outlays, 20 percent of the vessels' value. Jones, personal communications, *op. cit.*

79. La Croix, personal communications, *op. cit.*, June 29, 1993.

80. Dr. Francisco Herrera Terran, Director, Servicio Autonomo de los Recursos Pesqueros y Acuicolas (SARPA) as cited in U.S. Embassy, Caracas, September 8, 1993.

81. Some of the most profitable fisheries (shrimp, lobster, abalone, oysters, and other species) were reserved exclusively for cooperative fishermen. This restriction applied to fishing as well as aquaculture and is one reason that Mexico during the 1980s failed at developing an important shrimp culture industry. Dennis Weidner, Tom Revord, Randy Wells, and Amir Manuar, "Mexico," *World Shrimp Culture*, Vol. 2, Part 2 (NMFS: 1992, Silver Spring, Maryland), pp.453-567.

82. Peruvian officials report fee income at \$19.6 million in 1992. Hartley y Soto, "Pesqueria en el Peru," *op. cit.* Press reports indicate that 1993 (January-June) have totaled \$46 million. "El boom de la Pota," *Caretas*, June 3, 1993, pp. 6-7.

SECTION V. (Joint Ventures)

83. For details see Dennis Weidner, "The EEC groundfish market," *GLOBEFISH Research Programme*, Vol. 5, June 1990, 128p. This report is available in both Spanish and English.

84. U.S. Embassy, Buenos Aires, August 2, 1993.

85. Data is available only on the leasing of tuna vessels. Most were leased from Japanese companies, but a few were also leased from the Cayman Islands (actual ownership unknown) and Spain. International Commission for the Conservation of Atlantic Tunas (ICCAT), *Statistical Bulletin*, 1990, 1991, pp. 82-85.

86. Some development experts are not convinced that the best approach to regional fisheries development is to replace artisanal fishermen. The Inter-American Development Bank (IDB), for example, no longer makes loans for commercial fishery projects. Francis Peacock, IDB, personal communications, October 1, 1993.

87. Hartley y Soto, "Pesqueria en el Peru," *op. cit.*

APPENDICES

A series: Shipyards

B series: Fishing Vessels

- B1: World fleet
- B2: Latin American fleet by year
- B3: Latin American fleet, by size
- B4: Fish carriers and fish factory vessels
- B5: Flag of convenience vessels
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C series: Fisheries Catch

- C1: World catch
- C2: Latin America
 - a: Coastal country catch
 - b: Distant-water catch
- C3: World fishing areas
- C4: Distantwater fishing
 - a: Overall
 - b: FAO area 21 (north western Atlantic)
 - c: FAO area 31 (central western Atlantic)
 - d: FAO area 41 (southwestern Atlantic)
 - e: FAO area 48 (Atlantic, Antarctic)
 - f: FAO area 77 (central eastern Pacific)
 - g: FAO area 87 (southeastern Pacific)
 - h: FAO area 88 (Pacific, Antarctic)
- C5: Flag-of-convenience catch

D series: Fishing Vessel Yield Data

E series: Fisheries Trade Data

A SERIES APPENDICES: Shipyard Series

Appendix A1.--World. Construction of fishing vessels, 1991

Country	Vessel		Total
	Number	Size*	tonnage
	Number	GRT	GRT
Japan	112	387	43,340
Germany	4	7,765	31,060
Spain	40	648	25,905
Norway	7	1,914	13,400
Poland	20	560	11,192
Netherlands	13	722	9,384
Korea (ROK)	28	308	8,534
France	17	441	7,504
United States	7	548	3,834
Peru	11	316	3,479

* Median size

Source: D. Ya Eidel'man, "World construction of fishing vessels in 1991," *Rybnoe Khoziastvo*, No. 2, 1993, pp. 17-18.

Appendix A2.--Latin America. Major countries constructing fishing vessels

Country	Capacity*	Principal type
	GRT	
Argentina	350	Small demersal trawlers
Brazil	300**	Shrimp trawlers and small seiners
Chile	1,000***	Purse seiners
Mexico	1,200#	Shrimp trawlers and purse seiners
Peru	600	Small seiners

* Largest fishing vessel built

** One 860 GRT vessel was built in Brazil, but it is believed to be an anomaly.

*** Carrying capacity in metric tons, GRT data unavailable. One Chilean yard plans to build a 1,500 ton seiner in 1994.

Carrying capacity in short tons, GRT data unavailable.

Source: Various country reports.

B SERIES APPENDICES: Fishing Vessel Series

Appendix B1.--World. Fishing fleet (vessels over 100 GRT),
June, 1992

Country	Vessels	Capacity
	Number	1,000 GRT
Russia	2,137	2,942.3
Ukraine*	737	991.1
Japan	2,679	811.0
United States	2,973	692.6
Spain	1,578	558.3
Korea (ROK)	1,151	451.0
Norway	571	267.6
Panama**	464	250.7
Poland	285	203.0
Latvia	116	188.9
Canada	500	186.3
Denmark	506	185.4
Estonia	108	177.5
Argentina	298	159.2
Netherlands	378	148.8
Peru	565	146.3
Chile	281	132.6
France	376	132.0
Cuba	254	130.6
Morocco	390	129.2
Iceland	363	126.9
Romania	48	124.3
United Kingdom	434	122.7
Mexico	396	115.0
China	250	110.6
Others	5,801	1,845.0
Total	23,354	11,125.9

Note: The above listings are fishing vessels only and do not include fish processing motherships, fishery transports, tankers, water carriers, and other fishery support vessels.

* Former USSR vessels for which data is not available, but are believed to be primarily Ukrainian.

** Most of these vessels are flag of convenience registrations and are owned and operated by non-Panamanians.

Source: Lloyd's, Lloyd's Register: Statistical Tables, June 1992, pp. 27-28.

Appendix B2a1.--Latin America. Highseas fishing fleet, 1975, 1980-92.

Country	Year													
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 GRT													
Argentina	8.4	54.9	61.5	56.3	55.9	57.4	58.5	58.0	56.1	57.2	60.4	66.3	75.7	105.3
Bermuda	1.2	1.7	1.7	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.6	0.6
Brazil	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Cayman Is.	-	6.8	16.2	16.8	17.1	18.3	17.7	19.4	26.3	34.4	31.1	31.1	29.3	22.7
Chile	1.3	19.3	23.0	28.6	28.6	32.6	37.0	38.1	39.6	41.5	51.7	56.7	69.0	77.5
Colombia	-	-	0.8	0.8	0.8	-	-	-	-	-	-	-	-	3.3
Costa Rica	-	7.0	3.9	3.7	4.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.0	1.0
Cuba	65.4	149.8	150.6	145.7	145.7	145.7	145.8	119.4	118.7	113.2	109.8	110.4	109.9	109.2
Ecuador	2.8	2.8	4.5	5.4	8.7	7.3	5.7	5.7	6.1	6.1	7.9	8.5	8.5	8.5
El Salvador	-	-	-	-	-	-	-	-	-	2.3	2.3	-	-	-
Falkland Is.	-	-	-	-	-	-	-	-	-	-	1.6	3.2	2.9	1.3
Honduras	-	1.3	2.0	2.2	1.5	0.9	0.9	0.9	0.9	1.9	5.5	7.7	13.7	15.2
Mexico	5.7	21.3	23.5	29.3	57.7	70.5	71.2	73.1	71.1	75.6	67.3	67.8	67.8	63.0
Panama	41.8	48.5	49.1	58.1	50.0	51.6	58.7	56.1	57.8	68.7	85.6	97.2	118.9	133.3
Peru	0.7	6.5	14.8	39.1	50.2	55.2	55.2	51.4	54.5	45.6	43.3	41.2	8.7	36.2
St. Vincent	-	-	-	-	-	-	-	-	-	6.8	4.7	12.5	25.2	22.3
Uruguay	0.7	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.1	5.6	5.6
Venezuela	1.1	6.0	7.5	7.5	9.6	8.7	12.9	16.8	19.0	17.5	15.0	12.2	17.6	14.8
Total	130.0	330.2	363.4	399.5	435.9	456.9	472.3	447.6	458.8	479.5	494.9	524.2	556.3	620.7

Source: "Statistical Tables," Lloyd's Register.

Appendix B2a2.--Latin America. Highseas fishing fleet, 1975, 1980-92.

Country	Year													
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels													
Argentina	9	42	46	43	43	44	45	44	44	45	46	51	54	70
Bermuda	2	3	3	3	2	2	2	2	2	2	2	2	1	1
Brazil	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cayman Is.	-	5	14	14	14	15	14	14	20	25	23	23	22	17
Chile	2	11	16	19	19	21	25	28	30	33	44	56	76	89
Colombia	-	-	1	1	1	-	-	-	-	-	-	-	-	3
Costa Rica	-	5	3	3	4	3	3	3	3	3	3	3	2	1
Cuba	53	76	76	75	75	75	75	75	74	71	69	70	69	68
Ecuador	4	5	7	8	12	10	8	8	8	8	10	11	11	11
El Salvador	-	-	-	-	-	-	-	-	-	2	2	-	-	-
Falkland Is.	-	-	-	-	-	-	-	-	-	-	1	2	2	1
Honduras	-	1	1	2	2	1	1	1	1	2	7	8	12	12
Mexico	8	21	28	34	59	68	70	71	70	74	65	65	66	61
Panama	37	46	53	62	53	49	57	55	56	61	78	92	109	122
Peru	1	8	13	23	27	29	29	27	33	30	29	28	27	26
St. Vincent	-	-	-	-	-	-	-	-	-	4	4	7	18	19
Uruguay	1	3	3	3	3	3	3	3	3	3	3	4	5	5
Venezuela	2	7	9	9	12	10	14	17	18	17	15	13	18	16
Total	120	234	274	300	327	331	347	349	363	381	402	441	493	523

Source: "Statistical Tables," Lloyd's Register.

Appendix B2a3.--Latin America. Principal highseas fishing fleet of large (500-GRT or greater), 1975, 1980-92.

Country	Year													
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels													
Panama*	37	46	53	62	53	49	57	55	56	61	78	92	109	122
Chile	2	11	16	19	19	21	25	28	30	33	44	56	76	89
Argentina	9	42	46	43	43	44	45	44	44	45	46	51	54	70
Cuba	53	76	76	75	75	75	75	75	74	71	69	70	69	68
Mexico	8	21	28	34	59	68	70	71	70	74	65	65	66	61
Peru	1	8	13	23	27	29	29	27	33	30	29	28	27	26
St. Vincent*	-	-	-	-	-	-	-	-	-	4	4	7	18	19
Cayman Is.*	-	5	14	14	14	15	14	14	20	25	23	28	22	17
Venezuela	2	7	9	9	12	10	14	17	18	17	15	13	18	16
Honduras*	-	1	1	2	2	1	1	1	1	2	7	8	12	12
Ecuador	4	5	7	8	12	10	8	8	8	8	10	11	11	11

* Largely flag-of-convenience registrations
Source: "Statistical Tables," Lloyd's Register.

Appendix B3a1.--Latin America. Highseas fishing fleet, 1992

Country	Size (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Above 4,000	
	Number of vessels				
Argentina	28	28	11	3	70
Belize	1	-	-	-	1
Bermuda	1	-	-	-	1
Brazil	1	-	-	-	1
Cayman Islands	6	9	2	-	17
Chile	76	6	7	-	89
Colombia	1	2	-	-	3
Costa Rica	1	-	-	-	1
Cuba	28	10	30	-	68
Ecuador	11	-	-	-	11
Falkland Islands	-	-	1	-	1
Honduras	8	2	2	-	12
Mexico	21	40	-	-	61
Panama	70	41	11	-	122
Peru	13	3	10	-	26
St. Vincent	10	8	1	-	19
Uruguay	2	3	-	-	5
Venezuela	9	7	-	-	16
Total	287	159	75	3	524

Source: "Statistical Tables," Lloyd's Register, 1992

Appendix B3a2.--Latin America. Highseas fishing fleet, 1992

Country	Size (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Above 4,000	
	1,000 GRT				
Argentina	19.5	40.0	30.9	15.0	105.4
Belize	0.5	-	-	-	0.5
Bermuda	0.5	-	-	-	0.5
Brazil	0.9	-	-	-	0.9
Cayman Islands	4.4	13.4	4.8	-	22.6
Chile	49.9	8.9	18.8	-	77.6
Colombia	1.0	2.4	-	-	3.4
Costa Rica	1.0	-	-	-	1.0
Cuba	18.5	13.5	77.3	-	109.3
Ecuador	8.5	-	-	-	8.5
Falkland Islands	-	-	1.3	-	1.3
Honduras	6.0	3.1	6.1	-	15.2
Mexico	14.8	48.1	-	-	62.9
Panama	50.8	57.0	25.4	-	133.2
Peru	8.4	4.5	23.3	-	36.2
St. Vincent	7.6	11.5	3.2	-	22.3
Uruguay	1.3	4.3	-	-	5.6
Venezuela	6.8	8.0	-	-	14.8
Total	200.4	214.7	191.1	15.0	621.2

Source: "Statistical Tables," Lloyd's Register, 1992

Appendix B3b1.--Latin America. Large fishing vessels, 1970-89

Country/year	Vessel size				Total
	A	B	C	D	
	Number of vessels				
Argentina					
1970	-	-	-	-	-
1975	7	1	1	-	9
1980	16	19	8	-	43
1985	19	19	9	-	47
1986	18	19	9	-	46
1987	19	19	8	-	46
1988	19	20	8	-	47
1989	19	20	9	-	47
Chile					
1970	3	NA	-	-	3
1975	3	NA	-	-	3
1980	4	4	3	-	11
1985	9	8	6	-	23
1986	18	7	6	-	31
1987	25	6	6	-	37
1988	35	7	6	-	48
1989	54	7	6	1	68
Columbia					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	1	-	-	1
1988	-	1	-	-	1
1989	-	1	-	-	1
Cuba					
1970	-	NA	NA	-	-
1975	-	NA	NA	-	-
1980	-	NA	NA	-	-
1985	-	15F	1	28	44
1986	-	15F	1	27	43
1987	-	11	1	26	38
1988	-	11	1	26	38
1989	-	11	1	25	38
Ecuador					
1970	NA	NA	-	-	-
1975	NA	NA	-	-	-
1980	5	NA	-	-	5
1985	NA	NA	-	-	-
1986	NA	NA	-	-	-
1987	9	1	-	-	10
1988	8	-	-	-	8
1989	9	1	-	-	10
El Salvador					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	2	-	-	2
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Guatemala					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-

1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Guyana					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Honduras					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Mexico					
1970	NA	NA	-	-	-
1975	1	NA	-	-	1
1980	11	2	-	-	13
1985	11	59	-	-	70
1986	7	65	-	-	72
1987	6	64	-	-	70
1988	5	61	-	-	66
1989	7	61	-	-	68
Nicaragua					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Panama					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Peru					
1970	NA	NA	-	-	-
1975	NA	NA	-	-	-
1980	NA	NA	-	-	-
1985	6	-	-	-	6
1986	6	-	-	-	6
1987	6	-	-	-	6
1988	11	-	-	-	11
1989	11	-	-	-	11
Suriname					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-

1989	-	-	-	-	-
Uruguay					
1970	1	-	-	-	1
1975	2	2	-	-	4
1980	3	2	-	-	5
1985	3	-	-	-	3
1986	3	-	-	-	3
1987	3	-	-	-	3
1988	3	-	-	-	3
1989	NA	-	-	-	-
Venezuela					
1970	NA	NA	NA	-	-
1975	NA	NA	NA	-	-
1980	NA	NA	NA	-	-
1985	NA	NA	NA	-	-
1986	NA	NA	NA	-	-
1987	16	21	1	-	38
1988	NA	NA	NA	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-

NA - Not available

Size code

A - 500-999.9 GRT

B - 1,000-1,999.9 GRT

C - 2,000-3,999.9 GRT

D - 4,000 and over GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B3b2.--Latin America. Large fishing vessels, 1970-89

Country/year	Vessel size				Total
	A	B	C	D	
	<u>1,000 GRT</u>				
Argentina					
1970	-	-	-	-	-
1975	4.3	1.4	2.7	-	8.4
1980	10.7	26.8	20.0	-	57.5
1985	12.9	26.2	23.8	-	62.9
1986	12.4	26.2	23.8	-	62.4
1987	12.9	26.2	21.3	-	60.4
1988	12.9	27.2	21.3	-	61.4
1989	12.9	27.2	24.6	-	64.7
Chile					
1970	1.8	NA	-	-	1.8
1975	1.8	NA	-	-	1.8
1980	3.1F	5.9	10.2	-	19.2
1985	7.2	11.7	17.7	-	36.6
1986	13.0	10.0	17.8	-	40.8
1987	17.1	8.7	18.0	-	43.8
1988	22.9	10.0	17.8	-	50.7
1989	34.8	10.1	16.5	5.0	66.4
Colombia					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	NA	-	-
1988	-	-	NA	-	-
1989	-	-	NA	-	-
Cuba					
1970	-	NA	NA	-	-
1975	-	NA	NA	-	-
1980	-	NA	NA	-	-
1985	-	16.4	2.6	161.0	180.0
1986	-	16.4	2.6	155.0	174.0
1987	-	13.2	2.6	149.4	165.2
1988	-	13.2	2.6	149.4	165.2
1989	-	13.2	2.6	143.7	159.5
Ecuador					
1970	NA	NA	-	-	-
1975	NA	NA	-	-	-
1980	3.8	NA	-	-	3.8
1985	NA	NA	-	-	-
1986	NA	NA	-	-	-
1987	7.9	1.1	-	-	9.0
1988	6.1	-	-	-	6.1
1989	8.0	1.0	-	-	9.0
El Salvador					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	2.0	-	-	2.0
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Guatemala					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-

1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Guyana					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Honduras					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Mexico					
1970	NA	NA	-	-	-
1975	0.7	NA	-	-	0.7
1980	8.0	2.3	-	-	10.3
1985	8.5	78.4	-	-	86.9
1986	5.3	85.5	-	-	90.8
1987	4.7	85.4	-	-	90.1
1988	3.8	81.5	-	-	85.3
1989	5.6	81.5	-	-	87.1
Nicaragua					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Panama					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-
Peru					
1970	NA	NA	-	-	-
1975	NA	NA	-	-	-
1980	NA	NA	-	-	-
1985	3.9	-	-	-	3.9
1986	3.9	-	-	-	3.9
1987	3.9	-	-	-	3.9
1988	5.9	-	-	-	5.9
1989	5.9	-	-	-	5.9
Suriname					
1970	-	-	-	-	-
1975	-	-	-	-	-
1980	-	-	-	-	-
1985	-	-	-	-	-
1986	-	-	-	-	-
1987	-	-	-	-	-
1988	-	-	-	-	-
1989	-	-	-	-	-

Uruguay					
1970	0.5	-	-	-	0.5
1975	1.2	2.7	-	-	3.9
1980	1.9	2.5	-	-	4.4
1985	1.9	-	-	-	1.9
1986	1.9	-	-	-	1.9
1987	2.0	-	-	-	2.0
1988	2.0	-	-	-	2.0
1989	NA	-	-	-	-
Venezuela					
1970	NA	NA	NA	-	-
1975	NA	NA	NA	-	-
1980	NA	NA	NA	-	-
1985	NA	NA	NA	-	-
1986	NA	NA	NA	-	-
1987	12.5	25.2	2.2	-	39.9
1988	NA	NA	NA	-	-
1989	14.0	15.4	2.2	-	31.6

NA - Not available

Size code

A - 500-999.9 GRT

B - 1,000-1,999.9 GRT

C - 2,000-3,999.9 GRT

D - 4,000 and over GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B4a1.--Latin America. Fish carriers and factory vessels, 1975, 1980-92.

Country	Year													
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels													
Argentina	1	1	1	1	1	1	2	2	2	2	2	3	4	4
Bahamas	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Bermuda	1	2	1	1	NA	-	-	-	1	1	1	1	1	1
Honduras	-	1	-	1	2	2	2	1	2	2	2	4	7	8
Panama	7	-	19	18	19	19	18	19	20	18	17	18	23	24
Peru	-	1	1	1	1	1	1	1	-	-	-	-	-	-
St. Vincent	-	-	-	-	-	-	-	-	-	1	4	2	5	5
Venezuela	-	-	-	1	1	1	1	1	1	1	1	1	1	1
Totals	10	20	22	23	24	24	24	24	26	25	26	29	41	43

NA - Not available

Source: "Statistical Tables," Lloyd's Register.

Appendix B4a2--Latin America. Fish carriers and factory vessels, 1975, 1980-92.

Country	Year													
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
							1,000	GRT						
Argentina	2.7	2.7	2.7	2.7	2.7	2.7	4.3	4.3	4.3	4.3	4.3	5.5	4.3	5.7
Bahamas	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Bermuda	18.9	36.5	18.9	18.9	NA	-	-	-	0.7	0.7	0.7	0.7	0.7	0.7
Honduras	-	2.0	-	0.6	1.5	1.5	1.8	1.3	1.7	2.0	2.0	4.2	12.7	12.6
Panama	18.2	20.6	40.4	23.9	23.3	22.0	19.0	18.8	24.9	23.2	29.3	29.8	61.8	75.6
Peru	-	8.1	8.0	8.0	8.0	8.0	8.1	8.1	-	-	-	-	-	-
St. Vincent	-	-	-	-	-	-	-	-	-	1.4	9.7	6.9	24.3	23.7
Venezuela	-	-	-	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Totals	40.8	69.9	70.0	54.3	35.7	34.4	33.4	32.7	31.8	31.8	46.2	47.3	104.0	118.5

NA - Not available

Source: "Statistical Tables," Lloyd's Register.

Appendix B4b1.--Latin America. Fish carriers and fish factory vessels, 1992

Country	Size (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Above 4,000	
		Number of vessels			
Argentina	-	2	-	-	2
Bermuda	1	-	-	-	1
Chile	-	1	-	-	1
Honduras	-	3	1	1	5
Panama	2	5	4	6	17
St. Vincent	-	-	1	3	4
Total	3	11	6	10	30

Source: "Statistical Tables," Lloyd's Register, 1992

Appendix B4b2.--Latin America. Fish carriers and fish factory vessels, 1992

Country	Size (GRT)				Total
	500-999	1,000-1,999	2,000-3,999	Above 4,000	
		1,000 GRT			
Argentina	-	2.8	-	-	2.8
Bermuda	0.7	-	-	-	0.7
Chile	-	1.5	-	-	1.5
Honduras	-	4.8	2.3	4.8	11.9
Panama	1.1	7.0	12.6	52.5	73.2
St. Vincent	-	-	2.8	20.5	23.3
Total	1.8	16.1	17.7	77.8	113.4

Source: "Statistical Tables," Lloyd's Register, 1992

Appendix B5a1.--Latin America. Latin America. Large (over 500-GRT) flag-of-convenience vessels*, 1975, 1980-92

Country	Year													
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels													
Cayman Is.	-	5	14	14	14	15	14	14	20	25	23*	28	22	17
Honduras	-	1	1	2	2	1	1	1	1	2	7	8	12	12
Panama	37	46	53	62	53	49	57	55	56	61	78	92	109	122
St. Vincent	-	-	-	-	-	-	-	-	-	4	4	7	18	19
Total	37	52	68	78	69	65	72	70	77	92	112	143	161	170

* The Cayman Islands in 1989 decided to stop issuing additional flag-of-convenience registrations to foreign-owned fishing vessels. For details see the Caymans chapter of this book.

Source: "Statistical Tables," Lloyd's Register.

Appendix B5a2.--Latin America. Large (over 500-GRT) flag-of-convenience vessels*, 1975, 1980-92.

Country	Year														
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	
	1,000 GRT														
Panama	41.8	48.5	49.1	58.1	50.0	51.6	58.7	56.1	57.8	68.7	85.6	97.2	118.9	133.3	
Cayman Is.	-	6.8	16.2	16.8	17.1	18.3	17.7	19.4	26.3	34.4	31.1	31.1	29.3	22.7	
St. Vincent	-	-	-	-	-	-	-	-	-	6.8	4.7	12.5	25.2	22.3	
Honduras	-	1.3	2.0	2.2	1.5	0.9	0.9	0.9	0.9	1.9	5.5	7.7	13.7	15.2	
Total	41.8	56.6	67.3	77.1	68.6	70.8	77.3	76.4	85.0	111.8	126.9	148.5	187.1	193.5	

* These are vessels listed in the fleets of each country. The authors believe that they are mostly flag-of-convenience vessels.

Source: "Statistical Tables," Lloyd's Register.

Appendix B5b1.--Latin America. Flag of convenience vessels, 1993

Country	Vessels		Total
	Medium*	Large**	
	Number		
Panama	450#	125**	575
Honduras##	217	86	303
St. Vincent	63	24	87
Cayman Islands♦	6	9	15
Belize	7	2	9
Dominican Rep.	2	-	2
Total	745	246	991

* 100-499 GRT

** 500 or more GRT

♦ A very large number of fishery support/transport vessels are registered in Panama, but not included in this total.

Includes an unknown, but probably small number of Panamanian-owned vessels.

The data entered for Honduras was provided by the Honduran Navy. ONI indicates a much smaller number of reflagged vessels.

♦ Lloyds' and ONI suggests a larger fleet of medium-sized vessels (32 vessels) and large vessels (19 vessels). The authors believe, however, that the Cayman Islands Government data used here is more up to date.

Note: The authors have estimated the flag-of-convenience vessels for several countries (especially Panama and St. Vincent) by assessing ONI and other fleet data to determine which vessels are likely to be operated by foreign owners. Other entries (the Caymans and Honduras) are based on fleet data provided by the governments involved.

Source: U.S. Navy. Office of Naval Intelligence and other sources.

Appendix B5b2.--Latin America. Flag of convenience vessels, 1993

Country	Vessels		Total*
	Medium*	Large**	
	1,000 GRT		
Panama	117.6#	142.8**	260.4
Honduras	56.7E***	74.8##	131.5E
St. Vincent	17.3	34.2	51.4
Cayman Islands♦	1.1	12.6	13.7
Belize	1.8	6.6	8.4
Dominican Rep.	0.4	-	0.4
Total*	194.9E	271.0	465.8

E - Estimated

• Totals may not agree due to rounding

•• A very large number of fishery support/transport vessels are registered in Panama, but not included in this total.

♦ Lloyds' and ONI suggests a larger fleet of medium-sized vessels (5,200 GRT) and large vessels (25,700 GRT). The authors believe, however, that the Cayman Islands Government data used here is more up to date.

* 100-499 GRT

** 500 or more GRT

*** Data on the tonnage of the medium-sized vessels was unavailable to the authors who have made an approximation given available information on the number of vessels and probable ownership.

Includes an unknown, but probably small number of Panamanian-owned vessels.

The data entered for Honduras was provided by the Honduran Navy. ONI indicates a much smaller number of reflagged vessels.

Note: The authors have estimated the flag-of-convenience vessels for several countries (especially Panama and St. Vincent) by assessing ONI and other fleet data to determine which vessels are likely to be operated by foreign owners. Other entries (the Caymans and Honduras) are based on fleet data provided by the governments involved.

Source: U.S. Navy. Office of Naval Intelligence and other sources.

Appendix B5c.--Latin America. Importance of large (over 500 GRT) flag-of-convenience vessels, 1992

Category	Source	Capacity	Flag-of-convenience share
		1,000 GRT	Percent
Actual Latin American owned	Lloyd's*	329	63
Probable flag-of-convenience	Lloyd's*	194	37
Latin American-flag fleet	Lloyd's*	523	
Actual Latin American owned	Lloyd's*	329	55
Probable flag of convenience	NMFS**	271	45
Latin American-flag fleet	NMFS	600	

* Source refers to vessel tonnage figures based on flag, not ownership which has been estimated by NMFS.

** Appendix B5b2

Source: "Statistical Tables," Lloyd's Register and NMFS estimates.

Appendix B5d.--World. Reflagged tuna vessels, 1992

Registration	Vessels
	Number
Honduras	72
Panama	56
Singapore	13
Ecuador	9
St Vincent	9
Canary Islands	4
Others	35*
Total	198

Note: These vessels are believed to be owned by companies in Japan, Korea, and Taiwan.

* The countries include Cyprus, the Dominican Republic, Liberia, and others.

Source: "Assumption on the number of tuna vessels reflagged to flags of convenience," Suisan Keizai Shinbun, July 29, 1992.

Appendix B6.--Latin America. Transfer of large (500 GRT or greater) foreign-built fishing vessels fishing vessels, as of 1993

Importer	Country constructed									Total
	Germany*	Japan	Poland	Russia	Ukraine	Spain	USA	USSR**	Other	
	Number of vessels									
Argentina	7	13	4	-	-	36	-	-	13	73
Belize	-	1	-	-	-	1	-	-	-	2
Brazil	-	-	-	-	-	-	-	-	-	-
Cayman Islands	2	-	2	-	-	1	3	-	10	18
Chile	11	7	-	-	-	5	7	-	31#	61
Colombia	1	1	-	-	-	-	1	-	2	5
Cuba	8	7	-	-	-	53	-	4	3	75
Dominican Rep.	-	-	-	-	-	-	-	-	-	-
Ecuador	-	-	-	-	-	2	1	-	7##	10
El Salvador	-	-	-	-	-	-	-	-	-	-
Guyana	-	-	-	-	-	-	-	-	-	-
Honduras*	-	9	2	-	-	-	-	-	6	17
Mexico	-	-	3	-	-	14	8	-	12###	37
Panama	9	33	6	-	3	35	9	6	44####	145
Peru	-	-	10	-	-	2	-	-	5	17
St. Vincent	-	1	3	-	-	2	1	-	15	22
Suriname	-	-	-	-	-	-	-	-	-	-
Trinidad	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	3	11	-	4	18
Total	38	72	30	-	3	154	41	10	152	500

Note: This table provides information on where the large foreign-built fishing vessels in the Latin American fishing fleet were built. It does not mean that the vessels were transferred to Latin America from these countries. For example Germany (GDR) and Poland built large numbers of fishing vessels for the Soviets. Thus

the vessels identified in this table as German or Polish, could have been transferred from Russian companies to Latin America.

* GDR (East Germany)

** The Soviet successor state in which these vessels were built is unavailable.

Nearly half of these vessels (15) were built in Norway.

Mostly Peru

Mostly Italian

A fairly large number (12) are from Singapore

• The authors have used ONI data for the Honduras entry, but data from Honduras suggests that many more foreign-built vessels have been registered in Honduras.

Source: U.S. Office of Naval Intelligence.

C SERIES APPENDICES: Fisheries Catch Series

Appendix C1--World. Importance of Latin American fisheries catch, 1985-91

Year	Catch		Total	Latin American share
	Latin America	Other areas		
	1,000 Metric tons			Percent
1975	6.9	59.5	66.4	10
1980	9.6	54.9	64.5	15
1985	13.2	73.1	86.3	15
1986	16.0	76.8	92.8	17
1987	14.1	80.3	94.4	18
1988	16.5	82.5	99.0	17
1989	18.0	82.2	100.2	18
1990	16.3	81.1	97.4	17
1991	17.3	79.6	96.9	18
1992	17.0	80.0	97.0	18

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C2a1.--Latin America. Fisheries catches, 1975-90

Country	Year									
	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric Tons									
South America										
Argentina	229.3	385.3	396.8	420.7	559.8	493.4	486.6	555.6	640.6	702.0
Bolivia	1.8F	4.4	NA	3.9	4.3	4.4	6.0	7.4	5.4	5.4R
Brazil	772.1	819.8	756.5	957.6	948.0	829.5	850.0	802.9	800.0	800.0R
Chile	929.5	2,816.7	4,803.8	5,571.6	4,814.6	5,209.9	6,454.1	5,195.4	6,002.9	6,367.7
Colombia	66.6	76.2	23.1	83.4	85.5	89.1	98.3	128.0	108.7	108.7R
Ecuador	263.4	666.6	1,086.1	1,003.4	680.1	876.0	739.4	391.1	383.6	383.6R
Falkland Is	Negl	Negl	0.1	0.1	0.2	2.6	4.6	5.9	1.5	1.5R
Fr Guiana	0.9	1.1	2.5	3.3	5.3	5.5	6.6	6.7	7.3	7.3R
Guyana	20.1	24.0	36.8	37.4	36.8	36.5	35.3	36.9	40.8	40.8R
Paraguay	2.7F	2.7R	NA	13.0	10.0	10.0	11.0	12.5	13.0	13.0R
Peru	3,447.5	2,234.9	4,109.6	5,616.2	4,587.4	6,641.7	6,853.8	6,875.1	6,944.2	6,250.0
Suriname	6.1	5.4	3.9	3.7	5.2	3.7	3.7	4.0	4.1	4.1R
Uruguay	26.3	120.4	NA	140.7	137.8	107.3	121.7	90.8	143.7	124.5
Venezuela	153.4	183.7	247.5	284.2	297.6	285.5	329.3	332.2	352.8	352.8R
Central America										
Belize	1.9F	1.3	1.4	1.5	1.5	1.5	1.8	1.5	1.6	1.6R
Costa Rica	14.1	14.9	20.1	21.0	17.2	17.1	17.4	17.6	17.9	17.9R
El Salvador	10.6	14.0	13.3	20.5	21.5	11.7	11.6	9.2	11.3	11.3R
Guatemala	4.5	3.5	2.7	2.2	2.5	2.9	3.4	7.1	6.7	6.7R
Honduras	3.3	6.4	9.5	20.6	23.1	19.9	17.1	15.5	21.0	21.0R
Mexico	499.3	1,243.6	1,113.5	1,315.7	1,419.2	1,372.6	1,469.9	1,400.9	1,429.1	1,429.1R
Nicaragua	18.4	7.0	4.1	2.5	5.0	4.7	4.6	3.1	5.7	5.7R
Panama	111.3	194.7	288.9	131.5	155.5	127.7	193.3	146.4	147.4	147.4R
Caribbean										
Anguilla	Negl	NA	Negl							
Antigua	0.8	1.0	2.4	2.4F	2.4F	2.4F	2.4F	2.2F	2.3F	2.3R
Aruba	NA	NA	0.8	0.8F	0.8F	0.8F	0.8F	0.8F	0.8F	0.8R
Bahamas	2.8	5.0	7.6	5.9	7.1	7.2	8.2	7.5	9.2	9.2R
Barbados	4.0F	3.7	3.9	4.2	3.7	9.1	2.5	3.0	2.7	2.7R
Bermuda*	5.1	4.1	0.7	0.8	0.8	0.8	0.8	0.5	0.4	0.4
Cayman Is	Negl	Negl	0.4	0.5	1.1	0.4	0.6	0.8	0.8	0.8R
Cuba	143.3	186.5	203.0	244.7	215.3	231.2	192.1	188.2	165.2	109.5
Dominica	0.5F	1.4	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6R
Dominican Rep	7.1	10.7	15.8	17.3	20.4	12.9	21.8	20.1	17.2	17.2R
Grenada	1.8F	1.8	1.7	2.7	2.2	2.0	1.7	1.8	2.0	2.0R
Guadeloupe	4.5	8.0F	8.4	8.5	8.6	8.2	8.5	8.6	8.4	8.4R
Haiti	2.5F	4.0R	6.1F	6.0F	5.8F	5.5F	5.5F	5.2F	5.2F	5.3F
Jamaica	10.1	9.1	9.4	10.8	10.7	9.7	10.6	10.4	10.4	10.4R
Martinique	3.4	4.7R	4.6	4.1	3.2	3.1	3.3	3.4	3.6	3.6R
Montserrat	0.1	0.1R	0.1F	0.1R						
Neth Antiles	1.0F	1.9	1.0	1.1F	1.1F	1.2F	1.2F	1.2F	1.1F	1.1R
Puerto Rico	80.9	2.6	1.5	1.3	1.3	1.7	2.0	2.1	2.3	2.3R
St Kitts Nev	Negl	1.9	1.6	1.6F	1.7F	1.7F	1.7F	1.7F	1.8F	1.8R
Saint Lucia	2.0	2.4	1.1	0.8	0.7	0.8	0.8	0.9	0.9	0.9R
St. Vincent	0.5	0.5R	0.5	0.6	0.7	4.6	5.9	8.4	7.7	7.7R
Trinidad Tob	5.1	4.5	2.9	3.7	4.8F	5.9F	7.0F	8.0F	10.3	10.3R
Turks Caicos	1.1F	1.1R	1.3	1.5	1.3	1.3	1.3	1.0	1.0F	1.0R
Virgin Islands										
U.S.	1.2	0.7	0.6	0.9	0.9	0.7	0.8	0.7	0.9	0.9R
British	0.3	0.3R	1.1	1.2	1.2	1.2	1.4	1.4	1.4	1.4R
Total	6,861.3	9,082.6	13,193.7	15,976.8	14,114.7	16,466.4	18,001.2	16,324.4	17,345.6	17,002.8

NA - Not available

F - FAO estimate.

R - Repetition of data.

* Included within the Caribbean for geographical simplicity

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990, and 1991 and 1992 preliminary data.

Appendix C2a2.--Latin America. Major fishing countries, 1975-90

Country	Year									
	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric Tons									
Chile	929.5	2,816.7	4,803.8	5,571.6	4,814.6	5,209.9	6,454.1	5,195.4	6,002.9	6,367.7
Peru	3,447.5	2,234.9	4,109.6	5,616.2	4,587.4	6,641.7	6,853.8	6,875.1	6,944.2	6,250.0
Mexico	499.3	1,243.6	1,113.5	1,315.7	1,419.2	1,372.6	1,469.9	1,400.9	1,429.1	1,429.1R
Brazil	772.1	819.8	756.5	957.6	948.0	829.5	850.0	802.9	800.0	800.0R
Argentina	229.3	385.3	396.8	420.7	559.8	493.4	486.6	555.6	640.6	702.0
Ecuador	263.4	666.6	1,086.1	1,003.4	680.1	876.0	739.4	391.1	383.6	383.6R

R - Repetition of data.

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990, and 1991 and FAO 1992 preliminary data.

Appendix C2b.--Latin America. Coastal and distant-water fisheries catch, 1985-91

Year	Catch		Total	Distant-water
	Latin America	Distant-water		share
	1,000 Metric tons			Percent
1975	6.9	0.3	7.2	4
1980	9.6	1.0	10.6	10
1985	13.2	1.4	14.6	11
1986	16.0	1.6	17.6	10
1987	14.1	2.1	16.2	13
1988	16.5	2.3	18.8	12
1989	18.0	2.5	20.5	12
1990	16.3	2.5	18.8	13
1991	17.3	2.0	19.3	10
1992	17.0	NA	NA	NA

NA - Not available

* Totals reflect data available in FAO reports and represent statistics from FAO regions: Western Central Atlantic (31), Southwest Atlantic (41), Eastern Central Pacific (77), and Southeast Pacific (87). Data does not including the Antarctic regions.

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C3a1. World. Major world fishing areas, 1985-91

Area	FAO code	Year						
		1985	1986	1987	1988	1989	1990	1991
Million Metric tons								
Atlantic								
Northwest	21	2.9	3.0	3.1	3.0	3.1	3.2	3.0
Northeast	27	11.1	10.6	10.5	10.6	9.9	9.1	9.6
Western central	31	2.2	2.0	2.1	1.9	1.8	1.7	1.8
Eastern central	34	2.8	3.1	3.3	3.7	4.0	4.1	3.7
Southwest	41	1.7	1.9	2.4	2.3	2.3	2.0	2.2
Southeast	47	2.1	2.1	2.7	2.5	2.1	1.4	1.3
Mediterranean*	37	2.0	2.0	2.0	2.1	1.7	1.5	1.4
Indian Ocean								
Western	51	2.7	2.7	2.7	3.0	3.4	3.3	3.5
Eastern	57	2.3	2.5	2.7	2.7	2.8	2.8	2.9
Pacific								
Northwest	61	23.8	25.7	25.8	26.7	26.3	25.7	24.4
Northwest	67	2.9	3.2	3.4	3.3	3.3	3.4	3.0
Western central	71	5.9	6.4	6.8	6.9	7.1	7.4	7.9
Eastern central	77	1.7	1.6	1.7	1.7	1.8	1.5	1.5
Southwest	81	0.6	0.8	0.9	1.1	1.1	1.1	1.2
Southeast	87	10.7	13.0	11.0	13.8	15.3	14.0	14.2
Other		10.9	12.2	13.3	13.7	14.2	15.2	15.3
Total		86.3	92.8	94.4	99.0	100.2	97.4	96.9

* and Black Sea

Source: FAO, *Yearbook of Fishery Statistics*, 1991.

Appendix C3a2. World. Major world fishing areas, 1985-91

Area	FAO code	Year						
		1985	1986	1987	1988	1989	1990	1991
Million Metric tons								
Northwest Pacific	61	23.8	25.7	25.8	26.7	26.3	25.7	24.4
Southeast Pacific	87	10.7	13.0	11.0	13.8	15.3	14.0	14.2
Northeast Atlantic	27	11.1	10.6	10.5	10.6	9.9	9.1	9.6
Western central Pacific	71	5.9	6.4	6.8	6.9	7.1	7.4	7.9
Eastern central Atlantic	34	2.8	3.1	3.3	3.7	4.0	4.1	3.7
Western Indian Ocean	51	2.7	2.7	2.7	3.0	3.4	3.3	3.5
Northwest Pacific	67	2.9	3.2	3.4	3.3	3.3	3.4	3.0
Northwest Atlantic	21	2.9	3.0	3.1	3.0	3.1	3.2	3.0
Eastern Indian Ocean	57	2.3	2.5	2.7	2.7	2.8	2.8	2.9
Southwest Atlantic	41	1.7	1.9	2.4	2.3	2.3	2.0	2.2
Western central Atlantic	31	2.2	2.0	2.1	1.9	1.8	1.7	1.8
Eastern central Pacific	77	1.7	1.6	1.7	1.7	1.8	1.5	1.5
Mediterranean*	37	2.0	2.0	2.0	2.1	1.7	1.5	1.4
Southeast Atlantic	47	2.1	2.1	2.7	2.5	2.1	1.4	1.3
Southwest Pacific	81	0.6	0.8	0.9	1.1	1.1	1.1	1.2
Other		10.9	12.2	13.3	13.7	14.2	15.2	15.3
Total		86.3	92.8	94.4	99.0	100.2	97.4	96.9

* and Black Sea

Note: Latin American ocean areas noted in bold

Source: FAO, *Yearbook of Fishery Statistics*, 1991.

Appendix C4a.--Latin America.* Distantwater fishing, 1975-90

Country	Year														
	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Bulgaria	-	1.3	7.1	15.6	13.7	13.6	25.1	24.7	20.1	20.9	22.8	42.1	31.9	29.8	23.6
Cuba	24.0	42.7	19.4	88.7	79.0	86.8	55.6	34.2	51.5	93.4	47.6	92.0	40.0	62.0	56.1
Germany (GDR)	-	-	0.4	1.0	-	-	0.4	8.9	12.3	4.4	3.5	9.2	15.6	7.0	-
Germany**	4.4	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	1.5	3.5	4.0	4.1F	-
Israel	-	-	-	-	-	-	-	-	4.8	3.8	-	-	-	-	-
Italy	-	-	-	-	1.5	0.5	-	-	1.2	1.0	6.0	10.7	6.3	8.5	9.9
Japan	95.7	178.5	160.9	146.6	170.5	190.1	171.1	213.3	343.4	323.8	508.4	465.4	374.1	298.4	485.8
Korea (ROK)	20.0	42.7	25.0	21.3	25.3	25.5	28.8	32.3	70.1	117.8	155.3	153.4	186.7	181.6F	258.6
Netherlands	-	-	-	-	-	-	-	-	-	-	-	1.5	1.5	1.5F	-
Poland	28.8	2.7	75.0	94.5	73.3	255.1	387.9	298.9	190.1	167.7	165.2	130.9	106.7	86.5	59.4
Portugal	-	-	-	-	-	-	-	-	-	-	0.5	9.8	9.1	6.4	3.3
Spain	-	-	-	-	-	-	18.2	19.6	10.7	58.8	61.1	84.5	85.1	70.6	62.2
Taiwan	20.9F	21.9F	22.1	22.0F	19.9F	16.2F	16.1F	19.0F	23.7F	69.3F	150.5F	129.3F	133.1F	106.6F	131.9F
USSR	108.3	27.9	548.9	580.1	624.3	627.2	682.5	663.3	696.5	790.7	1,013.5	1,204.7	1,487.6	1,593.3	956.6
UK	-	-	-	-	-	-	-	-	-	-	3.5	8.9	9.3	1.4	2.0
Total	302.1	317.7	865.4	969.8	1,007.5	1,215.0	1,385.7	1,314.2	1,424.4	1,651.6	2,139.4	2,345.9	2,491.0	2,457.7	2,049.4

* Totals reflect data available in FAO reports and represent statistics from FAO regions: Western Central Atlantic (31), Southwest Atlantic (41), Eastern Central Pacific (77), and Southeast Pacific (87). Data does not include the Antarctic regions.

** Includes the former GDR beginning in 1991.

F - FAO estimates from available sources.

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C4b1. Northwest Atlantic. NCP groundfish catch by species, 1992

Country	Species					Total
	Cod	Redfish	Flounder	Halibut	Other	
	Metric tons					
Honduras						
European	100	-	-	-	-	100
Korean	-	2,600	-	-	-	2,600
Korea	-	4,500	4,000	-	-	8,500
Morocco						
Korean	-	-	1,000	-	-	1,000
Panama						
European	7,500	7,400	700	4,300	500	20,400
Korean	-	6,000	-	-	-	6,000
Sierra Leone						
Korean	-	3,000	-	-	-	3,000
Venezuela						
European	1,000	-	-	-	-	1,000
Subtotals						
European	8,600	7,400	700	4,300	500	21,500
Korean	-	16,100	5,000	-	-	21,100
Total	8,600	23,500	5,700	4,300	500	42,600

Source: Northwest Atlantic Fisheries Organization. "Data on non-contracting parties activities in the NAFO regulatory area (STACFAC)," Serial No. N2234, NAFO/GC Doc. 93/2, April, 1993.

Appendix C4b2. Northwest Atlantic. NCP groundfish fishery, 1992

Country	Groundfish fishery			
	Vessels	Effort	Catch	C/R
	Number		Metric tons	
Honduras				
Korean	1	153	2,600	15.0
European	1	20	100	5.0
Korea	2	488	8,500	17.4
Morocco				
Korean	1	148	1,000	7.0
Panama				
European	25	2,109	20,400	10.0
Korean	2	516	6,000	11.6
Sierra Leone				
Korean	1	201	3,000	15.0
Venezuela				
European	2	133	1,000	7.5
Subtotal				
European	28	2,262	21,500	9.5
Korean	7	1,506	21,100	14.0
Total	35	3,768	42,600	11.3

Source: Northwest Atlantic Fisheries Organization. "Data on non-contracting parties activities in the NAFO regulatory area (STACFAC)," Serial No. N2234, NAFO/GC Doc. 93/2, April, 1993.

Appendix C4b3. Northwest Atlantic. Non-member
vessels, 1992

Crew/Registry	Vessel Name
Western European Crewed	
Honduras	Gadus
Panama	Alpes II Amazones Aples III Anita I Cidade de Aveiro Classic Belair Columbo V Columbo VI Columbo VII Columbo VIII Elly I Espadarte Gafanha do Carmo Izarra Leone Leone III Pablo I Pescamex I Pescamex II Pescamex III Pescamex IV Porto de Aveiro Porto Santo Santa Joana Tierra de Lemos
Venezuela	Pescagel Bacanova
Korean crewed	
Honduras	Danica
Korea	Golden Venture Puk Yang II
Morocco	Ain Chanech
Panama	Marsopla* Peona #9
Sierra Leone	Great Splendor

* Vanuatu, June 1992

Source: Northwest Atlantic Fisheries Organization.
"Data on non-contracting parties activities in
the NAFO regulatory area (STACFAC)," Serial No.
N2234, NAFO/GC Doc. 93/2, April, 1993.

Appendix C4b4.--Northwest Atlantic. Countries deploying groundfish vessels in the NAFO area

Country	Year							
	1985	1986	1987	1988	1989	1990	1991	1992
	Number of vessels							
Contracting parties*	191	196	182	179	198	218**	220**	155***
Non-contracting countries (NCP)								
Caymen Islands	1	1	1	1	1	1	1	-
Honduras	-	-	-	-	-	-	1	2
Korea (ROK)	1	1	1	3	5	6#	3	2
Mauritania	-	1	-	1	1	-	-	-
Malta	-	-	-	-	1	1	-	-
Morocco	-	-	-	-	-	-	1	1
Panama								
Korean crews	4	3	4	5	5	2	2	2
European crews	4	5	8	15	19	22	23	25
Mexico/Chile	6	4	6	4	-	-	-	-
Sierra Leone	-	-	-	-	-	-	1	1
St. Vincent	-	-	-	1	1	1	1	-
United States	14	15	9	11	14	9	-	-
Venezuela	-	-	-	-	-	2	2	2
Subtotal	30	30	29	41	47	44	35	35##
Total	221	226	211	220	245	262	255	190

* Northwest Atlantic Fisheries Organization (NAFO) member countries.

** Excludes Norwegian vessels that fished exclusively for capelin in 1990 and 1991.

*** Preliminary figure.

May include a fishing vessel registered in Taiwan (Her Wen No. 1).

The 35 NCP vessels operating in the NAFO area during 1992 included 28 vessels crewed by West Europeans (6 pair trawlers, 16 single trawlers) and 7 vessels crewed by Koreans.

Note: Non-contracting parties (NCP) are not subject to NAFO conservation and enforcement measures and, therefore, are not required to permit NAFO inspectors on board.

Source: Northwest Atlantic Fisheries Organization. "Data on non-contracting parties activities in the NAFO regulatory area (STACFAC)," Serial No. N2234, NAFO/GC Doc. 93/2, April, 1993.

Appendix C4b5. Northwest Atlantic. NCP groundfish fishery, 1992

Country	Groundfish fishery			
	Vessels	Effort	Catch	C/R
	Numb		Metric tons	
Honduras:				
Korean	1	153	2,600	15.0
European	1	20	100	5.0
Korea	2	488	8,500	17.4
Morocco:				
Korean	1	148	1,000	7.0
Panama:				
European	25	2,109	20,400	10.0
Korean	2	516	6,000	11.6
Sierra Leone:				
Korean	1	201	3,000	15.0
Venezuela:				
European	2	133	1,000	7.5
Subtotal:				
European	28	2,262	21,500	9.5
Korean	7	1,506	21,100	14.0
Total	35	3,768	42,600	11.3

Source: Northwest Atlantic Fisheries Organization. "Data on non-contracting parties activities in the NAFO regulatory area (STACFAC)," Serial No. N2234, NAFO/GC Doc. 93/2, April, 1993.

Appendix C4c.--Western Central Atlantic (FAO statistical area 31). Distantwater fishing, 1975-91

Country	Year														
	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
							1,000	Metric	Tons						
Italy	9.7	11.3	6.6	6.6	1.5	0.4	-	-	1.2	-	-	-	-	-	-
Japan	8.9	7.2	3.3	3.7	8.2	8.4	5.1	5.3	6.5	3.5	2.2	2.0	6.1	3.5	2.6
Korea (ROK)	3.0	-	-	-	5.9	4.6	4.3	5.0	5.7	3.0	2.1	3.0	1.9	1.7	1.5
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	2.2	6.6	1.5	-	-	-	2.4	1.8	1.6
Taiwan	5.0F	5.3F	6.3F	4.9F	5.0F	9.3F	8.7F	8.3F	8.0F	8.6F	2.8F	3.2F	2.7F	3.1F	2.5F
United States#	NC	NC	NC	NC	NC	NC	NC	NC	NC						
USSR	69.0	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-
Total	95.6	23.8	16.2	15.2	20.6	22.7	20.3	25.2	22.9	15.1	7.1	8.2	13.1	10.9	8.2

NA - Not available

NC - Not computed

F - FAO estimate

The United States is both a coastal and distant-water country in FAO statistical area 77. The U.S. distant-water portion of the U.S. catch is unavailable.

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1991.

Appendix C4d1.--Southwestern Atlantic (FAO statistical area 41). Distantwater fishing, 1975-91

Country	Year															
	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	1,000 Metric Tons															
Bulgaria	-	1.3	-	-	-	-	-	10.0	17.8	20.9	22.8	42.1	31.9	28.1	21.9	9.0
Chile	-	-	-	-	-	-	-	-	-	-	0.4	1.3	-	-	-	-
Cuba	-	-	-	-	Negl	Negl	Negl	0.1	4.6	4.0	7.2	5.0	2.2	1.6	-	-
France	-	-	0.4	Negl	-	-	0.4	8.9	12.3	4.4	3.5	9.2	15.6	7.0	-	-
Germany*	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	1.5	3.5	4.0	4.1F	-	-
Israel	-	-	-	-	-	-	-	-	4.8	3.8	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-	1.0	6.0	10.7	6.3	8.5	9.9	-
Japan	0.4	0.2	20.4	12.4	22.3	40.3	30.3	69.7	79.0	130.0	297.1	288.7	203.1	107.2	122.2	197.2
Korea (ROK)	2.7	10.6	5.2	1.9	4.0	2.0	1.8	4.7	15.6	58.1	100.3	104.3	143.2	116.1	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	1.5	Negl	Negl	-	-
Poland	-	2.7	73.9	94.0	73.3	247.6	347.9	218.7	190.1	167.7	165.2	130.9	106.7	86.5	59.4	-
Portugal	-	-	-	-	-	-	-	-	-	-	0.5	9.8	9.1	6.4	3.3	-
Spain	-	-	-	-	-	-	16.0	13.0	9.2	58.5	61.1	84.5	82.7	68.8	60.6	-
Taiwan	6.2F	4.6F	5.6F	6.7F	6.7F	6.4F	3.2F	3.2F	6.4F	51.9F	137.7F	115.1F	117.1F	93.8F	122.8F	-
USSR	8.7	27.9	2.2	27.7	17.2	19.0	66.1	58.0	70.9	77.1	168.5	259.8	282.3	242.2	226.7	-
UK	-	-	-	-	-	-	-	-	-	-	3.5	8.9	9.3	1.4	2.0	-
Total	18.0	47.3	114.3	142.7	123.5	315.3	465.7	386.3	410.7	577.4	976.9	1,075.3	1,013.5	771.7	826.0	-

* Includes the former German Democratic Republic (GDR) beginning in 1991.

F - FAO estimate from available sources.

Negl - Negligable

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C4d2.--Southwestern Atlantic (FAO statistical area 41). Principal distantwater fishing countries, 1975-91

Country	Year														
	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
							1,000	Metric	Tons						
USSR	8.7	27.9	2.2	27.7	17.2	19.0	66.1	58.0	70.9	77.1	168.5	259.8	282.3	242.2	226.7
Korea (ROK)	2.7	10.6	5.2	1.9	4.0	2.0	1.8	4.7	15.6	58.1	100.3	104.3	143.2	116.1	197.2
Taiwan	6.2F	4.6F	5.6F	6.7F	6.7F	6.4F	3.2F	3.2F	6.4F	51.9F	137.7F	115.1F	117.1F	93.8F	122.8F
Japan	0.4	0.2	20.4	12.4	22.3	40.3	30.3	69.7	79.0	130.0	297.1	288.7	203.1	107.2	122.2
Spain	-	-	-	-	-	-	16.0	13.0	9.2	58.5	61.1	84.5	82.7	68.8	60.6
Poland	-	2.7	73.9	94.0	73.3	247.6	347.9	218.7	190.1	167.7	165.2	130.9	106.7	86.5	59.4

F - FAO estimate from available sources.

Source: FAO, Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C4d3.--Southwestern Atlantic (FAO statistical area 41). Distantwater catch by country and fishing zone, 1987-89

Country	1987			1988			1989		
	F.I.	Other	Total	F.I.	Other	Total	F.I.	Other	Total
	1,000 Metric Tons								
Bulgaria	-	22.8	22.8	-	42.1	42.1	9.1	22.8	31.9
Chile	0.4	-	0.4	1.3	-	1.3	1.2#	-	-#
Cuba	-	7.2	7.2	-	5.0	5.0	-	2.2	2.2
France	1.6	-	1.6	-	-	-	-	-	-
Germany (GDR)	-	3.5	3.5	-	9.2	9.2	-	15.6	15.6
Germany*	-	-	-	-	-	-	-	-	-
Greece	2.2	NA	1.5#	2.8	0.7	3.5	4.9#	NA	4.0#
Israel	-	-	-	-	-	-	-	-	-
Italy	5.2	0.8	6.0	3.7	7.0	10.7	10.4#	NA	6.3#
Japan	75.8	221.3	297.1	106.3	182.4	288.7	123.9	79.2	203.1
Korea (ROK)	22.4	77.9	100.3	39.2	65.1	104.3	50.5	92.7	143.2
Netherlands	-	-	-	1.5	-	1.5	4.6#	NA	Negl#
Poland	111.8	53.4	165.2	103.2	27.7	130.9	69.1	37.6	106.7
Portugal	0.5	-	0.5	9.8	-	9.8	9.1	-	9.1
Spain	61.1	-	61.1	84.5	-	84.5	81.7	1.0	82.7
Taiwan	32.0	105.7F	137.7F	33.2	81.9F	115.1F	37.6	79.5F	117.1F
USSR	-	168.5	168.5	-	259.8	259.8	-	282.3	282.3
UK	3.5	-	3.5	8.9	-	8.9	12.5#	NA	9.3
Total	316.5	661.1	976.9	394.4	680.9	1,075.3	414.5	612.9	1,013.5

Note: This table is based on the assumption that the Falkland Islands Government (FIG) foreign fishing data are compatible with the data compiled by FAO. In most cases this appears to be the case, but for some countries there are unexplained discrepancies. As a result, the Falklands and other totals in the totals row does not compute.

* Includes the former German Democratic Republic (GDR) beginning in 1991.

Obviously a country can not catch more off the Falklands than in the area as a whole. This statistical discrepancy is unexplained.

F - FAO estimate from available sources.

F.I. - Falkland Islands

Negl - Negligible

NA - Not available

Source: Falklands Island Department of Fisheries (Falklands totals) and FAO. Yearbook of Fisheries Statistics, 1991 (area totals).

Appendix C4d4.--Southwestern Atlantic (FAO statistical area 41). Distantwater catch by zone, 1990-92

Country	1990			1991			1992		
	F.I.	Other	Total	F.I.	Other	Total	F.I.	Other	Total
	1,000 Metric Tons								
Bulgaria	22.1	6.0	28.1	21.9	-	21.9	9.0	NA	NA
Chile	2.0#	NA	-#	-	-	-	3.0	NA	NA
Cuba	-	1.6	1.6	-	-	-	-	NA	NA
France	-	-	-	-	-	-	-	NA	NA
Germany (GDR)	-	7.0	7.0	-	-	-	-	NA	NA
Germany*	-	-	-	-	-	-	-	NA	NA
Greece	3.1	1.0	4.1F	-	-	-	-	NA	NA
Israel	-	-	-	-	-	-	-	NA	NA
Italy	4.4	4.1	8.5	2.4	7.5	9.9	2.9	NA	NA
Japan	58.0	49.2	107.2	93.7	28.5	122.2	68.3	NA	NA
Korea (ROK)	31.2	84.9	116.1	65.8	131.4	197.2	80.4	NA	NA
Netherlands	3.3#	NA	Negl#	-	-	-	-	NA	NA
Norway	1.4#	NA	-#	-	-	-	-	NA	NA
Poland	64.3	22.2	86.5	43.9	15.5	59.4	33.0	NA	NA
Portugal	6.4	-	6.4	3.3	-	3.3	1.5	NA	NA
Spain	65.4	3.4	68.8	57.7	2.9	60.6	87.8	NA	NA
Taiwan	10.5	83.3F	93.8F	12.6	110.2F	122.8F	27.0	NA	NA
USSR	-	242.2	242.2	-	226.7	226.7	-	NA	NA
UK	1.6#	NA	1.4#	2.0	-	2.0	-	NA	NA
Total	273.6	492.3	771.7	303.3	522.7	826.0	313.0	NA	NA

Note: This table is based on the assumption that the Falkland Islands Government (FIG) foreign fishing data are compatible with the data compiled by FAO. In most cases this appears to be the case, but for some countries there are unexplained discrepancies. As a result, the Falklands and other totals in the totals row does not compute.

* Includes the former German Democratic Republic (GDR) beginning in 1991.

Obviously a country can not catch more off the Falklands than in the area as a whole. This statistical discrepancy is unexplained.

F - FAO estimate from available sources.

F.I. - Falkland Islands

Negl - Negligible

NA - Not available

Source: Falklands Island Department of Fisheries (Falklands totals) and FAO. Yearbook of Fisheries Statistics, 1991 (area totals).

Appendix C4d5.--Southwestern Atlantic (FAO statistical area 41). Distantwater catch by zone, 1987-92

Year	Zone		Total
	F.I.*	Other	
	1,000 Metric Tons		
1975	NA	NA	18.0
1977	NA	NA	47.3
1979	NA	NA	114.3
1980	NA	NA	142.7
1981	NA	NA	123.5
1982	NA	NA	315.3
1983	NA	NA	465.3
1984	NA	NA	386.3
1985	NA	NA	410.7
1986	NA	NA	577.4
1987	316.5	658.4	974.9
1988	394.4	679.6	1,074.0
1989	414.5	599.0	1,013.5
1990	279.4	492.3	771.7
1991	303.3	522.7	826.0
1992	313.0	NA	NA

Note: This table is based on the assumption that the Falkland Islands Government (FIG) foreign fishing data are compatible with the data compiled by FAO. In most cases this appears to be the case, but for some countries there are unexplained discrepancies.

F.I. - Falkland Islands

NA - Not available

Source: Falklands Island Department of Fisheries (Falklands totals) and FAO. Yearbook of Fisheries Statistics, 1982, 1991 (area totals).

Appendix C4e.--Atlantic Antarctic (FAO statistical area 48). Distantwater fishing, 1975-91

Country	Year															
	1975/76	1977/78	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91		
	1,000 Metric tons															
Bulgaria	-	2.1	1.2	-	-	-	-	-	0.2	-	-	-	-	-	-	
Germany (GDR)	-	10.3	10.0	8.3	-	-	-	0.6	1.3	0.8	1.2	-	-	-		
Japan	-	-	-	3.8	5.4	5.5	40.7	31.3	53.8	74.3	73.2	79.9	33.9	66.3		
Korea (ROK)	-	-	-	-	-	-	-	-	-	1.5	0.5	2.3	4.5	-		
Poland	-	63.5	18.0	18.1	8.3	0.4	10.1	5.7	6.0	4.5	6.9	7.0	1.8	9.6		
Spain	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-		
USSR	40.2	217.3	424.1	361.5	452.6	296.3	172.7	188.0	397.4	348.8	355.4	373.4	342.7	199.5		
UK	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	0.1		
Total	40.2	293.2	453.3	391.7	466.3	302.2	223.5	225.6	458.7	430.4	437.3	462.6	383.0	275.5		

Negl - Negligible

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C4f.--Eastern Central Pacific (FAO statistical area 77). Distantwater fishing, 1975-91

Country	Year															
	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
	1,000 Metric Tons															
Japan	74.8	125.1	116.8	115.0	125.5	127.4	115.5	118.8	221.7	165.2	183.3	151.9	144.8	159.0	153.0	
Korea (ROK)	8.4	24.7	14.2	11.1	14.0	18.9	22.3	22.6	48.7	56.5	50.9	45.8	40.9	51.9F	40.8	
Poland	25.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Taiwan	8.7F	12.0F	10.2F	10.4F	8.2F	2.5F	4.2F	7.5F	9.3F	8.8F	10.0F	11.0F	13.3F	9.7F	6.6F	
United States#	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
USSR**	30.6	-	0.1	-	2.2	0.2	1.4	0.2	1.1	2.7	0.1	0.1	3.0	12.6	0.1	
Total*	148.3	161.8	141.3	136.5	149.9	149.0	143.4	149.1	280.8	233.2	244.3	208.2	202.0	233.2	200.5	

F - FAO estimate

NA - Not available

NC - Not computed

Negl - Negligible

Note: Unlike FAO statistical area 87, area 77 extends to 175°W and includes a large expanse in the South Pacific. Much of the tuna catch reported by Japan is probably taken in this region.

* Does not include tunas caught by a basket grouping of coastal countries, flag-of-convenience countries, and distant-water countries "other nei".

** Includes Russia, the Ukraine, Georgia, and the Baltic countries.

The United States is both a coastal and distant-water country in FAO statistical area 77. The portion of the U.S. distant-water portion of the U.S. catch is unavailable.

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C4g1.--Southeast Pacific (FAO statistical area 87). Distantwater fishing, 1975-91

Country	Year														
	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Bulgaria	-	-	7.1	15.6	13.7	13.6	25.1	14.7	2.3	-	-	-	-	1.7	1.7F
Cuba	24.0	42.7	19.4	88.7	79.0	86.8	55.6	34.1	46.9	89.4	40.4	87.0	37.8	60.4	56.1
Germany (GDR)	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-
Germany*	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	10.8	41.9	17.1	12.6	14.5	14.0	20.2	19.5	36.2	25.1	25.8	22.8	20.1	31.6	20.8
Korean (ROK)	-	0.2	2.3	4.6	1.4	Negl	0.4	-	0.1	0.2	2.0	0.3	0.4	0.9	19.1
Poland	-	-	1.1#	0.5	-	7.5	40.0	80.2	-	-	-	-	-	-	-
US	1.2	4.7	3.2	13.1	11.6	4.1	-	5.3	-	1.8	0.6	1.8	1.4	-	2.2
USSR	-	-	546.6	552.4	604.9	608.0	615.0	605.1	624.5	710.9	844.9	944.8	1,202.3	1,337.7	729.8
Venezuela	-	-	NA	NA	9.8	-	10.3	12.8	14.0	10.5	16.2	9.0	15.3	17.9	11.8
Total	40.4#	89.5#	596.8#	688.5	734.9	734.0	766.6	771.7	724.0	837.9	929.9	1,065.7	1,277.3	1,450.2	841.5

* Includes the former German Democratic Republic (GDR) beginning in 1991.

Catches taken by the RYBEX-EPSEP joint venture were reported as part of the Peruvian catch as the vessels were reflagged in Peru. Thus the distant-water catch from 1973-78 understates actual foreign catches.

NA - Not available

Negl - Negligible

Source: FAO, Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C4g2.--Southeast Pacific (FAO statistical area 87).
Coastal and distantwater fishing, 1975-91

Year	Catch		Total	Distant-water share
	Coastal	Distant-water		
	Million Metric tons			
1975	4.4	Negl#	4.4	Negl
1977	3.8	0.1#	3.9	3
1979	6.3	0.6#	6.9	9
1980	6.2	0.7	6.9	10
1981	6.7	0.7	7.4	9
1982	7.8	0.7	8.5	8
1983	5.9	0.8	6.7	12
1984	8.7	0.8	9.5	8
1985	10.0	0.7	10.7	7
1986	12.2	0.8	13.0	6
1987	10.1	0.9	11.0	8
1988	12.7	1.1	13.8	7
1989	14.0	1.3	15.3	7
1990	12.5	1.5	14.0	11
1991	13.3	0.9	14.2	6

Catches taken by the RYBEX-EPSEP joint venture were reported as part of the Peruvian catch as the vessels were reflagged in Peru. Thus the distant-water catch from 1973-78 understates actual foreign catches.
NA - Not available
Negl - Negligible
Source: FAO, Yearbook of Fisheries Statistics, various.

Appendix C4h.-- Pacific Antarctic (FAO statistical area 88). Distantwater fishing, 1975-91

Country	Year														
	1975/76	1977/78	1979/80	1980/81	1981/82	1982/83		1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
						1,000 Metric tons									
Japan	-	0.4	-	1.2	2.5	4.7	0.6	4.7	2.0	0.1	-	-	-	-	Negl
Poland	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
USSR	-	-	-	5.2	4.2	5.9	0.1	-	1.9	0.3	-	-	1.1	0.7	-
Total	-	0.5	-	6.4	6.7	10.6	0.7	4.7	3.9	0.4	-	-	1.1	0.7	-

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix C5.--Latin America. Possible flag-of-convenience catches.

Country	Vessels		Total
	Medium*	Large**	
	1,000 Metric tons		
Panama	350	430	780
Honduras	170	225	395
St. Vincent	50	100	150
Cayman Islands	3	40	43
Belize	5	20	25
Dominican Rep.	1	-	1
Total**	579	815	1,394

* 100-499 GRT

** 500 and greater GRT

Note: The possible catch estimates noted above are based on the estimate GRT of the flag-of-convenience vessels (appendix B5b2) and a rough approximation of yields averaging about 3 t per GRT

Source: U.S. Navy. Office of Naval Intelligence and other sources.

D SERIES APPENDICES: Fishing Vessel Yield Series

Appendix D1.--World. Fishing fleet (vessels over 100 GRT), 1992

Country	Vessels	Capacity	Catch#	Catch yield
	Number	1,000 GRT	1,000 metric tons	M. tons/GRT
Russia	2,137	2,942.3	5,800E	2.0
Ukraine*	737	991.1	1,400E	1.4
Japan	2,679	811.0	8,400	10.4
United States	2,973	692.6	5,473#	7.9
Spain	1,578	558.3	1,350##	2.4
Korea (ROK)	1,151	451.0	2,678	5.9
Norway	571	267.6	2,385	8.9
Panama**	464	250.7	147	NS
Poland	285	203.0	514	2.5
Latvia	116	188.9	150E	0.8
Canada	500	186.3	1,530#	8.2
Denmark	506	185.4	1,793#	9.7
Estonia	108	177.5	150E	0.8
Argentina	298	159.2	702	4.4
Netherlands	378	148.8	434	2.9
Peru	565	146.3	6,250	42.7
Chile	281	132.6	6,368	48.0
France	376	132.0	813#	6.2
Cuba	254	130.6	109	0.8
Morocco	390	129.2	593#	4.6
Iceland	363	126.9	1,544	12.2
Romania	48	124.3	95	0.8
United Kingdom	434	122.7	824#	6.7
Mexico	396	115.0	1,429#	12.4
China	250	110.6	14,600	NS
Taiwan	296	94.5	1,328#	14.1

Note: The above listings are fishing vessels only and do not include fish processing motherships, fishery transports, tankers, water carriers, and other fishery support vessels. The fishing vessel data, however, does not include vessels under 100 GRT which are an important part of the fleets of most countries. In some countries (especially Chile and Peru), most of the fleet is comprised by small vessels.

E - NMFS estimates

NS - Not statistically significant

China: Most of the Chinese catch is aquaculture harvests which does not require fishing vessels.

Panama: Most of the flag-of-convenience vessels do not report their catch as part of the Panamanian catch

* Former USSR vessels for which data is not available, but are believed to be primarily Ukrainian.

** Most of these vessels are flag of convenience registrations and are owned and operated by non-Panamanians.

1992 catch data when available

1991 data.

Source: Lloyd's, Lloyd's Register: Statistical Tables, June 1992, pp. 27-28 (fleet data) and preliminary FAO statistics (catch data).

Appendix D2.--Northwest Atlantic. Fishing effort of NCP vessels in the
NAFO Convention area, 1990-92

Nationality/Year	Catch	Vessels	Catch per vessel
	<u>1,000 Metric tons</u>	<u>Number</u>	<u>1,000 MT/vessel</u>
European crewed*			
1990	21,300	24	0.9
1991	23,100	25	0.9
1992	21,500	28	0.8
Korean crewed			
1990	25,500	11	2.4
1991	24,200	10	2.4
1992	21,100	7	3.0
Overall total			
1990	46,800	35	1.3
1991	47,300	35	1.3
1992	42,600	35	1.2

NCP- Non-contracting parties.

* The European crewed vessels caught cod

** The Korean crewed vessels redfish, flounder, and Greenland halibut.

Source: Northwest Atlantic Fisheries Organization. "Data on
non-contracting parties activities in the NAFO regulatory area (STACFAC),"
Serial No. N2234, NAFO/GC Doc. 93/2, April, 1993.

Appendix D3.--Falkland Islands. Fishing effort of licensed vessels in the FICZ, 1987-92

Nationality/Year	Catch	Licenses*	Catch per vessel
	1,000 Metric tons	Number	1,000 MT/vessel
Japan			
1987	75.8	86	0.9
1988	106.3	71	1.5
1989	123.9	94	1.3
1990	58.0	82	0.7
1991	93.7	77	1.2
1992	68.3	63	1.1
Korea			
1987	22.4	32	0.7
1988	39.2	21	1.9
1989	50.5	29	1.7
1990	31.2	30	1.0
1991	65.8	41	1.6
1992	80.4	55	1.5
Poland			
1987	111.8	69	1.6
1988	103.2	97	1.1
1989	69.1	68	1.1
1990	64.3	53	1.2
1991	43.9	40	1.1
1992	33.0	21	1.6
Spain			
1987	61.1	75	0.8
1988	84.5	128	0.7
1989	81.7	100	0.8
1990	65.4	72	0.9
1991	57.7	66	0.9
1992	87.8	75	1.2
Taiwan			
1987	32.0	29	1.1
1988	33.2	24	1.4
1989	37.6	30	1.3
1990	10.5	13	0.8
1991	12.6	39	0.3
1992	27.0	51	0.5
Overall totals**			
1987	316.5	319	1.0
1988	394.4	384	1.0
1989	414.5	368	1.1
1990	279.4	286	1.0
1991	304.8	287	1.1
1992	314.9	297	1.1

* A vessel could theoretically be licensed more than once during the year. Thus many vessels catch more in a given year than indicated in the catch per vessel column. Vessels can be licensed twice for both Falkland first and second seasons or deployed in alternative fisheries.

** Totals includes all vessels licensed by the Falklands Island Government, including Bulgaria, Chile, Italy, the Netherlands, Norway, Portugal, and the U.K.

Source: Falkland Islands Fisheries Department.

E SERIES APPENDICES: Fishery Trade Data Series

Appendix E1.--Latin America. Fishery exports, 1975-91

Country	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	\$ Million								
South America									
Argentina	19.9	143.3	149.9	216.6	262.8	266.8	280.9	315.9	448.0
Bolivia	Negl	-	Negl	0.1	0.1	0.1	0.1	0.1	0.1
Brazil	42.6	132.8	174.3	153.3	180.1	187.7	130.2	140.0	157.4
Chile	40.3	323.0	438.6	516.0	635.6	804.7	899.9	866.4	1,066.9
Colombia	13.5	35.4	31.7	36.1	50.1	62.8	86.2	117.8	117.7F
Ecuador	37.0	200.0	247.6	383.6	481.0	449.6	435.9	468.0	587.6
Falkland Is	-	-	NA	NA	NA	2.0F	3.5F	4.7F	1.2F
Fr Guiana	1.1	9.4	20.9	23.8	33.5	31.0	30.1	41.7	37.3
Guyana	3.4	7.5F	19.7	27.3	20.6	16.8	25.4	20.7	17.6F
Paraguay	-	-	NA	Negl	Negl	Negl	Negl	Negl	0.1
Peru	212.6	321.8	221.6	258.1	264.9	402.4	479.0	399.7	491.1
Suriname	10.1F	8.1F	4.1F	4.3F	5.3F	3.1F	2.6F	2.9F	4.5F
Uruguay	3.4	50.9	54.1	65.1	82.8	63.9	71.2	71.2	111.7
Venezuela	21.0	3.5F	127.8	192.9	25.8	14.4	111.9	96.1	89.5
	404.9	1,235.7	1,490.3	1,877.2	2,042.6	2,305.3	2,556.9	2,545.2	3,130.7
Central America									
Belize	2.2	4.5	7.8	7.7	8.4	6.2	6.7	5.2	5.6F
Costa Rica	3.4	9.2	28.9	33.8	35.1	51.5	67.4	56.9F	61.6
El Salvador	10.2	17.3	14.6	18.1	21.8	17.2	11.7	17.3	14.5
Guatemala	5.1	8.9	10.1	8.1	11.4	14.6	18.8	14.7	15.0
Honduras	10.3	18.7	27.4	59.3F	82.2F	51.2F	54.0F	33.4F	59.8F
Mexico	160.6	580.0	378.3	457.3	569.6	439.2	495.0	361.4	393.5
Nicaragua	17.9	31.3	12.9	8.7	12.4	9.6	12.7	10.1	18.1
Panama	22.6	66.0	92.1	117.2	117.5	78.8	91.1	66.9	74.8
	232.3	735.9	572.1	710.2	858.4	668.3	757.4	565.9	642.9
Caribbean									
Anguilla	Negl	NA							
Antigua	0.1	1.2F	1.2F	1.7F	2.5F	1.2F	0.6	0.5F	0.5F
Aruba	NA	NA	0.1F	0.3	0.9	0.1	0.2	0.1F	0.2F
Bahamas	3.0	11.1	19.0	20.0	22.8	29.8	22.3	31.3F	27.5F
Barbados	1.5	0.1	0.1	0.1	0.1F	0.4	0.2	0.3	0.2
Bermuda*	6.4	-	-	-	-	-	-	-	-
Cayman Is	NA	-	4.3F	6.1F	17.0F	4.6F	9.9	14.5F	13.4F
Cuba	51.4	123.8	127.3	146.3	141.7	146.3	129.3	101.1	129.6
Dominica	0.5F	-	-	-	-	-	-	-	-
Dominican Rep	Negl	1.1	2.8	2.4	1.3	1.1	0.8	0.6	0.6F
Grenada	Negl	Negl	NA	NA	NA	0.3	0.2	0.1	0.1F
Guadeloupe	0.1F	Negl	0.4	0.2	0.2	0.1	0.3	0.3	0.2
Haiti	0.4	0.6	0.8	1.4F	2.5F	2.2F	2.0F	2.0F	2.1F
Jamaica	0.1F	Negl	2.0	2.4	2.7	2.2	1.9	3.4	7.0
Martinique	-	0.1	0.2	0.1	0.2	1.0	0.2	0.5	0.2
Montserrat	NA	NA	NA	NA	NA	NA	NA	NA	NA
Neth Antiles	Negl	NA	0.5	0.2	0.2	0.1	0.2	0.4	0.3F
Puerto Rico	NA	NA	NA	NA	NA	NA	NA	NA	NA
St Kitts Nev	0.1	0.2	0.2	0.2	0.1	0.2	0.1F	0.1F	0.2F
Saint Lucia	Negl	Negl	Negl	0.2	0.2	0.1	Negl	Negl	-
St. Vincent	0.1	-	0.2	0.2F	0.3F	9.5F	12.4F	19.3F	17.1F
Trinidad Tob	1.1	2.1	0.5	2.1	2.9	4.2	2.6	2.4	2.8
Turks Caicos	0.8F	1.5F	2.6	3.8	3.4	3.1	2.1	2.2	3.6
Virgin Islands									
U.S.	NA	NA	NA	NA	NA	NA	NA	NA	NA
British	NA	NA	NA	NA	NA	NA	NA	NA	NA
	64.6	141.8	162.2	187.7	199.0	206.5	185.3	179.1	205.6
Total	701.8	2,113.4	2,224.6	2,775.1	3,100.0	3,180.1	3,499.6	3,290.2	3,979.2

NA - Not available/F - FAO estimate.

* Included within the Caribbean for geographical simplicity

Source: FAO. Yearbook of Fisheries Statistics, various years.

Appendix E2.--Latin America. Principal exporters, 1975-91

Country	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	\$ Million								
South America									
Chile	40.3	323.0	438.6	516.0	635.6	804.7	899.9	866.4	1,066.9
Ecuador	37.0	200.0	247.6	383.6	481.0	449.6	435.9	468.0	587.6
Peru	212.6	321.8	221.6	258.1	264.9	402.4	479.0	399.7	491.1
Argentina	19.9	143.3	149.9	216.6	262.8	266.8	280.9	315.9	448.0
Mexico	160.6	580.0	378.3	457.3	569.6	439.2	495.0	361.4	393.5
Brazil	42.6	132.8	174.3	153.3	180.1	187.7	130.2	140.0	157.4
Cuba	51.4	123.8	127.3	146.3	141.7	146.3	129.3	101.1	129.6
Colombia	13.5	35.4	31.7	36.1	50.1	62.8	86.2	117.8	117.7F
Uruguay	3.4	50.9	54.1	65.1	82.8	63.9	71.2	71.2	111.7

F - FAO estimate.

Source: FAO. *Yearbook of Fisheries Statistics*, various years.

Appendix E3.--Latin America. Fishery exports, 1975-91

Year	Exports	Annual increase
	\$ Million	Percent
1975	0.4	NA
1980	2.1	NA
1985	2.2	NA
1986	2.8	27
1987	3.1	11
1988	3.2	3
1989	3.5	9
1990	3.3	-6
1991	4.0	21

Source: FAO. *Yearbook of Fisheries Statistics*, 1982, 1990, and 1991.

GLOSSARY

Note: The following acronyms are widely used in both the Latin American overview of this book and in the individual country chapters.

BANPESCA - Mexican Banco Nacional Pesquero y Portuario (National Fisheries and Port Development Bank)

CANAINPES - Mexican Camara Nacional de la Industria Pesquera (National Chamber of the Fishing Industry)

CCAMLR - Commission for the Conservation of Antarctic Marine Living Resources

COPACO - See WECAFC

DWT - Dead Weight Tons

EC - European Community

EEZ - 200-mile Exclusive Economic Zone

EPSEP - Empresa Pública de Servicios Pesqueros (Peruvian Public Enterprise for Fishery Services, a state-owned fisheries marketing company)

ETP - eastern tropical Pacific

FAO - Food and Agriculture Organization of the United Nations

FCMA - United States Magnuson Fisheries Management and Conservation Act

FICMZ - Falklands Interim Conservation Zone

FICZ - Falklands Islands Interim Fisheries Conservation Zone

FIG - Falkland Islands Government

FIOZ - Falkland Islands Outer Conservation Zone

FIPZ - Falkland Islands Protection Zone

FLOCUBA - Flota Cubana de Pesca, Cuban distant-water fleet

FLOPESCA - Flota Pesquera Peruana, Peruvian state fishing fleet

FRG - Federal Republic of Germany (West Germany)

FONDEPES - Peruvian Fondo Nacional de Desarrollo Pesquero

GDR - German Democratic Republic (East Germany)

GRT - Gross Registered Tons

IATTC - Inter-American Tropical Tuna Commission

IBAMA - Brazilian Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renovaveis (Brazilian Institute for the Environment and Renewable Natural Resources)

ICCAT - International Commission for the Conservation of Atlantic Tunas

ICNEAF - International Commission for the Northeast Atlantic Fisheries

IMARPE - Peruvian Instituto del Mar (Sea Fisheries Institute)

INDERENA - Colombian Instituto de Recursos Naturales Renovables (Institute of Renewable Natural Resources. INDERENA has been replaced by INPA

INPA - Colombian Instituto Nacional de Pesca y Acuicultura (Institute for Fisheries and Aquaculture)

IQF - individually-quick-frozen

- MAC - Venezuelan Ministerio de Agricultura y Cría (Ministry of Agriculture and Livestock)
- MIPE - Peruvian Ministerio de Pesqueria (Ministry for Fisheries)
- MMPA - United States Marine Mammal Protection Act
- MSY - Maximum Sustainable Yield
- NAFO - Northwest Atlantic Fisheries Organization
- NASCO - North Atlantic Salmon Commission
- NMFS - United States National Marine Fisheries Service
- NOAA - United States National Oceanographic and Atmospheric Administration
- NRT - Net registered tons
- OLDEPESCA - Organización Latinoamericana de Desarrollo Pesquero, Latin American Organization for Fisheries Development
- PESCAPERU - Empresa Nacional Pesquera (Peruvian state fishmeal company)
- PNPAAPD - Mexican Programa Nacional para el Aprovechamiento del Atun y Protección de los Delfines (National Tuna Development and Dolphin Protection Program)
- ROK - Republic of Korea (South Korea)
- RYBEX - Rybni Eksport (Polish Fisheries Export Company)
- SARPA - Venezuelan Servicio Autonomo de los Recursos Pesqueros y Acuicolas (Autonomous Service for Fishery Resources and Aquaculture). SARPA is a dependency of MAC.
- SEPESCA - Mexican Secretaría de Pesca (Secretariat of Fisheries)
- SEVRYBA - Soviet Northern Regional Fisheries Administration
- SOVRYBFLOT - Soviet Joint Fishery Venture Enterprise
- SUDEPE - Brazilian Superintendencia de Desenvolvimento da Pesca (Agency for Fisheries Development)
- TAC - total allowable catches
- UN - United Nations
- UNCLOS - United Nations Convention on the Law of the Sea
- WECAFC - Western Central Atlantic Fisheries Commission

FISHERY OFFICIALS

NATIONAL OFFICIALS**Anguilla** (4/93)

Ochlyn Vanterpool
 Fisheries Officer
 Department of Fisheries
 South Hill
 Anguilla
 Telephone: (809) 497-2871
 FAX: (809) 497-2751

Antigua and Barbuda (2/93)

Eustace A. Royer
 Chief Fishery Officer
 Fisheries Department
 Ministry of Agriculture, Fisheries, Land, and
 Housing
 Temple Street
 St. Johns, Antigua
 Telephone: (809) 462-1007/1213
 FAX: (809) 462-1372

Aruba¹ (3/93)

Sylvester M. Vrolijk
 Director, Department of Agriculture, Husbandry,
 and Fisheries
 Dienst Landbouw
 Veeteelt en Visserij
 Afdeling Visserij
 Oranjestad.
 Aruba
 Telephone: (297-8) 25639, 28102, 26473, 26372
 FAX: (297-8) 25639

Argentina (4/93)

Roberto Baltar
 Director Nacional de Pesca y Acuicultura
 Secretaría de Agricultura, Ganadería y Pesca
 Av. Paseo Colon 982
 Código Postal 1305
 Anexo Jardin
 Buenos Aires, ARGENTINA
 Telephone: (54-1) 362-4654, 361-4721
 Telex: 21535 DGAAC-AR
 FAX: (54-1) 361-4547

Bahamas (2/93)

Colin L. Higgs
 Director of Fisheries
 Department of Fisheries
 Ministry of Agriculture & Fisheries
 P.O. Box N-3028
 Nassau, Bahamas
 Telephone: (809) 393-1014
 FAX: (809) 393-0238

Barbados (4/93)

Stephen Willowghby
 Fisheries Officer
 Fisheries Division
 Ministry of Agriculture, Food and Fisheries
 Bay Street, St. Michael
 Barbados
 Telephone: (809) 426-3745
 Telex: Via 2222 FOREIGN WB
 FAX: N/A

Belize (2/93)

Vincent Gillett
 Fisheries Administrator
 Ministry of Agriculture and Fisheries
 P.O. Box 148
 Belize City, Belize
 Telephone: (501-2) 44552, 32623
 FAX: (501-2) 32983

Bermuda (2/93)

Brian Luckhurst
 Senior Fisheries Officer
 Department of Agriculture, Fisheries, & Parks
 P.O. Box CR 52,
 Crawl CR BX, Bermuda
 Telephone: (809) 293-1785
 FAX: (809) 293-2716

Bolivia (2/93)

Freddy Arteaga Hayashida
 Director Ejecutivo
 Centro de Desarrollo Pesquera (CDP)
 Ave. Camacho No. 1471
 Quinto Piso MACA
 Casilla de Correo No. 1728
 La Paz, Bolivia
 Telephone: (591-2) 374269
 Telex: 2697 MACA BV
 FAX: (591-2) 35-75-35

Bonaire¹ (8/85)

Michael G.L.B. Fowler
 Department of Agriculture, Animal Husbandry, and
 Fisheries
 P.O. Box 43
 Kralendijk
 Bonaire, Netherlands Antilles
 Telephone: (599-7) 8836

Brazil (4/93)

Malor Simoes Lopes Ligock
 Directora
 Departamento de Pesca e Avicultura
 Instituto Brasileiro do Meio Ambiente e dos
 Recursos Naturais Renovaveis (IBAMA)
 SAIN, AV L-4 Norte, Ed SEDE
 70800-200 Brasilia, DF
 Brazil
 Telephone: (55-61) 226-3166, 316-1238
 Telex: (61) 1909; 2461
 FAX: (55-61) 223-6410

British Virgin Islands (4/93)

Laurens Blok
 Fisheries Officer
 Conservation and Fisheries Department
 Ministry of Natural Resources and Labor
 Government of the British Virgin Islands
 Tortola, British Virgin Islands
 Telephone: (809) 494-3429
 FAX: N/A

Cayman Islands (4/93)

James Parsons
 Fisheries Officer
 Department of the Environment
 George Town, Grand Cayman,
 Cayman Islands
 Telephone: (809) 949-8469
 FAX: (809) 949-7544

Chile (2/93)

Andrés Couve Rioseco
 Subsecretario de Pesca
 Ministerio de Economía, Fomento,
 y Reconstrucción
 Bellavista 168, piso 16°
 Valparaíso, Chile
 Telephone: (56-2) 212187, 212811, 211195, 234315
 Telex: 230355 PESCH CL
 FAX: 212790

Colombia (4/93)

Alejandro Londoño, Director
 Instituto Nacional de Pesca y Acuicultura (INPA)
 Diagonal 27, No. 15-09
 Bogotá, Colombia
 Telephone: (57-1) 287-9309
 Telex: N/A
 FAX: (57-1) 287-9190

Costa Rica (2/93)

Eduardo Bravo Pérez
 Director General
 Dirección General de Recursos Pesqueros y
 Acuicultura
 Ministerio de Agricultura y Ganadería
 100 metros al sur de la Agencia Mercedes Benz,
 Paseo Colón
 Apartado Postal 10.094
 1000 San José, Costa Rica
 Telephone: 21-7135, 55-3867
 Telex: 3558 MINAG
 FAX: 55-4697

Cuba (6/92)

Jorge A. Fernández Cuervo-Vinent
 Ministerio de la Industria Pesquera (MIP)
 5ta. Avenida y 248 Barlovento
 Santa Fé
 La Habana, Cuba
 Telephone: 22-73-33/22-73-90
 Telex: 051-1396, 05-1309, 051-1345
 FAX: N/A

Curacao¹ (2/93)

Gerard Van Buurt
 Head Fisheries Section
 Department of Agriculture, Animal Husbandry
 and Fisheries
 Agricultural Station, Concordia
 St. Eustatius, Netherlands Antilles
 Telephone: (599-9) 376-170, 370-288
 Telex: 1233 DTIE
 FAX: (599-3) 370-723

Dominica (4/93)

Nigel Lawrence
 Chief Fisheries Officer
 Fisheries Development Division
 Ministry of Agriculture, Land, Forestry &
 Fisheries
 Government Headquarters
 Kennedy Avenue
 Roseau, Dominica
 Telephone: (809) 448-2401 Ext. 391
 FAX: (809) 448-0140, 448-7999

Dominican Republic (2/90)

Gilberto Grullon P.
 Director Departamento de Recursos Pesqueros
 Secretaria de Estado de Agricultura
 Centro de los Héroes de Constanza, Maimon y
 Esrerohondo
 Santo Domingo, D.N.
 Republica Dominicana
 Telephone: (809) 533-6161, Ext 254 y 271
 FAX: N/A

Ecuador (2/93)

Max Aguirre
 Subsecretario Recursos Pesqueros
 Direccion General de Pesca
 Ministerio de Industrias, Comercio, e Integracion
 V.M. Rendon 1006-1010 y L. de Garaicoa
 Casilla 8358
 Guayaquil, Ecuador
 Telephone: (593-2) 308-360, 308-326
 Telex: 43006 SUBREP-ED
 FAX: N/A

El Salvador (3/93)

Ricardo Antonio Ibarra Manzanares
 Director General
 Centro de Desarrollo Pesquero (CENDEPESCA)
 Ministerio de Agricultura y Ganaderia
 Final 1º Avenida Norte, Nieve San Salvador,
 Departamento La Libertad
 San Salvador, El Salvador
 Telephone: (503) 28-1066
 FAX: 28-00-34

Falkland Islands (2/93)

John Barton
 Director of Fisheries
 P.O. Box 122
 Stanley
 Falkland Islands
 Telephone: (500) 27260
 FAX: (500) 27265

French Antilles² (2/93)

Jean Guillon Verne
 Directeur Departamental des Affaires Maritimes
 Guadeloupe-Martinique-Guyane
 Bd Chevalier Sainte-Marthe
 B.P. 620
 97261 Fort de France
 Martinique
 Telephone: (596) 71-90-05
 Telex: N/A
 FAX: (596) 63-67-30

French Guiana² (4/93)

Gilles Seigle
 Directeur Departamental des Affaires Maritimes
 2 bis rue Mentel, Cayenne
 B.P. 6008
 97306 Cayenne CEDEX
 French Guiana
 Telephone: 19 (594) 31-00-08
 FAX: 19 (594) 30-54-27

Grenada (4/93)

James Finlay
 Chief Fisheries Officer
 Fisheries Division
 Ministry of Agriculture, Trade, and Industry
 Young Street / Mount Wheldale
 St. Georges, Grenada
 Telephone: (809) 440-3814
 FAX: (809) 440-6613

Guatemala (4/93)

Jorge Emilio Chiapas
 Director de Pesca
 BITEPESCA
 Kilometro 21 y 1/2
 Carretera a Amatitlan / Al Pacifico
 Barcenase Villia Nueva
 Guatemala
 Telephone: (502-2) 031212, 031218
 Telex: N/A
 FAX: (502-2) 031212

Guadeloupe² (2/93)

René Goallo
 Directeur Departemental des Affaires Maritimes
 Quai Layrle - B.P. 473
 97164 Pointe-à-Pitre Cédex
 Guadeloupe
 Telephone: (590) 82-03-13
 Telex: AFMAR 919 858 GL
 FAX: (590) 90-07-33

Guyana (3/90)

Reuben Charles
 Chief Fisheries Officer
 Fisheries Department
 Ministry of Agriculture
 P.O. Box 10001
 Georgetown, Guyana
 Telephone: (592-2) 64398, 61833
 Telex: 3048 AFIP GY
 FAX: (592-02) 69297

Haiti (3/85)

Pierre Guy La Fontant
 Directeur des Ressources de la Pêche
 Division de la Pêcherie
 Department de l'Agriculture et des Ressources
 Naturelles
 P.O. Box 448 Damien
 Port-au-Prince, Haiti
 Telephone: (509-1) 23593
 FAX: N/A

Honduras (4/93)

Mauro Rolando Pino
 Director General de Pesca y Acuicultura
 Ministerio de RRNN
 Blv. Miraflores Avenida La Fao
 Tegucigalpa, Apartado postal No 309
 Honduras
 Telephone: (504) 31-0938
 Telex: SERENA 1404 HO
 FAX: (504) 32-7848

Jamaica (4/93)

G. André Kong
 Director of Fisheries
 Fisheries Division
 Ministry of Agriculture
 P.O. Box 470 KGN
 Marcus Garvey Drive
 Kingston 11, Jamaica W.I. 7571
 Telephone: (809) 923-8811, 923-9179
 Telex: 2114 EXTERNAL JA
 FAX: (809) 923-8811

Martinique² (4/93)

Jean-Michel Suche
 Directeur Departemental des Affaires Maritimes
 Bd. Chevalier de Sainte Marthe
 B.P. 620
 97261 Ft. de France
 Martinique
 Telephone: (596) 71-90-05
 FAX: (596) 63-67-30

Mexico (10/93)

Guillermo Jimenez Morales
 Secretario
 Secretaría de Pesca (SEPESCA)
 Periferico Sur 4209
 Fracc. Jardines en la Montaña
 Delegación Tlalpan
 14210 Mexico, DF
 Mexico
 Telephone: (52-5) 628-0602, 0604
 FAX: (52-5) 628-0644

Montserrat (2/93)

John A. Jeffers
 Fisheries Assistant
 Fisheries Division
 Ministry of Agriculture, Lands, and Housing
 P.O. Box 272
 Plymouth, Montserrat
 Telephone: (809) 491-3612, 491-2075
 FAX: (809) 491-7275, 491-7897

Netherlands Antilles¹ (2/93)

Gerard Van Buurt
 Head Fisheries Section
 Department of Agriculture, Animal Husbandry
 and Fisheries
 Agricultural Station, Concordia
 St. Eustatius, Netherlands Antilles
 Telephone: (599-9) 376-170, 370-288
 Telex: 1233 DTIE
 FAX: (599-3) 370-723

Nicaragua (2/93)

Emilio Olivares Torrez
 Presidente Ejecutivo
 Dirección de Pesca y Acuicultura del Ministerio
 de Economía (MEDE-PESCA)
 Km. 6 1/2, Carretera Sur
 Apartado No. 2020
 Managua, Nicaragua
 Telephone: (502-2) 650566, 652000, 650423
 Telex: 1309
 FAX: (502-2) 650590, 651278

Panama (2/93)

Roy E. Cardoze
 Director General
 Dirección General de Recursos Marinos
 Ministerio de Comercio e Industrias
 Ave. Cuba y Calle 31 Este
 Edif. Loteria, piso 15
 Apartado Postal 9658
 Zona 4, Panamá
 Panamá
 Telephone: (507) 27-4691
 Telex: 3197 COMERIN PG
 FAX: (507) 27-3104

Paraguay (4/93)

Franciso Galeano Vera
 Jefe Departamento de Pesca
 Sub-Secretaria de Ganderia
 Alberdi y Gral Diaz, Primer Piso
 Ministerio de Agricultura
 Asunción, Paraguay
 Telephone: (595) 21-506182
 Telex: NA
 FAX: (595) 21-447250

Peru (2/93)

Jaime Sobero Taira
 Ministro de Pesqueria
 Paseo de la Republica #3103
 Lima, Peru
 Telephone: (51-14) 70-4745, 70-4737
 Telex: 25498-MIPESCA
 FAX: (51-14) 70-4098

Puerto Rico (2/93)

Magda Mejía
 División de Licencias de Caza y Pesca
 Apartado 5887
 Puerta de Tierra Station - 00906
 San Juan, Puerto Rico
 Telephone: (809) 725-1155, 724-6415
 FAX: (809) 724-0390

Saba¹ (8/85)

Carl Hassell
 Department of Agriculture, Animal Husbandry and
 Fisheries
 Agricultural Station
 Windwardside,
 Saba, Netherlands Antilles
 Telephone: (599-4) 2273
 FAX: N/A

St. Christopher-Nevis (4/93)

Joseph Simmonds
 Fisheries Officer
 Fisheries Division
 Department of Agriculture
 P.O. Box 39
 La Guerite
 Basseterre, St. Kitts
 Telephone: (809) 465-8045
 FAX: (809) 465-8045

St. Eustatius¹ (1/93)

Gregory O. Thomson MS
 Head of the Department of Agriculture, Animal
 Husbandry and Fisheries
 Agricultural Station, Concordia
 St. Eustatius, Netherlands Antilles
 Telephone: (599-3) 82234
 FAX: (599-3) 82334

St. Lucia (4/93)

Horace D. Walters
 Chief Fisheries Officer
 Department of Fisheries
 Ministry of Agriculture, Lands, Forestry, and
 Fisheries
 Castries, St. Lucia
 Telephone: (809) 452-3987, 6172, 2611 (ext. 7811)
 Telex: 6394 FOR AFF LC
 FAX: (809) 452-3853

St. Maarten¹ (9/89)

Godfried E. Richardson
 Department of Agriculture, Animal Husbandry and
 Fisheries
 Administration Building
 Philipsburg
 St. Maarten, Netherlands Antilles
 Telephone: (599-5) 24289
 FAX: N/A

St. Vincent and the Grenadines (4/93)

Kerwyn Morris
 Chief Fisheries Officer
 Ministry of Agriculture, Industry and Labor
 Kingstown, St. Vincent
 Telephone: (809) 456-2738
 FAX: (809) 457-2112

Suriname (9/89)

Harold Lionarons
 Permanent Secretary for Fisheries
 Ministry of Agriculture, Fisheries, and Animal
 Husbandry
 Cornelis Jongbawstraat no. 48
 P.O. Box 438
 Paramaribo, Suriname
 Telephone: (597) 76741
 Telex: ALBUZA - I SN 132 ATTENTION
 MINAGR
 FAX: N/A

Trinidad and Tobago (2/93)

Mervyn La Croix
 Director of Fisheries
 Fisheries Division
 Ministry of Agriculture, Land and Marine
 Resources
 St. Clair Circle
 Port of Spain, Trinidad
 Telephone: (809) 622-5481, 1221-5
 FAX: (809) 622-4246

Turks and Caicos (4/93)

Chris Nannes
 Fisheries Development Officer
 Fisheries Department
 Grand Turk
 Turks and Caicos Islands
 Telephone: (809) 946-2970
 FAX: (809) 946-2970

Uruguay (2/93)

Jose Fernandez Pares
 Director General
 Instituto Nacional de Pesca (INAPE)
 Ministerio de Agricultura y Pesca
 Constituyente 1497-99
 Montevideo, Uruguay
 Telephone: (598-2) 412721, 412821
 Telex: MAP UY 6503
 FAX: (598-2) 413216

Venezuela (2/93)

Francisco Herrera Terán
 Direccion General Sectorial de Pesca y Acuicultura
 Ministerio de Agricultura y Cria
 Parque Central, Torre Este. Piso 10º
 Caracas, Venezuela
 Telephone: (58-2) 509-0383, 0384, 0385
 Telex: 21483 MACRA VC
 FAX: (58-2) 574-3587

Virgin Islands (2/93)

Chief of Fisheries
 101 Estate Nazareth
 Saint Thomas, Virgin Islands 00802
 Telephone: (809) 775-6762
 FAX: (809) 775-3972

INTERNATIONAL ORGANIZATIONS**Caribbean Aquaculture Association** (1/93)

Dallas E. Alston
 Professor
 Caribbean Aquaculture Association
 Department of Marine Sciences
 University of Puerto Rico
 P.O. Box 5000
 Mayaguez, PR 00681-5000
 Telephone: (809) 899-2048
 FAX: (809) 899-5500

Caribbean Community--CARICOM(2/93)

Ronald M. Gordon
 Senior Food Technologist
 Caribbean Community Secretariat
 Bank of Guyana Building
 P.O. Box 10827
 Georgetown, Guyana
 Telephone: (592-02) 69280, 69289
 Telex: 2263 CARISEC GY
 Cable: CARBISEC GUYANA
 FAX: N/A

Caribbean Conservation Association--CCA (2/93)

Executive Director
 Caribbean Conservation Association
 Savannah Lodge
 The Garrison
 St. Michael, Barbados
 Telephone: (809) 426-5373, 426-9635
 Cable: CONCARIB Barbados
 FAX: (809) 427-3483

Naresh C. Singh
 Executive Director
 Caribbean Environmental Health Institute
 Morne Fortune
 P.O. Box. 1111
 Castries, St. Lucia, W.I.
 Telephone: (809) 452-2501
 Cable: CARENHI ST LUCIA
 FAX: (809) 453-2721

Caribbean Development Bank CDB (2/93)

P. Desmond Brunton
 Deputy Director
 Caribbean Development Bank
 Productive Sector Division
 P.O. Box 408, Wildley

St. Michael, Barbados
 Telephone: (809) 426-1600, 426-1152, 427-8053
 Cable: "Caribank" Barbados
 FAX: (809) 426-7269

Caribbean Fisheries Training and Development Institute--CFTDI (2/93)

Carlisle M. Jordan
 Principal
 Caribbean Fisheries Training and Development Institute
 P.O. Box 1150
 Western Main Road
 Chaguaramas, Port of Spain
 Trinidad and Tobago
 Telephone: (809) 634-4587, 634-4276
 Cable: CAFITRADEV
 FAX: (809) 634-4405

Commission for Inland Fisheries of Latin America--COPESCAL³ (2/93)

Comission Secretary
 Regional Fisheries Officer
 Oficina Regional de la FAO
 Avda. Santa Maria 6700
 Casilla 10095
 Santiago, Chile
 Telephone: (56-2) 218-5323
 Telex: 340279 FAOCHI CK
 Cable: FOODAGRI SANTIAGO
 FAX: (56-2) 218-2547

Comisión Técnica Mixta del Frente Marítimo (2/93)

Guillermo Verazay
 Secretario Administrativo
 Juncal 1355, Piso 6, Esc. 604,
 11000 Montevideo, Uruguay
 Telephone: (598-2) 96-1973, 96-2047, 96-2773
 FAX: (598-2) 96-1578

European Economic Community--EEC(2/93)

José Antonio Munaiz
 Consejero Económico
 Delegación de la Comisión de las Comunidades Europeas para América Central y Panamá
 Apartado 836-1007 Centro Colón
 San José, Costa Rica
 Telephone: (506) 332-755
 Telex: 3482 CEEAC CR
 FAX: (506) 216-595

Food and Agriculture Organization--FAO (2/93)

Regional Fisheries Officer
 Oficina Regional de FAO
 Avda. Santa Maria 6700
 Casilla 10095
 Santiago, Chile
 Telephone: (56-2) 218-5323
 Cable: FOODAGRI SANTIAGO
 Telex: 340279 FAOCHI CK
 FAX: (56-2) 218-2547

FAO (2/93)

Bisessar Chakalall
 Regional Fisheries Officer
 134-138 Frederick Street
 P.O. Box 822
 Port of Spain,
 Trinidad & Tobago
 Telephone: (809) 625-0467, 625-0468, 623-5175
 Cable: FOODAGRI, TRINIDAD
 Telex: 22724 FAOTT WG
 FAX: (809) 623-0995

FAO AQUILA II Project (2/93)

Claudio Gregorio
 Project Director
 Privada de Trini No. 10
 Colonia San Jerónimo Lídice
 Apartado Postal 10783
 C.P. 10200
 México, D.F.
 Telephone: (525) 681-7866, 683-7127 Ext. 102
 Telex: 1772151 FAOMME
 FAX: (525) 681-7866

Gulf and Caribbean Fisheries Institute--GCFI

(4/90)
 Mel Goodwin
 Executive Secretary
 Gulf and Caribbean Fisheries Institute
 c/o South Carolina Sea Grant
 287 Meeting Street
 Charleston, South Carolina 29403
 Telephone: (803) 727-2078
 FAX: (803) 727-2080

Inter-American Development Bank--IDB (1/93)

Francis Peacock (E-0809)
 Fisheries Specialist
 Environment and Protection Division
 Inter-American Development Bank
 1300 New York Ave, N.W.
 Washington, D.C. 20577
 Telephone: (202) 623-1875
 FAX: (202) 623-1315

Inter-American Tropical Tuna Commission--IATTC
(4/93)

James Joseph
 Director, IATTC
 8604 La Jolla Shores Dr.
 La Jolla California, 92037
 Telephone: (619) 546-7100
 Telex: 697115 TUNACOM
 FAX: (619) 546-7133

**Inter-Governmental Oceanographic Commission-
(IOC) Sub-Commission for the Caribbean and
Adjacent Regions--IOCARIBE** (2/93)

Fernando L.E. Robles
 IOC Senior Assistant Secretary for IOCARIBE
 Casa del Marqués de Valdehoyos
 Calle De La Factoria
 Sector Amuallado
 Apartado Aereo 1108
 Cartagena de Indias, Columbia
 Telephone: (57-53) 646399, 650395
 Telex: 37743 CNT CO (Attention IOCARIBE)
 Cable: IOCARIBE
 Telemail: IOCARIBE.SEC (OMNET)
 FAX: (57-53) 650395

International Development Research Centre--IDRC
(2/93)

Brian Davy
 Aquatic Resources
 Sustainable Production Systems
 Environment and Natural Resources Division
 International Development Research Centre
 P.O. Box 8500
 Ottawa, Ontario K1G 3H9
 Telephone: (613) 236-6163
 Telex: N/A
 FAX: (613) 238-7230

Market Information and Technical Advisory Service for Fish Products in Latin America and the Caribbean--INFOPECSA (2/93)

Sjef van Eys
Project Manager
INFOPECSA
Apt. 6-4894
Estafeta El Dorado
Panama City, Panama
Telephone: (507) 69-3477, 69-3066
Telex: N/A
FAX: (507) 646-589

Organization of American States--OAS (1/90)

Organization of American States
1889 "F" Street, N.W.
Washington, D.C. 20006
Telephone: (202) 458-3000
FAX: (202) 458-3967

Organization of Eastern Caribbean States--OECS (2/93)

Daven Joseph
Development Officer
OECS Fisheries Unit
P.O. Box 846
Cane Garden, Kingstown,
St. Vincent and the Grenadines
Telephone: (805) 457-2979
Telex: OECSFISH, St. Vincent
FAX: (805) 456-2943

Organizacion Latinoamericana de Desarrollo Pesquero--OLDEPESCA³ (1/93)

Angel Rivera Benavides
Director Ejecutivo
OLDEPESCA
Calle Las Palomas N°422, Urbanizacion
Limatambo, Lima 34, Aptartado 10168
Lima, Peru
Telephone: (51-14) 427655 / 429868
Telex: 25047 PE
FAX: (51-14) 429925

Permanent South Pacific Commission (2/93)

Hugo Llanos Mansilla
Secretario General
Permanent South Pacific Commission (CPPS)
Casilla No. 16638
Agencia 6400 - 9
Santiago 9, Chile
Telephone: (56-2) 672-6652, 672-6654
FAX: (56-2) 695-1100

Red Regional de Entidades y Centros de Acuicultura de América Latina (2/93)

Armando Hernández R.
Coordinator
Regional Aquaculture Network
Apartado Aereo 251246
Bogata, D.E. - Colombia
Telephone: 221-74-93

Sea Grant Program (2/93)

Sea Grant Program
University of Puerto Rico,
P.O. Box 5000
Mayaguez, Puerto Rico 00709
Telephone: (809) 832-3585, 834-4040 (ext. 2511)
FAX: N/A

United Nations Education, Scientific, and Cultural Organization--UNESCO (9/89)

UNESCO Regional Office for Science and
Technology in Latin America (ROSTLAC)
P.O. Box 859
Montevideo, Uruguay
Telephone: (598-2) 40-57-34, 41-18-07
Telex: UY 22340
FAX: (598-2) 41-43-17

World Bank (4/90)

Eduardo Loayza
Fisheries Development Advisor
Agriculture and Rural Development Department
World Bank
1818 "H" Street, N.W.
Room N-1049
Washington, D.C. 20433
Telephone: (202) 473-8973
Telex: ITT 440098 World Bank
FAX: (202) 676-0007, 334-0568

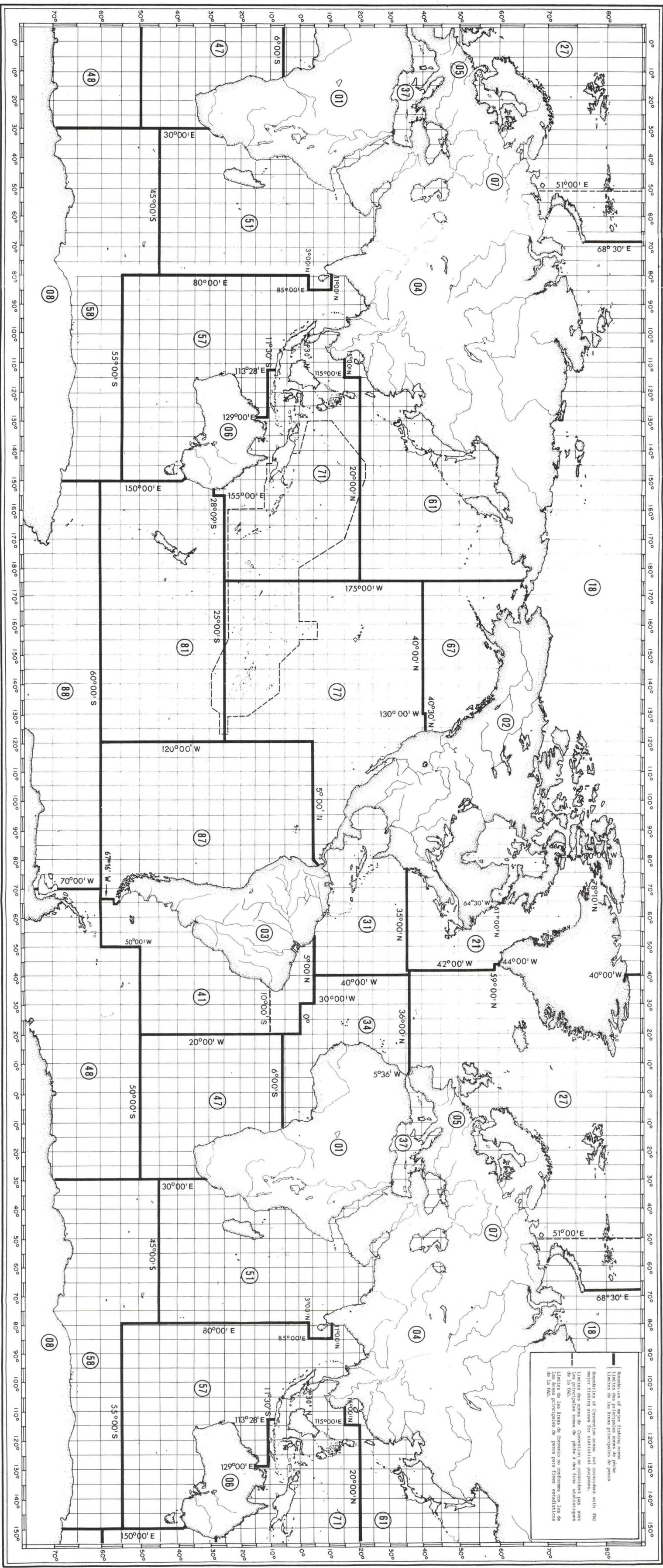
Western Central Atlantic Fisheries Commission--WECAFC / COPACO (2/93)

A. Mena-Millar, Secretary
Room F-220
WECAFC/FAO
Via delle Terme di Caracalla
00100 Roma, Italy
Telephone: (39-6) 5797-6616, 5284
Telex: 610181 FAO I
Cable: FOOD AGR I ROME
FAX: (396) 657-976-500

Note: Readers who have updated names or addresses of Latin American fishery officials are requested to supply that information to: Dennis Weidner (F/IA2), NMFS, NOAA, 1335 East-West Hwy, Silver Spring, Md. 20910. Telephone (301) 713-2286/FAX: (301) 713-2313. NMFS will supply all contributors with the most recent update of the list.

ENDNOTES

1. The Netherlands Antilles are divided into the Dutch Leeward Islands (Bonaire and Curacao) and the Dutch Windward Islands (Saba, St. Eustatius, and St. Maarten). See individual islands for names and addresses of local fisheries officials. Aruba was formerly a part of the Netherlands Antilles, but has now withdrawn.
2. French Guiana, Guadeloupe and Martinique are Overseas Departments of France, and fisheries are administered by the French State Secretariat for the Sea. The name and address of the current secretary is: Amboise Guellec, Secrétaire de l'Etat Charge de la Mer, 3 Place de Fontenoy, 75700 Paris, CEDEX 07 France. Telephone: (33-1) 273-55-05. Telex: MIMER 250-823.
3. OLDEPESCA is the successor agency to the Latin American Economic System's (SELA) Marine and Freshwater Seafood Product Action Committee.
4. The Latin American Office and Mr. Buzeta, were recently transferred to Uruguay. (Address not yet available.)
5. "N/A" indicates that information is not yet available.



2. THE CARIBBEAN

The Caribbean



2.1

CAYMAN ISLANDS

Cayman fishermen are unlikely to initiate significant distant-water operations during the 1990s. The Islands' fishermen conduct small coastal fisheries as well as limited offshore operations on various western Caribbean grounds. As much of the off-shore activity is on grounds claimed by other Caribbean countries (Colombia and Honduras), it seems unlikely that such activities can be significantly expanded. The Cayman's own small fishing zone offers minimal opportunities to foreign distant-water fishermen.

The Cayman Islands Government (CIG) has registered foreign-owned fishing vessels under the Cayman flag to generate revenue generating activity. These flag-of-convenience registrations by 1989 had reached significant levels. The Cayman registrations appears to have been sought primarily by European and North American companies and not Asian countries as is the case in several other Latin American countries registering flag-of-convenience vessels. CIG decided in 1989 to cease registering foreign-owned fishing vessels that operated outside of Cayman waters because of the difficulty of regulating such non-Cayman vessels. CIG has since removed many of the foreign-owned vessels from the Cayman registry.

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I. GENERAL BACKGROUND

The Cayman Islands has an extremely small fishing industry. The overall catch reached nearly 1,100 metric tons (t) in 1987, but has since declined to only about 800 t in 1991 (Latin America, appendix C2a1). Most of this catch, however, is taken by foreign-owned vessels which reported catches off West Africa (appendix D). Other vessels operated in the South Atlantic and other areas, but do not report their catch.¹ The catch actually harvested by Cayman fishermen for local consumption is only about 100 t annually and has changed little since 1987 (appendix D).

Cayman fishermen participate in both an inshore and offshore fishery. A small number of local residents (about 50) participate in these fisheries.

Inshore fishery: The inshore fishery is of only limited importance to the Cayman economy. Local banks report very small requests by fishermen for development loans. The principal species targeted are groupers, snappers, jacks, barracuda, and parrotfish. Artisanal catches total about 3-5 t per year.²

Offshore fishery: The offshore fishery has fluctuated from 10 vessels (12-15 meters) in 1988 to 8-10 vessels (9-13 m) in 1990.³ Cayman fishermen in 1992 operated about 10 vessels (10 m). Most of the catch is taken on Mysteriosa Bank (240 kilometers west southwest of Grand Cayman and claimed by Honduras) and Baja Nuevo (420 km south southeast in Colombian waters). Cayman fishermen also report occasional catches at Honey Hill, (195 km south of Grand Cayman) and Pickle Bank (130 km northeast of Grand Cayman). The catch is primarily composed of blackfin snapper, silk snapper, queen snapper, and wenchman, along with rainbow runner, dolphin, and groupers. The authors have no catch data on the offshore fishery. It seems unlikely, however, that Cayman fishermen could significantly expand this fishery. Most of it is conducted on grounds claimed by other countries (especially Colombia and Honduras). These countries appear to be tolerating the current level of activity, but could be expected to take some enforcement action if Cayman fishermen significantly expanded their fishing effort.

A recent study commissioned by the Government concluded that the Caymans can not develop an important pelagic fishery in its own Exclusive Economic Zone (EEZ). The low productivity of coastal waters appears to be the principal limiting factor.⁴

Fishery products are some of the Islands' most important export commodities. Shipments have generally increased during the 1980s and totaled about \$13.4 million in 1991 (Latin America, appendix E1). A substantial part of those shipments, however, especially the lobster shipments, appear to be the catch of either foreign-owned vessels flagged in the Caymans or foreign-flag vessels transshipping their catch through the Caymans.⁵ FAO reports a small crustacean fishery (Natantian decapods), but it is one of the fisheries conducted by foreign-owned vessels off West Africa (appendix D). The United States is the primary market for Cayman shipments which consist mostly of lobster (appendix E). Cayman fishermen do not, however, conduct a local lobster fishery.⁶ No details are available on the countries transshipping through the Caymans. Some observers speculate that because lobster is the principal species involved that it may be Cuban-origin product.

II. HIGH-SEAS FLEET

The Cayman Islands has no high-seas fleet, although some Cayman fishermen do operate in a offshore fishery on various banks and cays in the western Caribbean. (For details see section I. General Background.) The Caymans Islands Government (CIG) in 1974, began registering foreign-owned vessels which operated in distant-water fisheries. CIG modified its registration policy in 1989 and no longer issues such flag-of-convenience registrations to foreign-owned fishing vessels.

A. Flag of Convenience Registrations

Cayman authorities began registering flag-of-convenience vessels in 1974. This activity became an important source of income for the CIG. Most of the foreign vessels registered in the Caymans are merchant vessels, but small numbers of foreign-owned fishing vessels are also on the register. It is

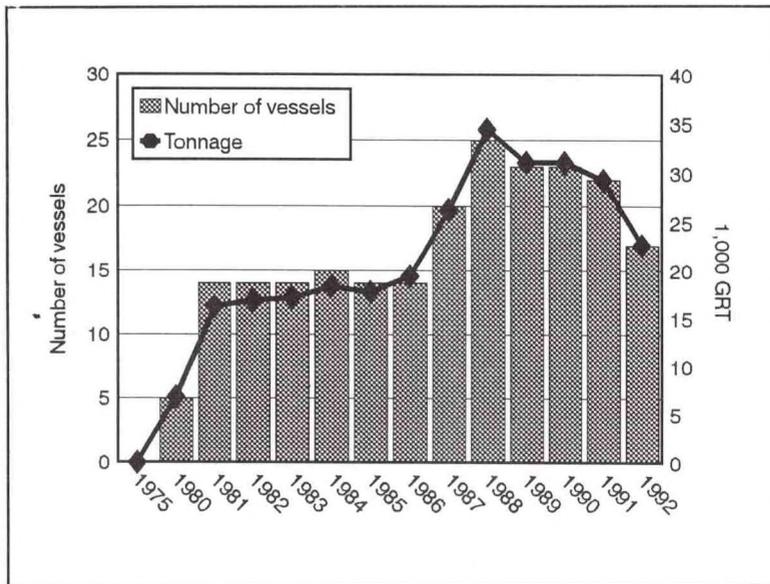


Figure 1.--Cayman Islands. Cayman officials have recently been reducing the number of large, foreign-owned vessels in the fishing fleet.

unclear why the foreign fishing vessel owners selected the Caymans. It may be because the Caymans had been registering foreign-owned vessels for several years and had established a reputation for accepting such registrations. The Caymans' offshore banking center and strong bank secrecy laws and its stability as a British Crown colony may be other important factors.

All the larger fishing vessels still registered in the Caymans appear to be flag-of-convenience registrations as Cayman companies are not believed to have equity participation. The owners have registered their fishing vessels in the Caymans for a wide range of quite legitimate reasons.⁷ Some of the owners, however, have obtained flag-of-convenience registrations because it allows them to evade various international fishery management regimes in which the Caymans does not participate. It also allows the foreign owners to evade a variety of strict fishery management, pollution, environmental safety, tax, or other regulations which are enforced by their own government. U.S. owners, for example, registered a few large tuna seiners in the Caymans during the 1980s, reportedly to avoid U.S. dolphin

protection laws.⁸

1. Large-sized vessels

The Cayman Islands reported a high-seas fleet of 17 fishing vessels totaling nearly 23,000 gross registered tons (GRT) to Lloyd's of London in 1992 (Latin America, appendix B2a1-2). This number was confirmed by the U.S. Office of Naval Intelligence (ONI) estimates of 20 vessels totaling 26,000 GRT in 1993 (appendix A). These estimates appear to be too high, however, as current CIG data shows a smaller fleet (appendix C), reflecting the 1989 change in registration policy.

ONI identifies most of the foreign-owned vessels registered in the Caymans as trawlers (trawlers, refrigerated trawlers, fish factory trawlers) and tuna vessels--probably purse seiners (appendix A).

Most Cayman flag-of-convenience vessels appear to be relatively old vessels. ONI reports that most were built in the 1960s and are more than 25 years old. Only four were built during the 1970s (appendix A). CIG reports that it has removed many older vessels from the Caymans register.

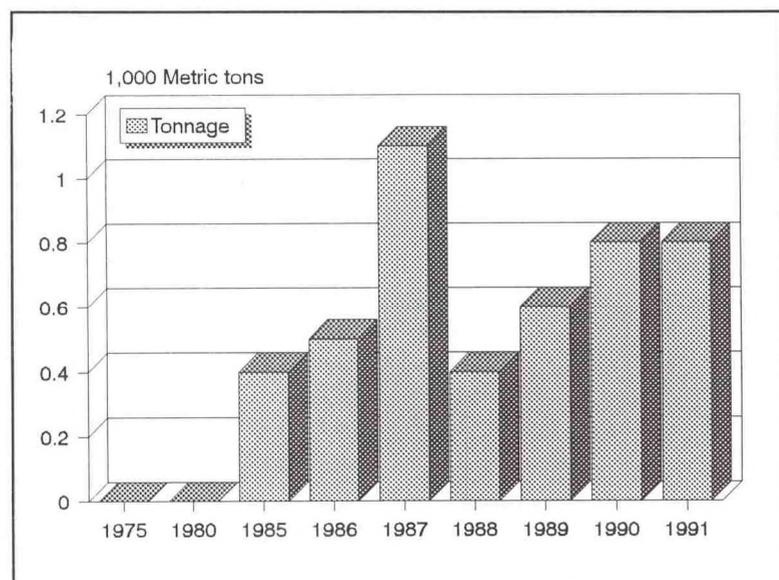


Figure 2.--Cayman Islands. The Cayman catch has fluctuated in recent years, primarily due to the foreign-owned vessels.

CIG's more current list of Cayman-flag registrations shows that six vessels were built in the 1960s and eight in the 1970s (appendix C).

2. Medium-sized vessels

Cayman officials have also registered several smaller foreign-owned fishing vessels. About twelve 117-GRT Nicaraguan shrimp and lobster vessels were registered in the Caymans. Presumably these were vessels that their owners used to flee Nicaragua during the Sandinista period. They were probably deployed illegally off Nicaragua or another Caribbean country, but no details are available. About six Japanese-built vessels ranging in size from 254-399 GRT were also registered in the Caymans. CIG officials report that most of these Nicaraguan and Japanese vessels have been removed from the Cayman register, either because the vessels did not meet the requirements under the Torremolinos Convention or because their owners failed to present them for survey in the Cayman Islands.

B. New Registration Policy

The Cayman Islands Government (CIG) in 1989 decided to stop registering foreign-owned fishing vessels that were seeking flag-of-convenience registries. CIG now refuses to register foreign-owned vessels with no legitimate Cayman's connection that are to be deployed on distant-water grounds. CIG has removed many of the non-local fishing vessels from its vessel registry. CIG decided to cease making such registrations because of the impracticality of regulating non-domestic fishing vessels. CIG reports that only 15 foreign-owned vessels totaling less than 14,000 GRT now remain on the registry (appendix C). CIG is currently systematically conducting safety surveys on the remaining vessels for compliance with the requirements of the 1977 Torremolinos Convention as interpreted by the United Kingdom. Those owners who fail to offer their vessels for survey under this regime will also be removed from the Cayman register. These measures have sharply reduced the flag-of-convenience fishing vessels flying the Cayman flag.⁹

III. VESSEL SOURCES

The authors know of no Cayman shipyards building commercial fishing vessels. Most commercial vessels used in the local fishery appear to have been imported from U.S. shipyards.¹⁰

IV. FOREIGN FISHING

No information is available on foreign fishing off the Caymans. Some foreign fishermen have reportedly expressed an interest in pelagic fisheries. CIG officials are not encouraging such applications, however, believing that both inshore and offshore stocks should be reserved for the growing sports fishing industry which is important to the tourist trade and local fishermen. The Government is reportedly considering the designation of exclusive offshore sports fishing areas where commercial fishing for large pelagics would be banned.¹¹

V. JOINT VENTURES

The authors have no information on Cayman joint fishery ventures.

VI. DISTANT-WATER OPERATIONS

Cayman Islands fishermen do not conduct distant-water operations, but do operate in various areas of the western Caribbean. (See I. General Background.) Some fishermen may be employed on the foreign-owned flag-of-convenience vessels deployed on distant-water grounds.

Little information is available on the distant-water operations of the foreign-owned vessels registered in the Caymans. The flag-of-convenience fleet may have totaled as many as 50 medium and large fishing vessels totaling 30,000 GRT (Latin America, appendices B5b1-2). Given the size of the Cayman flag-of-convenience fleet, the catch may have totaled 90,000 t annually (Latin America, appendix C5). Cayman officials are no longer registering flag-of-convenience and have removed several previously registered foreign-owned fishing vessels from the Cayman registry. Foreign registrations in 1993 amounted to 15 vessels totaling about 14,000 GRT (appendix C). This has significantly reduced the fishing potential of the foreign-owned vessels. The foreign vessels currently have the capability to catch about 45,000 t of fish and shellfish annually (Latin America, appendix C5).

Caribbean: The Cayman offshore fishery in the western Caribbean is described above in section I. General Background. CIG may license additional smaller vessels owned by Cayman nationals resident in the Islands and deployed in Caribbean fisheries.¹²

North Atlantic: One Cayman Island vessel was reported fishing in the North Atlantic from 1985-91 (Latin America, appendix C4b4).¹³ The catch of this vessel was not reported to FAO.

South Atlantic: The Cayman Islands Government reports that nine of the foreign-owned vessels belonged to two companies (Neptune Trawlers and Pict Holdings) based in Durban, South Africa and a third company (South Atlantic Fishing Company) for which no information on where their vessels are based is available (appendix C).¹⁴ Presumably the South Atlantic Fishing Company along with Neptune Trawlers and Pict Holdings are primarily deploying vessels in the southern Atlantic. One of the target species is apparently hake because EC countries report frozen hake from the Cayman Islands.¹⁵ This implies that at least some of the vessels are probably deployed in the South Atlantic and CIG officials confirm such deployment (appendix C).¹⁶

West Africa: Other vessels are deployed off West Africa (appendix D), for both shrimp and tuna. The tuna catch is mostly yellowfin. No information is available on the operations of these vessels and it is unclear if they ever actually call or ship product

through the Cayman Islands. As the United States imports tuna from the Caymans, some of these vessels may be landing some of their catch in the Cayman Islands.

Few details are available on the nationality of the companies registering vessels in the Caymans. The country of construction suggests that the current owners may be of the same nationality (appendix B). This is not really a reliable indicator, however, because the vessels could have been built for foreign companies or since sold to other foreign owners. In the absence of other information, the authors have had used the country of construction because it does offer some clues as does the name of the vessel. The owners involved appear to be primarily Canadian, European Community, and United States companies. East European companies may also be involved as several vessels were built in Germany (GDR) and Poland. Notably few of the vessels are of Asian origin, unlike the flag-of-convenience in several other countries.

Canada: Several large Cayman-flag vessels were built in Canada, suggesting that Canadian companies may have retained ownership in the vessels, but this can not be confirmed at this time.

European Community: Several vessels appear to be operated by European, perhaps British, companies.

South Africa: Neptune Trawlers and Pict Holdings operate vessels from Durban, but the authors could not determine the nationality or the controlling financial interests of the companies.

United States: The tuna vessels, probably purse seiners, may still be operated by U.S. owners. The authors have not noted any Cayman-flag vessels, however, operating in the Eastern Tropical Pacific since 1987 or in the Atlantic.¹⁷

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1. S.R. Fordham, Chief Marine Surveyor, Cayman Island Government, personal communications, October 8, 1983.
2. Gene Parsons, Fisheries Director, personal communication, October 5, 1993.
3. When available the vessels discussed in this report will be described in tonnages, but available data does not often provide such information.
4. MRAG, "Large Pelagic Fisheries in the Caribbean: Their Role in the Development of the U.K. Dependent Territories," *EF2 Management Study* (Caribbean U.K. Dependent Territories, final report, 1993), 130 pp and appendix.
5. Parsons, *op. cit.*, October 5, 1993.
6. Parsons, *op. cit.*, October 5, 1993.
7. For a detailed discussion of the flag-of-convenience registrations, including a list of possible motivations on the part of the vessel owners, see the Latin American overview section of this report.

SECTION II. (High-seas Fleet)

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9. Fordham, *op. cit.*, October 8, 1993.

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12. *Cayman Islands Yearbook & Business Directory* (Cayman Free Press: Grand Cayman, 1992), p. 267.

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APPENDICES

Appendix A.--Cayman Islands. Large* fishing vessels, 1993.

Vessel type\Vessel name	Size	Constructed	
		Country	Year
	<u>GRT</u>		
Trawler (510)			
Garabito**	1,441	Canada	1967
Mancha	948	Peru	1973
Maria Rosana	1,440	Canada	1967
Southern Patriot##	519	Spain	1962
Southern Saint	550	Netherlands	1958
Southern Victor	611	Italy	1967
Subtotal	<u>5,509</u>		
Refrigerated trawler (511)			
Southern Fighter	1,702	U.K.	1964
Southern Ranger	<u>1,642</u>	U.K.	1962
Subtotal	<u>3,344</u>		
Fish factory trawler (512)			
Chorotega	1,445	Canada	1968
Lupin	1,174	Netherlands	1966
Nicoya	1,444	Canada	1967
Rosalind Bank	2,405	Poland	1979
Roxana Bank	2,405	Poland	1978
Sacip	1,580	Germany (GDR)	1967
Storesse	<u>1,572</u>	Germany (GDR)	1968
Subtotal	<u>12,025</u>		
Tuna vessel (516)			
Blue Sky	1,185	U.S.	1975
Guatuso**	1,441	Canada	1967
Maria Amalia	1,092	U.S.	1968
Maria Lyn	<u>1,091</u>	U.S.	1967
Subtotal	<u>4,809</u>		
Total	<u>25,687</u>		

* 500 GRT or greater.

** ONI identifies one of these vessels as a trawler and the other as a tuna vessel. The similarity of the size, however, suggests that they may be similar vessel types.

Presumably the same company operates all the "Southern" vessels. Besides the vessels listed above, there are two smaller trawlers (less than 500 GRT): the Southern Raider (458 GRT) built in GE during 1956 and the Southern Warrior built in Japan during 1968.

Source: U.S. Navy. Office of Naval Intelligence. Washington, D.C., 1993.

Appendix B.--Cayman Islands. Large* fishing vessels, 1993.

Country built\ Vessel name	Type#	Size	Constructed
		<u>GRT</u>	<u>Year</u>
Canada			
Chorotega	512	1,445	1968
Garabito**	510	1,441	1967
Guatuso**	516	1,441	1967
María Rosana	510	1,440	1967
Nicoya	512	1,444	1967
Germany (GDR)			
Sacip	512	1,580	1967
Storesse	512	1,572	1968
Italy			
Southern Victor	510	611	1967
Netherlands			
Lupin	512	1,174	1966
Southern Saint	510	550	1958
Poland			
Rosalind Bank	512	2,405	1979
Roxana Bank	512	2,405	1978
Spain			
Southern Patriot##	510	519	1962
United Kingdom			
Southern Fighter	511	1,702	1964
Southern Ranger	511	1,642	1962
United States			
Blue Sky	516	1,185	1975
María Amalia	516	1,092	1968
María Lyn	516	1,091	1967
Total		24,739	

* 500 GRT or greater.

** ONI identifies one of these vessels as a trawler and the other as a tuna vessel. The similarity of the size, however, suggests that they may be similar vessel types.

ONI vessel type codes:

510 - Trawler

511 - Refrigerated trawler

512 - Fish factory trawler

516 - Tuna vessel

Source: U.S. Navy. Office of Naval Intelligence. Washington, D.C., 1993.

Appendix C.--Cayman Islands. Foreign-owned fishing vessel registrations, 1993

Vessel name	Owner	Operating area	Year built	Size	Length
				GRT	Meters
Lupin	Neptune Trawlers	Durban	1967	878	67.2
Pan Pacific 86	NA	NA	1974	255	40.5
Pict	Pict Holdings	Durban	1973	1,478	70.1
Rosalind Bank	Neptune Trawlers	Durban	1979	2,405	89.8
Roxana Bank	Neptune Trawlers	Durban	1978	2,405	85.3
Sea Bull	NA	NA	1975	99	24.5
Sacip	Neptune Trawlers	Durban	1967	1,580	77.7
Southern Patriot	South Atlantic Fishing	NA	1962	519	48.1
Southern Saint*	South Atlantic Fishing	NA	NA	NA	NA
Southern Victor	South Atlantic Fishing	NA	1967	612	60.1
Southern Warrior	NA	NA	1968	1,131	147.0
Storesse	Neptune Trawlers	Durban	1968	1,572	83.1
Texas Star	NA	NA	1980	95	32.4
Toni M	NA	NA	1970	244	31.8
Tri C	NA	NA	1973	146	24.3
Young Star No. 88	NA	NA	1973	284	44.0
Total				13,703	

* Apparently removed from the Caymans registry in 1993.

Source: Cayman Islands Government, Marine Survey Department, October 8, 1983.

Appendix D.--Cayman Islands. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	-	-	-	-	-	-	-	-	-
Coastal (31)	Negl	Negl	Negl	Negl	0.1	0.1	0.1F	0.1F	0.1
Distant Water* 34	-	-	0.4	0.5	1.0	0.3	0.5	0.7	0.7
Total	Negl	Negl	0.4	0.5	1.1	0.4	0.6	0.8	0.8

FAO statistical areas

31: Western central Atlantic

34: Eastern central Atlantic (off the coast of western Africa)

Negl - Negligible

* The Caymans distant-water fishery is conducted by foreign-owned vessels.

Source: FAO, Yearbook of Fishery Statistics, various years.

Appendix E.--United States. Fishery imports from the Cayman Islands, 1990-92

Product	Year		
	1990	1991	1992
	<u>US\$1,000</u>		
Finfish			
Grouper	-	-	2.5
Tuna			
Albacore	727.9	709.9	794.6
Other	1,252.0#	-	8.6
Other			
Freshwater	-	-	43.4
Marine			
Fresh	127.2	39.5	
Frozen*	1,849.0	2,624.8	1,532.5
Crustaceans/Mollusks			
Conch	5.0	-	-
Lobster	14,102.6	12,308.3	5,018.2
Octopus**	395.9	264.2	118.8
Total##	18,459.6	15,946.7	7,518.6

* Primarily frozen fillets

** And other mollusks

Mostly skipjack

Totals may not agree due to rounding.

Source: U.S. Bureau of the Census

2.2

CUBA

The Cuban high-seas fleet, the Flota Cubana de Pesca (FLOCUBA), has been forced to idle its fleet of distant-water trawlers, primarily because of fuel shortages. The Cuban Government will eventually have to decide what to do with its idled vessels. Many of the vessels are relatively old. Most of the *Río Damuji* class vessels, the most modern in the Cuban fleet, were built in the mid-1970s and now average nearly 20 years old. No information is available on how well the vessels have been maintained and what condition they are in. Press reports suggest that FLOCUBA is interested in purchasing used replacement vessels, but have not been able to actually acquire any vessels, probably because of an inability to finance foreign purchases. FLOPESCA's idled vessels are too large to be deployed profitably in Cuban coastal waters. The increasing demands that coastal countries are making for access and the cost of distant-water operations suggest that Cuba is unlikely to deploy many of these vessels during the 1990s. FLOPESCA has already withdrawn from most of its distant-water grounds: the southeastern and southwestern Atlantic and the southeastern Pacific. Canada is continuing its allocations to Cuba, but the Canadian Government may find such allocations increasingly difficult to justify to the country's own hard-pressed fishermen. Namibia is reportedly considering the reopening of its coastal waters, but it is unclear if Cuba can benefit from its close relationship with Namibian officials. Even if FLOCUBA could secure access rights, they would be unable to renew extensive distant-water operations. Diesel fuel supplies are so limited in Cuba that state companies, like FLOCUBA, that do not produce exportable products faces serious obstacles in qualifying for fuel allocations. This means that the Cuban Government will either have to sell most of its distant-water vessels or scrap them. The Cubans are already attempting to sell some vessels. Given the age of the idled vessels, Cuban officials are likely to have considerable difficulty finding buyers and may have little option but to scrap them.

Cuba does not permit any foreign fishing in its waters. Cuba has, with Soviet assistance, developed its fishing industry and Cuban fishermen are fully utilizing most available fishery resources.

Cuba has served as a repair and supply point for the Soviet fishing fleet during the 1960s-80s. The authors do not have current information on the level of support currently being provided the Russian fleet or how financial payment terms may have been revised. Formerly Soviet payments for port services were largely credited against Cuba's enormous debt to the Soviet Union and thus generated little real income for Cuba. The reduction of the Soviet/Russian fishing efforts off Latin America (Peru/Chile in 1991-92 and Argentina in 1993) suggests that Russian use of Cuban ports has probably declined substantially since 1991. Cuba undoubtedly would like the Russians to continue using the Havana port as it may generate earnings needed to purchase Russian oil.

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I. GENERAL BACKGROUND

Cuba is the leading island fishing country in the Caribbean. The country has given considerable priority to developing its fishing industry. A modern fishing industry appeared highly desirable to Cuban planners in the 1960s, offering the means to augment domestic food production, adversely affected by the increasingly ideologically oriented economic policies of the Revolutionary Government. The expansion of the industry, in addition, provided Cuba a way of increasing badly needed foreign currency export earnings. The fishing industry also offered non-economic benefits such as creating a

pool of experienced seamen the Cuban Navy could draw from and expanding the country's coastal surveillance potential. Cuba's development of a modern fishing industry was aided by substantial Soviet technical assistance beginning in the mid-1960s.¹ This partly explains Cuba's decision to adopt the Soviet model of fisheries develop and acquire a high-seas fleet, the Flota Cubana de Pesca (FLOCUBA). This decision required the support of ranking Cuban leaders as it necessitated the commitment of scarce foreign exchange reserves to import costly, modern high-seas vessels from foreign shipyards.

The Cuban fishing industry is conducted through 16 state-owned enterprises which include separate facilities for port services and the processing and marketing of fishery products. Many of these companies have modern facilities designed to supply high-quality product (especially lobster and shrimp) to export markets. One report indicates that six of these facilities have been rebuilt since 1980 and many others have been substantially modernized.

The Cuban Government decided to use much of the coastal catch of valuable species (lobster, shrimp, snapper, and tuna) to export for foreign currency. While sugar is Cuba's principal export product, fishery

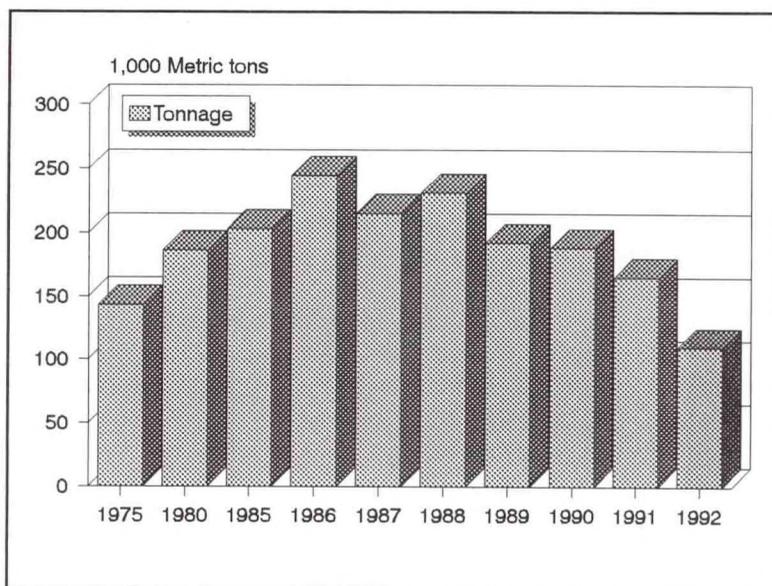


Figure 1.--Cuba has been reporting steady catch declines because of plummeting distant-water fisheries.

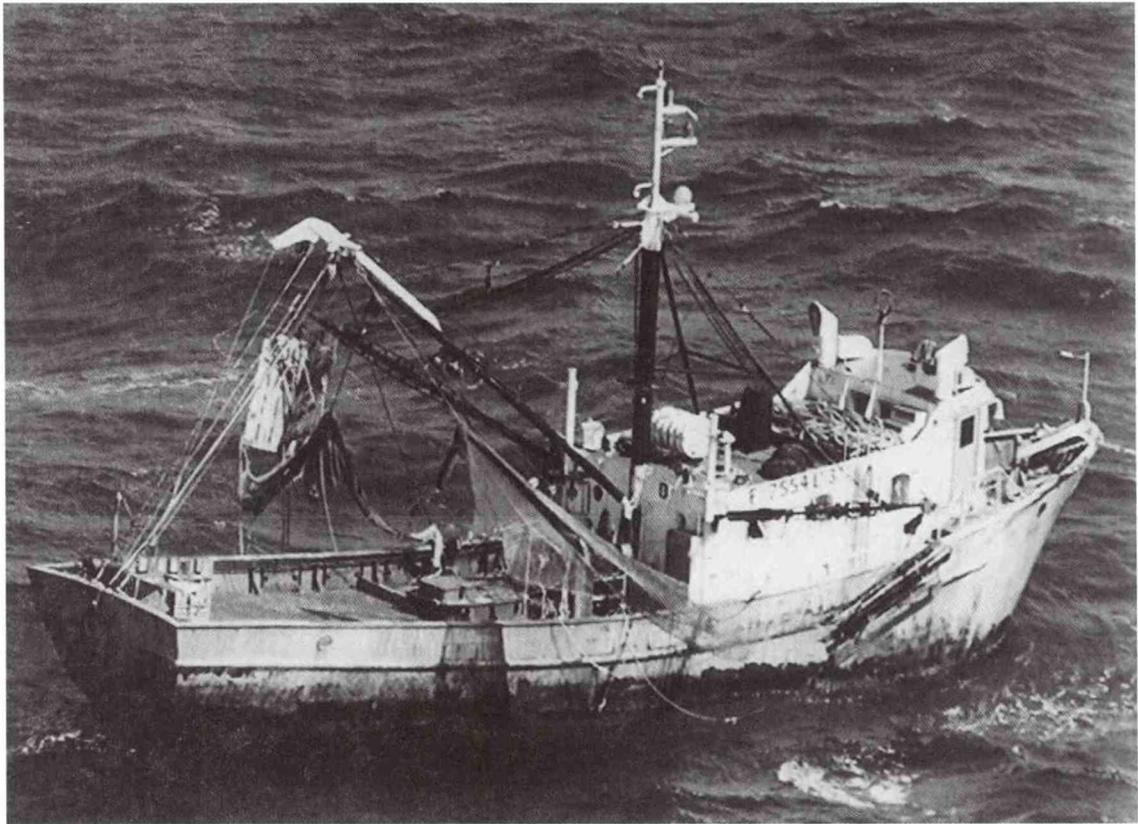


Photo 1.--Much of the Cuban fleet is composed of small coastal vessels, like this shrimp trawler. Other small vessels are deployed for lobster and a variety of finfish.

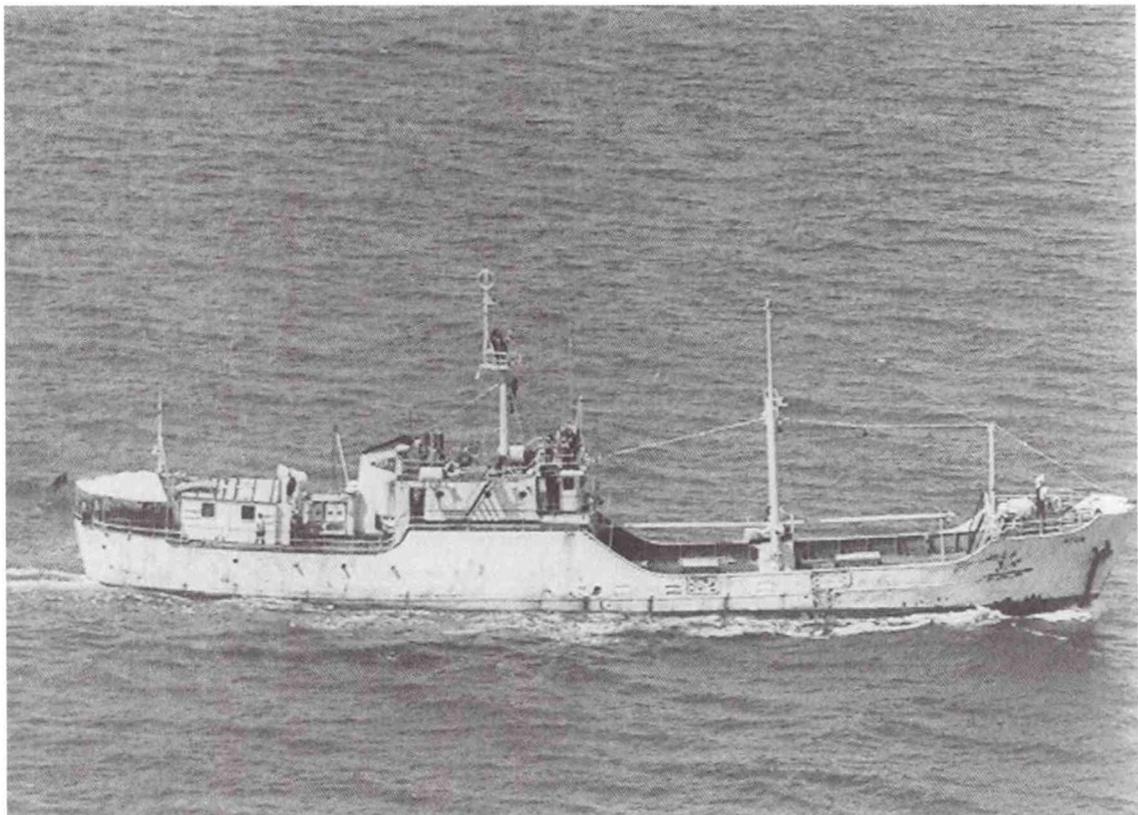


Photo 2.--Cuba has deployed small numbers of tuna boats in the central Atlantic.

products have become one of the leading non-sugar export commodities. Cuban export shipments totaled nearly \$130 million in 1991 (Latin America, appendix E1).² As most valuable fishery products in demand on foreign markets are exported, such species are not available to Cuban consumers in the domestic market. The state-owned distant-water fleet, FLOCUBA, was deployed to produce seafood for domestic consumers. FLOCUBA was mainly able to access low-value species such as jack mackerel that few other fishermen desired. FLOCUBA did produce smaller quantities of some more desirable species, such as hake.

Cuba rapidly expanded its overall fisheries catch during the 1980s after acquiring its fleet of large Rio Damuji class stern factory trawlers from Spain during 1975-79 (appendix D). Overall catches reached a record 245,000 metric tons (t) in 1986, primarily because of massive catches in the southeastern Pacific off Peru and Chile and in other distant-water fisheries (appendix E). Much of the catch was used to supply domestic markets. Even when meat was not available, Cuban consumers could sometimes find fish supplied by FLOCUBA in domestic markets.³

The Cuban fisheries catch has steadily declined since 1986. Cuba reported catch declines in 1987, 1989, 1991, and 1992. The Cuban catch in 1992 totaled only 110,000 t, less than half of the 1986 catch. The 1993 catch will almost certainly be even lower. The authors believe that most of this decline has come in Cuba's distant-water fisheries. The Cubans deployed trawlers off Canada in the northwestern Atlantic during 1993, but did not fish in the other distant-water areas where they had previously operated.⁴

The major difficulty facing FLOCUBA is the worsening fuel shortage in Cuba. The Cuban fishing industry, beginning in the 1960s and continuing through the 1980s, received a major subsidy from the Soviet Union through the provision of fuel at prices substantially below international prices. This permitted FLOCUBA to conduct costly distant-water operations even for low-value species. Such fisheries were

probably not justified in market terms.⁵ Now that Russia has sharply cut back on oil deliveries, Cuba can no longer afford to supply FLOCUBA's massive fuel requirements for distant-water operations. President Castro has stated that Cuba requires 7 million t of imported oil for the Cuban economy to be functional. Cuba was only able to obtain about 6 million t from Russia in 1992 and 1993 imports may be only a fraction of the quantity received in 1992.⁶ The country is continuing some coastal fisheries that generate export earnings, but most of FLOCUBA's distant-water operations that produced low-value fish for the domestic market were sharply curtailed in 1992 and suspended in 1993, except for operations in the northwestern Atlantic off Canada.⁷

II. HIGH-SEAS FLEET

Cuba reported a high-seas fleet consisting of 68 vessels totaling nearly 109,000 GRT to Lloyd's in 1992 (Latin America, appendix B2a1-2). Most of the vessels are operated by FLOCUBA, the state-owned distant-water fleet. Nearly half of those vessels were 2,000 GRT or larger. The U.S. Office of Naval Intelligence indicates that Cuba has a fleet of almost 80 large fishing vessels totaling nearly

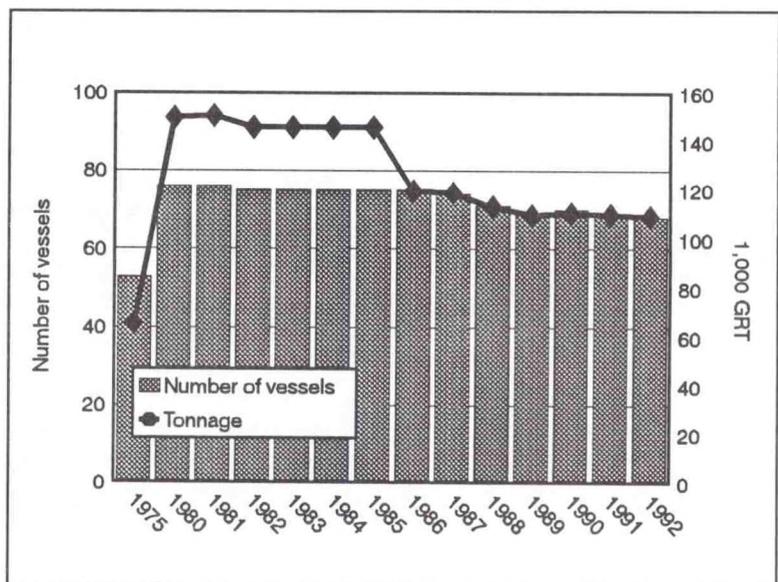


Figure 2.--Cuba added many large fishing vessels, mostly trawlers, to its fleet during the 1970s, but no new vessels in recent years.

140,000 GRT (appendix C). This does not include the large fleet of support vessels (tankers and cargo vessels) FLOCUBA requires for its distant-water operations. Data published by FAO provides additional fleet estimates through 1989 (appendices A and B). While These estimates vary, it is clear that the Cuban distant-water fleet is the largest operated by any Latin American country. Many of the most productive vessels are *Río Damuji* class stern factory trawlers. These vessels comprise the biggest fleet of large vessels operated by any Latin American country (appendix B3b1-2).

The decision to initiate a distant-water fishery was based primarily on the Soviet experience and the availability of inexpensive, Soviet-supplied fuel. The decision to use scarce foreign exchange reserves to purchase factory trawlers in foreign shipyards was made in the early 1970s before important coastal countries off which the Cubans planned to deploy vessels had declared 200-mile zones. As a result, the Cubans found themselves by the late 1970s with an expensive distant-water fleet and rapidly shrinking access to coastal grounds on which it could be deployed.

Cuba now has an increasingly aging fleet. All of the fleet was built in the 1960s and 1970s. The newest Cuban fishing vessels are the *Río Yateras* built in 1975-79 (appendix C). The authors know of no large fishing vessels added to the Cuban fleet since 1979. Maintenance costs for such old vessels must be escalating. Many have engines which are not as fuel efficient as modern engines. This must be a critical problem for FLOCUBA now that the Russians have sharply reduced the former Soviet oil subsidy. Growing maintenance and fuel difficulties have apparently become insolvable problems, probably explaining the substantial decline in the fisheries catch since 1986 (Latin America, appendix C2a1). Cuban officials apparently have been unable to resolve these problems. One press report suggested that the Cubans were considering the purchase of used Spanish trawlers displaced from the Namibian fishery, but the purchase was never consummated.⁸

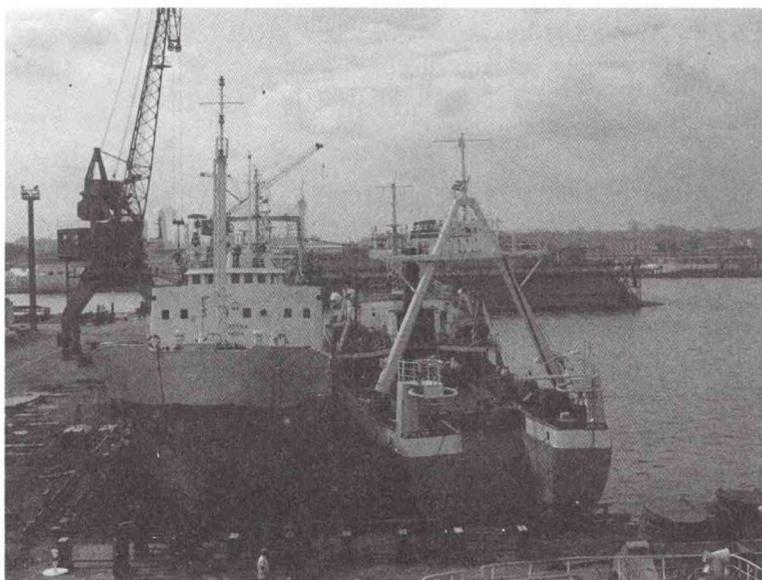


Photo 3.--Cuba operated the largest distant-water fleet in Latin America during the 1980s, but had to terminate most operations in 1992-93 when the Soviet oil subsidy ended.

The reduction of FLOCUBA catches must be having a disastrous impact on domestic markets. Species like jack mackerel during the 1980s were often one of the few high-protein foods available to Cuban consumers. The supply situation has apparently worsened significantly in the 1990s. Jack mackerel was already in short supply even before the precipitous decline in the 1992 catch.

III. VESSEL SOURCES

Cuba operates several state-owned shipyards which build shrimp trawlers, lobster trap boats, and other small vessels for coastal fisheries. Six shipyards service the coastal fleet and a major Soviet-built facility in Havana services the larger distant-water vessels.⁹ The Havana facility was extensively used by Soviet fishing vessels for repairs and support services. Artisanal yards also occupy a significant part of the shipbuilding and repair market in Cuba.¹⁰ The Cuban yards do not build distant-water fishing vessels, all of which have to be imported, requiring the allocation of scarce foreign exchange reserves. Cuban shipyards have built the 700-750-ton *El Cocal* class series, but these are fish-base ships, not actual fishing vessels (appendix C).

The largest Cuban-built fishing vessels are the 110-GRT Lamda-class vessels. The Cuban shipbuilding industry has reported some success. Dated sources indicate that Cuba is the world's leading producer of ferro-cement fishing boats, with a total of 696 being built between 1960 and 1977.¹¹ More current production data is unavailable. The use of ferro-cement in place of steel or wood is an attractive alternative for Cuba, which has limited domestic production and lacks foreign currency to import these materials. Scattered press reports suggest that production has been interrupted at some shipyards.¹² Vessel production has apparently been limited both by management problems and material shortages.

Cuba's large fishing vessels have all been imported. Cuba began importing large fishing vessels during the mid-1960s in an effort to create a high-seas fleet based on the Soviet model. The Cubans ordered the vessels from foreign, mostly Spanish, shipyards. Available information on vessel imports is as follows:

Greece: Cuba imported the Atlantik class factory trawlers from Greece during 1968-71.

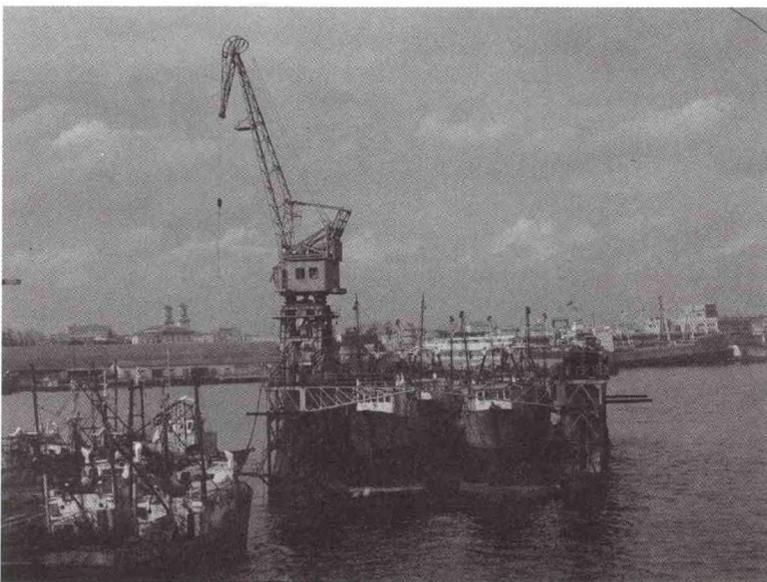


Photo 4.--Cuban shipyards primarily build and service the coastal fleet.

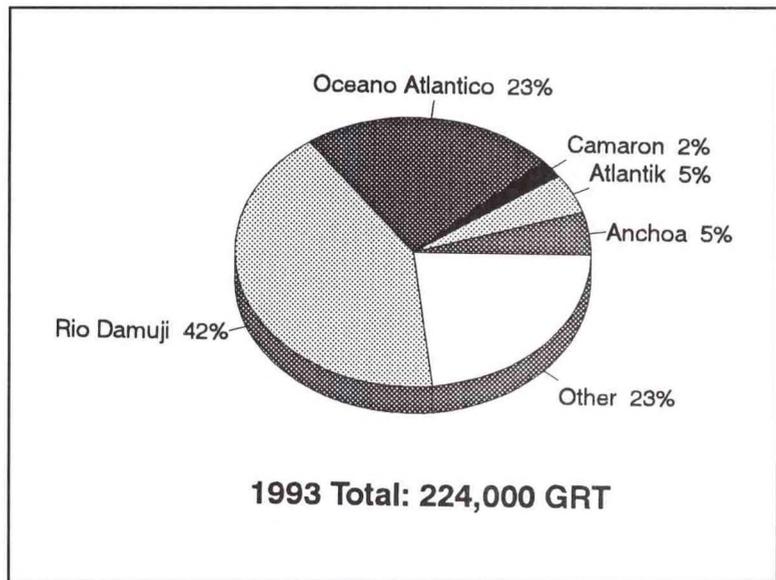


Figure 3.--The Rio Damuji stern factory trawlers are the mainstay of the Cuban distant-water fleet.

Japan: Cuba imported a small number of large distant-water fishery support vessels from Japanese yards during the late 1970s. The largest of these were the 6,000-ton refrigerated cargo vessels *Golfo de Batabano* and *Golfo de Guanahacabibes*, delivered in 1978 and 1979, respectively.¹³

Peru: The Cubans ordered sixteen 814-ton *Cubanacan*-class tuna purse seiners from the Peruvian shipyard Pisca in 1976. Cuba took possession of three, but canceled its contract before the remaining vessels were completed.¹⁴ The Cubans have also imported shrimp trawlers from Peru.

Russia: The Russian Federation maintains close contacts with the Cuban Fisheries Ministry (MIPES), however, they are not as extensive as with the former Soviet Union. The Cubans are primarily concerned with the sharp cuts in diesel fuel supplies, but the Russian Federation places much less importance on its Cuban relationship than did the former Soviet Union and is unwilling to continue the massive Soviet subsidies. The Russian Committee on Fisheries,



Photo 5.--Many of Cuba's larger fishing vessels have been imported. The Golfo de Tonkin class stern trawlers, for example, were ordered from Spanish shipyards.

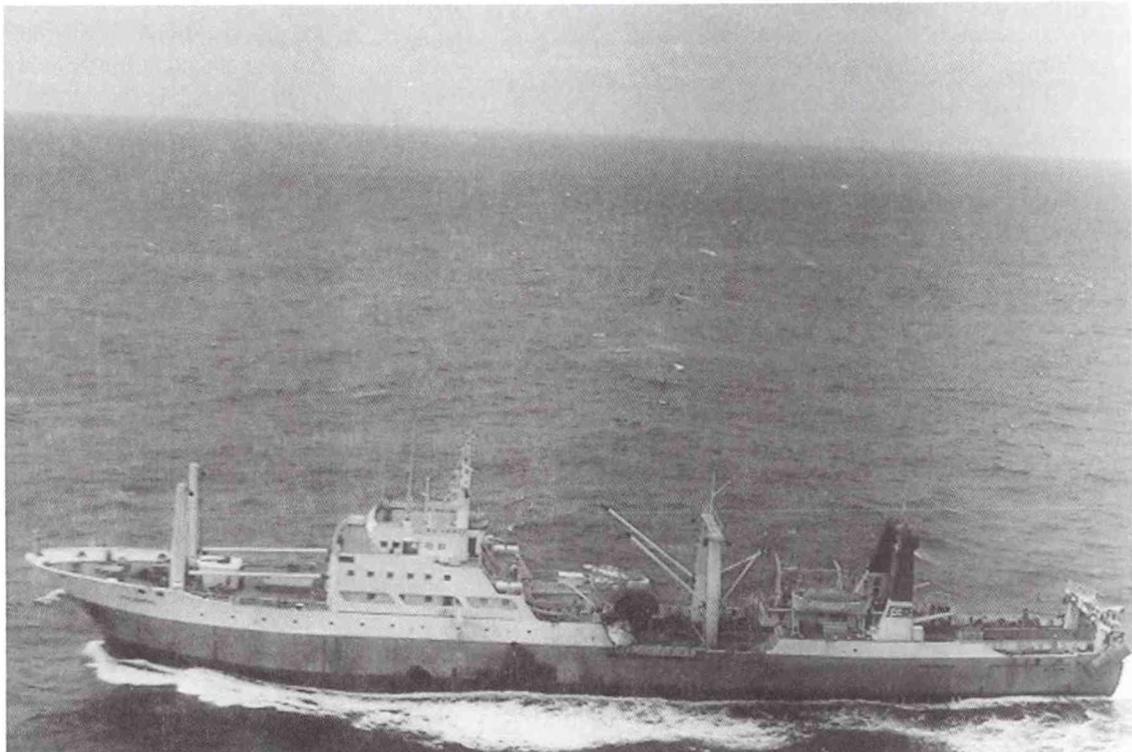


Photo 6.--Río Damuji class stern factory trawlers were ordered from Spanish shipyards and required a major capital outlay for Cuba. They have been widely deployed in distant-water grounds.

however, continues to maintain a fisheries attache office in Havana.

Spain: The Cuban Government contracted several Spanish shipyards during the mid-1960s and early 1970s to build a substantial number of high-seas fishing vessels, mostly trawlers, for FLOCUBA. One local source indicated that Spanish yards delivered 40-50 additional fishing vessels, including some 20 trawlers, to Cuba during the 1960s.¹⁵ Another report indicated that Spanish yards reportedly delivered 26 fishing vessels of unknown type to Cuba during 1966-67.¹⁶ Cuba's most significant vessel order with Spanish shipyards during the 1970s was for twenty-six 2,400-ton stern factory/freezer trawlers. The Vigo yard Astilleros Construcciones delivered the first of these vessels, the *Rio Damuji*, to Cuba in 1975. Spanish yards had delivered 25 *Rio Damuji*-class trawlers to Cuba by 1979.¹⁷ The authors know of no imports during the 1980s. The Cuban Ministry of Fisheries bid in late 1992 on approximately 20 used Spanish freezer trawlers idled in Spanish ports after Namibia expelled the Spanish fleet from its EEZ, but further details are not available.¹⁸

USSR: Despite its close ties with the Soviet Union, the Cuban fishing fleet operates only a few Soviet-built fishing vessels, including four 699-ton *Mayak*-class refrigerated trawlers obtained from the Soviet Union during 1967-68 (appendix D).

IV. FOREIGN FISHING

Cuba does not permit foreign fishermen to operate in its waters other than recreational angling for billfish associated with local sports fishing tournaments.

V. JOINT VENTURES

The authors have no information indicating that Cuba has negotiated joint venture fishery agreements with foreign companies for operations in Cuba. Scattered press reports have indicated, however, that the Cubans attempted to negotiate some joint venture agreements for their distant-water fisheries.

Argentina: Argentine press reports suggested in 1983 that Cuba was close to finalizing a joint venture permitting four Cuban trawlers to operate in Argentine waters.¹⁹

Canada: The Cuban Ministry of the Fishing Industry (MIPES) operates a Canadian-registered company, CARIBEX, to market Cuban seafood in Canada. The company in the past has been involved in operations to ship Cuban seafood to the United States by disguising its origin.

Panama: MIPES has various commercial relations with Panamanian companies. In the past, some of these companies have imported Cuban seafood and then re-exported it to the United States as Panamanian product. Few details, however, are available on these operations. The authors have noted substantial Panamanian lobster exports to the United States in recent years. The quantities shipped have exceeded the quantities taken by Panamanian fishermen. Panamanian Government officials report, however, that the apparent discrepancy is not Cuban lobster, but rather Russian lobster transshipped through Panama.²⁰

Peru: Cuba formed several joint ventures in Peru beginning in 1973. For details see the Peruvian chapter of this report.

Cuban officials have placed fishing vessels on a list offered to interest foreign investors in Cuban joint ventures. The Cubans have reportedly offered Tasca-95 factory vessels, built in Spain during the 1970s, for lease, lease with a purchase option, or for a joint venture.²¹



Photo 7.--The jack mackerel being landed herein the port of Havana was mostly used to supply Cuban domestic markets. D. Weidner

VI. DISTANT-WATER OPERATIONS

FLOCUBA conducts Cuba's primary distant-water operations. FLOCUBA has deployed vessels in groundfish fisheries off Namibia and Canada and in mid-water trawl fisheries for jack mackerel and other species off Peru and Chile (appendix E). These operations during the 1980s accounted for the bulk of the Cuban fisheries catch. Cuba's tuna fleet also conducted some distant-water operations, primarily off West Africa from a support base in the Canary Islands.²² A variety of small fishery activities have also been conducted with various Latin American countries.²³

Angola: Cuba has held high-level fishery discussions with Angola. Cuban Fisheries Minister Anibal Velaz Suarez, for example, visited Angola in 1978.²⁴ Cuba negotiated a bilateral fisheries agreement with Angola in the 1970s. The text of the agreement was never published and is considered a state secret.²⁵ One observer reports that Cuba appears to have made little effort to assist Angola develop its fishing industry and appears to have been primarily interested in obtaining access to coastal fishing grounds.²⁶ The Cubans deployed a fleet of shrimp trawlers off Angola in the 1970s.²⁷ The Cubans also reportedly deployed some stern factory trawlers for groundfish off Angola, but probably devoted most of their effort

in the southeastern Atlantic to the waters off Namibia (appendix E). Economic cooperation meetings between Angola and Cuba regularly discussed fisheries, but no information is available on the outcome.²⁸

Argentina: Cuba began fishing on the Patagonian Bank off Argentina in 1966, following the lead of the Soviet fishing fleet.²⁹ The Cuban effort was limited, reaching only 2,000 t in 1968 when the Cubans terminated the fishery because the Argentines declared a 200-mile zone and initiated strict enforcement patrols. A variety of trade discussions involving vessel purchases and trade in fishery commodities were discussed by Argentine and Cuban officials during the 1970s, but few details exist on actual commercial exchanges and relations were constrained by the political differences between the two governments.³⁰ Cuban-Argentine relations improved during the 1980s, in part because of Cuba's strong support for the Argentine position on the Falklands.³¹ Cuba initiated a technical cooperation agreement on fisheries with Argentina in 1984. The agreement raised the possibility of an Argentine fisheries allocation, but it appears the agreement was never ratified. The Cubans conducted some test fishing in the southwestern Atlantic during 1984, outside the Argentine 200-mile zone. They then resumed limited fishing operations in 1985. Catches peaked at 7,200 t in 1987 (appendix E). The Cuban catches were almost totally composed of *Illex* squid taken on the high seas. Continued Cuban fishing off Argentina is confirmed by press reports which indicated that the Cuban trawler *Río Saza* sank in 1989 after colliding with a Taiwan vessel off southern Argentina outside the 200-mile limit.³² The Cubans reduced their fishing effort off Argentina in 1990 and terminated the fishery in 1991. Argentina adopted a new foreign fishing system in 1992, opening Argentine waters to foreign fishing. This may be of little benefit to Cuba, however, because the primary motive appears to be increasing income from the leasing fees and the acquisition of modern fisheries technology.

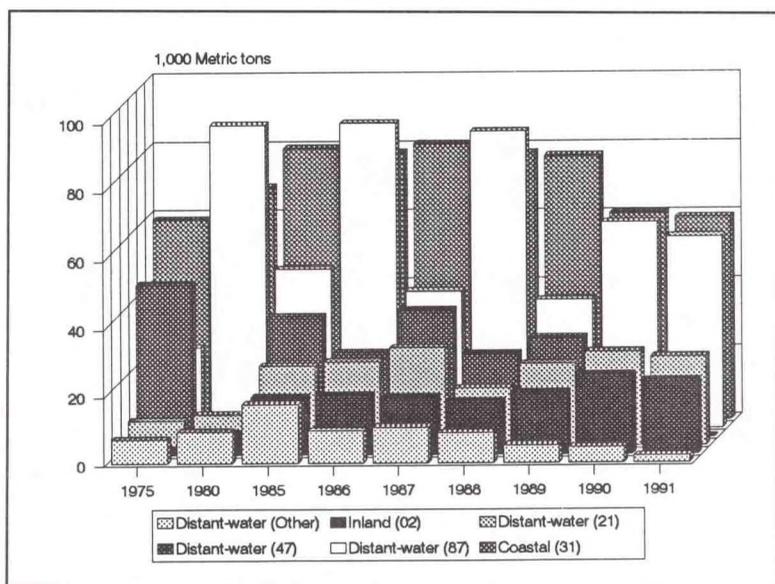


Figure 4.—Distant-water fisheries during the 1980s generally provided most of Cuba's overall catch. Officials have had to sharply curtail operations in 1992-93.

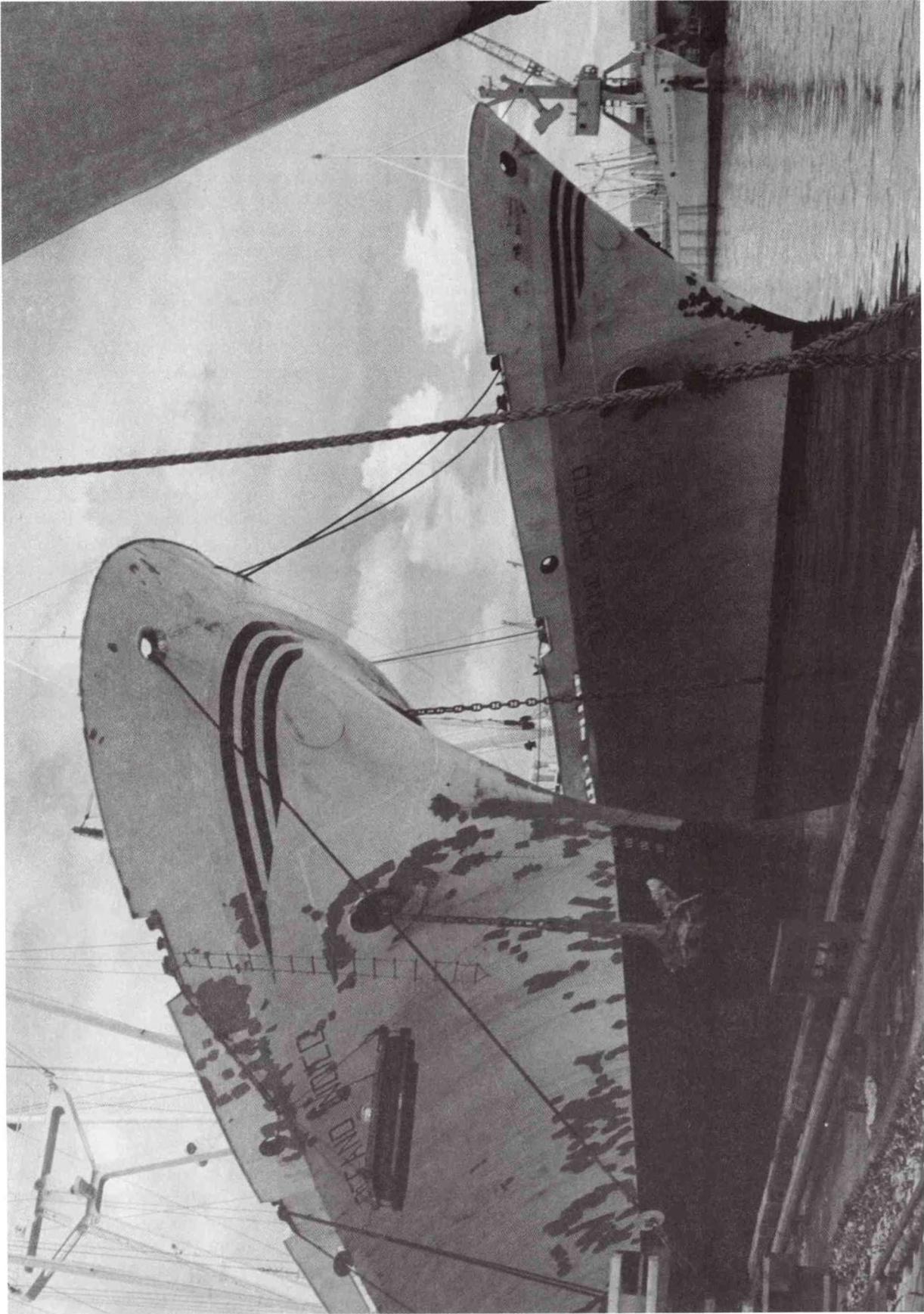


Photo 8.—Cuba has a modern fleet of refrigerated cargo vessels to support its distant-water operations.

Canada: The Cubans have fished intermittently off Canada since 1966, and regularly since 1976. Canada seized three Cuban fishing vessels in 1976 for violating its 12-mile territorial limit, which at that time was also the extent of its fisheries jurisdiction.³³ In January 1977, Canada extended its jurisdiction to 200 miles. Cuba signed a fisheries agreement with Canada on March 12, 1977, governing Cuban fishing in Canada's fisheries zone.³⁴ The Canadians agreed to provide a catch quota to the Cubans from the expected Canadian surplus of various fish species. The quota is set at annual consultative meetings. The Cubans had hoped to combine the Canadian allocation with a compatible allocation in U.S. waters. Cuba received a smaller U.S. allocation than expected, so Cuban officials assigned fewer vessels to the northwestern Atlantic than they had originally anticipated. Since 1980 the Cuban fishery off North America has been entirely off Canada. The Cubans and Canadians meet annually to discuss the fishery allocations, trade and other fishery cooperation issues.³⁵ The Cubans were consistently granted Canadian catch quotas larger than they were able to utilize, until 1986, when they took their entire quota. The annual quotas for 1984-88, mostly silver hake, were set at 23,000 tons. Despite increasing problems with stocks and sharp allocation cuts to domestic fishermen, the Canadians have continued to provide allocations to the Cubans. Presumably the allocations are part of Canada's overall diplomatic effort to maintain positive relations with the Cuban Government. The Cubans have continued their fishery off Canada and since 1984 have reported catches of over 20,000 t in most years. The Canadians appear to be pursuing a notably different policy with Cuba than with other distant-water countries. The Canadian Government, despite increasing opposition to foreign fishermen by the hard-pressed domestic fishing industry, has not through 1991 cut Cuban allocations and FLOCUBA has not had to reduce its distant-water effort off Canada (appendix E). Cuba caught 26,000 t in 1991, close to the record 29,000 t reported in 1987. This fishery is important for the Cubans as it allows them to harvest hake, redfish, and squid, much more desirable species than the low-value jack mackerel taken off Chile and Peru. FLOCUBA for that reason was able to obtain fuel to operate trawlers off Canada in 1993, despite the severe fuel shortage.³⁶ The Canadian policy toward Cuba is partially based on Canada's overall foreign policy of maintaining

economic ties with the Castro regime, but the Canadians have also insisted that in return for their catch allocation, the Cubans purchase Canadian fishery products.³⁷ These purchases are one of the key factors in determining the actual allocation. Cuba purchases processed fish from Nova Scotia and Prince Edward Island; the salted fish produced there is a popular product in Cuba (bacalao) and other Latin American countries. Cuba has made annual commitments to purchase US\$2 million of Canadian processed fish.³⁸ Canadian Fisheries and Oceans Minister, John Fraser, noted in 1985 that "Canada has maintained a stable level of catch allocations to Cuba in recognition of Cuba's contribution to Canada's fish marketing efforts, and Cuba's cooperation on conservation." Cuban-Canadian fishery relations have been generally cordial. Only one incident was noted in the press: in 1985, Canada charged a Cuban fishing vessel captain with under-reporting 9.3 t of fishmeal reduced from fish caught in Canadian waters. He was fined only US\$500, and no fish or fishmeal was seized. The future of Cuba's northwestern Atlantic fishery off Canada is unclear. The Canadian Government has had to sharply cut allocations to its own fishermen. Thousands of fishermen and processing workers have been laid off.³⁹ Plants and vessels are idled. The Canadian Government may find it increasingly difficult to justify the continued allocation to Cuba, no matter how small.

Chile: The Chilean military Government broke all diplomatic relations with Cuba in 1973 and thus the fisheries cooperation program conducted during the Allende period was terminated. The Cubans quickly negotiated a joint fisheries venture with neighboring Peru and also began to fish outside Chile's 200-mile zone. For details see the Chilean chapter of this report.⁴⁰

Guyana: Guyana in 1972 was one of the first Latin American countries to re-establish full diplomatic ties with the Castro government. A seven-member Cuban delegation, including four fishery experts, visited Georgetown for fishery talks in August 1973, and signed an agreement permitting Cuban fishermen to catch shrimp in Guyanese waters and allowing them access to Guyana's ports. In return, Cuba agreed to deliver 10 percent of its shrimp catch (estimated at about 2,000 t per year) to the Guyanese Government, and to provide fisheries technical assistance. The

agreement went into effect January 1, 1974. A Guyanese delegation visited Havana in 1974 to discuss details on technical cooperation. Guyanese Minister of Economic Development, Kenneth F. S. King, met with the Director of the Cuban Instituto Nacional de Pesca, Anibal Velez, and the two parties reached agreement on a scientific and technical cooperation program on May 14, 1974. This agreement provided for the assignment of Cuban coastal technical personnel to establish a research program and train Guyanese fishermen. Cuba expanded its second fishery off South America from its new base in Georgetown. Unlike the fishery off Chile and Peru, the fishery on the Guianas Bank for shrimp and related species was similar to already-established Cuban fisheries. More than 100 Cuban administrative and technical personnel were working in Georgetown by 1976, and some 10-16 Cuban trawlers, operated by more than 100 Cuban fishermen, were fishing and shrimping off Guyana. One report indicated that much larger numbers of trawlers, as many as 70, may have been deployed off Guyana.⁴¹ Cuba marketed the shrimp catch, apart from the Guyanese Government's 10 percent, largely in Canada. Unconfirmed reports suggest that substantial portions of the Cuban catch were mislabeled and re-exported to the United States in violation of the U.S. ban on imports of Cuban-origin product. No information is available on the results of the training and technical assistance provided to Guyana by the Cubans. The Cuban fleet ceased operations off Guyana, apparently in 1981. The reasons are not completely clear. The Cuban Deputy Minister for Fisheries, Hector Parras Lopez, claimed that the Cuban Government found the operations to be "uneconomical." However, other sources suggest political motivations. Press reports indicated that Guyanese Prime Minister Forbes Burnham was dissatisfied with both Soviet and Cuban aid, and believed that Cuba had been "cheating" on its contract. Several newspapers carried articles describing a growing political strain between the two governments.

Mexico: Cuba signed a bilateral fisheries agreement with Mexico in 1976. Under the agreement Mexico permits Cuba to catch small quantities of grouper off the Yucatan Peninsula. For details see the Mexican chapter of this report.⁴²

Namibia: The Cuban distant-water fleet initiated fishing operations in the southeast and Atlantic, primarily off Namibia, in 1969. The fishery has since been one of FLOCUBA's primary distant-water grounds, although catches peaked in 1978 at 64,000. FLOCUBA sharply reduced effort from 1980-82 for unknown reasons. FLOCUBA resumed significant operations in 1983 and catches during the remainder of the 1980s were relatively stable, ranging from

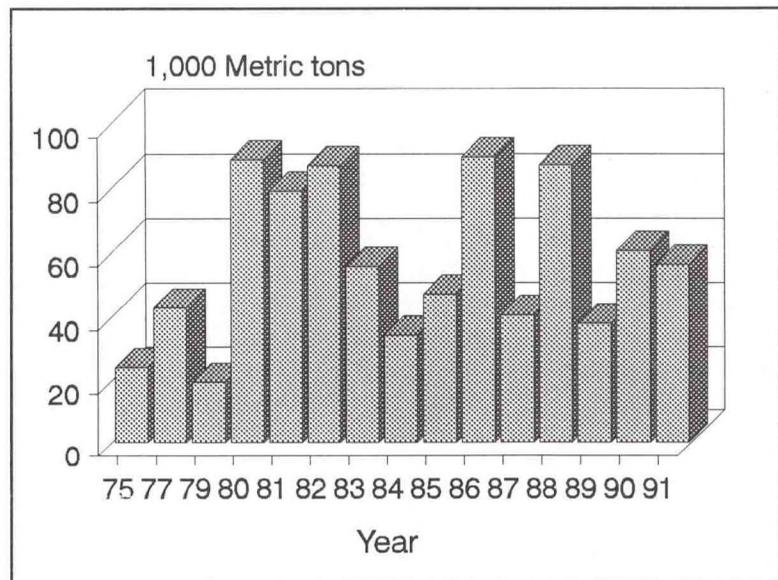


Figure 5.--The Cuban catch in the southeastern Pacific fluctuated significantly during the 1980s, but since 1980 has been a key element in the country's overall catch.

25,000 t (1986 and 1989) to 37,000 t (1987) (appendix E). FLOCUBA curtailed operations in 1990, catching only 12,000 t and terminated the fishery in 1991 after Namibia's newly-independent Government declared a 200-mile zone and prohibited foreign fishing. The Cuban Government, like other distant-water countries, has approached Namibian officials concerning access to Namibian waters.⁴³ President Castro and President Nujoma signed an agreement establishing a joint cooperation agreement in March 1991. Press reports indicate the agreement includes provisions for fisheries cooperation.⁴⁴ The authors believe, however, that the agreement did not

include fishery allocations. Press reports suggest that the Namibians have agreed to fishery talks with the EC in late 1993, suggesting that they are considering the opening of their EEZ to foreign fishermen. Whether they will permit renewed Cuban fishing, or whether FLOCUBA can afford the fuel to resume such operations, remains to be seen.

Peru: One of Cuba's principal fishing grounds is the western coast of South America off Peru and Chile. In some years, the Cuban fishery off Peru and Chile, accounted for nearly half the overall Cuban catch. For details, see the Peruvian chapter of this report. The authors believe that FLOCUBA had to terminate or sharply reduce the fishery off Peru in 1992. FLOCUBA was unable to deploy vessels in the fishery during 1993 because of the fuel crisis.⁴⁵

The overall Cuban distant-water catch peaked at nearly 150,000 t in 1986, comprising over 60 percent of the total Cuban catch. The distant-water catch has since declined to only 84,000 t in 1991 (appendix E). Preliminary Cuban data indicates that the country's catch fell sharply in 1992 and the authors believe most of the decline occurred in the distant-water fishery. More current catch data is not yet available. Preliminary indications suggest that the catch will decline further in 1993. Many FLOCUBA vessels have been idled because of restricted access to formerly important fishing grounds (Namibia and Peru) and the sharp cuts in Russian diesel oil deliveries. FLOCUBA has conducted very limited distant-water operations in 1993. FLOCUBA deployed 12 trawlers off Canada from March to September, 1993, but the rest of its large vessels were idled in port, primarily Havana.⁴⁶ FLOCUBA primarily deployed its distant-water vessels to supply domestic markets and the peso earnings from such fish sales can apparently not support necessary hard currency fuel purchases.

Sharp reductions in Soviet fuel deliveries have forced the Government to require energy conservation measures in all agricultural and industrial enterprises. Blackouts in Havana and other cities are common. The Government has a major program, for example, to expand the use of oxen by farmers and bicycles by commuters. The conservation program has also affected the country's fishing industry, but little information on the actual impact is available. One recent press report indicates that half of the bonito

fleet, for example, was being converted to sail power. Cuban officials claim that they have already tested the feasibility of such operations. Cuba is continuing to supply fuel to some coastal fisheries producing exportable product (lobster, shrimp, snappers, etc.). The fuel conservation measures, however, have had a major impact on FLOCUBA which primarily supplies domestic markets. The authors believe the fuel shortage is the major reason that FLOCUBA has had to terminate almost all of its distant-water operations. It simply could not buy fuel at international prices. The major reduction in FLOCUBA operations has caused severe fish shortages in the Cuban domestic market, further worsening the deplorable domestic food situation.

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(*El*) *Diario las Americas*, February 14, 1989.

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- _____, Kinasha, February 14, 1977.
- _____, Panama City, July 2, 1993.
- _____, Rome, January 25 and 26, 1978.
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- World Fishing*, various issues.

ENDNOTES

SECTION I. (General Background)

1. For details see José A Suarez Caabro, *Cuba y su Pesca* (Miami, 1988). pp. 59-63. Dr. Suarez's book also provides an excellent overview of the Cuban fishing industry.
2. In inflation adjusted terms, however, Cuban fishery exports have actually declined since 1980.
3. Cuban monthly rations, even in 1993, included 1 pound of fish, but notably no meat. *Miami Herald*, May 6, 1993. It is not known if the full ration is now regularly available.
4. Anonymous FLOPESCA source, personal communications, October 7, 1993.
5. It may have been more cost effective for Cuba to have sold the Soviet fuel and used the proceeds to import low-value fish rather to purchase vessels and finance expensive distant-water operations.
6. *Cuba News*, September, 1993, p. 3.
7. Anonymous FLOPESCA official, personal communications, October 7, 1993.
8. "Cuban aid for Galicia," *Spanish Fishing News*, August 27, 1992.

SECTION III. (Vessel Source)

9. Repair facilities include at least three Soviet-built floating docks as well as substantial on-shore facilities. "Dique flotante al puerto de la Habana," *El Nuevo Dia*, June 1, 1989; Fernando G. Davalos, "Arribo a la Habana, arrastada por el remolcador sovietico 'Poseidon,' la sección principal de un nuevo dique flotante para la pesca." *Granma*, February 6, 1974.
10. Artisanal yards were granted \$15 million in government credits in 1984. "Creditos a pescadores," *Mercurio*, January 1984.
11. Jesus Abascal Lopez, "Our catch will total 200,000 tons," *Mar y Pesca*, October, 1977, pp. 9-18.
12. Much of the La Coloma shipbuilding facility, for example, was paralyzed in 1989 by the lack of wheels for the cradles in which the ships are built. Although the wheels are manufactured in Mua, a town adjacent to Guantanamo, logistical problems apparently kept the yard from obtaining the needed parts. Luis Obeda, "Largo fue el camino," *Mar y Pesca*, July 1989, pp.24-27.
13. "Nuevo transportador para la Flota Cuba de Pesca," *Mar y Pesca*, March 1979.
14. "Peru builder loses tuna purse seiner orders," *Fishing News International*, October 1976.
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17. Cuba canceled the contract in 1978 after receiving only 22 vessels, claiming that strike-related construction delays at the Astilleros Construcciones yard had resulted in lost earnings. "Cuba cancels balance of \$200 million contract," *World Fishing*, September 1978.
18. "Cuban aid for Galicia," *op. cit.*

SECTION V. (Joint Ventures)

19. *Tiempo*, August 7, 1983. The authors have been unable to obtain further details, but notes Cuban fishing in the southwest Atlantic did begin in 1984 (appendix E).
20. U.S. Embassy, Panama, July 2, 1993.
21. "For sale?" *Cuba News*, September 1993, p.5.

SECTION VI. (Distant-water Operations)

22. Cuba has recently closed its Canaries base as an economy measure.
23. For details on Cuban fishery activities in Latin America, see Tracey Thomas and Dennis Weidner, "Cuban fishery relations in the Americas, 1959-88," *International Fishery Reports*, (IFR-88/59), June 29, 1988.
24. "Cuban Fishing Industry Minister arrives in Luanda," Havana domestic broadcast, 2214 GMT, March 8, 1978.
25. Anonymous Cuban source, personal communications, March 10, 1980.
26. U.S. Embassy, Rome, January 25, 1978; and U.S. Embassy, Kinshasa, February 14, 1977. The U.S. Embassy in Rome notes that another knowledgeable source disagrees and claims that Cuba has provided fisheries development assistance to Angola and other African countries. U.S. Embassy, Rome, January 26, 1978.
27. Jorge Picón, NMFS, personal communications, December 29, 1976.
28. "Cooperation protocol signed with Angola," Havana, *Prensa Latina*, 2005 GMT, September 21, 1986; and "Risquet opens Angolan cooperation talks 9 Feb," Havana television broadcast, 0100 GMT, February 10, 1987.
29. For details on Cuban-Soviet fishery relations, see Jacobson and Weidner, *op. cit.*
30. For available details see Thomas and Weidner, *op. cit.*
31. "Havana radio on British Falklands decision," Havana international service, 2300 GMT, January 30, 1987.
32. "Pesquero cubano se hundió frente a costas argentinas tras chocar con nave de Taiwán," *Diario las Americas*, February 14, 1989.
33. "Cubans fined," *World Fishing*, March 1977.

34. The agreement was signed during a visit of Canadian Fisheries Minister LeBlanc to Havana. "LeBlanc goes to Cuba to sign fishing agreement," *Fisheries and Marine News Service*, June, 1977.
35. See for example "Convenio Cuba-Canada en la esfera de la pesca," *Mar y Pesca*, September, 1989, p. 30.
36. Anonymous FLOCUBA official, October 7, 1993.
37. See for example U.S. Interests Section, Havana, October 4, 1978; and "Island saltfish expands operation," *The Southeaster*, August 15, 1985. Canada in turn imports Cuban seafood and is an important Cuban market for lobster, shrimp, and other fishery exports.
38. The authors have noted several press reports to such purchases during the 1980s and 1990s, but do not have reports on every year.
39. For details on the state of Canadian fisheries see the Canadian chapter in William Folsom, David Rovinsky, and Dennis Weidner, "Western Europe and Canada," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. VI, (NMFS: Silver Spring, MD., 1993).
40. Also see Thomas and Weidner, *op. cit.*
41. "Cuba: Dejó de pescar en la zona de Guyana," *Industrias Pesqueras*, March 1, 1981.
42. Also see Thomas and Weidner, *op. cit.*
43. U.S. Embassy, Windhoek, December 6, 1991.
44. "Agreement signed on setting up joint commission with Namibia," *Tele Rebelde*. Havana television broadcast, March 6, 1991.
45. Anonymous FLOPESCA official, October 7, 1993.
46. Anonymous FLOPESCA official, October 7, 1993.

APPENDICES

Appendix A.-- Cuba. Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	Number of vessels							
Freezers stern trawlers								
C	NA	NA	NA	1	1	1	1	1
D	-	-	-	28	27	26	26	25
Purse seiners								
B	-	-	-	1	1	1	1	1
Tuna long liners								
B	NA	NA	NA	14F	14F	10	10	10
Total	NA	NA	NA	44F	43F	38	38	37

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Appendix B.--Cuba. Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Freezers stern trawlers								
C	NA	NA	NA	2.6	2.6	2.6	2.6	2.6
D	-	-	-	161.0F	155.0F	149.4	149.4	143.7
Purse seiners								
B	-	-	-	1.4	1.4	1.4	1.4	1.4
Tuna long liners								
B	NA	NA	NA	15.0F	15.0F	11.8	11.8	11.8
Total	NA	NA	NA	180.0F	174.0F	165.2	165.2	159.2

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Appendix C.--Cuba. Large* fishing vessels, 1993.

Vessel class\Vessel type Vessel name	Size	Constructed
	GRT	Year
Anchoa (Refrigerated trawler)		
Alecrin	705	1966
Arigua	705	1965
Bajonao	705	1966
Cubera	705	1966
Damero	705	1965
Joturo	705	1965
Jurel	705	1966
Liseta	705	1966
Machuelo	705	1966
Medregal	705	1966
Merluza	705	1966
Mero	705	1966
Pargo	705	1966
Rascasio	705	1966
Robalo	705	1965
Sierra	705	1966
Atlantik (Stern factory trawler)		
Playa Colorada	2,657	1969
Playa Duaba	2,657	1971
Playa Giron	2,657	1968
Playitas	2,657	1971
Atun (Refrigerated trawler)		
Atun	509	1961
Marlina	508	1962
Camaron (Refrigerated trawler)		
Camaron	1,284	1965
Cherna	1,284	1966
Manjuari	1,284	1965
Tiburón	1,284	1965
Castero (Refrigerated trawler)		
Castero	621	1963
Cubanacan (Tuna vessel)		
Baracoa	814	1976
Guama	814	1976
Yara	814	1976
El Cocal (Fisheries baseship)		
El Cocal	700	1968
Gilberto Picas	750	1968
Moroboro	750	1972
Tuma	750	1974
Golfo de Tonkin (Stern factory trawler)		
Golfo de Tonkin	1,276	1970
Ulises#	1,276	1969
Guasa (Refrigerated trawler)		
Bia Jaiba	1,112	1966
Guasa	1,112	1965
Jagua (Refrigerated trawler)		
Jagua	586	1970
Las Guasimas (Tanker, fisheries support)		
Las Guasimas	3,600	1976

Mar Oceano (Stern factory trawler)		
Mar Oceano	2,396	1968
Mayak (Refrigerated trawler)		
Arroyos de Mantua	699	1967
Caibarien	699	1968
Moron	699	1967
Puerto Esperanza	699	1967
Oceano Atlantico (Refrigerated fisheries transport)		
Golfo de Batabano	10,549	1977
Golfo de Guacanayabo	10,549	1978
Golfo de Guanahacabibes	9,494	1978
Oceano Artico	10,549	1977
Oceano Atlantico	10,273	1974
Oceano Indico (Refrigerated fisheries transport)		
Oceano Pacifico	6,116	1969
Okean (Refrigerated trawler)		
Calamar	502	1958
Lenguado	502	1960
Macarela	502	1958
Salema	502	1958
Rio Damuji (Stern factory trawler)		
Rio Agamba	3,888	1975
Rio Almendares	3,888	1975
Rio Arimao	3,888	1975
Rio Bayamo	2,635	1979
Rio Canimar	3,888	1975
Rio Caonao	3,888	1976
Rio Cauto	3,888	1975
Rio Contramaestre	3,888	1976
Rio Cuyaguatete	3,888	1976
Rio Damuji	3,888	1975
Rio Hanabana	3,888	1977
Rio Jatibonico	3,888	1976
Rio Jibacoa	3,888	1977
Rio Jobabo	2,579	1975
Rio La Palma	3,888	1979
Rio Las Casas	2,635	1975
Rio Los Palacios	3,888	1978
Rio Mayabeque	3,888	1976
Rio Mayari	3,888	1978
Rio Moa	3,888	1976
Rio Najasa	3,888	1977
Rio Sagua	3,888	1976
Rio Salado	3,888	1976
Rio Toa	3,888	1977
Rio Yateras	3,888	1978
<hr/>		
Total	223,725	

* 500 GRT or greater.

Classified as a fisheries research vessel.

Source: U.S. Navy. Office of Naval Intelligence. Washington, D.C., 1993.

Appendix D.--Cuba. Fishing fleet and fishery support vessels, 1993.

Type/Class	Number	GRT		Constructed	
		Average	Total	Country	Years
Fisheries baseships					
El Cocal	4	738	2,950	Cuba	1968-74
Fisheries research vessels					
Golfo de Tonkin	1	1,276	1,276	Spain	1969-70
Fishing vessels (unspecified)					
Lambda 6	49	108	5,270	Cuba	1965-67
NA	1	NA	NA	NA	1983
Total	50	108	5,270		
General fishery transports					
Rafael Cabera Montelier	1	319	319	Germany(GDR)	1950
Refrigerated fishery transports					
Oceano Atlantico	5	10,283	51,414	Japan	1974-78
Oceano Indico	1	6,116	6,116	Italy	1969
Total	6	9,588	57,530		
Refrigerated trawlers					
Anchoa	16	705	11,280	Spain	1965-66
Atun	2	509	1,017	Spain	1961-62
Cameron	4	1,284	5,136	Spain	1965-66
Castero	1	621	621	Spain	1963
Guasa	2	1,112	2,224	Spain	1965-66
Jagua	1	586	586	Spain	1965
Mayak	4	699	2,796	USSR	1967-68
Okean	4	502	2,008	Germany(GDR)	1958-60*
Victoria	4	280	1,120	Cuba	1965-67
Total	38	705	26,788		
Shrimp trawlers					
French "F"	29	124	3,596	France	1969-70
Peruvian "P"	14	109	1,526	Peru	1975-76
Spanish "E"	89	108	9,587	Spain	1968-69
Total	132	111	14,704		
Stern factory trawlers					
Atlantik	4	2,657	10,628	Germany(GDR)	1968-71
Golfo de Tonkin	1	1,276	1,276	Spain	1969-70
Mar Oceano	1	2,396	2,396	Japan	1976
Rio Damuji	25	3,735	93,385	Spain	1975-79
Total	31	3,515	107,685		
Tankers (fisheries support)					
Las Guasimas	1	3,600	3,600	Japan	1976
Tuna vessels					
Cubanacan	3	814	2,442	Peru	1976
Delfin	3	387	1,161	Japan	1962
Total	6	1,201	3,603		
Total	270	829	223,725		

* These vessels were donated to Cuba by Soviet Chairman Khruchev when he first visited Cuba in 1962, thus initiating nearly three decades of Cuban-Soviet fisheries cooperation.

NA - Not available

Source: U.S. Navy. Office of Naval Intelligence. Washington, D.C., 1993.

Appendix E.--Cuba. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	1.7	6.3	16.9	17.6	17.0	15.6	18.2	23.3	21.7
Coastal (31)	59.0	68.4	79.7	78.4	80.9	78.2	77.4	60.5	59.3
Distant Water									
21	7.5	9.3	23.5	24.8	28.8	16.9	24.1	27.6	26.1
34	7.0	9.3	12.7	5.5	3.3	3.9	3.0	3.0	2.1
41	-	-	4.6	4.0	7.2	5.0	2.2	1.6	-
47	45.0	5.0	35.6	25.0	37.5	24.6	29.4	11.8	-
87	24.0	89.0	46.9	89.4	40.4	87.0	37.8	60.4	56.1
Subtotal	83.5	112.6	123.3	148.7	117.2	137.4	96.5	104.6	84.3
Total	143.3	186.5	219.8	244.7	215.3	231.2	192.1	188.2	165.2

Note: Totals may disagree due to rounding.

Source: FAO, Yearbook of Fishery Statistics, various years.

DOMINICAN REPUBLIC

Limited foreign fishing occurs off the Dominican Republic, but no data is available. There appears to be few prospects for distant-water countries to deploy any significant number of vessels off the Dominican Republic. Dominican fishermen do not conduct distant-water operations. The country is one of several Caribbean countries, however, where foreign vessel owners have obtained flag-of-convenience registrations. The foreign vessel owners appear to have registered relatively few vessels in the Dominican Republic, but inadequate information is available.

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I. GENERAL BACKGROUND

The Dominican Republic has a very small fishing industry, largely conducted by artisanal fishermen. Catches totaled only 17,000 metric tons (t) in 1991 and have fluctuated significantly in recent years (appendix A). Fishermen report a diverse catch. One of the largest fisheries is for snapper/grouper. Most of the catch is consumed domestically. Fishery exports are minimal, generally

less than \$1 million annually (appendix E1).

Most of the catch is taken by artisanal fishermen from small wooden boats operating along the coast. The average artisanal boat is about 3-7 meters (m). Dominican fishermen operate a few larger boats, varying from 7-22 m which are deployed in off-shore fisheries on the Plata and Navidad Banks. Much of the Dominican catch is landed at beach sites without even basic processing facilities.

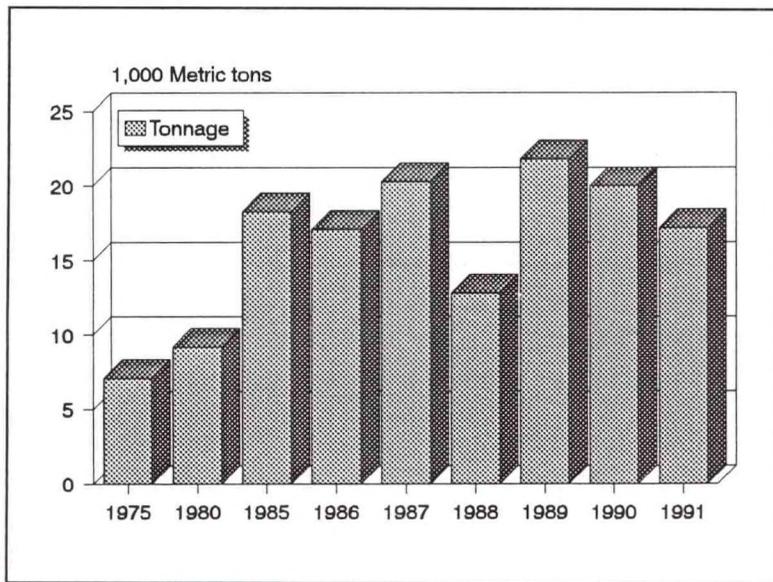


Figure 1.--The small Dominican catch fluctuates significantly from year to year.

II. HIGH-SEAS FLEET

The authors know of no large fishing vessels (over 500 GRT) registered in the Dominican Republic. Neither Lloyd's or FAO reports any such vessels in the Dominican fleet (appendices B2a1 and B3b1). The U.S. Office of Naval Intelligence does report two U.S.-built 198-GRT trawlers registered in the country.

III. VESSEL SOURCES

The Dominican Republic has no domestic shipyards and imports all commercial fishing vessels. There are no specific legal provisions governing the importation of new or used fishing vessels.¹

IV. FOREIGN FISHING

Dominican Law requires that countries interested in access to coastal waters for their fishermen must negotiate a bilateral agreement.² Currently there are no agreements with other countries. Unconfirmed reports suggest, however, that some unauthorized foreign fishing is conducted in Dominican waters. The Dominican Navy has been authorized to conduct fishery patrols,³ but there is no record of any seizures of foreign vessels.⁴

Foreign fishermen do not transship their catches through Dominican ports.⁵

V. JOINT VENTURES

Companies interested in forming a joint fishery venture must register the company in the Dominican Republic and have a local partner with a controlling (at least 51 percent) equity interest.⁶ No such ventures are known to have been formed.⁷

VI. DISTANT-WATER OPERATIONS

Dominican fishermen do not conduct distant-water fisheries. Some foreign vessel owners have obtained flag-of-convenience registrations in the Dominican Republic. A Dominican-registered vessel owned by Faroese interests was reported fishing in an area of the Barents Sea that falls outside the 200-mile EEZs of both Norway and Russia during 1993.⁸ The vessel owners are not reporting their harvest as part of the Dominican catch.

SOURCES

Bill Atkinson's News Report, September 1, 1993.

Dominican Republic. Law No. 3033 (1951) and Law No. 5914 (1962).

FAO. "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Lloyd's, *Lloyd's Register: Statistical Tables*, June 1992, pp. 27-28.

U.S. Embassy, Santo Domingo, July 30, 1993.

_____, Oslo, August 18, 1993.

U.S. Navy. Office of Naval Intelligence.

ENDNOTES

SECTION III. (Vessel Sources)

1. U.S. Embassy, Santo Domingo, July 30, 1993.

SECTION IV. (Foreign Fishing)

2. Law No. 5914, 1962.
3. Law No. 3003, 1951.
4. U.S. Embassy, Santo Domingo, July 30, 1993.
5. U.S. Embassy, Santo Domingo, July 30, 1993.

SECTION V. (Joint Ventures)

6. Law No. 5914, 1962.
7. U.S. Embassy, Santo Domingo, July 30, 1993.

SECTION VI. (Distant-water Operations)

8. U.S. Embassy, Oslo, August 18, 1993 and "Barents Sea Cod," *Bill Atkinson's News Report*, September 1, 1993, p.4.

APPENDICES

Appendix A.--Dominican Republic. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	0.6	2.5	2.6	0.9	2.0	1.3	2.0	1.8F	1.1
Coastal (77)	6.5	8.2	15.8	16.3	18.5	11.6	19.9	18.2F	16.1
Distant Water	-	-	-	-	-	-	-	-	-
Total	7.1	10.7	18.4	17.3	20.4	12.9	21.8	20.1F	17.2

Negl - Negligible

Source: FAO, Yearbook of Fishery Statistics, various years.

2.4

ST. VINCENT AND THE GRENADINES

St. Vincent fishermen are unlikely to initiate distant-water fisheries during the 1990s, although some local fishermen have begun longline operations in the eastern Caribbean. There appear to be few opportunities for foreign countries to deploy distant-water vessels in the small St. Vincent zone. Some foreign fishermen would like to deploy tuna and swordfish longliners, but such operations would be limited unless arrangements could also be worked out with neighboring eastern Caribbean islands.

St. Vincent is an important Caribbean center for foreign vessel owners interested in obtaining flag-of-convenience registrations. Less is known about the St. Vincent-flag registrations than other Latin American countries authorizing flag-of-convenience registrations (Cayman Islands, Honduras, Panama, and other countries). The vessels appear to be operated by companies from several different countries. While most of the vessels do not appear to be landing their catch or calling at St. Vincent, some foreign-caught fish is apparently being shipped through the Island.

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I. GENERAL BACKGROUND

The St. Vincent fishing industry is primarily an artisanal fishery. The country's catch totaled less than 1,000 metric tons (t) annually until 1988 when FAO began reporting notable catch increases (appendix D). FAO reported a record St. Vincent catch of 8,400t in 1990, but a small decline to only 7,700 t in 1991 (appendix D). Almost all of the reported increase since 1988, however, is the catch by foreign fishermen who have registered their vessels in St. Vincent and operate off West Africa and on other distant-water grounds. Because of the importance of the foreign-owned fleet, FAO reports that the composition of the St. Vincent catch is primarily shrimp, porgies, cuttlefish, and octopus.¹ Catches reported by actual St. Vincent fishermen continue little changed at only about 1,000 t (appendix D).

St. Vincent exports increased sharply beginning in 1988 when foreign owners began registering fishing vessels in the Island. Shipments increased from only \$0.3 million in 1987 to \$9.5 million in 1988. Export shipments reached an estimated \$19.3 million in 1990, but declined somewhat in 1991 (Latin America, appendix E1). The sharp increase in 1988 occurred at the same time St. Vincent began

to register flag-of-convenience vessels, suggesting that the export shipments are products being transhipped by the foreign fishermen operating under the St. Vincent flag.

St. Vincent fishermen primarily use small traditional boats, many of which are artisanal craft without motors. Until recently the largest boat was about 8 meters (m), but most of the fleet is composed of much smaller craft. The Japanese sold St. Vincent fishermen five longliners in 1991 which are reportedly assisting fishermen to significantly increase their catch.²

The artisanal fishermen use a wide range of traditional methods from beach seining, hand lining, trammel netting, and trolling as well as longlining and trap fishing. St. Vincent fishermen land most of their catch in Kingston for the domestic market. Grenadine fishermen market most of their catch in nearby Martinique where they can obtain much higher prices for quality species than such species can command in local St. Vincent markets. Some St. Vincent fishermen also sell part of their catch in St. Lucia, another nearby Caribbean island.

Fishermen have benefitted from the \$2.2 million fish market constructed in Kingston. The market was constructed with the assistance of a Japanese development project.³ It includes market stalls, a chill room, blast freezers, and a cold store.⁴

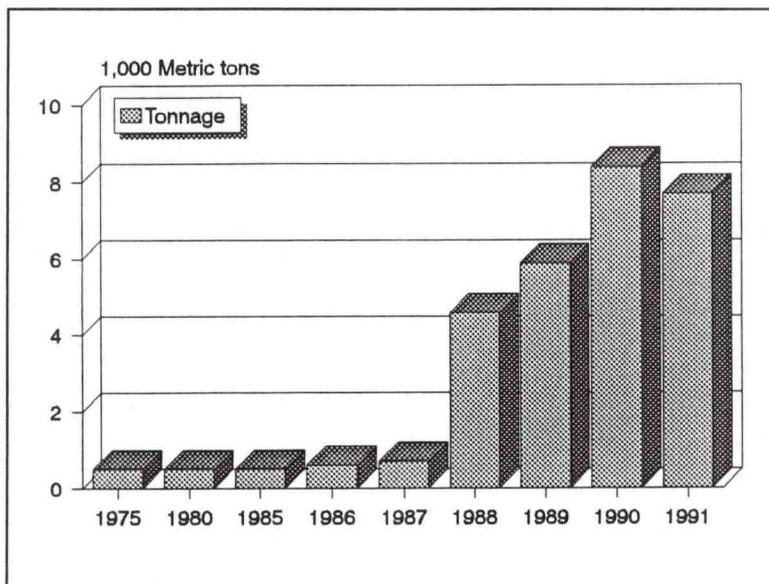


Figure 1.--The St. Vincent catch has increased significantly since 1988 when the Government began registering foreign-owned vessels.

II. HIGH-SEAS FLEET

St. Vincent began registering foreign-owned fishing vessels in 1988. The country reported a fleet of 23 large fishing and fishery support vessels (500 GRT or over) totaling 45,000 gross registered tons (GRT) to Lloyd's in 1992. Of this total, the country has registered 19 high-seas fishing vessels totaling over 22,000GRT (Latin America, appendix B2a1-2). An additional 4 fish carriers and or processing vessels with a total tonnage of over 23,000GRT are also registered in St. Vincent (Latin America, appendix B4a1-2). FAO data available through 1989 generally confirm that large fishing vessels were registered in St. Vincent, but provides somewhat different numbers (appendix A and B). The Office of Naval Intelligence reports that there were 24 large fishing vessels registered in St. Vincent during 1993 (appendix C). These fleet estimates, however, do not fully reflect the number of foreign-owned vessels registered in St. Vincent as another 80 medium-sized vessels (ranging from 100-499 GRT) are also probably foreign-owned.

St. Vincent began to make flag-of-convenience registrations in 1988. Officials registered 4 foreign-owned vessels in 1988, but sharply increased registrations to 18 in 1991. The number of such registrations has continued at about the same level, 19 fishing vessels, in 1991 (Latin America, appendix B2a2). Officials also began registering foreign-owned factory vessels and refrigerated fish carriers in 1988 (Latin America, appendix B4a1).

Little information is available on the ownership or vessel type of the large St. Vincent vessels. Virtually all are believed to be owned and operated by foreign companies. Several of the vessels appear to be operated by French, Italian, Korean, and Polish companies, but other countries have also registered vessels in St. Vincent. Most of the vessels are reportedly trawlers, including six factory vessels (appendix C). One Japanese report suggests that nearly 10 of the flag-of-convenience vessels, including vessels under 500-GRT, were formerly tuna longline vessels (Latin America, appendix B5d).⁵ The countries registering large fishing vessels in St. Vincent probably include:

Canada: Norwegian officials report that some of the Caribbean-registered vessels (Belize, Dominican Republic, and St. Vincent) are of Canadian origin backed by Faroese interests.⁶

Faroe Islands: See Canada above.

France: Four French-built trawlers are registered in St. Vincent, ranging from 600-1,100 GRT (appendix C).

Italy: Five Italian-built trawlers and factory trawlers are registered in St. Vincent, ranging from 1,200-1,700 GRT (appendix C). The names of the vessels suggest they most of them are now operated by non-Italian companies.

Japan: Two Japanese-built trawlers are registered in St. Vincent (appendix C). The age of the vessels and current names suggest that they are no longer operated by Japanese owners.

Korea: Three Korean-built vessels, probably longliners, are registered in St. Vincent (appendix C). As they are modern vessels built in 1990, they are probably still operated by the Koreans.

Poland: Three large Polish-built vessels are registered in St. Vincent (appendix C). They are all extremely old vessels, having been built in the early 1960s, and it would seem unlikely that the vessels could still be operated profitably. One of the vessels is the 10,000 GRT fish factory vessel *Chukhotka*, the largest fishing vessel registered in St. Vincent. The authors believed it was probably transferred to St. Vincent registry by a Russian company. The ownership of the other two Polish-built vessels (*Peace* and *Snow Goose*) is unknown.

Russia: One Russian-built vessel is registered in St. Vincent, the 3,200 GRT stern factory trawler *Yak* (appendix C). No information is available on the vessel, but it is probably operated by Russian owners. Russian owners also probably operate the *Chukhotka*.

Spain: Two Spanish-built trawlers are registered in St. Vincent (appendix C). They are relatively small trawlers (800-900 GRT) and may be still operated by Spanish owners.

United Kingdom: One extremely old (1947) British-built trawler is registered in St. Vincent, but no information on it is available (appendix C).

United States: Two U.S.-built vessels are registered in St. Vincent, but no information is available on the vessels (appendix C).

III. VESSEL SOURCES

St. Vincent does not have shipyards building commercial fishing vessels of any size. The few such vessels operated by St. Vincent fishermen, such as the Japanese-built longliners, are imported. Local artisans may produce small craft for the Island fishermen, but no information is available on this activity.

IV. FOREIGN FISHING

St. Vincent limits foreign fishing to vessels whose operators, representatives, or governments have negotiated an access agreement.⁷ Some foreign longlining does occur in the Caribbean and western Atlantic, but no data is available to the authors on actual level of foreign fishing in St. Vincent waters.

V. JOINT VENTURES

The authors have no information on St. Vincent joint ventures.

VI. DISTANT-WATER OPERATIONS

St. Vincent fishermen do not conduct distant-water operations, but may land some of their catch in neighboring islands, including Martinique and St. Lucia.

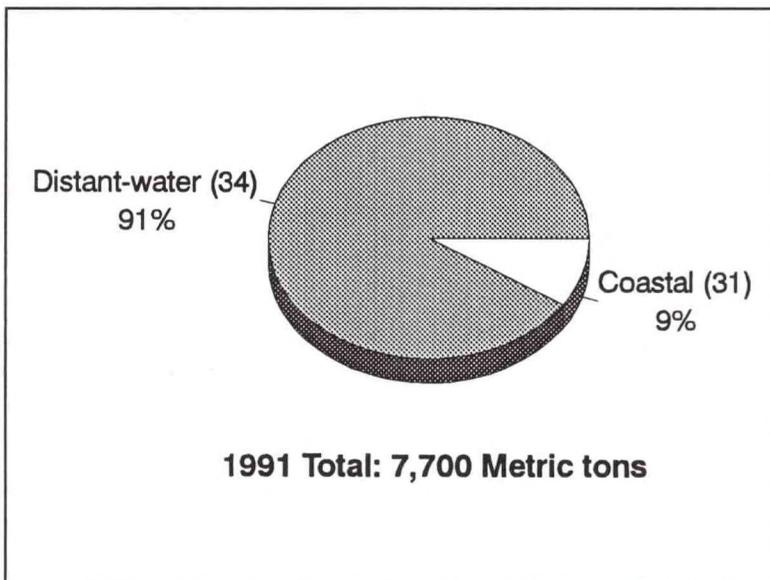


Figure 2.—Most of the St. Vincent catch is taken by foreign-owned vessels in distant-water fisheries.

Foreign owners have registered distant-water vessels in St. Vincent to obtain a flag of convenience. St. Vincent nationals appear to have little or no equity participation in these vessels. It is unclear why the owners involved have selected St. Vincent. The St. Vincent Government does appear to have encouraged the practice as an income-generating activity. The authors have little information regarding the operations and deployment of the foreign-owned vessels. Available catch data suggest some are deployed off West Africa (appendix D), but many vessels are not reporting their catch.

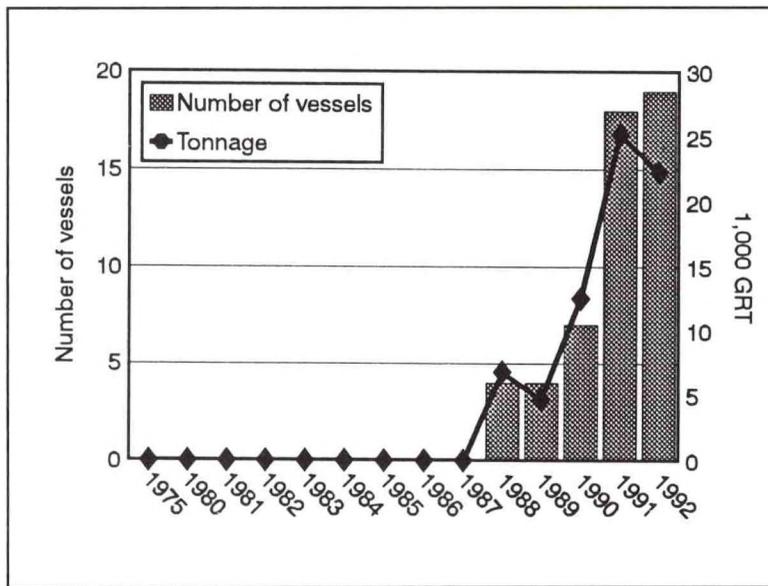


Figure 3.-- St. Vincent began to register large foreign-owned fishing vessels in 1988.

The overall catch of the large St. Vincent flag-of-convenience fleet is impossible to assess with the limited available data. The authors estimate, however, that the vessels involved could catch as much as 100,000 t annually (Latin America, appendix C5). The smaller foreign-owned vessels (100-499 GRT) may harvest about 50,000 tons.

Available details concerning the operations of St. Vincent-flag vessels are as follows:

Eastern central Atlantic: St. Vincent reported a catch of 7,700 t in the eastern central Atlantic off West Africa during 1990 (appendix D). About half the catch is porgies, seabreams and other marine fish and the other half is cuttlefish, squid, and octopus. The fishermen also report small catches of shrimp and hake.

Northwest Atlantic: One St. Vincent vessel was observed operating in the northwestern Atlantic during 1988-91. None of the catch was reported to FAO.

Northeast Atlantic: One St. Vincent registered vessel, along with other Caribbean registered vessels, has been observed by Norwegian fishery officials operating in the Barents Sea during 1993. Norwegian authorities escorted the vessels out of the protected zone around Svalbard, but they continued fishing in high-seas areas of the Barents

Sea. Some of the catch was landed in Iceland.⁸ A second St. Vincent-registered vessel was observed on its way to the Barents Sea in 1993.

No information is available on whether the foreign-owned vessels actually call at or transship their catch through St. Vincent. Import data from major countries suggest that substantial quantities of fishery products are being shipped from St. Vincent. Much of this product appears to come from the flag-of-convenience vessels or transshipments from other foreign fishermen. The cold store at the Kingston market could accommodate transshipments. U.S. imports began in 1990, but are mostly crustaceans (appendix E). Some swordfish was imported in 1992. The Japanese in 1992 imported over 2,000 t

of tunas (mostly bigeye and yellowfin) and over 200 t of swordfish from St. Vincent. The quantities involved appear to be greater than could be shipped by local artisanal fishermen. At least the tuna and swordfish shipments could be due to the deployment of the Japanese-built longline vessels.⁹

SOURCES

CANA, 1615 GMT, August 17, 1988.

FAO. "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Jones, Albert. NMFS, personal communications, October 25, 1993.

Lloyd's, *Lloyd's Register: Statistical Tables*, June 1992, pp. 27-28.

St. Vincent. Fisheries Act No. 8 of 1986, Section 8.

Suisan Keizai Shinbun, July 29, 1992.

U.S. Embassy, Bridgetown, November 20, 1987;
August 10, 1988; and October 18, 1989.

U.S. Embassy, Norway, August 18, 1993.

U.S. Embassy, Oslo, August 18, 1993.

U.S. Navy. Office of Naval Intelligence.

ENDNOTES

SECTION I. (General Background)

1. This is misleading as only the foreign fishermen operating off West Africa appear to be reporting their catch.
2. The Japanese reportedly allowed the St. Vincent fishermen to purchase the vessels with only a 20 percent down payment. Dr. Albert Jones, NMFS, personal communications, October 25, 1993.
3. U.S. Embassy, Bridgetown, November 20, 1987; August 10, 1988; and October 18, 1989.
4. "Japan to finance stage of fish market project," CANA, 1615 GMT, August 17, 1988.

SECTION II. (High-seas Fleet)

5. *Suisan Keizai Shinbun*, July 29, 1992.
6. U.S. Embassy, Norway, August 18, 1993.

SECTION IV. (Foreign Fishing)

7. Fisheries Act No. 8 of 1986, Section 8.

SECTION VI. (Distant-water Operations)

8. U.S. Embassy, Oslo, August 18, 1993.
9. Jones, personal communications, *op. cit.*, October 25, 1993.

APPENDICES

Appendix A.--St. Vincent . Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	Number of vessels							
Not identified								
A	-	-	-	-	-	-	1	1
B	-	-	-	-	-	-	2	4
C	-	-	-	-	-	-	2	1
D	-	-	-	-	-	-	-	1
Total	-	-	-	-	-	-	5	7

Vessel size key

- A: 500 - 999.9 GRT
 B: 1,000 - 1,999.9 GRT
 C: 2,000 - 2,999.9 GRT
 D: Over 4,000 GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.--St. Vincent. Large fishing vessels (over 500 GRT), 1970-89.

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Not Identified								
A	-	-	-	-	-	-	0.7	0.7
B	-	-	-	-	-	-	2.6	5.3
C	-	-	-	-	-	-	4.9	2.3
D	-	-	-	-	-	-	-	5.5
Total	-	-	-	-	-	-	8.2	13.8

Vessel size key

- A: 500 - 999.9 GRT
 B: 1,000 - 1,999.9 GRT
 C: 2,000 - 2,999.9 GRT
 D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix C.--St. Vincent. Large* fishing vessels registered, 1993

Country	Size	Built	Vessel type**
	GRT	Year	
France			
Aegina	1,133	1943	510
Christophe Colomb	855	1973	510
Gevred	607	1975	510
Jacques Cartier	851	1978	510
	<u>3,446</u>		
Italy			
Commandant Gue	1,596	1974	511
Ocean Victory II	1,598	1973	512
Ocean Victory III	1,734	1973	512
Samsun Beauty	1,247	1983	510
Samsun Brave	1,229	1983	510
	<u>7,404</u>		
Japan			
Pieda I	1,153	1960	510
Korea (ROK)			
Panalox 501	644	1990	510
Panalox 502	644	1990	510
Panalox 503	644	1990	510
Panalox 505	424	1990	510
Panalox 506	424	1990	510
	<u>2,780</u>		
Poland			
Chukotka	10,033	1962	521
Peace	1,005	1963	512
Snow Goose	1,000	1963	512
	<u>12,038</u>		
Spain			
Alize	832	1974	510
Itxas Bide	915	1974	511
	<u>1,747</u>		
United Kingdom			
Oscar	695	1947	510
USSR			
Yak	3,170	1966	512
United States			
Cape Cod	794	1944	510
Gold Coast	958	1973	510
	<u>1,752</u>		
Total	<u>34,185</u>		

* 500 GRT or larger

** ONI vessel types

510 - Trawler

511 - Refrigerated trawler

512 - Fish factory trawler

521 - Fish factory ship

566 - Fisheries research vessel

Source: U.S. Office of Naval Intelligence (ONI)

Appendix D.--St.Vincent. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	Negl	Negl	Negl	Negl	Negl	Negl	Negl	Negl	Negl
Coastal (31)	0.6	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.7
Distant Water 34	-	-	-	-	-	3.9	5.2	7.8	7.0
Total	0.6	0.6	0.5	0.6	0.7	4.6	5.9	8.4	7.7

F - FAO estimate

Source: FAO. Yearbook of Fisheries Statistics, 1982, 1990.

Appendix E.--United States. Fishery imports from St. Vincent, 1987-92

Year	Imports	
	Quantity	Value
	Metric tons	US\$1,000
1987	-	-
1988	-	-
1989	-	-
1990	29.0	965.2
1991	254.6	2,707.2
1992	169.2	610.6

Source: U.S. Bureau of the Census.

2.5

TRINIDAD AND TOBAGO

Trinidad fishermen are unlikely to initiate significant distant-water fisheries during the 1990s. The state-owned National Fisheries Company no longer has the capability to deploy shrimp trawlers on distant-water grounds like Brazil and Guyana as it did during the 1970s. Some Trinidadian fishermen have entered a new longline fishery, but they are mainly fishing off Trinidad and neighboring islands in the eastern Caribbean.

Trinidad has the most developed fishing industry in the eastern Caribbean. Most coastal stocks are heavily fished and the Islands' fishermen are increasingly targeting underutilized stocks such as tunas and swordfish. The fishermen constantly press the Government to arrange access with neighboring countries. There is little likelihood that the Trinidad and Tobago Government would permit the deployment of any significant number of foreign vessels off the country. Foreign fishermen do, however, use Trinidad as an important Caribbean transshipment point.

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I. GENERAL BACKGROUND

Trinidad has only a small fishing industry, but it is the largest in the eastern Caribbean. Catches have been increasing in recent years and totaled 10,300 metric tons (t) in 1990 (appendix D). The most important fishery is for Spanish mackerel, amounting to about one-third of the entire catch. The shrimp fishery was the country's principal fishery during the 1970s, but has declined since fishermen lost access to the important Brazilian grounds. Most of the small shrimp catch is currently taken by artisanal fishermen in Venezuelan waters of the Gulf of Paria, a shallow sea influenced by both the Amazon and Orionoco. Shrimp stocks there are heavily fished, probably beyond the sustainable yield. The stock is jointly managed by Trinidad and Venezuela under the terms of a bilateral fisheries agreement. The Trinidadian fishery is mostly conducted by artisanal fishermen. A few Trinidadian fishermen in recent years, noting the longline fishery for swordfish initiated by distant-water fishermen, have acquired small multi-purpose vessels (13 meters and longer) and initiated similar longline operations. Trinidadian fishermen market most of their catch domestically. Exports totaled less than \$3 million in 1991 (Latin America, appendix E1).

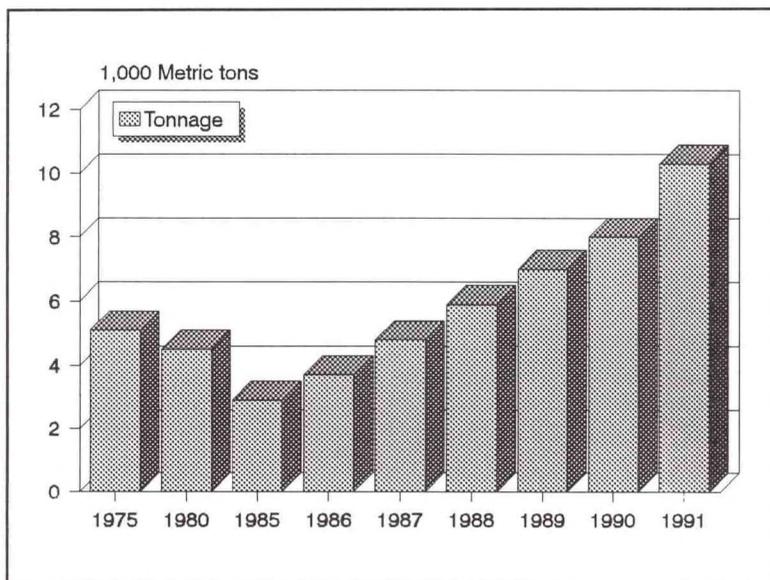


Figure 1.--Trinidad fishermen have been steadily increasing their small fisheries catch since 1985.

II. HIGH-SEAS FLEET

Trinidad currently has no highseas fishing vessels. Trinidadian fishermen used to conduct a distant-water shrimp trawl fishery off northeastern Brazil and on the Guianas Banks. This fishery was terminated, however in the 1980s when Guyana lost access to the grounds. No information is available on the disposition of the vessels involved.

III. VESSEL SOURCES

Trinidadian shipyards do not construct highseas fishing vessels. Local shipyards do build, however, most of the artisanal and small commercial vessels used by local fishermen. Trinidad has 19 small yards, including multiple purpose yards (6), fiberglass builders (6), and wood hull builders (7). Production consists of artisanal vessels (wood and fiberglass hulls) from 5-14 meters (m) and various commercial fiberglass vessels of different design from 11-15 meters. Some small craft are also built by individual artisans.¹

Many of the modern commercial vessels, such as the shrimp trawlers, used by Trinidadian fishermen are imported. Vessels have been imported from Colombia, Peru, the United States, and other countries. Imports of commercial fishing vessels declined during the 1980s after Trinidad fishermen lost access to their distant-water fishing grounds. Permission to import new or used vessels must be obtained from the Fisheries Division in the Ministry of Agriculture, Land, and Marine Resources.² Import duties and other fees can be waived for approved vessels.³

Colombia: The Trinidad state-owned National Fisheries Company (NFC) ordered six shrimp trawlers from Colombian shipyards in 1975.⁴

Peru: Amber Seafoods of Trinidad ordered five 22-m trawlers, from the Peruvian shipyard Metal Empresa in 1975. Trinidadian companies ordered a total of 37 vessels from Metal Empresa.⁵

United States: The NFC ordered five shrimp trawlers from U.S. shipyards in 1975.⁶ The NFC ordered three 27-m combination shrimp/mid-water vessels from Quality Marine of Theodore, Alabama, in 1987. Trinidadian companies also ordered three small trawlers from Fiberglass Fabricators of Pascagoula, Mississippi in 1987.⁷

IV. FOREIGN FISHING

The Trinidadian Government regulates foreign fishing under the Archipelagic and Exclusive Economic Zone Act of 1986.⁸ The law requires licenses for foreign-flag vessels and crews operating in Trinidadian waters. The Ministry of Agriculture, Land, and Marine Resources currently administers all foreign fishing. The Ministry, through the Fisheries Division, insures that foreign fishermen do not exceed the catch limits set per vessel and per country. Foreign-flag vessels do not require the foreign fishing licenses if Trinidadian individuals or companies own at least 51 percent of the vessel. Regulations pursuant to the Act have not yet been issued. The Government has issued small numbers of licenses to United States, Canadian, Dutch, and Barbadian fishermen for snapper/groupers, swordfish, and other species (appendix A). The Government issued three licenses (in 1991), the latest year for which data is available.

Trinidadian officials have attempted to negotiate access arrangements for the country's small domestic fishing industry. The country failed to retain access to Brazilian grounds for its commercial shrimp fleet, but has gained access to Venezuelan grounds for artisanal shrimp fishermen. The country's principal fisheries relationship is with Venezuela. The signing of a reciprocal agreement in 1990 with Venezuela has helped resolve some, but not all, of the problems associated with operating in Venezuelan waters.

Barbados: After years of negotiations, the governments of Trinidad-Tobago and Barbados

finally signed a fisheries agreement in 1990. The agreement was to take effect on January 1, 1991, providing, among other things: access to Trinidadian waters for an unspecified number of Barbadian vessels under a licensing scheme, a marketing arrangement between the two countries, and a monitoring commission to oversee implementation. Information on the ratification of the agreement is unavailable. U.S. Embassy sources indicated that Barbados officials seemed pleased with the agreement, although the local fishermen were reserving judgment pending the release of more details.⁹

USSR: Trinidad and the Soviet Union discussed a bilateral agreement in 1975, but no agreement was ever signed.¹⁰ One Soviet official said the proposal made little commercial sense.

Venezuela: Venezuela and Trinidad-Tobago first signed a reciprocal fisheries agreement in 1977. The most recent agreement was signed in 1985. It has since been renewed several times, and gives fishermen of both countries limited access to the other's EEZ. The agreement requires that at least 50 percent of the catch be landed in the country where it was taken. While the agreement is reciprocal, it primarily deals with the Trinidadian fishermen catching shrimp in the Venezuelan area of the Gulf of Paria.¹¹ Disputes between Venezuelan and Trinidadian fishermen are handled by a joint fishing commission. Despite the agreement incidents, primarily Venezuelan arrests of the Trinidadian artisanal fishermen fishing in Venezuelan waters, continue to be an ongoing irritant to bilateral relations.¹² The current agreement expires in December 1993.¹³ Trinidad and Venezuela, after 17 years of negotiations, also concluded a treaty in 1990 delimiting their marine boundary.¹⁴

Some illegal foreign fishing occurs off Trinidad, but few details are available. The Government has reported occasional seizures, but often for non-fishery offenses (appendix C). Violations of the law in the 200-mile Exclusive Economic Zone (EEZ) entail fines of up to \$8,700. Violations in territorial waters can result in fines of \$1,700, imprisonment for 6 months, and in all cases cancellation of the license and forfeiture of the vessel, equipment, and catch.¹⁵ Special exemptions exist for vessels operated by joint ventures.

V. JOINT VENTURES

Foreign fishermen can obtain access to Trinidadian waters through charter fishery agreements and joint ventures. Trinidadian companies have, however, formed only a few fishery joint ventures with foreign companies. The state-owned NFC, is Trinidad's principal fishing company and is involved in many of the foreign joint ventures. These joint ventures target mainly shrimp and tuna off the coast of Brazil and in the Caribbean. The Government attempted to privatize the NFC in 1989, attracting bids from Japanese, Taiwanese, and Venezuelan companies. The initial deal signed with Venezuela was canceled when the Venezuelan investor rescinded his offer. The Government is reportedly still attempting to sell the company.¹⁶

The countries that are presently involved in joint ventures with Trinidad are:

Brazil: The two Governments signed an agreement in 1978 detailing the formation of joint venture companies between Trinidadian and Brazilian companies.¹⁷ Brazil and Trinidad concluded an agreement in 1978 which was to facilitate the formation of joint venture fishing companies. Under the terms of this agreement the Brazilian partners were to be the main shareholders in any new company. Some joint venture companies were apparently formed, but the authors have few details. One Brazilian company (Leal Santos) leased 10 Trinidadian trawlers in 1982.¹⁸ Another joint venture agreement between the NFC and the Brazilian fisheries agency, SUDEPE, was signed in 1983, but few details are available on specific joint venture companies.¹⁹

Cyprus: Mainstream Industries Ltd. reached agreement in 1990 with two Cyprus-based companies. Mainstream planned to process, package, and export fish caught in Trinidadian waters by vessels provided by the Cyprus partners. The vessels were multiple purpose and designed to target offshore demersals, red snapper, and grouper. A license was granted to Mainstream which had a 55-percent interest in the venture.²⁰

Japan: A Mitsubishi-owned fleet operated out of Port-of-Spain, Trinidad, during 1991. The fleet was registered in Taiwan, and its activities ranged from the Azores and African coast to the Caribbean. Observers believe that the goal of the Japanese was to buy the NFC and therefore control the port and processing facilities. One report alleges that the captains of the Japanese vessels bribe port agents to sign the papers certifying that the tuna they catch is dolphin-safe.²¹

Korea (ROK): Korea signed an agreement in 1986 with Trinidad to establish a tuna processing plant.²²

Taiwan: The Kwo-Jeng Trading Company, based in Trinidad, uses the NFC processing facilities to transship its catch. This appears to be a straight contractual relationship with no equity participation. The NFC reportedly chartered 26 Taiwanese vessels for tuna fishing in 1986. Some observers report this lease proved profitable for the NFC.²³

United States: Hummingbird Resources (Trinidad) and Marquest (U.S.) entered into a joint venture to catch and export fish to the United States. The company was to utilize six U.S. fishing vessels and the fish was to be processed by the NFC.²⁴ Trinidad, however, canceled the temporary permits issued to the U.S. longliners upon discovering that the captains of the vessels failed to fully comply with Government requirements.

VI. DISTANT-WATER OPERATIONS

Trinidadian fishermen do not currently conduct distant-water operations. Fishermen used to operate shrimp trawlers on the Guianas Banks and off northern Brazil. Such operations were terminated during the 1980s when Trinidad could not negotiate access arrangements with the countries involved.

Brazil: Trinidad has pursued an active fisheries relationship with Brazil. The Trinidadians operated a distant-water shrimp fishery off Brazil in the 1960s and 1970s. A Trinidad-Brazilian "mixed commission," formed in 1971 helped negotiate access agreements and educational exchanges between the two countries.²⁵ Trinidad signed an agreement with Brazil which ended the licensing of Trinidad-flag vessels, but allowed for continued Trinidad access through joint ventures.²⁶

Guyana: Trinidad fishermen also operated on the Guianas Banks off Guyana. The two governments signed a bilateral agreement in 1981 under which 25 Trinidadian trawlers could fish off Guyana.²⁷ No details are available on the current status of the agreement, but Trinidadian fishing off Guyana is believed to have ended during the mid-1980s.

Venezuela: Trinidadian artisanal fishermen operate off neighboring Venezuela, but as this is a reciprocal arrangement it is discussed in section IV. Foreign Fishing.

Foreign fishermen transship fish taken on the highseas or off other countries through Trinidad. Most of this product is shipped through facilities operated by the NFC. Local observers report that the larger foreign vessels call to transship product about two times annually. The NFC can accommodate vessels of up to 1,500 net registered tons (NRT) and with a 4.6 m draft (low tide). Available data (appendix B) suggests that transshipping activity through Trinidad peaked in 1990. Trinidadian officials report over 30 vessels transshipped through Trinidad in 1991, including Taiwan (27 vessels) and United States or Canada (3-6 vessels). Officials report only 18 distant-water vessels are currently transshipping product.²⁸

Taiwan: The primary country transshipping fishery products through Trinidad is Taiwan. Taiwan fishermen generally account for 80 percent or more of the fishery products transshipped. The Taiwan vessels vary in size and are deployed in the central Atlantic. The smaller ones rarely venture further south than 10°N while the larger vessels are deployed at greater distances, as far as 20°S.²⁹ Taiwan transshipments since 1983 have varied from only 300 t in 1986 to nearly 4,100 t in 1990 (appendix B). Most of the shipments are yellowfin, bigeye tuna, and other tunas, but a variety of other species are also shipped in smaller quantities.

Other: Other countries, including the United States, transship only a small fraction of the product shipped by Taiwan, again mostly tuna. The only country reporting bluefin transshipments is the United States.³⁰

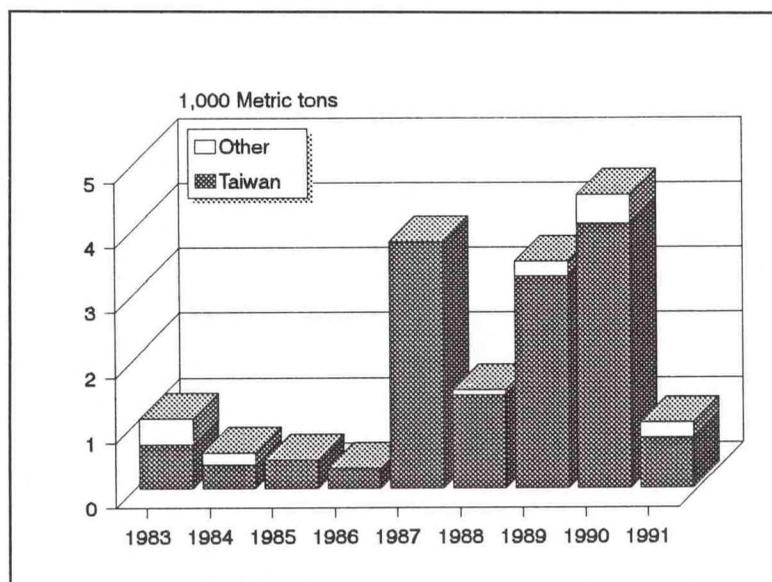


Figure 2.--Taiwanese and other foreign fishermen transship part of their catch through Trinidad.

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10. U.S. Embassy, Port-of-Spain, July 31, 1975.
11. Dennis Weidner, "Venezuela and Trinidad and Tobago sign a fisheries agreement," *International Fishery Reports*, (IFR-78/15), January 20, 1978.
12. U.S. Embassy, Port-of-Spain, May 12, 1986 and U.S. Embassy, Port-of-Spain, April 22, 1993.
13. U.S. Embassy, Caracas, May 26, 1993.
14. For a detailed discussion of the international legal implications of this treaty see Anselm Francis, "Treaty between the Republic of Trinidad and Tobago and the Republic of Venezuela on the delimitation of the marine and submarine areas: An analysis," *Caribbean Marine Studies*, Vol. 1(2), 1990, pp. 71-88.
15. Article 26 of Law No. 24.

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17. "Fishing Agreement Signed With Trinidad-Tobago," *O Globo*, May 9, 1978, p. 23.

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25. Trinidad and Tobago nationals were trained in Brazil during the late 1970s to become fisheries extension officers. "Brazil to train Trinidad and Tobago fisheries extensions officers," *Trinidad Guardian*, November 10, 1978 and U.S. Embassy, Brasilia, July 23, 1982.
26. "Fishing agreement signed," *op. cit.*
27. "Trawler purchase," *Trinidad Guardian*, March 15, 1981, p. 41.

SECTION VI. (Distant-water Operations)

28. La Croix, *op. cit.*
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30. La Croix, *op. cit.*

APPENDICES

Appendix A.--Trinidad. Foreign fishing licenses, 1980-91

Year/country	Licenses			Vessel		Gear	Species
	Applied	Granted	Fished	Length	Size		
1980-86	-	-	-	NA	NA	NA	NA
1987							
United States	31	6	1#	NA	NA	NA	NA
1988							
Canada	2	2	1##	13-27	NA	LL	Snapper/grouper*
1989							
Canada	2	2	-@	13-21	19-71	LL	Swordfish**
1990							
Netherlands	2	2	1##	24-31	100-154	T	NA
1991							
Barbados	1	1	1##	12	NA	D	Various***
Barbados	1	1	1	12	NA	M	Various***
United States	1	1	-	18	NA	LL	Snapper/grouper

Gear

D - Drifting

LL - Longline

M - Multiple gear (Banking, longlining, trapping)

T - Trawler

NA - Not applicable or not available

License withdrawn

License terminated

* And tilefish

** And tunas

*** Flying fish, wahoo, dolphin fish, snapper, sharks, and sailfish

@ Replaces licenses granted in 1988 to the same company.

Source: Unpublished statistics provided by the Ministry of Agriculture, Land, and Marine Resources, June 29, 1993.

Appendix B.--Trinidad. Landings/transshipments by foreign vessels, 1983-91

Year	Country					Total**
	Taiwan	U.S.	Canada		Unknown	
			Trinidad*	Metric tons		
1983	676	-	-	-	396	1,072
1984	373	-	-	-	174	547
1985	436	-	-	-	-	436
1986	308	2	-	-	-	311
1987	3,787	-	-	Negl	-	3,787
1988	1,434	44	-	18	10	1,506
1989	3,258	51	1	43	131	3,483
1990	4,073	154	-	213	97#	4,517
1991	772	6	-	72	155	1,004

* It is unclear why some Trinidadian catch is included in this table. It may be product associated with a joint venture.

** Totals may not agree due to rounding.

Includes negligible Venezuelan transshipments.

Source: Statistics provided by the Ministry of Agriculture, Land, and Marine Resources, June 29, 1993.

Appendix C.--Trinidad. Foreign fishing vessel seizures

Year	Country	Vessels
		<u>Number</u>
1985	Bolivia	1
	United Kingdom	1
	United States	1
	Venezuela	2
1986	Venezuela	1*
1987	None	
1988	None	
1989	None	
1990	Venezuela	1*
1991	Venezuela	4
1992	Barbados	1
	Denmark	1*
	Grenada	1*
	Venezuela	1

* Non-fishery offense.

Source: Statistics provided by the Ministry of Agriculture, Land, and Marine Resources, June 29, 1993.

Appendix D.--Trinidad. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	-	-	-	-	-	-	-	-	-
Coastal (31)	5.1	4.5	2.9	3.7	4.8F	5.9F	7.0F	8.0F	10.3
Distant Water	-	-	-	-	-	-	-	-	-
Total	5.1	4.5	2.9	3.7	4.8F	5.9F	7.0F	8.0F	10.3

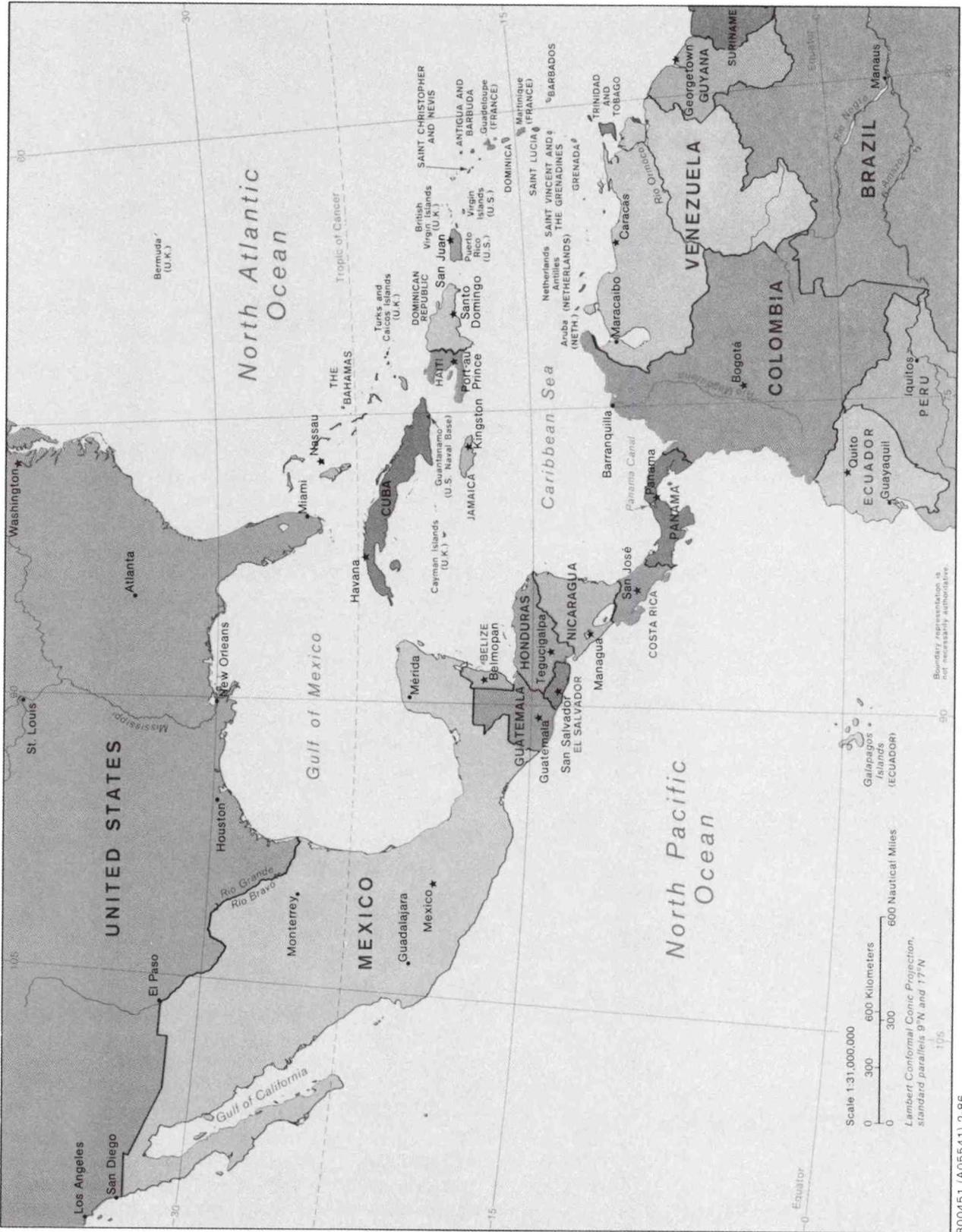
F - FAO estimate

Negl - Negligible

Source: FAO, Yearbook of Fishery Statistics, various years.

3. CENTRAL AMERICA

Middle America



3.1

BELIZE

Limited foreign fishing occurs off Belize, primarily fishermen from neighboring Honduras. There are few prospects for distant-water countries to deploy any significant number of vessels off Belize. Belizean fishermen do not conduct distant-water operations. The country is one of several Caribbean countries, however, where foreign vessel owners have obtained flag-of-convenience registrations. Relatively few such registrations have been improved in the past, but the Government appears to have revised its vessel registration policy and has begun issuing more flag-of-convenience registrations to foreign-owned vessels in 1993. No precise statistics on the number of vessels involved are available.

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I. GENERAL BACKGROUND

Belizean fishermen conduct coastal fisheries for lobster, conch, shrimp, snapper, grouper, and various other finfish. Much of the fishing is conducted by fishery cooperatives. The single most important fishery is for lobster which fishermen harvest with traps. The fishermen generally use 4-6

meters (m) boats, usually equipped with outboard motors, but a few larger vessels support divers harvesting both lobster and conch. Fishermen also operate a few shrimp trawlers. Government officials have expressed some interest in expanding fisheries, especially for finfish, beyond the country's barrier reef. Catches have been relatively stable at 1,500-1,800 metric tons (t) since 1986 (appendix B).

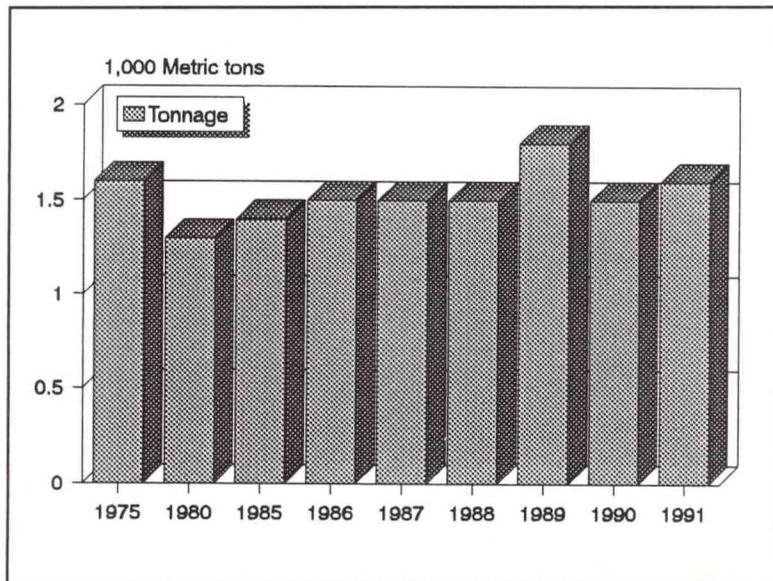


Figure 1.--Belize. Belizean fishermen reported relatively stable catches during the 1980s.

While this constitutes relatively small quantities, much of it is relatively high-value species.

The industry plays an important role in the small Belizean economy and fishery products are one of the country's leading export commodities. Belizean fishery exports peaked at \$8.4 million in 1987 and have since declined to only about \$5.6 million in 1991 (Latin America, appendix E1). Even so, fishery products are some of the country's leading export commodities.

II. HIGH-SEAS FLEET

The authors know of only two large vessels (over 500 GRT) that are registered in Belize. The vessels are a tuna vessel and a refrigerated fish transport (appendix A). No information is available on the ownership of either vessel, but they have probably been registered in Belize to obtain a flag-of-convenience.

III. VESSEL SOURCES

Belize does not have shipyards capable of constructing large fishing vessels.

IV. FOREIGN FISHING

The Government of Belize allows very limited foreign fishing in Belizean waters. Foreign fishermen may operate in Belizean waters only through joint ventures with Belizean fishing cooperatives. Local sources report that Belize lacks the capability to adequately patrol its waters and that foreign vessels, mostly Honduran, regularly fish illegally within the country's 12-mile limit.¹

V. JOINT VENTURES

Foreign fishermen have occasionally participated in Belizean fisheries through joint ventures with Belizean fishing cooperatives, but little information is available. The Government of Belize required foreign joint-venture vessel owners in 1987 to pay an annual license fee of \$3,000 per vessel to operate in Belizean waters.²

VI. DISTANT-WATER OPERATIONS

Belizean fishermen do not conduct distant-water fisheries.

Some foreign vessel owners have obtained flag-of-convenience registrations in Belize. The authors do not, however, have complete details. The number of vessels involved has in the past been very small. The authors believe that at least nine flag-of-convenience fishing vessels are registered in Belize (Latin America, appendix B5b1), but the number may be larger. Unconfirmed reports from Belize indicate that the Government has revised its registration policy and has approved several flag-of-convenience registrations in 1993.³ This appears to be primarily a decision resulting from the fee income which can be generated. One unconfirmed reports suggest that foreign fishermen who in the past have registered their vessels in Panama are now considering Belize as a possible alternative.

Few specific details, however, are available on Belizean flag-of-convenience registrations. A Belize-registered vessel owned by Faroese interests was reporting fishing in the Barents Sea during 1993.⁴ The vessel owners are not reporting their catches. Another report indicates that foreign owners have registered a 900-short ton tuna seiner, the *Guadiana*, in Belize during 1993 for operations in the eastern tropical Pacific. The vessel's owner has applied to the Inter-American Tropical Tuna Commission for a 1994 Dolphin Mortality Limit.

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2. U.S. Embassy, Belize, December 28, 1987.

SECTION VI. (Distant-water Operations)

3. Dr. Albert Jones, NMFS, personal communications, October 25, 1993.

4. U.S. Embassy, Oslo, August 18, 1993.

APPENDICES

Appendix A.--Belize. Large* fishing vessels registered, 1993

Country/Vessel	Class	Size	Built	Vessel type**
		GRT	Year	
Japan				
Baroon		5,206	1978	534
Spain				
Alai		1,365	1978	516
Total		6,571		

* 500 GRT or larger

** ONI vessel types

516 - Tuna vessel

534 - Processing refrigerated fish transport

Source: U.S. Office of Naval Intelligence (ONI)

Appendix B.--Belize. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	Negl	Negl	Negl	Negl	Negl	Negl	Negl	Negl	Negl
Coastal (31)	1.9F	1.3	1.4	1.5	1.5	1.5	1.8	1.5	1.6
Distant Water	-	-	-	-	-	-	-	-	-
Total	1.9F	1.3	1.4	1.5	1.5	1.5	1.8	1.5	1.6

F - FAO estimate

Negl - Negligible

Source: FAO, Yearbook of Fishery Statistics, various years.

3.2

EL SALVADOR

El Salvador's small 200-mile zone appears to offer only limited possibilities for distant-water fishermen. Few foreign fishermen to date have applied for Salvadoran licenses, although some activity has been reported by Spanish and United States fishermen. There may be a potential for limited longlining operations. Tuna purse seine fishermen could also operate off El Salvador, but only as part of an overall Latin or Central American system as the fishermen could probably not profitably operate confined exclusively to Salvadoran waters. Salvadoran fishermen operated two tuna seiners in the Eastern Pacific during the late 1980s, but are unlikely to initiate distant-water operations during the 1990s.

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I. GENERAL BACKGROUND

Salvadoran fishermen conduct a small fishery along the Pacific coast of Central America. The catch in recent years has declined, partially due to the country's protracted civil war. The 1991 catch totaled only 11,000 metric tons (t) in 1991, a decline of nearly 50 percent from the 22,000t taken in 1987 (appendix C). Much of the decline has resulted from the collapse of the craylet (langostino) fishery.

The fishing industry is comprised primarily of commercial fishermen focusing on shrimp for export and artisanal fishermen targeting a large variety of species which they market domestically. The shrimp fleet consists of about 90 trawlers, varying from about 40 to 60 tons which are deployed in coastal waters. Fishermen acquired two tuna purse seiners in the late 1980s, but now appear to be turning to a longline fishery. Fishery exports peaked at \$22 million in 1987 and have since declined to \$15 million in 1991 (appendix E1).

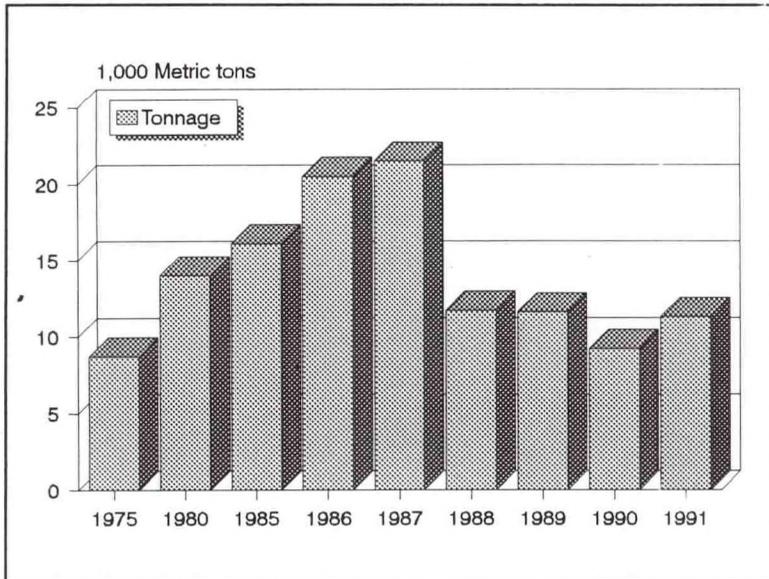


Figure 1.--The Salvadoran fisheries catch declined in 1988 and has changed little since.

II. HIGH-SEAS FLEET

El Salvador has virtually no high-seas fleet. Lloyd's of London reports that there are currently no fishing vessels in the Salvadoran fleet of 500 gross registered tons (GRT) or greater (appendix B2a1-2). Salvadoran companies acquired two medium-sized tuna purse seiners from France in the early-1980s that were capable of high-seas operations (appendices A and B).¹ Few details are available on their operations. They were probably deployed off neighboring Central American countries with varying degrees of success. Salvadoran officials had hoped to build an important tuna port at la Union and worked with three French companies to plan the project and acquire tuna seiners.² The project eventually failed, in part due to the escalating civil war.³ The vessels were reportedly operated by a Venezuelan company (HIPESCA) during the late 1980s.⁴ The vessels continued in the Salvadoran fleet through 1988, but one was apparently sold in 1989. The other may have been sold in 1991, but no details are available. Based on the success of a U.S. longliner operating in El Salvador, several Salvadoran companies have reportedly acquired vessels to initiate their own longline operations.⁵

III. VESSEL SOURCES

El Salvador has a small shipbuilding industry. Six small and medium sized companies build fishing vessels, mostly shrimp trawlers and other small coastal vessels (up to about 10 meters).

El Salvador has imported small numbers of fishing vessels from foreign countries.

France: The French shipyard Ateliers et Chantiers de la Manche (ACM) delivered two 700-ton tuna purse seiners, the *Justicia* and the *Participación*, to El Salvador during

1981.⁶

United States: El Salvador has also purchased vessels, mostly shrimp trawlers and lobster boats, from U.S. yards.⁷

Imported fishing vessels are subject to import duties, varying with the size of the vessel. Vessels less than 14 meters (m) (45 feet) are subject to a 5 percent duty. Used vessels are also subject to this duty which the Government calculates on the current market price, based on an adjustment of the original factory price.⁸

IV. FOREIGN FISHING

Foreign fishing off El Salvador is believed to be very limited.

Spain: One local source indicated that the Salvadoran Government granted a Spanish company (Pascual) permission to operate a purse seiner in 1991.

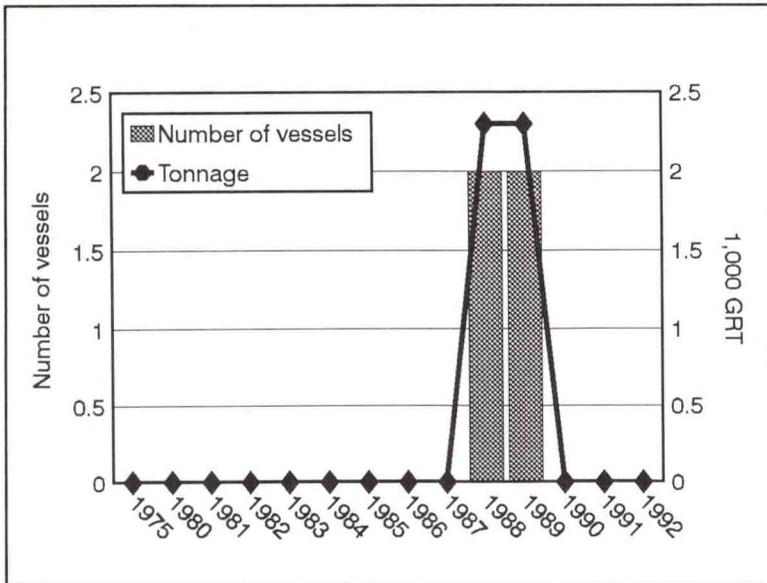


Figure 2.--The only large fishing vessels operated by Salvadoran fishermen were two tuna seiners in 1988-89.

documents proving ownership of and responsibility for the vessel (registration, international sanitation certificate, and lease contracts). These documents should be certified by authorities in the country where the vessel is registered. If CENDEPESCA approves the application, the following fees are applicable: special fishing license (\$1,136/C10,000), vessel registration (\$1.14 per net vessel ton), and fishing permit (\$8.50 per net vessel ton per trip).¹²

V. JOINT VENTURES

United States: The Government also granted a research or temporary (accounts vary) permit to a U.S. company to operate a longliner to fish for tuna in Salvadoran waters during 1991.⁹

Virtually no information about joint fishery ventures in El Salvador is available. Korean and Salvadoran officials discussed a possible tuna joint venture in the early 1970s, but the authors know of no actual company formed.

Salvadoran industry groups have sharply criticized such foreign operations and they have proven highly controversial. The Salvadoran Government reports that they have not licensed any foreign fishermen for operations in Salvadoran waters.¹⁰ The authors believe that some unlicensed foreign fishing, primarily tuna fishing, takes place off El Salvador. Salvadoran Naval authorities have issued warnings to foreign fishermen.¹¹

Salvadoran law requires foreign vessels to meet several requirements to operate in the country's 200-mile EEZ. Foreign fishermen must submit a request to the National Fisheries Development Center (CENDEPESCA) specifying vessel size and tonnage, area of operations, and gear to be deployed. The applicant must, in addition, provide a balance sheet of the company (or individual) that will operate the vessel and a feasibility study of the project. The applicant must also submit

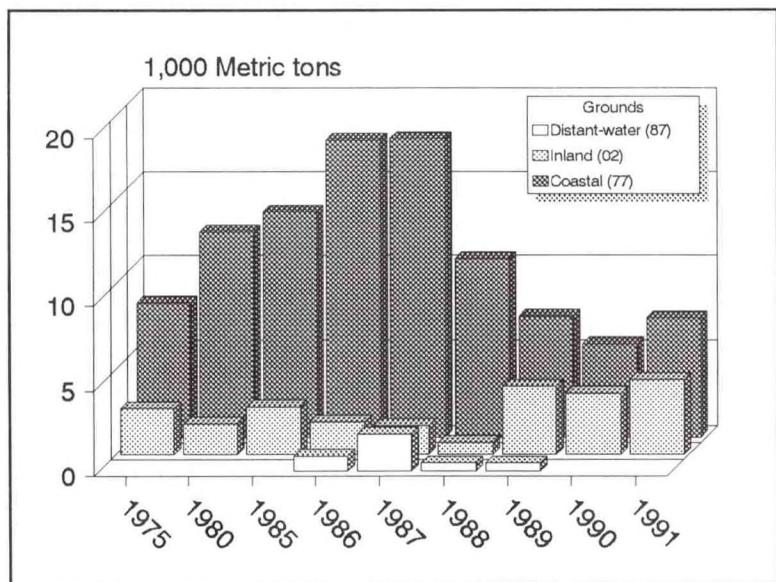


Figure 3.--The only Salvadoran distant-water fishing has been conducted by tuna fishermen in the southeastern Pacific (FAO area 87) during the mid-1980s.

VI. DISTANT-WATER OPERATIONS

Salvadoran fishermen do not conduct significant distant-water operations. Tuna fishermen did conduct limited operations in the southeastern Pacific during the late 1980s (appendix C).

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2. Dennis Weidner, "Salvadoran tuna port," *International Fishery Reports*, (IFR-81/139), August 31, 1981.
3. Lynda Schuster, "Salvadoran strife stymies new port," *Wall Street Journal*, March 31, 1992.
4. U.S. Embassy, Caracas, November 18, 1988.
5. INFOPECA, "Atún enfriado, congelado: El Salvador," *Noticias Comerciales*, September 5, 1991.

SECTION III. (Vessel Sources)

6. "French yards," *op. cit.*
7. Press reports indicated Salvadoran companies purchased several vessels from U.S. yards in the 1970s and early 1980s, but the authors have noted few recent imports. See for example "A Desco for Multipesca, S.A., El Salvador," *Fishing Gazette*, March, 1982, p. 54.
8. U.S. Embassy, San Salvador, August 12, 1993.

SECTION IV. (Foreign Fishing)

9. U.S. Embassy, San Salvador, December 20 and 26, 1991.
10. U.S. Embassy, San Salvador, August 12, 1993.
11. See for example "Maritime surveillance, patrols to be intensified," *La Prensa Grafica*, November 19, 1980, p. 48.
12. U.S. Embassy, San Salvador, August 12, 1993.

APPENDICES

Appendix A.--El Salvador. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>Number of vessels</u>							
Outrigger trawlers								
B	-	-	-	-	2	-	-	-

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.--El Salvador. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>1,000 GRT</u>							
Outrigger trawlers								
B	-	-	-	-	2.0	-	-	-

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix C.--El Salvador. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	2.7	1.8	2.8	1.9	1.7	0.7	4.0	3.6	4.4
Coastal (77)	7.9	12.1	13.3	17.6	17.7	10.5	7.1	5.5	7.0
Distant Water* 87	-	-	NA	0.9	2.2	0.5	0.5	NA	NA
Total	10.6	14.0	16.1	20.5	21.5	11.7	11.6	9.2	11.3

Negl - Negligible

Source: FAO, Yearbook of Fishery Statistics, various years.

3.3

HONDURAS

Only limited opportunities exist off Honduras to deploy distant-water fishing vessels. Honduran fishermen, for the most part, are capable of fully utilizing their valuable shrimp and lobster resources. Honduran fishermen conduct some of the most important lobster and shrimp fisheries in Latin America on their important Caribbean shelf. Finfish stocks such as snapper/grouper, however, are not fully utilized. The Government might consider access to underutilized species for foreign fishermen, but will almost certainly require that a joint venture be formed with a Honduran company.

Foreign fishing vessel owners are using Honduras to obtain flag-of-convenience registrations. The principal country involved is Taiwan, but owners from several other countries are also registering vessels in Honduras. Incomplete information on the deployment and operation of these vessels makes it impossible to assess specifically why the owners are registering them in Honduras. One of the principal reasons, considering that so many of the vessels involved are Taiwan owned, is that Honduras maintains diplomatic relations with Taiwan. Many Taiwan owners would have difficulties operating their vessels off countries which recognize China. Individual owners have a wide range of other motivations for registering their vessels in Honduras. Many of the foreign vessels have been reflagged for quite legitimate reasons. Some owners may have determined that they can operate more profitably if registered in Honduras. Other vessel owners may be trying to evade strict regulations on fishing effort, safety, pollution, taxes, and other matters in their own country. At least some owners are doing so to avoid various international fishery management regimes and gear restrictions. The vessels appear to have little or no connection with the Honduran fishing industry. The Honduran Government appears to be promoting such registrations as an income generating activity, but some officials question the practice. The number of vessels involved is significant, totaling over 300 medium and large foreign-owned fishing vessels. Such a fleet, combined with other Latin American countries (Cayman Islands, Panama, and St. Vincent) which register flag-of-convenience vessels, is capable of exerting very significant effort. The full impact of the vessels could potentially impair the effectiveness of international Fishery management regimes.

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I. GENERAL BACKGROUND

Honduras has a commercial fishery focusing on lobster and shrimp as well as a small artisanal fishery. Smaller fisheries exist for snapper and other finfish. The commercial fishery is primarily conducted for lobster and shrimp off the Caribbean

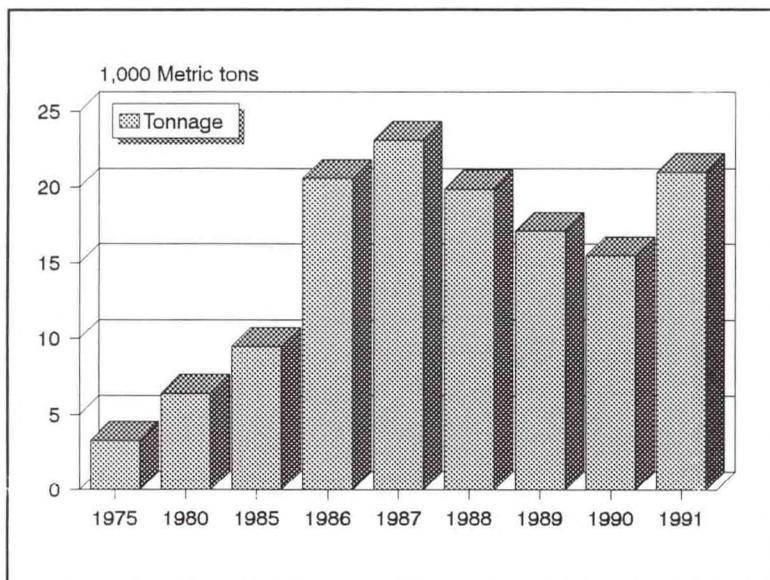


Figure 1.--Honduras. The Honduran fisheries catch peaked in 1987, but fishermen reported a good 1991 catch.

coast, largely from the Bay Islands on the country's substantial shelf. Honduras has a 680 kilometer (km) coast along the Caribbean with a variety of habitat (mangroves lagoons, sandy beaches, and coral reefs) which offer ideal habitat for many important commercial species. The coastal lagoons, for example, are critical shrimp nursery habitat. The Honduran coast faces an extensive continental shelf extending 19-240 km out from the coast where the country's commercial fishery is conducted. Honduran fishermen reported a record 23,000 metric ton (t) catch in 1987. The catch subsequently declined, but fishermen reported a good catch totaling 21,000 t in 1991 (Latin America, appendix C2a1).

Commercial fishermen deploy shrimp trawlers, lobster trap and mother boats for divers, and combination boats ranging from 25-35 meters (m). Many of the vessels can be rigged to participate in both the lobster and shrimp fisheries, often converting gear during the shrimp seasonal closure so that they can continue fishing lobster. The vessels are primarily coastal, but are to some extent deployed off other Caribbean countries, primarily



Photo 1.--Honduras. This Honduran-flag vessel has been rigged for squid jigging and is believed to have operated in the southwestern Atlantic off the Falklands.

Nicaragua.¹ Only limited commercial fishing is conducted along the country's Pacific coast, which is restricted to the Gulf of Fonseca.

Fishery products are some of Honduras' major export commodities. Much of the commercial catch is exported, mostly to the United States. The artisanal fishery supplies the small domestic market. Export shipments peaked in 1987 at over \$80 million and declined to only \$33 million in 1990 (Latin America, appendix E1). Exporters increased shipments to nearly \$60 million in 1991, but much of that increase has resulted from the expanding harvests of the country's shrimp farmers.

II. HIGH-SEAS FLEET

A. Honduran

Honduras does not have a high-seas fleet. The authors know of only one large fishing vessel (500 gross registered tons or greater), the *Oriente No. 7*, that is owned by a Honduran company. The authors have no information, however, that the company is owned by Hondurans or the vessel operated by Honduran fishermen.

B. Flag-of-convenience

Foreign vessel owners are registering fishing vessels in Honduras to obtain flag-of-convenience registrations. These foreign-owned vessels represent

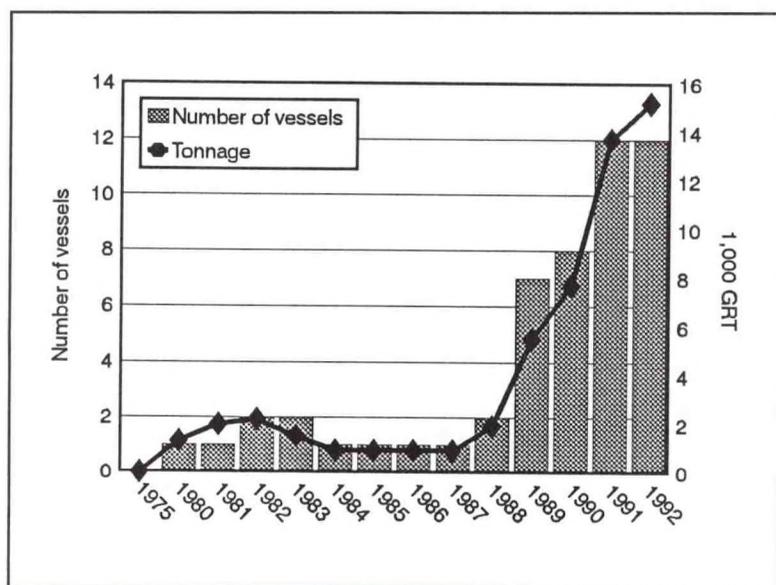


Figure 2.--Honduras. Honduras has significantly increased the number of large vessels in its fleet, almost all of which are foreign owned.

a very substantial high-seas fleet. The principal country involved is Taiwan, but owners from several other countries also register their vessels in Honduras.

Many Taiwan vessel owners have apparently chosen Honduras to register their vessels because Honduras maintains diplomatic relations with Taiwan. Some coastal countries (such as India, Myanmar, and Sri Lanka), off which Taiwan desires to obtain access or negotiate joint venture/vessel leasing contracts, are hesitant if Taiwan-flag vessels are involved.² Such countries are reportedly concerned over China's reaction to arrangements involving the Taiwan flag vessels.

Foreign vessel owners undoubtedly have many other reasons for registering their vessels in Honduras.³ Many owners have chosen Honduras because the fees are less than those charged by Panama and some other countries making such registrations.⁴ Some owners may have simply determined that they can operate more profitably if registered in Honduras. Other vessel owners may be trying to evade strict regulations on fishing effort, safety, pollution, taxes, and other matters in their own country. At least some owners are registering in Honduras to avoid various international fishery management regimes and gear restrictions. Some specific examples of such activity are described in section VI. "Distant-water Operations". Other

owners may be involved in a variety of illegal non-fishery activities. Some vessels are, for example, reportedly involved in the smuggling of Chinese nationals to the United States.⁵

The number of foreign-owned flag-of-convenience registrations is significant. The Honduran Navy reports that nearly 90 large fishing vessels have been registered in Honduras with a combined tonnage of nearly 75,000 gross registered tons (GRT) (appendix A). Only one of these vessels is owned by a Honduran company. These large vessels represent only part of the overall fleet registered in Honduras for distant-water operations. The Honduran Navy also reports in 1993 that a total of 213 medium-sized vessels (100-499 GRT) totaling nearly 60,000 GRT have been registered in Honduras for distant-water operations. Considerable variations exist with available estimates concerning the number of large fishing vessels registered in Honduras. Lloyd's reported a high-seas fleet of only 12 large fishing vessels (500 GRT and larger) totaling about 15,000 GRT in 1992 (Latin America, appendix B2a1-2). The authors believe the Honduran Navy data is a more accurate list of the current fleet, but have used the Lloyd's data to assess annual trends as it is the only source providing time-line data. For most other countries the Lloyd's data seems to represent a reasonably accurate assessment of the country's fleet. The Lloyd's data for Honduras, however, appears to significantly under-report the actual fleet of foreign-owned vessels. The U.S. Office of Naval Intelligence also reports a much smaller fleet (only 17 large vessels) than reported by the Honduran Navy (appendix D).

The foreign-owned vessels constitute a fleet of over 300 vessels exceeding 125,000 GRT. Such a fleet, combined with other Latin American countries (Cayman Islands, Panama, and St. Vincent) which register flag-of-convenience vessels, is capable of exerting very significant fishing effort. Such effort can have an especially serious impact on international management efforts as the foreign fishermen often concentrate on a few fisheries targeting a small number of high-value species. Distant-water fisheries are expensive to conduct and

the fishermen thus must target high-value species. It is precisely these species, however, that are depleted and the focus of international efforts to more effectively manage. The full impact of the flag-of-convenience fishermen could potentially impair the effectiveness of international management regimes.

The foreign-owned flag-of-convenience vessels appear to have little connection with the Honduran fishing industry. Foreign companies register fishing vessels in Honduras to obtain a flag-of-convenience. There appears to be little or no Honduran equity participation. No information is available on the companies involved and their activities in Honduras, besides the company name and nationality (appendix A). Few if any of the vessels call at Honduran ports. They apparently never land their catch in Honduras. A Honduran home port may be specified on the vessel registration, but this is for registration purposes only.⁶ Such Honduran registrations are a relatively recent phenomenon and appear to have begun increasing in 1989 (Latin America, appendix C2a1).

The Honduran Foreign Ministry is responsible for vessel flagging, but the Merchant Marine office in the Navy maintains the records.⁷ The Honduran Government appears to have adopted its current registration policy as an income generating activity. No data is available on the fees charged, but at least one observer reports that it is very substantial.⁸ In addition to the fees, private Honduran citizens benefit because many of the foreign vessel owners hire local lawyers and set up offices or local companies to handle the paper-work associated with such large numbers of vessel registrations. Some Honduran officials are critical of the practice which has caused a political controversy that has been widely reported in the local media.⁹ Honduran officials and the country's Congress are currently considering revisions to the laws governing the registration practices and inspection procedures for foreign-owned vessels.¹⁰

Almost all of the large (500 GRT and greater) and medium-sized (100-499 GRT) Honduran flag-of-convenience fishing vessels are owned by Taiwan companies. More than 60 of the 86 large foreign-owned vessels registered in Honduras are owned by Taiwan groups, or over 70 percent (appendices A and C). Most of the medium-sized vessels are also

owned by Taiwan companies, but precise numbers are not available.¹¹ A few companies from other countries have registered vessels in Honduras, including Belgium, Mauritius, Panama, Singapore, Thailand, and the United Kingdom (appendix B). Many of the vessels from these countries also appear to be owned by Taiwan companies. The Taiwan companies registering vessels in Honduras have typically registered only one or two vessels in Honduras, but two companies (Lubmain International, S.A. and Swillington Ltd.) in other countries have registered three or more vessels. The Taiwan companies involved have generally registered small numbers of vessels because small companies have greater access to credit in Taiwan and also receive more favorable treatment under the country's tax code.¹² Many of these companies, however, are owned by the small individuals and the vessels are coordinated as part of a large fleet operation by "relative" enterprises.¹³

Many of the large (over 500 GRT) flag-of-convenience vessels appear to be tuna longliners or reconverted tuna longliners. The Taiwan vessels in particular appear to be tuna longliners, most ranging from 600-1,100GRT. One Japanese report suggests that over 70 of the flag-of-convenience vessels, including vessels under 500-GRT, were formerly tuna longline vessels (Latin America, appendix B5d).¹⁴ The Japanese Government has provided some data on fishing vessels it has exported to Japan. The vessels include some small trawlers (probably for Honduran fishermen) and larger vessels (probably for Taiwan and other foreign owners) ranging from 100-2,999 GRT (appendix E). The vessels include squid jiggers, trawlers, pole-and-line vessels, and other types including research and enforcement vessels.¹⁵

A few companies have registered larger vessels, but few details are available on these vessels. Some companies have registered particularly large vessels. Korvin Fisheries Company (Singapore) has registered the 1,900-GRT *Great Splendor*. The Sirichai Fisheries Company (Thailand) has registered the 1,800-GRT *Sirichai Independence*. Greenbury Trading Co. Ltd. (U.K.) has registered the 2,700 GRT *Glory*. The Fortuna Unity Co. Ltd. (Thailand) has registered the 4,400-GRT *La Paloma* (appendix B). No information on the types of these large vessels is available.

III. VESSEL SOURCES

Honduran fishermen import almost all of their commercial fishing vessels. No special provisions exist concerning the importation of new or used fishing vessels.¹⁴ A few yards produce small boats, mostly for artisanal and recreational fishermen, and provide maintenance services. Honduras had, as of 1986, two shipyards. One is owned by a U.S. citizen in the free zone in Puerto Cortez and the other is owned by an unknown corporation in Guanaja.¹⁵

IV. FOREIGN FISHING

Honduras does not issue fishing permits to foreign vessels. Honduran law limits the issuance of fishing licenses to resident Honduran citizens or companies with majority Honduran ownership. The law also requires that only Honduran citizens captain fishing vessels in Honduran waters.¹⁶ A few exceptions are made for research purposes.¹⁷

Honduras has no bilateral agreements with other countries dealing with fisheries access or other fishery matters.¹⁸ Several countries (the European Community, Japan, Taiwan, and the United States), however, provide fisheries assistance to Honduras.

Honduran fishermen currently are fully utilizing the country's most important fishery resources, lobster and shrimp. As a result, the Government does not normally grant licenses to foreign fishermen. Officials have, however, occasionally made exceptions and granted a few licenses. Officials have issued licenses to foreign fishermen targeting underutilized finfish as a way of promoting the development of a Honduran fishery.

Honduran officials until the late 1980s prohibited foreign fishing in Honduran waters, unless the foreign vessels were operated under a joint venture. The Government decided in 1988, however, to allow foreign-flag vessels access to

Honduran stocks of snapper and grouper. The foreign fishermen had to land and process their catch in Honduras and had to have a Honduran inspector present on each vessel while in Honduran waters. One U.S. company deployed two vessels for test fishing, but the authors have no information as to the results of their efforts.¹⁹ Two factors complicate foreign access to Honduran fishing grounds. First, Honduras' fishing laws make the sale of licenses to foreigners extremely complicated unless it is through a joint-venture. Second, the U.S. Embassy reports that U.S. fishermen applying for licenses have experienced serious difficulties with Government officials.²⁰

V. JOINT VENTURES

There is little information available on Honduran joint-ventures. Some U.S. citizens are reportedly involved with Honduran nationals in the shrimp and lobster industry, but the extent of this activity is unknown.²¹ Joint-ventures are permitted under Honduran law. Only ventures with at least 51 percent Honduran equity participation can obtain fishing licenses.

VI. DISTANT-WATER OPERATIONS

A. Honduran

Honduran fishermen do not conduct extensive distant-water fisheries. They do fish, however, (both with and without the appropriate licenses) in the Caribbean, primarily off neighboring countries.

Belize: Honduran fishermen occasionally deploy a few vessels off Belize.

Nicaragua: Unconfirmed reports suggest substantial Honduran effort off Nicaragua.²² The Nicaraguan fishing industry declined substantially during the 1980s as a result of Sandinista mismanagement and the civil war and, as a result, lobster and shrimp stocks were not being fully utilized. Honduran fishermen were thus attracted by the excellent yields which could be achieved on relatively unutilized fishing grounds.

Colombia: Honduran fishermen also fish off Colombia and other Caribbean countries, but often as part of a coastal fishery under a variety of joint venture or leasing arrangements, landing at least part of the catch in local ports. Most of the Honduran vessels licensed to fish off Colombia during 1993 were contracted by the Colombian Antillana del Mar company to fish for lobster (Colombia, appendix E).²³

B. Flag-of-convenience

The foreign-owned flag-of-convenience vessels registered in Honduras conduct very extensive distant-water operations. The authors have few details, however, concerning their operations. These vessels are not permitted to fish in Honduran waters and appear to have no connection with the Honduran fishing industry.²⁴ Given the size of the fleet the large flag-of-convenience vessels (larger than 500-GRT) could probably catch about 225,000t and the medium-sized vessels (100-499 GRT) can probably catch about 170,000 t annually (Latin America, appendix C5). This means the

vessels have the potential to catch nearly 400,000 t annually.

Available information on the foreign owners in specific countries is as follows:

Belgium: The Lubmain company registered seven 700-725 GRT vessels in Honduras during 1993 (appendix B). No information is available on Lubmain, but the vessels involved appear to be Taiwan vessels. Lubmain may be chartering the vessels from their actual Taiwan owners or the company may be owned by Taiwan interests.

Denmark: Denmark currently does not register large fishing vessels in Honduras, according to Honduran Government data (appendix B). Unconfirmed reports, however, indicate that Danish owners are deploying Honduran-flagged vessels for salmon in the North Atlantic. As Denmark is a North Atlantic Salmon Conservation Organization (NASCO) member country, Danish-flag vessels are subject to the NASCO Atlantic salmon management regime. The owners are not, however, subject to prosecution once their registry has been transferred to Honduras which does not belong to NASCO.

Korea: The Honduran Government does not list any large Korean vessels as registered in Honduras. Korean owners, however, have applied for and been issued licenses by the Falkland Islands Government

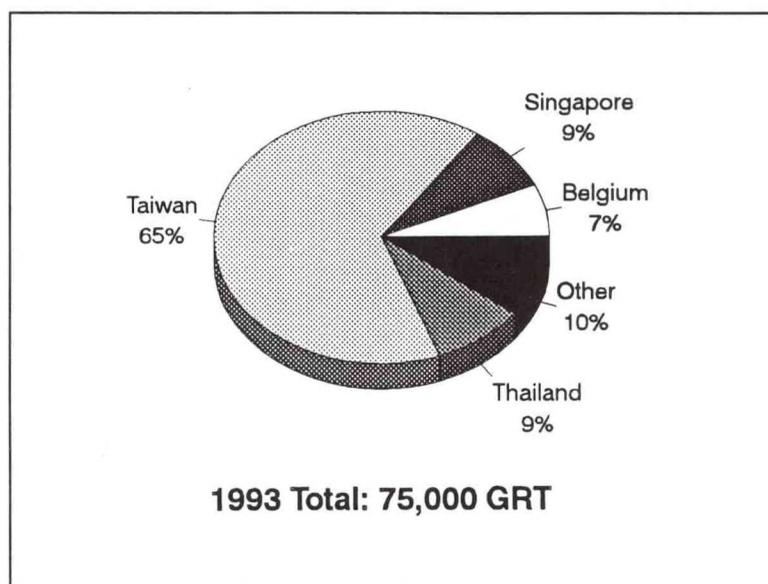


Figure 3.--Honduras. Many foreign fishermen registered in Honduras do not report their catch, but some report catches off West Africa (FAO area 34).



Photo 2.--Honduras. This British built stern trawler, the Pilgrim, has been reflagged in Honduras by unidentified interests.

for Honduran-flag vessels.²⁵ At least one Honduran-flag vessel operated in the northwestern Atlantic with a Korean crew during 1992, suggesting Korean ownership (appendix B). Some indications suggest that Korean owners have to obtain Korean Government authorization for distant-water operations, even if the vessel is registered in another country.

Mauritius: The Mauritian company Hsin Hua Fishery has registered one large vessel in Honduras, the 708-GRT *Hsin Hua No. 1* (appendix B). The actual owner may be a Taiwan company.

Panama: Two Panamanian companies (Focus Trading and Oasis Venture) have registered three large fishing vessels in Honduras (appendix B). No information is available on these companies and it is unclear why they have registered their vessels in Honduras.

Singapore: Several Singapore companies (Hui Jem Oceanic, Korvin, Sara Fa Ocean Fishery, Shang Weng Ocean, and Swillington) register large fishing vessels in Honduras (appendix B). Most of the vessels are probably longliners, ranging from about

720-810 GRT. Korvin Fisheries, however, has registered a 1,949 GRT vessel, probably a stern factory trawler. The authors believe that most of these vessels are at least in part owned by Taiwan or overseas Chinese interests. One observer believes, for example, that a Taiwan owner registered a former driftnet vessel in Honduras to facilitate continued high-seas operations.

Taiwan: Taiwan owners registered 62 large fishing vessels in Honduras during 1993 (appendix B). The total number of vessels is even larger because Taiwan also registered substantial numbers of smaller vessels (100-499 GRT) in Honduras. In addition, several of the vessels registered by other foreign countries (Belgium and Singapore) appear to be of Taiwan origin. At least two former Taiwan driftnet vessels are believed to be registered in Honduras (appendix E).²⁶ Many of these vessels appear to be transferred to Honduran flag to facilitate operations off countries which do not have diplomatic relations with Taiwan.

Thailand: Three Thai companies (S. Overseas Marine, Fortuna Unity, and Sirichai Fisheries) have registered large fishing vessels in Honduras (appendix B). Two of the vessels are some of the

largest fishing vessels registered in Honduras, the *La Paloma* (4,358 GRT) and the *Sirichai Independence* (1,841 GRT). No information is available on the operations of these vessels.

United Kingdom: One British company, Greenbury Trading, has registered a vessel in Honduras, the *Glory* (2,677 GRT).

Only limited information is available on fleet operations. Many of the owners apparently do not report their catch. The only catch reported for these vessels is for operations in the central Atlantic off West Africa (appendix F). The authors believe that fishing is also conducted in the southwestern Pacific, northern and southern Atlantic, and the Indian Ocean.

Central Atlantic: Honduran-flag vessels only report distant-water catches off West Africa (appendix F). Honduras began reporting such catches in 1986

when about 7,000 t were caught. The 1991 catch was nearly 11,000 tons. The catches are primarily composed of cuttlefish, octopus, shrimp, and other marine fish. Notably the vessels do not report a significant tuna catch. While some observers believe Taiwan-owned vessels are fishing bluefin, there are no accurate data available to substantiate such operations.

North Atlantic: Honduran-flag vessels owned by Danish interests have been deployed for salmon in the North Atlantic. Two Honduran-flag vessels were deployed in the northwestern Atlantic during 1992. One had a European and another a Korean crew, suggesting European and Korean ownership. The European vessel caught about 100 t of cod and the Korean vessel about 2,600 t of redfish (Latin America, appendix C4b1-2). None of the catch was reported to FAO.

South Atlantic: A small number of Honduran-flag vessels are deployed in the South Atlantic.

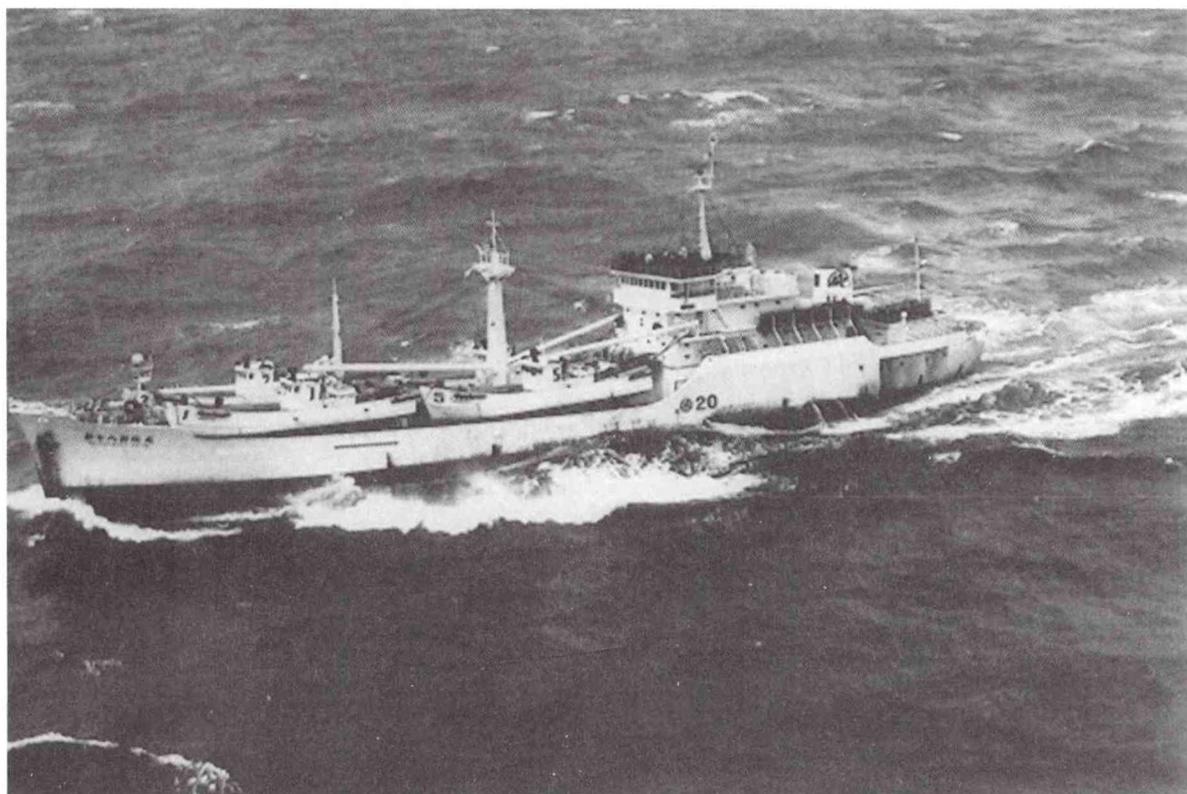


Photo 3.--This Japanese-built vessel, the *Wide Sea No. 28* is believed to be operated by a Taiwan company under the Honduran flag.

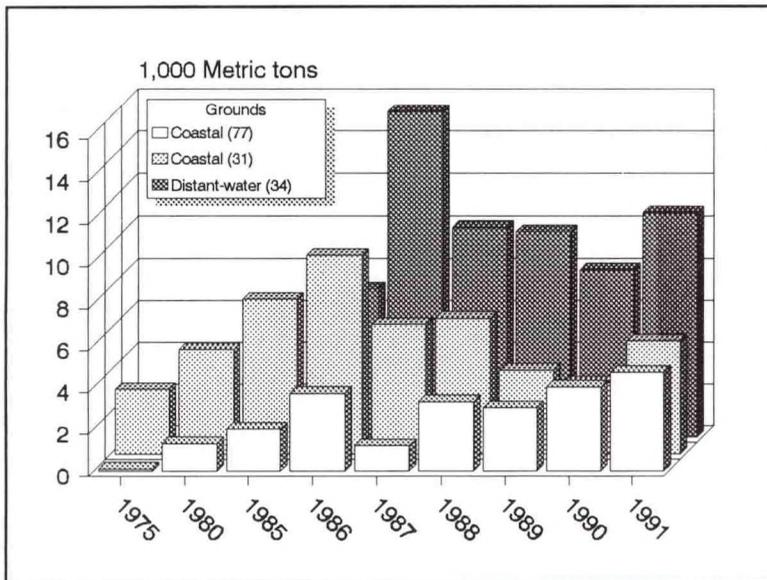


Figure 4.--Honduras. Most of the distant-water catch is taken by foreign flag-of-convenience vessels owned by Taiwan companies.

Falklands officials began licensing Honduran vessels in 1991, issuing two licenses in 1991 and four in 1992 (Falkland Islands, appendix B1a).²⁹ The Falklands granted four licenses (one for a jigger and three for trawlers) in 1993 (Falkland Islands, appendices B3a-b). At least some of these vessels are believed to be owned by Korean interests. The vessels are deployed off the Falklands and operate with the knowledge and approval of the Korean Government.³⁰

Western Pacific: Most of the Honduran flag-of-convenience vessels are Taiwan owned. Presumably large numbers are deployed in the southwestern Pacific tuna fishery. The tuna catch of these vessels is reported by FAO as a basket category with other countries and thus it is difficult to determine precisely where the fishery is conducted or the quantities taken by individual countries.³¹

Indian Ocean: Some of the Taiwan vessels appear to be operating in the Indian Ocean as the flag-of-convenience registrations are in part a way of placating officials in several Indian Ocean countries (India, Myanmar, and Sri Lanka) that are unwilling to deal with Taiwan-flag vessels.³²

SOURCES

Barton, John. Director, Falklands Fisheries Department, personal communications, August 13, 1993.

FAO. "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Fishing News International, September, 1988.

Huang, Cheng-Fei. Fisheries Specialist, Taiwan Coordinating Council for North American Affairs, personal communications, October 21 and November 8, 1993.

Lloyd's, *Lloyd's Register: Statistical Tables*, June 1992, pp. 27-28.

Roche, Timothy. U.S. Embassy, Tegucigalpa, personal communications, September 23, 1993.

Suisan Keizai Shinbun, July 29, 1992.

U.S. Department of State, May 21, 1993.

U.S. Embassy, Tegucigalpa, July 12, 1985; April 19, 1986; March 31, 1988; September 4, 1990; October 1, 1991; July 29, 1992; March 18, June 4, and August 10 and 23, 1993.

U.S. Embassy, Tokyo, September 17, 1993.

U.S. Navy. Office of Naval Intelligence.

Wildman, Mark. "Taiwan," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 3 (NMFS: Silver Spring, MD., 1993).

Zuñiga, Gabino Edgardo. Director General, Dirección General de Pesca y Acuicultura, Secretaría de Recursos Naturales, personal communications, July 6, 1993.

ENDNOTES

SECTION I. (General Background)

1. "Honduras: Fleet growth increases production," *Fish Boat*, August, 1988, p.38-39.

SECTION II. (High-seas Fleet)

2. Cheng-Fei Huang, Fisheries Specialist, Taiwan Coordinating Council for North American Affairs, personal communications, October 21, 1993.

3. For details on the various reasons for obtaining flag-of-convenience registrations, see the Latin American Overview chapter of this report.

4. Huang, personal communications, *op. cit.*, November 8, 1993.

5. Timothy Roche, U.S. Embassy, Tegucigalpa, personal communications, September 23, 1993.

6. U.S. Embassy, Tegucigalpa, August 10, 1993.

7. U.S. Embassy, Tegucigalpa, March 18, 1993.

8. Huang, personal communications, *op. cit.*, October 21, 1993.

9. The issue surfaced in the local media primarily because of the international reporting on several Honduran-flag vessels carrying illegal Chinese immigrants to the United States. The Honduran Congress as a result has called for a review of the entire flag-of-convenience process. Some Honduran Government officials are convinced that unnamed individuals are receiving substantial illegal payments. Anonymous Honduran source, personal communications, October 27, 1993.

10. U.S. Embassy, Tegucigalpa, June 4, 1993.

11. NMFS has a list of foreign-owned vessels registered by foreign companies in 1993. Most of the vessels have Chinese names.

12. Huang, personal communications, *op. cit.*, October 21, 1993.

13. Huang, personal communications, *op. cit.*, October 21, 1993.

14. *Suisan Keizai Shinbun*, July 29, 1992.

15. Japanese officials report that two driftnets vessels were exported to Honduras, but stress that the gear was removed before the vessels were transferred to Honduras. U.S. Embassy, Tokyo, September 17, 1993.

SECTION III. (Vessel Sources)

16. U.S. Embassy, Tegucigalpa, August 23, 1993.

17. U.S. Embassy, Tegucigalpa, April, 19, 1986.

SECTION IV. (Foreign Fishing)

18. U.S. Embassy, Tegucigalpa, July 12, 1985 and August 23, 1993.

19. U.S. Embassy, Tegucigalpa, August 23, 1993.

20. U.S. Embassy, Tegucigalpa, August 23, 1993.

21. U.S. Embassy, Tegucigalpa, March 31, 1988; "Licenses with limits," *Fishing News International*, September, 1988.

22. U.S. Embassy, Tegucigalpa, September 4, 1990.

SECTION V. (Joint Ventures)

23. U.S. Embassy, Tegucigalpa, October 1, 1991.

SECTION VI. (Distant-water Operations)

24. "Honduras: Fleet growth," *op. cit.*

25. The largest such program is in Colombia. For details, see the Colombian chapter of this report.

26. Gabino Edgardo Zuñiga, Director General, Dirección General de Pesca y Acuicultura, Secretaría de Recursos Naturales, personal communications, July 6, 1993.

27. For details, see the Falklands chapter of this report.

28. The vessels were the *Ching Luang Hsiang* and the *Sarn Fa No. 37*. U.S. Department of State, May 21, 1993. These vessels do not appear on the available Honduran registry list (appendix A), but they may be smaller vessels and thus not included.

29. For details, see the Falklands chapter of this report.

30. John Barton, Director, Falklands Fisheries Department, personal communications, August 13, 1993.

31. For details, see Mark Wildman, "Taiwan," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 3 (NMFS: Silver Spring, MD., 1993).

32. Huang, personal communications, *op. cit.*, October 21, 1993.

APPENDICES

Appendix A.--Honduras. Large fishing vessels# registered in Honduras, 1993

Nationality*	Vessel		Owner
	Name	Size GRT	
Belgium			
	Chien Hang No. 6	711.00	Lubmain International S.A.
	Fu Yuan No. 16	711.00	Lubmain International S.A.
	Fu Yuan No. 6	708.00	Lubmain International S.A.
	Hsin Huang No. 201	706.57	Lubmain International S.A.
	Tching Ye No. 217	725.00	Lubmain International S.A.
	Tching Ye No. 236	726.00	Lubmain International S.A.
	Yu I Hsiang No. 617	708.00	Lubmain International S.A.
		<u>4,995.57</u>	
Honduras			
	Oriente No. 7	658.40	El Oriente S. De R.L.
Mauritius			
	Hsin Hua No. 1	708.00	Hsin Hua Fishery Co.
Panama			
	Focus	999.70	Focus Trading S.A.
	Focus No. 101	912.53	Focus Trading S.A.
	Polestar	889.17	Oasis Venture Corporation
		<u>2,801.40</u>	
Singapore			
	En Chun No. 2	746.00	Swillington Limited.
	En Chun No. 6	746.00	Swillington Limited
	En Chun No. 7	746.00	Swillington Limited.
	Great Splendor	1,949.00	Korvin Fisheries Co.
	Hui Shun No. 6	719.00	Hui Jem Oceanic Enterprises Co.
	Sarn Fa No. 37	801.00	Sarn Fa Ocean Fishery
	Shang Weng	810.00	Shang Weng Ocean Fishery
		<u>6,517.00</u>	
Spain			
	Sekishu	991.37	Interburgo S.A.
Taiwan			
	Chang Hann No. 117	705.48	Chang Man Fishery Co. Ltd.
	Chen Chia No. 1	710.52	Cheng Chia Fishery Co.
	Chiao Chun No. 1	721.00	Chiao Chun Fishery Co.
	Chieh Hsiang No. 302	709.00	Chieh Fong Fishery Co.
	Chieh Hsiang No. 303	718.00	Chieh Fong Fishery Co.
	Chien Yu No. 7	712.68	Chien Yu Fishery Co.
	Chin Ching No. 1	719.00	Chin Ching Fishery Co.
	Chin Hui	704.84	Chin Hui Marine Products
	Chin Lung Yun No. 27	751.82	Chyi Yun Fishery Co.
	Chung I No. 126	705.55	Chung Yng Fishery Co.
	Fung Yue No. 102	709.00	East Man Fishery Co.
	Fung Yue No. 102**	709.00	Shin Chun Fishery Co.
	Fv Kuang Hui No. 212	602.00	Kuang Hui Fishery Co.
	Fv Yuh Yow No. 201	717.00	Yuh Yih Fishery Co. Ltd.
	F.V. Tong Yu No. 6	715.80	Tong Yu Fishery Co.
	Hai Fa No. 11	706.30	Hai Fa Fishery Co.
	Hai Fa No. 21	717.48	Hai Fu Fishery Co.
	Hai Fa No. 31	718.00	Hai Hao Fishery Co.
	Hai Fa No. 62	713.00	Hai Fu Fishery Co.
	Hien Chung No. 1	735.00	Chang Jung Fang Co.
	Hsieh An No. 16	726.00	Hsieh An Fishery Co.
	Hsin Cheng Hsiang No. 101	711.30	Hsin Cheng Hsiang Fishery
	Hsin Hung No. 101	705.10	Hsin Hung Fishery Co.
	Hsin I Hsiang No. 11	711.39	Hsin Ying Hsiang Fishery
	Hsin Yuan No. 202	719.56	Hsin Yuan Fishery Co.

Hsing Lung No. 31	718.00	Hsin Lung Fishery Co.
Hsing Yun No. 101	709.04	Hsing Yun Fishery Co.
Hung Chia No. 3	712.00	Chia Fu Fishery Co. Ltd.
Hung Fu I No. 212	716.00	Hung Fu I Fishery Co.
Hung Heng No. 121	722.00	Hung Heng Fishery Co.
Hung Hsing No. 11	991.00	Yng. Sheng Oceanic Enterp.
Hung Hsing No. 212	722.00	Hung Hsing Fishery Co.
Hung Hwa No. 202	725.00	Hung Tzu Fishery Co.
Hung Ming No. 231	719.09	Hung Ming Fishery Co.
Hung Yu No. 122	722.72	Hung Yiu Fishery Co.
Hwa Hsing No. 16	993.00	Yih Sheng Fisheru Y Co.
Hwa Kun No. 232	722.72	Hwa Kun Fishery Co.
Hwa Ren No. 16	998.00	Hwa Shin Chang Marine
Hwa Ren No. 6	1,076.00	Hwa Ren Fishery Co.
I Chun No. 3	717.00	Luxiriant Fishery Co.
Kuo Hung No. 808	714.00	Kuo Hung Fishery Co.
Pilgrim	1,447.60	Altea Fish S. De R.L.
Tai Chin No. 12	718.00	Tai Chin Fishery Co.
Tai Fan No. 1	708.00	Tai Fan Fishery Co.
Tai Hsing No. 11	720.00	Hsing Tai Fishery Co.
Tung I No. 801	711.00	Tung I Fishery Co.
Win Yeong Tai No. 136	1,095.46	Yu Chih Hsie
Yi Mao 306	1,513.00	Yi Yang Marine Products
Ying Pi Hsiang No. 3	706.00	Fu Chun Marine Products
Yu Chan No. 201	705.10	Yu Chan Fishery Co.
Yu Feng No. 116	719.00	Yu Chan Fishery Co.
Yu Feng No. 68	719.00	Hung Chang Fishery Co.
Yu I Hsiang No. 132	708.12	Yu-Hung Fishery Co.
Yu I Hsiang No. 227	708.12	Yu-Hung Fishery Co.
Yuh Yow No. 101	706.00	Yu Yuan Fishery Co.
Yuh Yow No. 102	719.00	Yu Chang Marine Products
Yuh Yow No. 127	729.00	Yu Pao Fishery Co.
Yung Hsu No. 101	717.00	Yung Hsu Fishery Co.
Yung Ta No. 606	1,410.24	Zen Lee Fishery Co.
Yih Far No. 63	991.00	Chia Fu Fishery Co.
Yih Shuen No. 61	993.00	Ting Fond Oceanic Development
Yuan Chun No. 1	785.00	Yuan Chun Marine Products.
	<u>48,680.03</u>	
Thailand		
Ekawat Reefer 2	580.00	S. Overseas Marine Corp.
La Paloma	4,358.38	Fortuna Unity Co. Ltd.
Sirichai Independence	1,841.19	Sirichai Fisheries Co.
	<u>6,779.57</u>	
United Kingdom		
Glory	2,676.71	Greenbury Trading Ltd.
Total	<u>74,808.05</u>	

* Nationality of owner

** This vessel is listed twice on the Honduran registry under two different owners.

Vessels over 500 GRT

Source: Fuerzas Armadas de Honduras, Marina Mercante Nacional, unpublished list, July 14, 1993.

Appendix B.--Honduras. Large fishing vessels# registered
in Honduras, by company 1993

Nationality*/ Company	Vessel Name	Size GRT
Belgium		
Lubmain International S.A.	Chien Hang No. 6	711.00
	Fu Yuan No. 16	711.00
	Fu Yuan No. 6	708.00
	Hsin Huang No. 201	706.57
	Tching Ye No. 217	725.00
	Tching Ye No. 236	726.00
	Yu I Hsiang No. 617	708.00
Honduras		
El Oriente S. De R.L.	Oriente No. 7	658.40
Mauritius		
Hsin Hua Fishery Co.	Hsin Hua No. 1	708.00
Panama		
Focus Trading S.A.	Focus	999.70
	Focus No. 101	912.53
Oasis Venture Corporation	Polestar	889.17
Singapore		
Hui Jem Oceanic Enterprises Co.	Hui Shun No. 6	719.00
Korvin Fisheries Co.	Great Splendor	1,949.00
Swillington Limited.	En Chun No. 2	746.00
	En Chun No. 6	746.00
	En Chun No. 7	746.00
Sarn Fa Ocean Fishery	Sarn Fa No. 37	801.00
Shang Weng Ocean Fishery	Shang Weng	810.00
Spain		
Interburgo S.A.	Sekishu	991.37
Taiwan		
Chang Jung Fang Co.	Hien Chung No. 1	735.00
Chang Man Fishery Co. Ltd.	Chang Hann No. 117	705.48
Chia Fu Fishery Co. Ltd.	Hung Chia No. 3	712.00
	Yih Far No. 63	991.00
Cheng Chia Fishery Co.	Chen Chia No. 1	710.52
Chiao Chun Fishery Co.	Chiao Chun No. 1	721.00
Chieh Fong Fishery Co.	Chieh Hsiang No. 302	709.00
	Chieh Hsiang No. 303	718.00
Chien Yu Fishery Co.	Chien Yu No. 7	712.68
Chin Ching Fishery Co.	Chin Ching No. 1	719.00
Chin Hui Marine Products		

Chin Hui	704.84
Chung YNG Fishery Co.	
Chung I No. 126	705.55
Chyi Yun Fishery Co.	
Chin Lung Yun No. 27	751.82
East Man Fishery Co.	
Fung Yue No. 102	709.00
Fu Chun Marine Products	
Ying Pi Hsiang No. 3	706.00
Hai Fa Fishery Co.	
Hai Fa No. 11	706.30
Hai Fu Fishery Co.	
Hai Fa No. 21	717.48
Hai Fa No. 62	713.00
Hai Hao Fishery Co.	
Hai Fa No. 31	718.00
Hsieh An Fishery Co.	
Hsieh An No. 16	726.00
Hsin Cheng Hsiang Fishery	
Hsin Cheng Hsiang No. 101	711.30
Hsin Hung Fishery Co.	
Hsin Hung No. 101	705.10
Hsin Lung Fishery Co.	
Hsing Lung No. 31	718.00
Hsin Ying Hsiang Fishery	
Hsin I Hsiang No. 11	711.39
Hsin Yuan Fishery Co.	
Hsin Yuan No. 202	719.56
Hsing Yun Fishery Co.	
Hsing Yun No. 101	709.04
Hsing Tai Fishery Co.	
Tai Hsing No. 11	720.00
Hung Chang Fishery Co.	
Yu Feng No. 68	719.00
Hung Fu I Fishery Co.	
Hung Fu I No. 212	716.00
Hung Heng Fishery Co.	
Hung Heng No. 121	722.00
Hung Hsing Fishery Co.	
Hung Hsing No. 212	722.00
Hung Ming Fishery Co.	
Hung Ming No. 231	719.09
Hung Tzu Fishery Co.	
Hung Hwa No. 202	725.00
Hung Yiu Fishery Co.	
Hung Yu No. 122	722.72
Hwa Kun Fishery Co.	
Hwa Kun No. 232	722.72
Hwa Shin Chang Marine	
Hwa Ren No. 16	998.00
Hwa Ren Fishery Co.	
Hwa Ren No. 6	1,076.00
Kuang Hui Fishery Co.	
Fv Kuang Hui No. 212	602.00
Kuo Hung Fishery Co.	
Kuo Hung No. 808	714.00
Luxiriant Fishery Co.	
I Chun No. 3	717.00
Altea Fish S. De R.L.	
Pilgrim	1,447.60
Shin Chun Fishery Co.	
Fung Yue No. 102**	709.00
Tai Chin Fishery Co.	
Tai Chin No. 12	718.00
Tai Fan Fishery Co.	
Tai Fan No. 1	708.00
Ting Fond Oceanic Development	
Yih Shuen No. 61	993.00
Tong Yu Fishery Co.	

F.V. Tong Yu No. 6	715.80
Tung I Fishery Co.	
Tung I No. 801	711.00
Yi Yang Marine Products	
Yi Mao 306	1,513.00
Yih Sheng Fishery Co.	
Hwa Hsing No. 16	993.00
Yng. Sheng Oceanic Enterp.	
Hung Hsing No. 11	991.00
Yu Chan Fishery Co.	
Yu Chan No. 201	705.10
Yu Feng No. 116	719.00
Yu Chang Marine Products	
Yuh Yow No. 102	719.00
Yu Chih Hsie	
Win Yeong Tai No. 136	1,095.46
Yu Pao Fishery Co.	
Yuh Yow No. 127	729.00
Yu Yuan Fishery Co.	
Yuh Yow No. 101	706.00
Yuan Chun Marine Products.	
Yuan Chun No. 1	785.00
Yu-Hung Fishery Co.	
Yu I Hsiang No. 132	708.12
Yu I Hsiang No. 227	708.12
Yuh Yih Fishery Co. Ltd.	
Fv Yuh Yow No. 201	717.00
Yung Hsu Fishery Co.	
Yung Hsu No. 101	717.00
Zen Lee Fishery Co.	
Yung Ta No. 606	1,410.24
Thailand	
Fortuna Unity Co. Ltd.	
La Paloma	4,358.38
S. Overseas Marine Corp.	
Ekawat Reefer 2	580.00
Sirichai Fisheries Co.	
Sirichai Independence	1,841.19
United Kingdom	
Greenbury Trading Ltd.	
Glory	2,676.71

* Nationality of owner

** This vessel is listed twice on the Honduran registry under two different owners.

Or other Southeast Asian country

Source: Fuerzas Armadas de Honduras, Marina Mercante Nacional, unpublished list, July 14, 1993.

Appendix C.--Honduras. Foreign-owned fishing vessels, 1993

Country	Size		Total
	Medium*	Large**	
	Number		
Belgium	NA	7	NA
Honduras	NA	1#	NA
Mauritius	NA	1	NA
Panama	NA	3	NA
Singapore	NA	7	NA
Spain	NA	1	NA
Taiwan	NA##	62	NA
Thailand	NA	3	NA
United Kingdom	NA	1	NA
Total	217	86	303

* 100-499 GRT

** 500 GRT or greater

The Honduran company which owns the vessels may have foreign partners.

Most of the medium-sized vessels are also owned by Taiwan companies, but exact numbers are unavailable.

Source: Fuerzas Armadas de Honduras, Marina Mercante Nacional, unpublished list, January 31, 1993.

Appendix D.--Honduran. Large* fishing vessels registered, 1993

Country#/Vessel	Size	Year Built	Vessel type**
	GRT		
Japan			
Hilda	2,528	1966	512
Dae Sung No 18	1,957	1963	512
Dae Sung No 21	2,994	1973	512
Danica	3,608	1965	512
Ponte Reefer	2,320	1967	534
Sekishu	991	1966	510
Sirichai Independence	1,945	1966	510
Taiyo I	1,782	1965	534
Wide Sea No 28	1,317	1962	510
Korea (ROK)			
Haeng Bok No 307	626	1988	510
Haeng Bok No 308	626	1989	510
Haeng Bok No 309	626	1989	510
Haeng Bok No 316	638	1990	510
Poland			
Mamry	797	1961	511
Mamry II	766	1961	512
United Kingdom			
Stratos S	1,105	1967	511
Pilgrim	1,822	1973	511

* 500 GRT or larger

** ONI vessel types

510 - Trawler

516 - Tuna seiner

534 - Processing refrigerated fish transport

566 - Fisheries research vessel

Country where constructed

Source: U.S. Office of Naval Intelligence (ONI)

Appendix E--Honduras. Fishing vessels exported by Japan, 1990-June 1993

Date*	Vessel		Size GRT	Buyer
	Name**	Gear***		
1990 (January-June)				
	Seishu No. 27	Squid jigger	315	Koje Enginee & Trading Pte.
	Shinse No. 3	Trawler#	60	Corsia S de RL
	Shinsei No. 5	Trawler#	58	Corsia S de RL
	Hoyo No. 3	Trawler#	58	Corsia S de RL
	Hoyo No. 5	Trawler#	59	Corsia S de RL
	Ansei No. 1	Trawler#	59	Corsia S de RL
	Ansei No. 2	Trawler#	58	Corsia S de RL
1990 (July-December)				
	Echo No. 8	Squid jigger	409	Poder Mar S de
	Fukuju No. 87	Squid jigger	390	Poder Mar S de
	Yashu	Trawler#	194	Gold Fishery S
1991 (January-June)				
	Chidori No. 53	Driftnet/jigger	449	Sirichat Fisheries
	Seishin No. 51	Squid driftnet	451	Sirichat Fisheries
	Daiki No. 38	Tuna longliner	285	Sirichat Fisheries
1991 (July-December)				
	Yuwa	Enforcement vessel	483	Hondirema de Atun S. de RL
	Hajime No. 5	Skipjack	100	Minsl Shipping
	Chiba	Research vessel	348	Navier Mar Este S. de RL
1992 (January-June)				
	Eisei	Skipjack pole and line	179	Wing Sang Fisheries S de
1992 (July-December)				
	Zengyoren	Transport##	286	Grand Link Shipping S de
	Keiho No. 87	Fish carrier	2,999	Unknown
	Daikichi No. 21	Squid driftnet	299	Ruta Esperanza S de
	Hokuto	Enforcement vessel	234	Greenbrier Company, S.A.
	Minato No. 20	Squid jigger	98	Mike Marine Enterprises
	New vessel###	Bottom longline	2	Honduran Government Fisheries Department
	Hosei No. 85	Squid driftnet	238	Trilakes Maritime S de
1993 (January-June)				
	Chokai	Enforcement vessel	451	Vinic Limited
	Kaio No. 58	Skipjack pole and line	499	Sanyo Shipping
	Shinko No. 5	Tuna longline	108	South Sea Fisheries S de
	Kaiho No. 3	Enforcement vessel	391	Sirichat Fisheries S de
	Kairyu	Enforcement vessel	149	Sirichat Fisheries S de
	Koyo No. 12	Squid jigger	241	Lobster Navier
	Kairyu No. 3	Skipjack pole and line	284	Oscar S de RL
	Koyo No. 2	Longline and pole and line	470	S. Road Naviera

* Japanese export verification issued

** Japanese name

*** Type of vessel. Japanese law requires that all gear be removed from the vessel before export.

Trawl vessel licensed by the Japanese MAFF to trawl in waters to the west of 135° E.

The FAJ assumes that vessels equipped with freezing plants will be used as transport vessels.

Japanese Government grant

Source: Department of Oceanic Fisheries, Fisheries Agency of Japan (FAJ) as reported in U.S. Embassy, Tokyo, September 17, 1993.

Appendix F.--Honduras. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	0.2	0.1	0.2	0.2	0.3	0.2	0.4	0.2	0.2
Coastal									
31	3.1	5.0	7.4	9.5	6.2	6.5	4.0	3.4	5.4
77	0.1	1.3	2.0	3.7	1.2	3.3	3.0	4.0	4.7
Subtotal	3.2	6.3	9.4	13.2	7.4	9.8	7.0	7.4	10.1
Distant Water									
34	-	-	-	7.1	15.5	10.0	9.8	8.0	10.7
71	-	-*	-*	-	-	-	-	-	-
Subtotal	-	-	-	7.1	15.5	10.0	9.8	8.0	10.7
Total	3.3	6.4	9.7	20.6	23.1	19.9	17.1	15.5	21.0

Notes: Totals may not agree due to rounding.

* Honduras did report a catch of 3,000 t in the southwestern Pacific during 1982 and 1983.

Source: FAO, Yearbook of Fishery Statistics, various years.

3.4

MEXICO

Mexican fishermen conduct limited distant-water operations, but may have difficulty expanding such operations during the 1990s. Tuna fishermen are currently the only Mexican fishermen capable of distant-water operations. While they fish primarily in Mexico's own Exclusive Economic Zone, they also operate off Central America and off South America as far south as Ecuador. They will probably continue operations off neighboring countries in Central America, but they may have to curtail operations further south. An Ecuadorean company which was contracting Mexican vessels may not do so in the future because of difficulties exporting tuna caught by Mexican-flag vessels. Future operations in more distant grounds are possible, but the current status of such efforts are unknown. Mexican tuna companies have held preliminary discussions with officials and business executives in several western Pacific/Indian Ocean countries, but details are unavailable. Fishing operations in these areas are not conducted on dolphin, and thus the tuna harvested would, by definition, be "dolphin safe." A few owners have deployed vessels to the western Pacific since 1991, but the results have not been encouraging.

Some Mexican tuna vessel owners are considering a variety of options as to how to resolve their current marketing problems. Most are convinced that they cannot operate profitably in the eastern Pacific without setting on dolphins. The vessels owners are studying the possibility of registering their vessels in other countries. Some are considering flag-of-convenience registrations, but there are limited benefits to such transfers. As long as the owners continue to fish on dolphin they will encounter the same difficulties exporting tuna as they currently do with Mexican-flag registrations.

Mexican officials have been very protective of fishing rights in their 200-mile Exclusive Economic Zone. They have issued few licenses to foreign fishermen. This appears to be a long-term Mexican policy and officials are unlikely to agree to access arrangements in the future for any significant number of foreign vessels. They will, however, probably continue issuing limited numbers of licenses for foreign vessel owners working with Mexican companies. Such projects are most likely to obtain Government approval when they involve developing a new fishery that does not compete with established Mexican fisheries.

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I. GENERAL BACKGROUND

Mexican fishermen conduct important fisheries for shrimp, tuna, lobster, abalone, small pelagics, oysters, shark, seaweed, and a variety of other species. The 1991 catch totalled 1.4 million metric tons (t), little changed since 1986. Most of the catch is landed along the Pacific coast, but substantial quantities are also taken in the Gulf of Mexico. Many of the most developed fisheries focus on export markets, primarily the United States. Shrimp and other species are popular with Mexican consumers and increasing quantities of seafood are being marketed domestically.

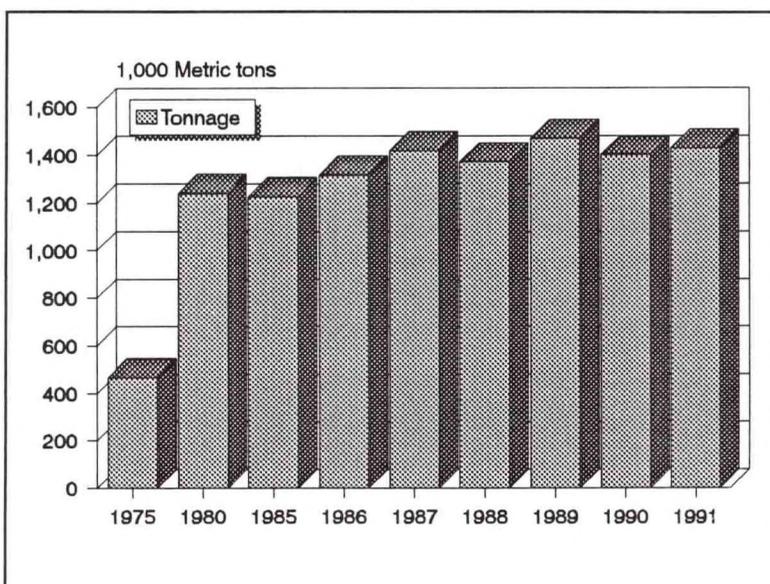


Figure 1.—Mexico. The Mexican fisheries catch has changed little since 1987, but some individual fisheries such as shrimp have fared badly.

Shrimp is the country's single most important fishery, but catches and exports have declined sharply in recent years.¹ Mexican observers vary concerning the reason for this decline, but it is probably due to a variety of factors, including overfishing, adverse climatic factors, and poaching by artisanal fishermen. The Government has for years reserved the shrimp fishery and other valuable species to cooperative fishermen. The Salinas Administration (1988-94) has sharply reduced Government support for cooperatives and the shrimp fishery has been reopened to private industry and important new investments have been made.

Mexican fishermen utilize primarily small coastal vessels, mostly of 150 gross registered tons (GRT) or less. The most common vessels are shrimp trawlers, small pelagic seiners, and a variety of small boats used for various finfish species. The Secretaría de Pesca (SEPESCA) reported a fleet of 3,300 commercial fishing vessels in 1991, consisting mostly of shrimp trawlers (2,350). The country's fishermen also operated, small pelagic seiners (115), various finfish boats (750), and tuna vessels (85).² Artisanal fishermen operated a variety of small craft. All of these vessels, except for the large tuna purse seiners, are exclusively deployed in coastal fisheries.

The Government, in an effort to build a more modern fishing industry, has conducted a major privatization program. One of the principal steps taken has been



Photo 1.--Mexico. Most of Mexico's finfish catch is taken by small boats in coastal fisheries. Dennis Weidner



Photo 2.--Mexico. Mexican fishermen have increased the catch of edible species taken in coastal fisheries during the 1980s. Dennis Weidner

to permit private investors to participate in the shrimp fishery, both the capture fishery and shrimp culture. The Government has also sold most of the assets of state corporations, although the sale of one important company--Ocean Garden Products--has not yet been completed.³ Many observers believe the restrictions on private investment, both domestic and foreign, during the 1980s is one factor explaining the inability of Mexican fishermen to significantly expand catches since 1987 (Latin America, appendix C2a1).

Mexico is one of the few Latin American countries that has reported declining fishery export earnings during the 1980s. Mexico exported nearly \$0.6 billion worth of fishery products in 1980, but that total had declined to only \$0.5 billion in 1989, a major decline when the effect of inflation is computed. Mexican fishery shipments have further declined to \$0.4 billion in 1991 (Latin America, appendix E1). The principal Mexican fishery export commodity is shrimp. Most of the overall export decline is due to problems in the shrimp fishery, climatic factors, management difficulties, poaching of juvenile shrimp in the estuaries, and declining prices. Mexico, unlike many important Latin American shrimping countries, did not develop a significant shrimp culture industry during the 1980s. Exports have also been affected by increasing domestic consumption of shrimp. Many observers are hopeful that the Government's decision in 1991 to permit private investors to participate in the shrimp fishery may result in increased catches and exports.

Mexican fisheries exports have also been impaired during the 1990s by increasing difficulties marketing tuna.

The only important Mexican fishery employing large vessels capable of distant-water operations is for tuna. Mexico's modern tuna purse seiners are primarily deployed, however, within the country's own 200-mile Exclusive Economic Zone (EEZ). The Government made costly investments in the tuna industry and helped private investors develop a major tuna fleet during the 1980s. The country's tuna fleet steadily expanded operations during the 1980s and has reported annual catches of about 130,000 t since 1988.

Tuna fishermen report increasing difficulty in exporting their catch because of concern in major export markets over the incidental dolphin mortalities associated with the Mexican yellowfin tuna fishery. While domestic consumption expanded significantly during the 1980s and currently totals about 110,000 t, Mexican fishermen cannot market their entire catch exclusively in the Mexican domestic market. As a result, Mexican tuna purse seiner owners are deploying fewer vessels in the fishery. Mexican officials are hopeful that Mexico's increasingly effective dolphin protection program and participation in the Inter-American Tropical Tuna Commission (IATTC) dolphin protection program will enable it to regain lost export markets.

II. HIGH-SEAS FLEET

Mexico reported a high-seas fleet of 61 large (over 500 GRT) fishing vessels totaling nearly 63,000 GRT in 1992 (Latin America, appendices B2a1-2). The fleet of large vessels is primarily composed of tuna purse seiners. The fleet data compiled by FAO through 1989 shows roughly comparable numbers of vessels and tonnage (appendix F). Data compiled by the U.S. Office of Naval Intelligence in 1993 shows a somewhat smaller fleet of non-tuna vessels (appendix C).

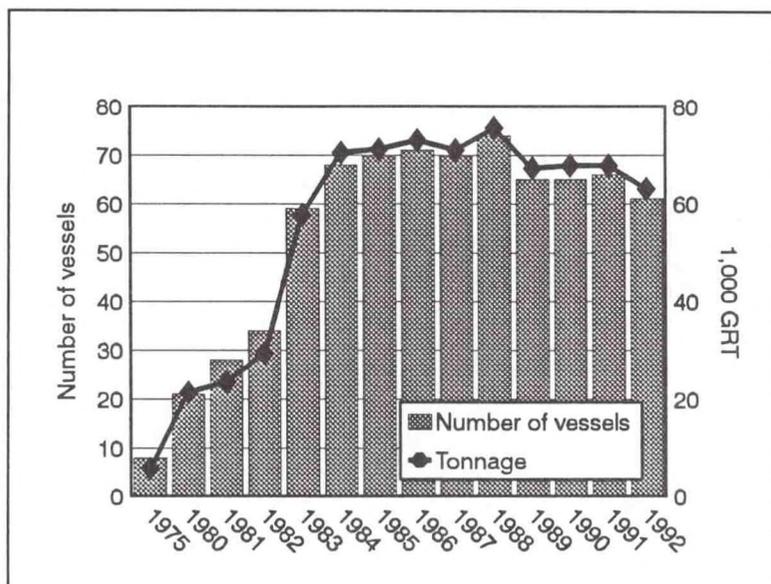


Figure 2.--Mexico. Mexico's fleet of large vessels peaked in 1988 and has since declined.

A. Tuna vessels

Most of Mexico's large vessels are tuna purse seiners. One report indicated in 1989 that 56 of Mexico's total fleet of 64 large fishing vessels were tuna seiners (appendix A1). IATTC reports a tuna fleet of 46 seiners in 1992 (appendix E). The Cámara Nacional de la Industria Pesquera (CANAINPES), which represents tuna vessel owners, confirms that 47 tuna vessels, mostly seiners, were active during 1992.⁴

Mexican fishermen acquired Latin America's largest tuna fleet during the 1980s (appendix C). The fleet is composed of many large, modern seiners (appendix E). Generous Government financial incentives drew private interest to the tuna fishery while at the same time the Government restricted private participation in shrimp and other fisheries reserved for the country's fishery cooperatives. The new tuna fishing companies planned to export much of the catch to the United States--one of the world's principal tuna markets. Mexican tuna companies ordered large, new tuna seiners primarily

from foreign shipyards, but a few smaller seiners were built in Mexican yards.⁵ The fleet has fluctuated from year to year, but during the 1980s averaged about 50 large purse seiners.

Mexico's purse seine fleet is primarily deployed in the country's own 200-mile EEZ. Mexican waters include some of the most productive yellowfin grounds in the eastern tropical Pacific (ETP). The seiners are also deployed in the ETP off the Central American countries, depending on fishing conditions and migration patterns. A few seiners have occasionally been deployed on other grounds such as the western Pacific, but these have been experimental trips achieving only marginal results and not a sustained effort to expand fishing

operations.

The Mexican Government was forced to heavily subsidize its tuna fleet. Most of the new vessels were built with Government loan guarantees. Two major developments in the early 1980s forced the Government to assist the vessel owners in meeting their mortgage payments.



Photo 3.--Mexico. Mexico operates Latin America's largest fleet of tuna purse seiners. David Hall

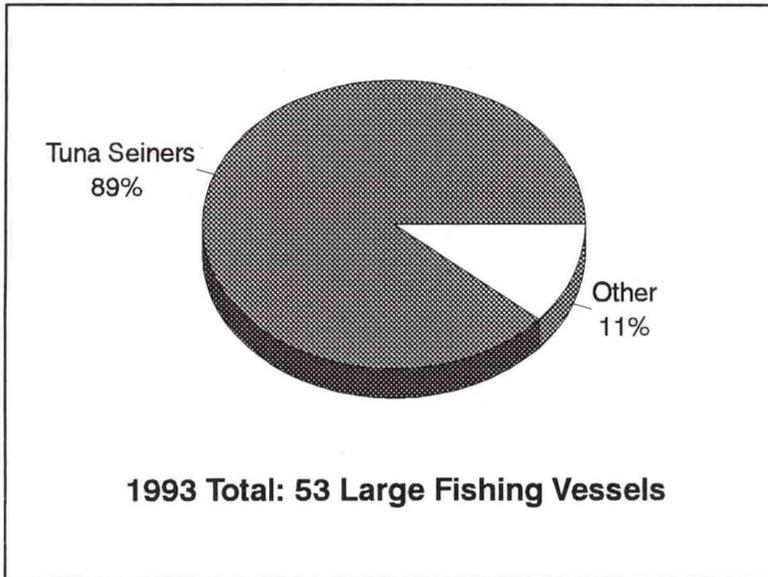


Figure 3.--Mexico. Most of the large vessels in the Mexican fishing fleet are tuna purse seiners.

U.S. embargoes: Mexico's major prospective market was closed in 1980 by a U.S. tuna embargo resulting from the Mexican seizure of a U.S. tuna seiner (appendix G). The embargo was based on the Magnuson Fisheries Conservation and Management Act (FCMA). As a result, the expected export earnings needed to make dollar-denominated mortgage payments to foreign shipyards did not materialize. Mexican companies accustomed to selling primarily to U.S. canneries had few alternative export markets and had to turn mainly to the domestic market, which could not absorb the increased production of the expanding fleet.

Peso devaluation: The peso fell sharply during 1982, making it virtually impossible for the owners to buy the dollars needed for mortgage payments with the plummeting pesos earned from mostly domestic market sales since 1980.

No statistics are available, but the Government fisheries development bank (BANPESCA) was forced to make millions of dollars of payments to prevent vessel owners from defaulting on their loans. Eventually BANPESCA had to seize several of the vessels from the owners for failure to make loan

payments. The total losses suffered by BANPESCA must have been enormous, but the Government has never released actual figures.

The Mexican tuna industry was affected by an additional U.S. tuna embargo in 1981 (appendix G). The embargo affected yellowfin tuna caught by purse seines in the ETP and was based on the Marine Mammal Protection Act (MMPA). Countries desiring to export tuna to the United States had to demonstrate that they had an effective dolphin protection program. Mexican officials declined to make such submissions because the country's tuna was already embargoed as a result of the 1980 FCMA embargo

Fleet operators by 1985 began to report substantially improved tuna catches. Vessel owners beginning in 1985 succeeded in opening new alternative markets in Europe, which generated significant foreign exchange earnings for the first time since 1980. Government and industry promotions also succeeded in expanding domestic consumption. The Government's economic program succeeded in stabilizing the peso, allowing vessel owners to convert profits from expanding domestic sales to the dollars needed for mortgage payments.

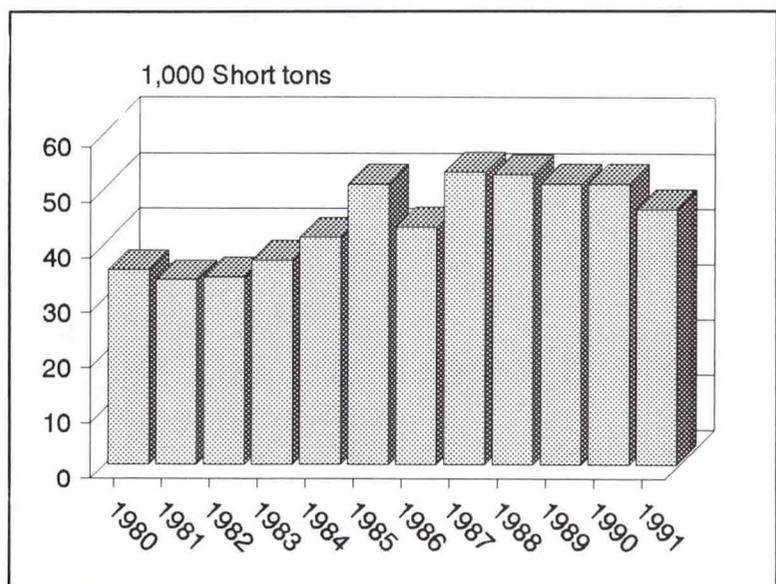


Figure 4.--Mexico. The capacity of the Mexican tuna fleet has declined somewhat from peak 1987 levels.

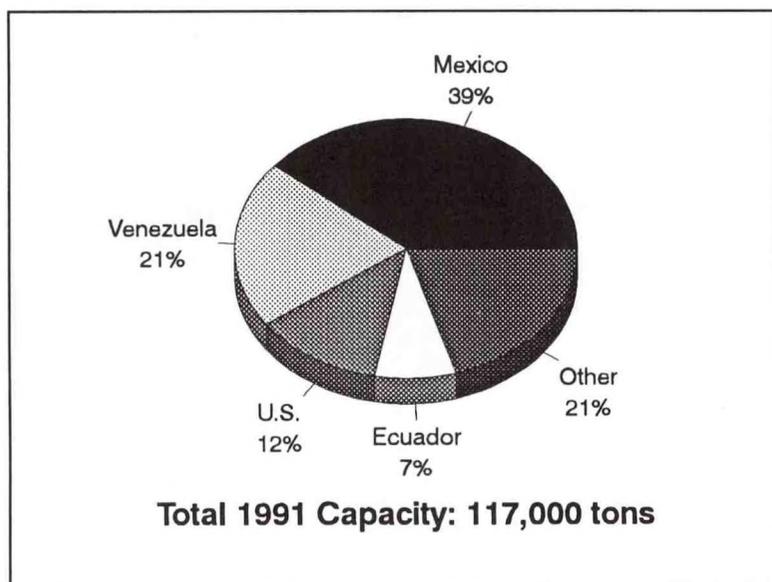


Figure 5.--Mexico. Mexico dominates the eastern tropical Pacific tuna purse seine fleet.

The U.S. lifting of the two tuna embargoes in 1986 (appendix G) created additional market opportunities for Mexican exporters. The growing fleet enabled fishermen to increase catches which exceeded 100,000 t in 1986. These successes reduced the need for Government subsidies. The Salinas Administration has ended Government subsidies in many sectors, including fisheries, and Mexican officials insist that the tuna industry is no longer subsidized. Vessel owners and canneries reported relatively profitable operations in the late 1980s and early 1990s, although the demise of BANPESCA in 1989 created some problems.⁶

The Mexican tuna industry has had to adjust its operations to protect dolphins. Mexican fishermen who entered the tuna fishery followed the U.S. example, building boats based on U.S. designs and employing U.S.-developed gear. Mexican fishermen also adopted the method of setting their nets on dolphin schools as the most economical way of harvesting schools of adult yellowfin, the species targeted by Mexican fishermen in the ETP. (Dolphins, which commonly swim with yellowfin schools, are air-breathing mammals and thus are easy to spot as they must constantly surface to breathe.) As a result, Mexican fishermen, like their U.S. counterparts, began to report

increasing dolphin mortalities as they expanded their fleet and fishing effort. These mortalities reached very significant levels in 1986, drawing the increasing attention of environmental groups.⁷

Mexico has since made substantial progress in reducing the dolphin mortalities associated with the tuna fishery. The Government and industry are cooperating in a major effort to train vessel masters and introduce fishing techniques to reduce mortalities. Government and industry sanctions heavily penalize masters who continue to report excessive mortalities. As a result, Mexico has achieved very impressive reductions in dolphin mortality rates (appendix H). The National Tuna Development and Dolphin Protection

Program (PNPAAPD), established by SEPESCA in 1991, reports that incidental mortality rates fell from 15.0 kills per set in 1986 to only about 0.6 kills per set in 1993 (appendix J).⁸

Various Governments, private companies, and environmental groups acted during 1990-92 to close or restrict major markets to Mexican exporters, including the important tuna markets in the United States, Spain, Italy, and Thailand. The current U.S. embargo was implemented in 1991 and affects all yellowfin taken with purse seines in the ETP



Photo 4.--Mexico. The Mexican Government and industry are conducting an effective dolphin protection program which has sharply reduced mortalities. CANAINPES

(appendix G). The U.S. market was only of secondary importance, however, as Mexico's major export market was the European Community (especially Italy and Spain). Both Italy and Spain have stopped importing large quantities of ETP tuna. The Spanish action is based on an agreement between canners and environmental groups. It is unclear what the Italian action is based on.

The Mexican tuna fleet currently markets almost all of its catch in the country's own domestic market as a result of the problems experienced in export markets.⁹ Mexican officials report more than 110,000 t of tuna were marketed domestically during 1992.¹⁰ The authors do not have data on the profitability of domestic sales. Some authors believe domestic profit margins are less than those achieved through export sales. Other observers report excellent results in domestic sales. One observer claims that companies were achieving profit margins of 35-40 percent on domestic sales.¹¹

Tuna vessel owners decided to cooperate in 1991 to maintain domestic profit margins by organizing a marketing consortium, MARINPE. Owners operating 37 seiners, or about 80 percent of the fleet, initially participated in MARINPE.¹² The vessel owners, through MARINPE, succeeded in keeping yellowfin prices stable at about \$1,150-1,200 (fish over 20 pounds) from 1991 to early 1993. U.S. Embassy sources report, however, that increasing competition has adversely affected the ability of MARINPE to maintain prices. Rising imports of low-cost tuna are making it increasingly difficult in 1993 to maintain high domestic prices.¹³ Several vessel owners have reportedly withdrawn from MARINPE. As of mid-1993 the group included owners operating only 22 seiners, but this still constituted about half the fleet.

The closure of export markets is affecting fleet operations. Mexican tuna catches have been relatively stable, totaling 125-136,000 t between 1988-92. Unconfirmed reports suggest, however, that in 1993 vessel owners have reduced their effort by as much as a third because of their increasing marketing difficulties. One report in mid-1993 indicated that up to a third of the Ensenada fleet and 50 percent of the tuna canning capacity were idle.¹⁴ Available catch data confirms that the fishermen have reduced effort in 1993. Mexican tuna fishermen caught only 52,300 t of yellowfin in the ETP during



Photo 5.--Mexico. Mexico's tuna catch is now primarily sold in domestic markets. David Hall

January-June 1993, a 17 percent decline from 1992 catches during the same period. Some observers in 1993 report growing inventories of unsold canned tuna and reduced purchases of raw tuna by the canneries. While Mexico has developed a substantial domestic market, the full utilization of the existing fleet requires export markets. Partial utilization will almost surely impair the fleet's profitability.

Mexico may not be able to resume export shipments to major markets unless fishermen end fishing on dolphin. Mexican officials hope that the increasing effectiveness of their efforts to reduce dolphin mortalities and active participation in the IATTC program may resolve the problem.

Environmental groups are, however, promoting efforts to stop all fishing on dolphin. U.S. legislation which comes into effect in June 1994 will ban the importation of all yellowfin caught in association with dolphin. Mexican industry spokesmen insist that they cannot operate profitably unless they set on dolphins.

Carlos R. de Alba Pérez, director of a dolphin protection program set up by vessel owners, insists that abandoning the big yellowfin would "ruin our industry."¹⁵ Vessel owners report that other methods are more costly, producing lower yields and less valuable small fish. A few vessel owners are considering dolphin-safe operations.¹⁶ Most Mexican industry sources also contend that the fishery cannot be managed for optimal utilization if the fishermen have to rely increasingly on schools of smaller fish. Expanding fishing effort on juvenile yellowfin could adversely affect stocks and impair future catches.¹⁷

The future of Mexico's tuna fleet is unclear. The domestic market is large enough to support a substantial number of vessels, but not the entire fleet. Unless export markets can be reopened, it is unlikely that the current fleet can be supported without Government subsidies. The Salinas Administration, however, is attempting to eliminate just such subsidy programs. The fleet is already operating at much less than full capacity and some vessels may have to be tied up permanently or sold. These vessel owners



Photo 6.—Mexico. Mexico is expanding its fleet of small tuna longliners which it deploys primarily in the Gulf of Mexico. Dennis Weidner

are considering transferring their registration to flag-of-convenience countries. One report indicated a few owners are even considering U.S. flag registration.¹⁸ The authors do not know of any alternative fisheries in which Mexico could deploy its tuna purse seiners. These large vessels are expensive to operate and the design characteristics limit modifications for other fishery operations. Some owners are studying the possibility of shifting effort to alternative grounds (including the eastern Atlantic, western Pacific, and Indian Ocean) where they can employ dolphin-safe fishing methods. Owners have reportedly pursued several different arrangements with local companies, but no details are available. Owners have also held discussions with important Southeast Asian canneries.

B. Other vessels

Mexico reportedly had about eight large fishing vessels other than tuna seiners in 1989 (appendix A1). They include trawlers, longliners, and multipurpose vessels. Four of the vessels are stern freezer trawlers exceeding 1,000 GRT. A more recent report indicates a slightly smaller number of non-tuna vessels (appendix F).

III. VESSEL SOURCES

Mexico has one of the most important shipbuilding industries in Latin America. Mexico's larger, more modern shipyards include, Astilleros de la Armada de México (Salina Cruz, Oaxaca), Astilleros Unidos de Veracruz (Veracruz), Industria Naval de California (Ensenada, Baja California), and Industria Naval del Pacífico (Guaymas, Sonora). These yards, however, have built only limited numbers of fishing vessels. Fishing vessel construction has been mostly shrimp trawlers, but some small seiners and a variety of other vessel types have also been constructed. Mexican yards built several smaller seiners such as the *Sonora*.

Mexican yards have built very few vessels capable of distant-water operations. The largest domestic-built vessels known to the authors are the 750-ton *Atún*-class purse seiners built by the state-owned Construcciones Navales de Guaymas

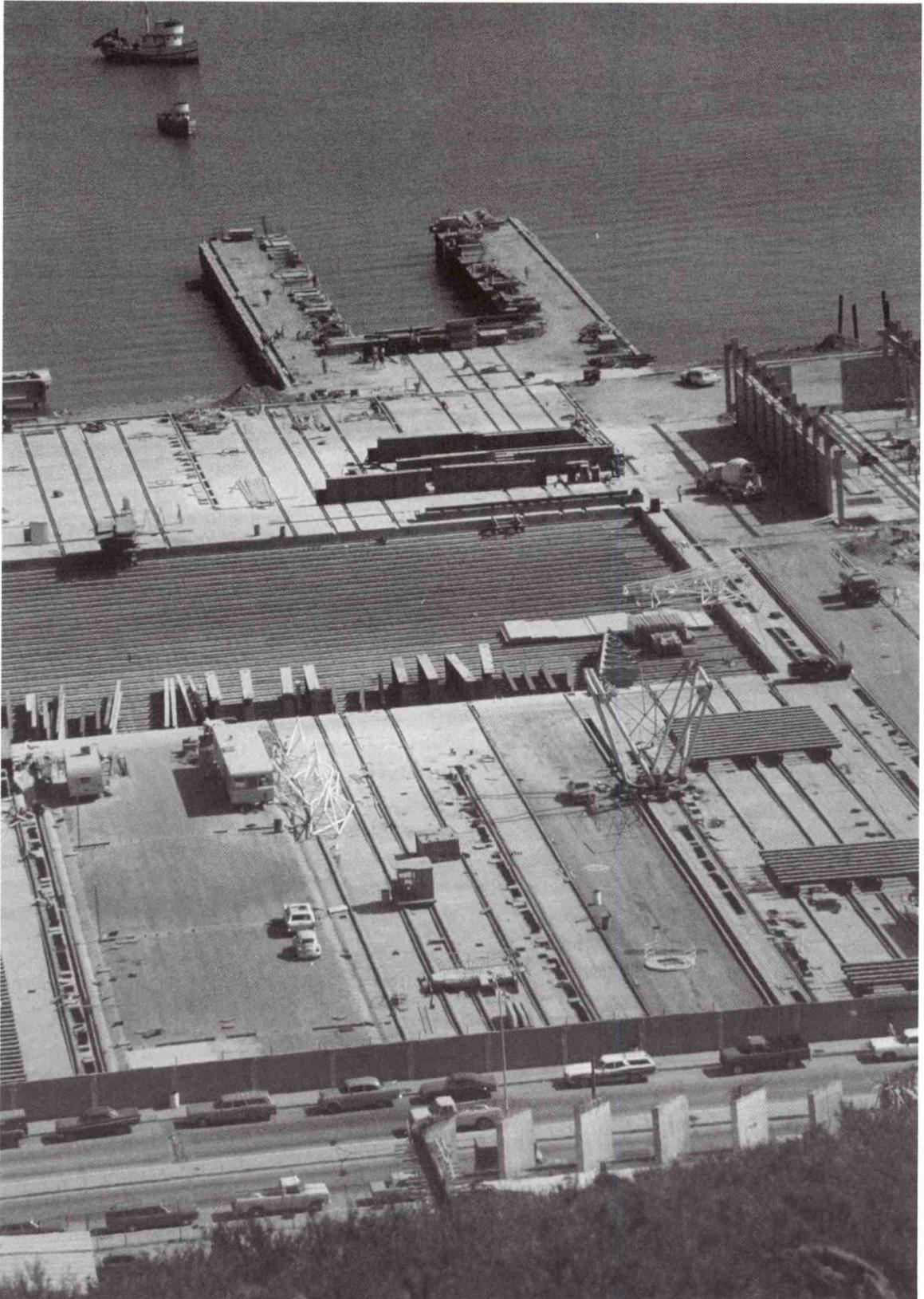


Photo 7.--Mexico. Mexican shipyards are capable of building and servicing medium-sized (100-499 GRT) fishing vessels.
Dennis Weidner



Photo 8.—Mexico. *Industria Naval de California* in Ensenada, B.C., is one of Mexico's most important shipyards, offering services to a wide variety of fishing vessels. David Hall

(CONAGUSA)¹⁹ shipyard during the early 1980s and the 1,200-ton seiners *Convemar* and *Cancún*, built in 1983 by Astilleros de Marina (Tampico) and Astilleros de Veracruz, respectively. Another Mexican shipyard built the 1,200-ton seiner *Tratamontana*, but it has since sunk. Most of Mexico's fleet of modern purse seiners were built in foreign shipyards.

A few Mexican yards have exported small numbers of fishing vessels. *Industria Naval del Pacífico* has built several vessels, mostly shrimp trawlers, for export. Mexican companies also sold two 850-ton seiners to Colombia in 1991.²⁰ The recently-privatized Astilleros Unidos de Veracruz shipyard also has reportedly constructed a few fishing vessels for foreign buyers, but no information is available on the type and number of vessels involved.

Most Mexican shipyards offer a variety of repair and maintenance services and facilities, including floating repair docks, drydocks, and elevated platforms. Several shipyards are hoping they will be able to attract work from the

United States and other foreign countries. Mexican yards have some advantages, such as low wages, but the cost of imported parts and high interest rates impair their competitive advantage. Baja California's status as a free trade zone makes it easier for yards like *Industria Naval del Pacífico* to compete in the international market than yards in other parts of the country.

Mexico has imported large numbers of fishing vessels to supplement domestic construction. Most imports have been shrimp trawlers and small seiners for anchovy and other small pelagic species.

Fishermen are becoming increasingly interested in the longline fishery and may import as many as 20 small longliners in 1993 from an Icelandic company utilizing a Canadian yard.²¹ Mexico has also purchased several larger vessels. The largest of these are the 1,200-ton tuna superseiners, built during the 1980s, mostly by shipyards in Italy, Spain, and the United States.²² Mexico imported smaller numbers of large tuna seiners (over 850 tons) from Canada, Norway, and Poland. Mexican companies ordered



Photo 9.—Mexico. Many of Mexico's tuna vessels are serviced in Ensenada, one of the country's most important tuna ports. David Hall

over 60 seiners from foreign shipyards during the 1970s and 1980s.²³ The total cost of these vessels probably exceeded \$1.0 billion when financing charges are computed. Fishermen imported the seiners because Mexican shipyards did not yet possess the ability to build so many large vessels quickly and affordably.

IV. FOREIGN FISHING

Mexico permits very little foreign-flag fishing in its 200-mile EEZ. Bilateral agreements with neighboring countries (Cuba and the United States) have in the past permitted some limited operations. Currently, Cuba is the only country with which Mexico has such an active bilateral agreement.²⁴ The Government also occasionally grants licenses to foreign fishermen for experimental fishing. Available information on foreign fishing by individual countries is as follows:

Cuba: Mexico permits Cuban fishermen to fish in the EEZ surrounding the states of Campeche, Tabasco, Quintana Roo, and Yucatan under a 1976 bilateral agreement between the two countries. The agreement limits Cuban fishermen by area, species, and equipment. Quotas are set annually at bilateral fishery discussions. The number of vessels allowed in Mexican waters varies according to Mexican stock assessment estimates. Cuban fishermen are limited by the agreement to catching finfish, primarily grouper, with hooks; the use of nets is prohibited. The 1993 allocations are for 4,000 t of grouper and other finfish.²⁵ Several Mexican government officials and fishing industry representatives believe that some Cuban fishermen regularly violate the agreement. Local newspapers constantly carry articles criticizing foreign, especially Cuban, fishing. Some Mexican fishermen and businessmen even complained about large Cuban vessels ramming smaller Mexican vessels.²⁶ While Mexican fishing industry representatives are almost unanimously critical of the agreement, the Mexican Government is likely to continue granting

allocations to Cuba as part of the country's overall foreign policy.²⁷

Guatemala: Mexican and Guatemalan fishermen sometimes cross over their common marine boundary and fish illegally. Reported incidents generally involve Mexican fishermen operating off Guatemala without the required license and Guatemalan authorities have occasionally seized Mexican fishing vessels. Unconfirmed reports suggest that the two countries have worked out an informal understanding to avoid enforcement incidents.

United States: Mexico and the United States signed a bilateral fisheries agreement in 1976. The agreement allowed for the gradual phase-out of U.S. shrimp fishing, but permitted other fisheries, such as snapper/grouper, to continue. Mexico abrogated the agreement in 1980 after the failure of the two countries to reach an agreement on an ETP tuna management regime.²⁸ Mexico continued granting licenses to small "disadvantaged" U.S. vessels (seiners and baitboats), mostly operating out of San Pedro through 1986. The Mexican Government has since denied such applications, but has granted experimental licenses for foreign fishermen helping to collect information for possible future Mexican fisheries. (See "V. Joint Ventures.") The authors have been unable to obtain details, but have received unconfirmed reports of such licenses in both Gulf of Mexico and Pacific fisheries. U.S. fishermen



Photo 10.—Mexico. Several U.S. longliners operate in association with Mexican companies in the Gulf of Mexico and Caribbean. Dennis Weidner

working for Mexican fishing companies have obtained permission to longline for tuna and other species in the Gulf of Mexico and Caribbean. The U.S. fishermen are allowed to fly the Mexican flag, but apparently retain ownership of the vessels. About 12 U.S. longliners were involved in this fishery as of 1992, operating out of Yucalpeten and Tampico. Some observers are concerned that Mexican flagging allows the fishermen to ignore the International Commission for the Conservation of Atlantic Tunas (ICCAT) management regime for heavily-fished bluefin because Mexico does not belong to ICCAT. The fishermen involved say they primarily target yellowfin and that bigeye and bluefin catches are only incidental.

Mexico strictly prosecutes foreign fishermen when unlicensed vessels are detected in the EEZ. Limited enforcement capabilities, however, restrict the country's ability to completely exclude unauthorized foreign fishing. Nevertheless, the Mexican Navy has taken extensive action against foreign fishermen. In 1983, for example, the Mexican Navy seized over 70 U.S.-flag fishing vessels, mostly shrimp trawlers operating in the Gulf of Mexico. Mexico continues to report only occasional seizures of foreign vessels and the authors believe that the level of violations has declined sharply in recent years. Some press reports, however, indicate that large numbers of seizures have continued.²⁹ Mexican fishermen have complained that foreign fishermen operating through joint venture companies often violate Mexican fishing regulations. The Mexican Government has revoked the licenses of several such joint venture vessels found to be violating regulations. (See "V. Joint Ventures.")

V. JOINT VENTURES

Mexico has in the past granted foreign fishermen limited access to its EEZ through joint venture arrangements. Mexico has typically promoted joint ventures to develop under-utilized fishery resources. Mexican fisheries law stipulates that fishing permits can only be issued to Mexican companies or to joint venture companies with 51 percent Mexican equity participation.³⁰ Under the law, foreign partners in

fishing joint ventures must re-flag their vessels in Mexico. The law also restricts the number of foreign fishing experts allowed on-board each vessel to two.³¹

Japanese, Korean, and U.S. companies and individuals have most actively pursued joint venture arrangements in Mexico. A few Mexican companies, especially tuna companies, have formed joint ventures or negotiated contractual relations involving operations off other countries. The Salinas Administration has revised Mexico's foreign investment laws and has reported considerable success in attracting private investment. Little of that investment, however, has gone into the fishing industry. The authors know of no currently functioning joint ventures which have both Mexican and foreign equity participation. No new fishery joint ventures have been initiated during the Salinas Administration (December 1988-94). Several Mexican fishing companies, however, do have a variety of contractual arrangements with foreign companies.

Available historical details on joint ventures and other contractual relations with foreign companies are as follows:

Ecuador: An Ecuadorean company has contracted Mexican tuna fishermen to land their catch in Ecuador for processing and export. Such landings were part of the Ecuadorean "maquila" program, but the Ecuadorean company involved is reportedly reconsidering such purchases.

Colombia: The Colombian company Vikingos has contracted the Mexican seiner *Lupe del Mar*. The vessel has been granted a Colombian fishing license, but must land the catch in Colombia--presumably Cartagena--where Vikingos is located (Colombia, appendix E).

Japan: Several Mexican and Japanese companies participated in Mexican joint fishery projects during the 1980s, mainly to longline for billfish and tuna in the Mexican EEZ. Most of these were not actual joint ventures involving equity participation, but rather simply involved setting up a local company to secure experimental fishing licenses. None of these ventures are believed to be currently active. Joint ventures were also reportedly formed to fish for black

cod and squid, but no details are available. Press reports indicate that three joint venture companies were involved in tuna and billfish longlining during the early 1980s (including Copemapro, **Pesquera Integral**, and **Colomex**).³² These companies operated primarily off Baja California. In 1982, the Mexican Government canceled the fishing licenses of all joint venture vessels operating in the Mexican EEZ off Baja California Sur because of declining billfish stocks.³³ At least two Mexican-Japanese joint venture companies, however, retained their permits to catch billfish elsewhere in Mexican waters.³⁴ Another joint venture formed in 1980 (**Explotadora Marina**) targeting groundfish.³⁵ Two Mexican-Japanese joint venture companies were formed in 1988 to develop the longline tuna fishery in the Gulf of Mexico. The companies (**Kosei-Mex** and **Productos de Mar y Tierra**) mainly used Mexican-flag vessels, but one of the Mexican participants, **Golpa, Pesca e Industrial**, received experimental permits for two foreign-flag longliners.³⁶ The current status of these joint ventures is not known to the authors. The Japanese Sakura company in 1989 attempted to transship the catch of a 12-vessel squid fleet through Ensenada. SEPESCA granted the company permission to transfer the catch to a mothership within the EEZ. Sakura then formed a joint venture (**Ankara Mexicana**) and applied for Mexican licenses. SEPESCA issued four experimental licenses to operate the vessels off Mexico during 1989.³⁷

Korea: Korean and Mexican companies established two joint ventures during the late 1970s. The first venture involved the deployment in August 1978 of nine 1,000-ton trawlers and two refrigerated fish carriers in the U.S. FCZ off Alaska by the Korea Marine Industry Development Corporation (KMIDC) and the Propesca corporation.³⁸ This operation failed, however, when the United States refused to grant an allocation after Mexico seized a U.S. tuna purse seiner in 1980. KMIDC and Propesca established a second joint venture company, **Protexa Pesquera**, to develop fishery resources within Mexico's 200-mile zone. The Korean company deployed three tuna vessels and three cod vessels in

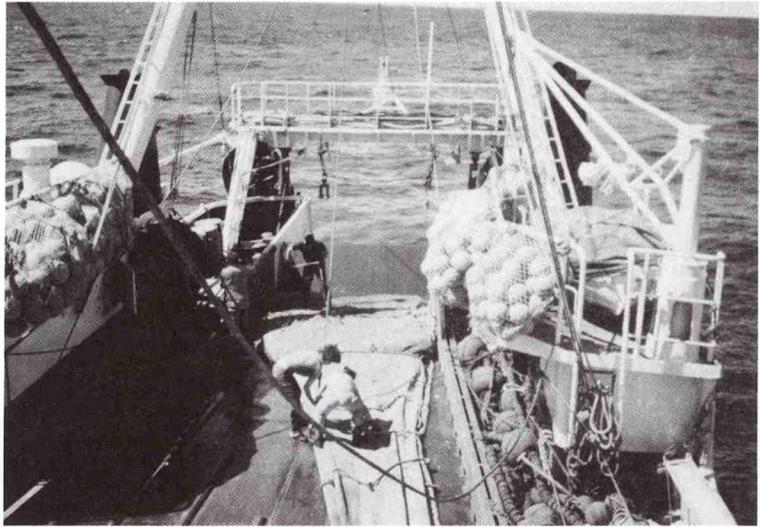


Photo 11.--A Spanish-Mexican joint venture operated briefly in the U.S. 200-mile FCZ.

Mexican waters during late 1979. The authors do not know of any current Korean-Mexican joint ventures.

Spain: Spanish and Mexican fishing companies created several fishery joint ventures in the late 1970s to fish in both the Mexican EEZ and the U.S. FCZ. At least 10 Spanish-Mexican joint venture companies had applied by late 1978 for permits to catch squid in the Atlantic FCZ and cod and hake in the Pacific FCZ.³⁹ No further information about these Spanish-Mexican joint ventures is available.

United States: U.S. companies have formed a variety of fishery joint ventures and other commercial partnerships in Mexico, but few details are available on these ventures. One U.S. group formed PESCATUN in 1980 with Multibanco COMEREX,⁴⁰ but the company appears to have been a means of reflagging U.S. tuna seiners rather than a long-term joint venture. U.S. fishermen operating the U.S.-flag vessel *Pacific Invader* obtained experimental fishing licenses to fish for tuna and black cod through an Ensenada-based company. The authors have also received unconfirmed reports of U.S.-flag pole-and-line tuna vessels operating as part of unspecified commercial arrangements.

VI. DISTANT-WATER OPERATIONS

Mexican fishermen conduct very limited distant-water fishing operations. The only fleet capable of distant-water operations is the tuna purse seine fleet. The only significant commercial activity is conducted in the ETP, mostly off neighboring countries in Central America. Some operations as far south as Colombia and Ecuador have been reported. Tuna companies have conducted only very limited operations in more distant grounds. CANAINPES reports that two Mexican tuna purse seiners were deployed in the western Pacific off Papua New Guinea during 1991 as part of a joint venture with an unidentified foreign company. The venture was reportedly plagued by technical and financial problems and was dissolved after yielding poor results.⁴¹ Tuna companies dispatched two tuna seiners to the southwestern Pacific during 1992 on an experimental basis.⁴² The masters had hoped to fish off Papua New Guinea, but the venture was not adequately capitalized and the vessels were never deployed in the fishery. They were both reportedly tied up in Guam as of mid-1993.⁴³ CANAINPES also reports that an unidentified foreign company has recently contracted three Mexican 1,200-ton purse seiners to fish off the Samoa Islands and Micronesia, possibly under a foreign flag, but no details are available.

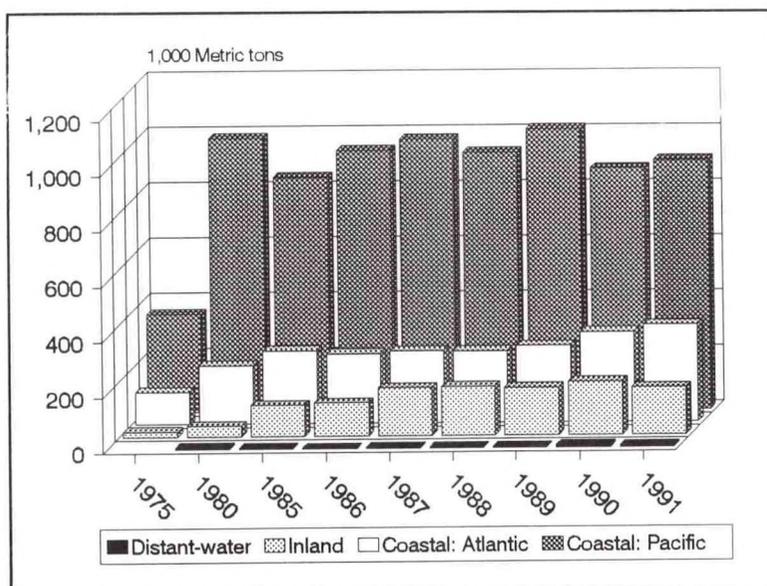


Figure 6.--Mexico. Mexican fishermen harvest almost all of the country's catch in coastal and inland waters.

The only Mexican fishing vessels, other than tuna vessels, known to be deployed on distant-water grounds are a few trawlers deployed in the northwestern Atlantic during the mid-1980s for groundfish. The authors believe the vessels were operated by Spanish companies. They were last observed in 1988 (Latin America, appendix C4b4).

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ENDNOTES

Section I. (General Background)

1. A good review of the current situation in Mexico's shrimp fishery is available in U.S. Embassy, Mexico City, October 22, 1993.
2. SEPESCA, *The Fisheries Sector of Mexico* (Mexico: Mexico City, September, 1992), 31 p.
3. For details on the privatization process see U.S. embassy, Mexico City, October 22, 1993.

Section II. (High-seas Fleet)

4. Carlos R. de Alba Pérez, Director, CANAINPES Programa Atún-Delfín, personal communications, October 6, 1993.
5. For details on the fleet expansion program see Dennis Weidner, "Mexican tuna fleet expansion," *International Fishery Report*, (IFR-82/57), May 25, 1982.
6. Dr. Edgardo Hicks, Scientific Affairs Specialist, U.S. Embassy, Mexico City, personal communications, June 17 and August 24, 1993.
7. The non-U.S. fleet was responsible for over 110,000 dolphin mortalities in 1986. Marine Mammal Commission, "The Tuna Dolphin Issue," *Annual Report to Congress*, 1992, p. 100. Most of these mortalities resulted from Mexican fleet operations because they operated the largest fleet of seiners in the ETP.
8. Guillermo A. Compeán Jiménez, Director, Programa Nacional para el Aprovechamiento del Atún y Protección de los Delfines (PNPAAPD), personal communications, October 21, 1993.
9. A good review of the state of Mexico's tuna industry is available in U.S. Embassy, Mexico City, October 22, 1993.
10. "El embargo no ha afectado a la industria atunera," *Uno Mas Uno*, March 26, 1992.
11. Anonymous source, September 9, 1993.
12. Anonymous Mexican source, September 9, 1993.
13. Hicks, *op. cit.*, August 24, 1993, and U.S. Embassy, Mexico City, October 22, 1993.
14. Anonymous Mexican source, September 9, 1993.
15. Katherine Ellison, "US quest for dolphin-safe tuna hurts Mexican fishermen," *Journal of Commerce*, October 28, 1991.
16. Hicks, *op. cit.*, August 24, 1993.

17. Israel González Arregín, Chairman of the Fisheries Committee, Cámara de Diputados, as cited in Camacho, "Condenan diputados . . .," *op. cit.*

Section III. (Vessel Sources)

18. Hicks, *op. cit.*, August 24, 1993. It would not seem advantageous to transfer to U.S. flag. They would lose the right to land their non-dolphin safe catch in Mexican ports. Such vessels would have to meet U.S. dolphin protection regulations. Only the seiners built in U.S. shipyards could be used to land fish in U.S. ports, although foreign-built bottoms could land their catch in the Federated States of Micronesia.

19. CONAGUSA shipyard was purchased from the Government 1991 by the Sidek company, which subsequently renamed the shipyard Industria Naval del Pacífico.

20. Ing. Isaac Muñoz, Gerente de Construcción, Industria Naval del Pacífico, personal communications, July 1, 1993.

21. The Icelandic small boat builder Móttun hf has a production facility in Nova Scotia. "Sale of 20 boats to Mexico within year?" *News from Iceland*, February, 1993.

22. The U.S. shipyards which have built tuna seiners for Mexico include Bender (Mobile), Campbell Industries (San Diego), and Tacoma Boat Building (Tacoma).

Section IV. (Foreign Fishing)

23. Weidner, "The expansion of the Mexican tuna fleet, 1981-1984," *op. cit.*

24. U.S. Consulate, Merida, July 8, 1993.

25. Hicks, personal communications, October 28, 1993.

26. U.S. Consulate, Merida, July 8, 1993.

27. Mexico has objected to the U.S. policy of excluding Cuba from hemispheric relations. Unlike other Latin American countries, Mexico never severed diplomatic relations with Cuba in the 1960s. The Government has actively promoted commercial and cultural relations with Cuba.

28. Mexico seized a U.S. tuna purse seiner in 1980 which resulted in a U.S. embargo on Mexican tuna. The U.S. also denied newly formed Mexican-Korean joint ventures allocations in the U.S. FCZ, causing substantial final losses.

Section V. (Joint Ventures)

29. One report, for example, indicated that the Mexican Navy "took action" against 434 vessels in 1988, assessing fines exceeding \$40 million. "Mexico acts against poachers, fines total \$40 million," *Fishing News International*, December, 1989. The authors, however, have been unable to confirm this level of enforcement activity.

30. Ley Federal para el Fomento de la Pesca de 1972, Artículo 27, in U.S. Embassy, Mexico City, April 2, 1985.

31. U.S. Embassy, Mexico City, August 25, 1989. Several joint venture vessels have been arrested for violating the law. The Mexican Navy arrested in March 1989 one of the fishing vessels of the Mexican/Japanese joint venture company Copemapro, the *Copemapro V*, on charges of illegal fishing. The vessel's operators subsequently lost their fishing license. Two other Copemapro vessels, the *Copemapro VII* and *Copemapro VIII*, were arrested in August 1989 and respectively charged with catching squid without a permit and exceeding the permissible number of foreign crew members. Mexican officials revoked the fishing licenses for both vessels. U.S. Embassy, Mexico City, August 19, 1989.
32. Rafael Medina, "Protege pesca a una flota pirata japonesa: Ceceña A.," *Excelsior*, August 22, 1983. The Japanese partner in Pesquera Integral was Kosei Shogi. Suisan Sha, *Suisan Nemkan*, 1992, (Suisan Sha: Tokyo, 1992), pp. 194-195.
33. "Cancela nuestro país todos sus convenios pesqueros," *Diario de Juárez*, August 15, 1982.
34. Ignacio Herrera, "Pesca no concede permisos a naves extranjeras: López Cruz," *Excelsior*, August 31, 1982.
35. The Japanese partner was Seto Gyogyo. Suisan Sha, *op. cit.*
36. Dennis Weidner, "Gulf of Mexico tuna fishery," *International Fisheries Report*, July 31, 1988.
37. "New squid venture," *WSFR*, January 26, 1990. GLOBEFISH data base, AN 024074/9002 and U.S. Embassy, Mexico City, August 25, 1989.
38. "Mexico fishery," Haptong radio broadcast, 0125 GMT, June 5, 1978.
39. Matteo Milazzo and Dennis Weidner, "Mexico's joint fishery ventures with Spain," *International Fisheries Report*, October 18, 1978.

Section VI. (Distant-water Operations)

40. Alan Ryding, "Mexico builds up fishing industry," *New York Times*, November 25, 1980.
41. De Alba Pérez, Director, CANAINPES Programa Atún-Delfín, personal communications, October 21, 1993.
42. U.S. Embassy, Mexico City, August 27, 1992. The owners involved apparently have since declared bankruptcy. Hicks, *op. cit.*, August 24, 1993.
43. Anonymous Mexican source, September, 9, 1993.

APPENDICES

Appendix A1.--Mexico. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>Number of vessels</u>							
Long liner nei								
A	-	-	-	-	-	-	1	1
Multipurpose vessels								
A	-	-	5	4	2	1	1	1
B	-	-	2	6	1	-	-	-
Purse seiners								
Nei								
A	-	-	-	1	-	-	-	-
Tuna								
B	NA	NA	NA	50	59	59	56	56
Trawlers								
Freezer stern								
A	-	-	-	2	2	2	1	1
B	-	-	-	3	4	4	4	4
Wet-fish stern								
B	-	-	-	-	1	1	1	1
Total	NA	NA	NA	66	69	67	64	64

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix A2.--Mexico. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Long liner nei								
A	-	-	-	-	-	-	0.6	0.6
Multipurpose vessels								
A	-	-	3.6	3.0	1.3	0.7	0.7	0.7
B	-	-	2.3	8.5	1.2	-	-	-
Purse seiners								
Nei								
A	-	-	-	0.7	-	-	-	-
Tuna								
A	NA	NA	NA	3.3	2.3	2.3	1.7	3.5
B	NA	NA	NA	65.2	77.0	78.1	74.2	74.2
Trawlers								
Freezer stern								
A	-	-	-	1.6	1.6	1.6	0.7	0.7
B	-	-	-	4.7	5.6	5.6	5.6	5.6
Wet-fish stern								
B	-	-	-	-	1.7	1.7	1.7	1.7
Total	NA	NA	5.9	87.0	90.7	90.0	85.2	87.0

Vessel size key

- A: 500 - 999.9 GRT
- B: 1,000 - 1,999.9 GRT
- C: 2,000 - 2,999.9 GRT
- D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.--Mexico. Large fishing vessels (vessels over 500 GRT), 1993

Type	Vessels
	Number
Tuna purse seiners*	47
Trawlers	3
Factory trawlers	2
Refrigerated trawlers	1
Total	53

* ONI identifies the vessels under various categories, but the authors believe that they are all tuna purse seiners. See appendix E.

Source: U.S. Office of Naval Intelligence, 1993

Appendix C.--Eastern Pacific. Tuna purse seine* fleet, 1991.

Country	Fleet		Importance**
	Vessels	Capacity	
	Number	Short tons	Percent
Mexico	49	46,445	40
Venezuela	21	24,798	21
United States	23	14,814	13
Ecuador	33	8,825	8
Vanuatu	11	NA	NA
Panama	6	2,739	2
Colombia	2	NA	NA
Spain	2	NA	NA
Honduras	1	NA	NA
Peru	1	NA	NA
Cyprus	1	NA	NA
Others#	(24)	21,783	19
Total##	150	116,665	NA

* Various countries also operate 22 small baitboats, but the total carrying capacity is only 1,883 tons.

** Percent of total capacity

Data pooled to avoid revealing the operations of individual companies or vessels.

Each vessel is included in the totals for each flag under which it fished during the year, but is included only once in the fleet total. Note: These vessels refer to flag of registry. It is possible that some of the vessels can be wholly or partly owned by other countries. Some of the Panamanian vessels, for example, could be owned by Venezuelan investors. U.S. Embassy, Caracas, September 7, 1990.

Source: Inter-American Tropical Tuna Commission, preliminary data.

Appendix D.--Mexico Eastern Pacific tuna purse seine fleet, 1980-91.

Year	Fleet	
	Vessels	Capacity
	Number	Short tons
1980	46	35,162
1981	45	33,358
1982	43	33,900
1983	49	36,891
1984	47	41,110
1985	53	50,645
1986	45	42,977
1987	54	52,840
1988	55	52,413
1989	52	50,753
1990	53	50,813
1991	49	46,255

Source: Inter-American Tropical Tuna Commission, Annual Report, various years.

Appendix E.--Mexico. Eastern Pacific tuna purse seine fleet, 1992.

Vessel	Size
	GRT
Aleta Azul	1,227
Arkos I	1,157
Arkos II	1,259
Atún I	1,104
Atún III	1,104
Atún V	1,100
Atún VII	1,100
Atún IX	1,104
Atún X	1,104
Azteca 1	991
Azteca 2	1,164
Azteca 3	1,318
Beatriz Eugenia	NA
Bonnie	1,269
Cabo San Lucas	1,334
Cancún	1,294
Capt. Isidoro Duarte	1,192
Chac Mool	1,093
Convemar	1,294
Ensenada	546
Estado 29	1,262
General A.L. Rodriguez	1,146
General Zapata	1,262
Gloria H	1,411
Guaymas	546
Jennifer	1,242
Juan A. R. Sullivan	1,108
Loreana	1,295
Lupe del Mar	1,227
Macel	539
María Antonieta	212
María del Socorro	NA
María Fernanda	1,242
María Francisa	1,411
María Veronica	1,242
Mariano Otera	NA
Nair	1,158
Norman Ivan	1,410
Nova	1,107
Olivia	177
Oscar I	118
Roberto Luis	1,280
Teruel	1,667
Tobora	1,226
Tungui	1,263
Valerie	1,269
Total	47,574

Source: IATTC, Quarterly Report, Third Quarter, 1992, p. 26.

Appendix F.--Mexico. Large vessels* by name, size, and type#, 1993.

Country built/Vessel name	Size	Year built	Type
	<u>GRT</u>		
Mexico			
San Martin III	600	1979	Trawler
Norway			
El Puma	638	1980	Fisheries research vessel
Justo Sierra	637	1982	Fisheries research vessel
Spain			
Arriscado	1,480	1974	Stern factory trawler
Esguio	1,480	1974	Stern factory trawler
Juan A. Rodriguez Sullivan	750	1971	Trawler
Santa Matilde	1,360	1959	Refrigerated trawler
United States			
Jose Gerardo	501	1968	Trawler

* 500 GRT or over

Does not include tuna purse seiners. For a list of Mexican tuna vessels, see appendix (appendix E).
Source: U.S. Navy. Office of Naval Intelligence. Washington, D.C., 1993.

Appendix G.--United States. Tuna embargoes on Mexico

Statute*/Type	Date		Products covered
	Imposed	Rescinded	
MFCMA	7/14/80	8/13/86	All tuna/products
MMPA; Primary	2/01/81	5/21/86	All YFT/products#
MMPA; Primary	9/07/90	9/07/90	All YFT/products#
MMPA; Primary	10/10/90	11/14/90	All YFT/products#
MMPA; Primary	2/21/91	In force	ETP purseseined YFT

ETP - Eastern Tropical Pacific

YFT - Yellowfin tuna

* Embargoes on Mexico are imposed under the authority of the Magnuson Fishery Conservation and Management Act of 1976 (MFCMA) and the Marine Mammal Protection Act (MMPA).

Applied to all yellowfin tuna and tuna products harvested in the Atlantic (Gulf/Caribbean) and Pacific oceans.

Source: NMFS, Southwest Regional Office

Appendix H.--Mexico. Dolphin mortalities

Year	Mortality estimates		
	IATTC*	Press**	CANAINPES
		Number	
1986	21,156	NA	NA
1987	14,376	NA	NA
1988	14,272	NA	NA
1989	18,113	NA	NA
1990	NA	NA	NA
1991	NA	25,000E	15,000E
1992	NA	16,000E	7,000E#
1993	NA	NA	1,800-2,000P

E - Estimates

P - Projection

* Confirmed by the IATTC through its observer program.

** SEPESCA as reported in Ignacio Herrera A., "Paralizará a la flota atunera la ley conservación de delfines de EU," Excelsior, October 31, 1992. (NMFS believes that Sr. Herrera may be referring to the entire international tuna fleet.)

CANAINPES estimates less than 7,000 dolphin mortalities

Sources: NMFS Southeast Regional Office (1986-89 IATTC data) and Carlos de Alba Perez, Camara Nacional de la Industria Pesquera (CANAINPES), personal communications, October 21, 1993 (1991-93 data).

Appendix J.--Mexico. Incidental dolphin mortality rate, 1986-93

Year	Mortality rate
	Kills per set*
1986	15.0
1987	8.9
1988	8.6
1989	8.5
1990	5.6
1991	3.1
1992	1.9
1993	0.6P

P - Preliminary

* Only those sets with dolphins encircled
Source: Dr. Guillermo Compean, Director, Programa Nacional para el Aprovechamiento del Atun y Protección de los Delfines, October 22, 1993.

Appendix I.--Mexico. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland (02)	18.0	38.0	113.0	119.7	173.4	177.3	172.9	194.1	171.4
Coastal									
31	117.5	214.0	265.2	253.1	261.7	260.2	278.4	325.4	350.6
77	354.1	988.0	846.2	941.7	981.1	932.0	1,016.3	872.8	901.4
Subtotal	471.6	1,202.0	1,111.4	1,194.8	1,242.8	1,192.2	1,294.7	1,198.4	1,252.0
Distant Water									
21	-	5.0	-	-	-	-	-	-	-
87	-	-	2.1	1.1	2.9	3.1	2.3	8.6	5.8
Subtotal	-	5.0	2.1	1.1	2.9	3.1	2.3	8.6	5.8
Total	499.3	1,244.0	1,226.5	1,315.7	1,419.2	1,372.6	1,469.9	1,400.9	1,429.1

Source: FAO, Yearbook of Fishery Statistics, various years.

3.5

PANAMA

Little opportunity exists for distant-water fishermen to deploy fishing vessels off Panama. Panamanian fishermen are capable of fully utilizing their major coastal stocks, shrimp and small pelagics. Some finfish stocks may not be fully utilized, but the Government to date has only issued licenses to foreign fishermen for tuna. Foreign tuna fishermen will, however, have difficulty conducting eastern tropical Pacific tuna fisheries with licenses restricted to the zones of individual countries.

Panamanian fishermen conduct only limited distant-water fisheries. The only significant Panamanian distant-water operations are conducted by tuna fishermen, primarily off neighboring countries in the eastern tropical Pacific. The vessels are owned by Panamanians, foreigners, and resident aliens. Unlike the flag-of-convenience vessels, the tuna vessels appear to be an integral part of the Panamanian fishing fleet, operating off Panama, employing Panamanians, and landing or transshipping part of their catch through Panamanian ports. Such operations may decline during the 1990s as the United States embargoed Panamanian tuna in December 1992 and major European buyers are currently avoiding eastern tropical Pacific-origin tuna.

Foreign fishermen are using Panama to obtain flag-of-convenience registrations and have registered more vessels in Panama than in any other Latin American country. The principal country involved is Spain, but incomplete data makes it impossible to determine precisely who is registering vessels in Panama. At least some vessels from several other countries are also being registered, including Korea (ROK), Japan, Poland, Portugal, Taiwan, the United States, and others. Incomplete information on the extent, deployment, activities, trends, and motivations of these fishermen makes it impossible to determine why the owners are registering them in Panama. Vessel owners have a variety of legitimate reasons for transferring the registration. Taiwan owners, for example, find it difficult to deal with many coastal countries which do not recognize their Government. Thus they register vessels in Panama and Honduras to facilitate their distant-water operations. Other fishermen may have a variety of other reasons for seeking a Panamanian registration. Some owners may be trying to evade strict regulations on fishing effort, safety, pollution, taxes, etc. At least some vessel owners, however, are attempting to use a Panamanian-flag of convenience to avoid the U.N. driftnet moratorium and/or various regional management regimes. The number of vessels involved is significant, especially when combined with other Latin American countries (Cayman Islands, Honduras, St. Vincent, etc.) registering flag-of-convenience vessels. Panama has steadily increased registrations of foreign-owned vessels. The increasing efforts by coastal countries to enforce regional management regimes on heavily fished commercial stocks suggest that owners with idled vessels have increasing motivation to register their vessels in countries like Panama which do not participate in the various regional fishery commissions. Panamanian flag-of-convenience vessels may catch as much as 0.8 million tons annually. The impact of such significant operations could potentially undermine the effectiveness of international management regimes.

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I. GENERAL BACKGROUND

Panama has the largest fishing industry in Central America. The country's primary fishing port is Vacamonte, a Pacific-coast port, where most of the commercial catch is landed and processed. Catches vary significantly primarily because of fluctuations in the small pelagic fishery. The catch peaked at nearly 290,000 metric tons (t) in 1985, but has since declined to about 150,000 t in 1991. Almost all of that decline was reduced catches of small pelagics.

The country's most important fishery is for shrimp, but fishermen also catch small pelagics and a variety of other species.

Shrimp: Shrimp is Panama's single most important fishery. Fishermen operate primarily along the Pacific coast with small trawlers. Government officials are concerned about declining shrimp catches which many observers attribute to overfishing.¹ Shrimp fishermen, however, are reporting improved 1993 shrimp catches which some attribute to climatic factors and the Government management program.² Artisanal fishermen have resisted Government efforts to regulate their activities, staging protests and demanding the return of seized property.³ Panamanian fishermen

operate the largest shrimp fleet in Central America. The fishermen deployed about 230 trawlers in 1992, although Government officials and FAO specialists believe that the fishery can only support about 180 trawlers.⁴

Small pelagics: The other important fishery is for anchovy, thread herring, and various other small pelagics to produce fishmeal. It is conducted primarily in the Gulfs of Chiriqui and Panama.

Other species: Other smaller fisheries are conducted for snapper, grouper, shark, various other finfish, and lobster. Much of this activity is conducted by

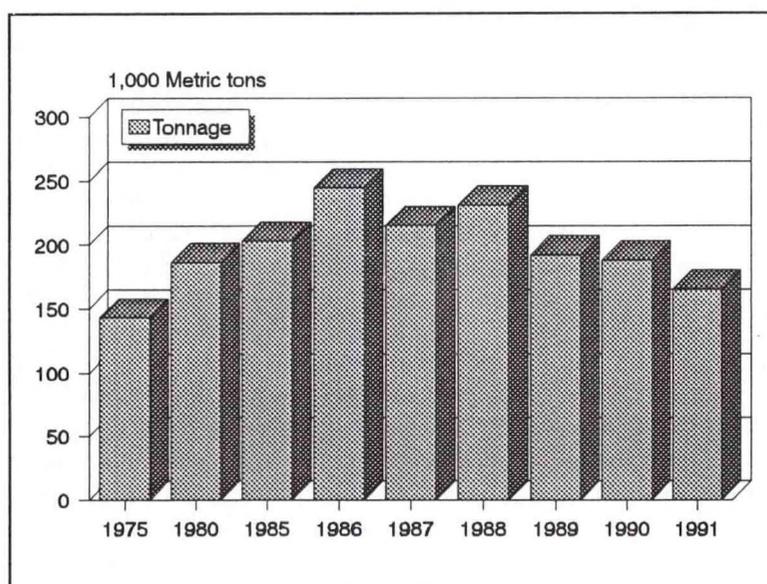


Figure 1.--Panama. Panama has reported steadily declining catches since 1988, primarily because of plummeting small pelagic catches.

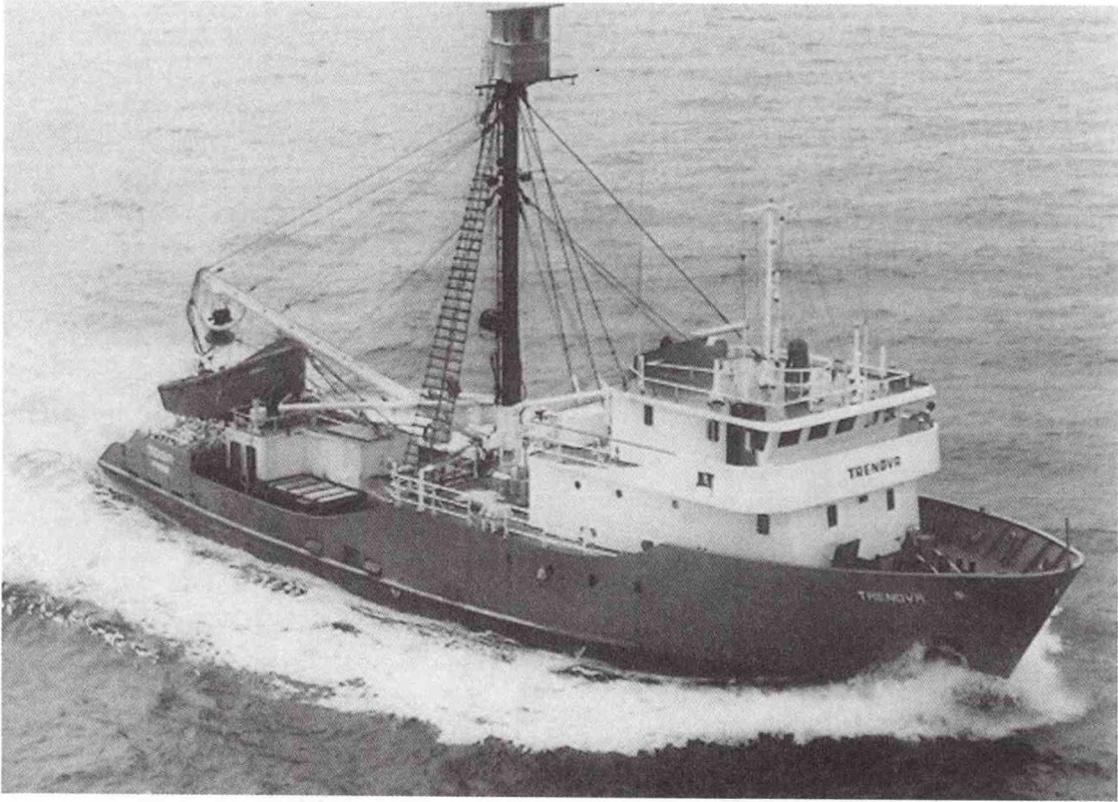


Photo 1.--Most of Panama's fisheries catch is taken by small purse seiners targeting small pelagic species for reduction to fishmeal and oil.

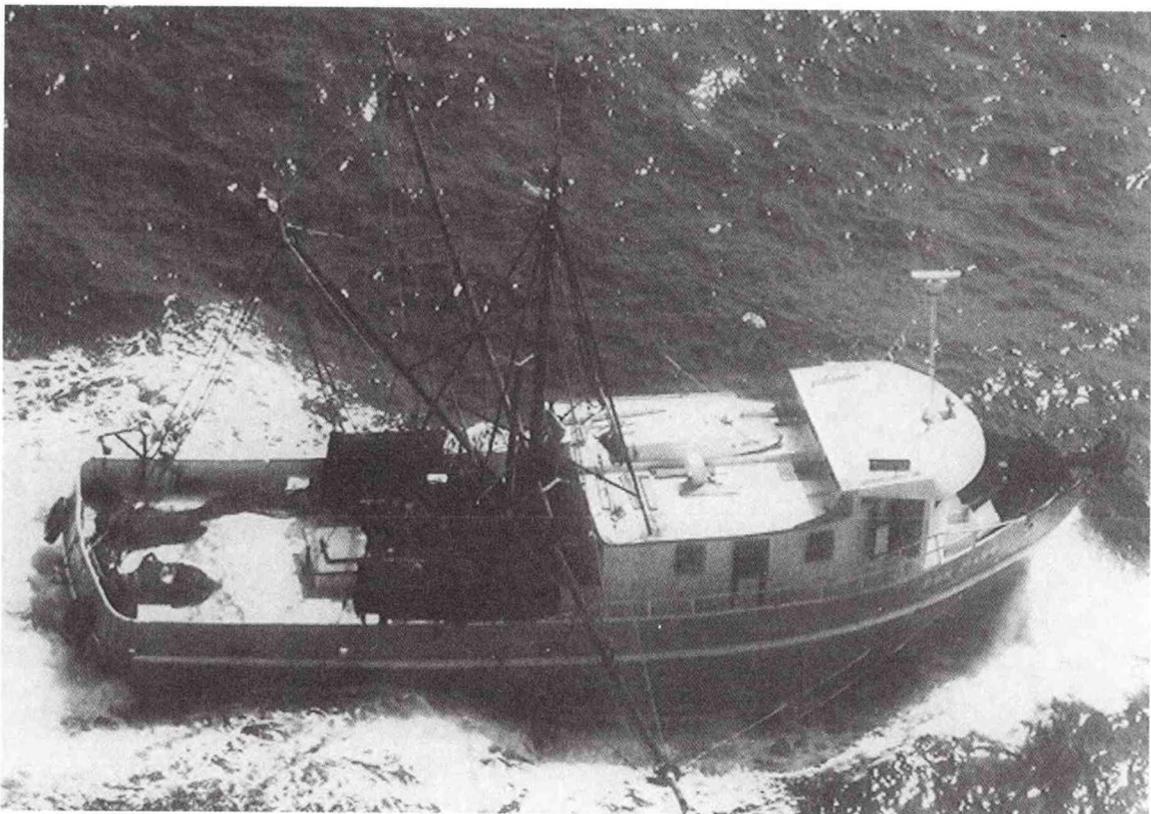


Photo 2.--Panama's valuable shrimp fishery is conducted by small coastal trawlers.

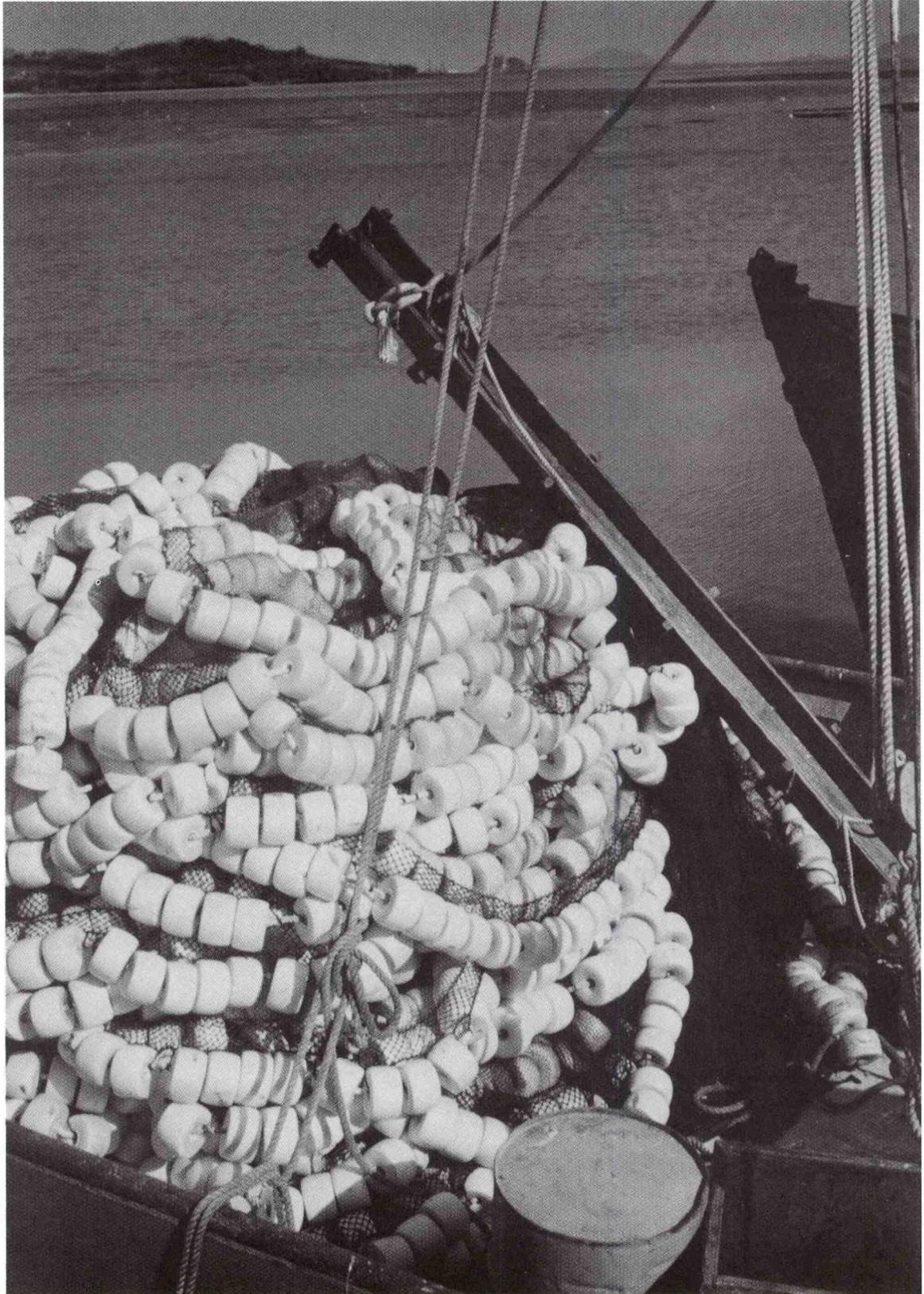


Photo 3.--Panama's small pelagic purse seiners conduct strictly coastal operations. Dennis Weidner



Photo 4.--Panama. Panama's small-pelagic seiners support the largest fishmeal industry in Central America. Dennis Weidner

artisanal fishermen from small boats. The new shark fishery, however, is utilizing longliners converted from old shrimp trawlers.

Fishery products, especially shrimp, are Panama's second leading export commodity, exceeded only by bananas. Much of the catch of edible species is exported because Panama has only a small domestic market. Exports peaked at \$118 million in 1987 and have since declined to \$75 million in 1991.

II. HIGH-SEAS FLEET

Panama reported a massive fleet in 1992 of nearly 140 large (500 gross registered tons or more) fishing and fishery support vessels exceeding 205,000 GRT to Lloyd's. Of this total, the country has registered 122 high-seas fishing vessels totaling over 133,000 GRT (Latin America, appendix B2a1-2). In addition, 17 support vessels (refrigerated fish carriers and/or processing vessels) with a total capacity of over 73,000 GRT are also registered

in Panama (Latin America, appendix B4a1-2). This data is roughly confirmed by the U.S. Office of Naval Intelligence (ONI) (appendices A and B). The ONI vessel numbers are close to the Lloyd's data, but they estimate a substantially higher tonnage for flag-of-convenience support vessels. FAO through 1989 reports no large Panamanian fishing vessels (Latin America, appendix B3b1), probably reflecting their tenuous status as flag-of-convenience vessels.

The Panamanian distant-water fleet is the largest reported by any Latin American country (Latin America, appendix B2a3). It is almost entirely composed of flag-of-convenience vessels. Panama has registered flag-of-convenience vessels for years, but started

to register sharply larger numbers of vessels in 1989 (Latin America, appendix B2a2).⁵ The authors, however, have virtually no information on these vessels. One Japanese report suggests that over 50 of the flag-of-convenience vessels, including vessels under 500-GRT, were formerly tuna longline vessels (Latin America, appendix B5d).⁶ Almost all of the foreign-owned vessels, except for a few tuna seiners, are registered in Panama as flag-of-convenience vessels with little or no Panamanian equity participation. The Bureau of Consular and Marine

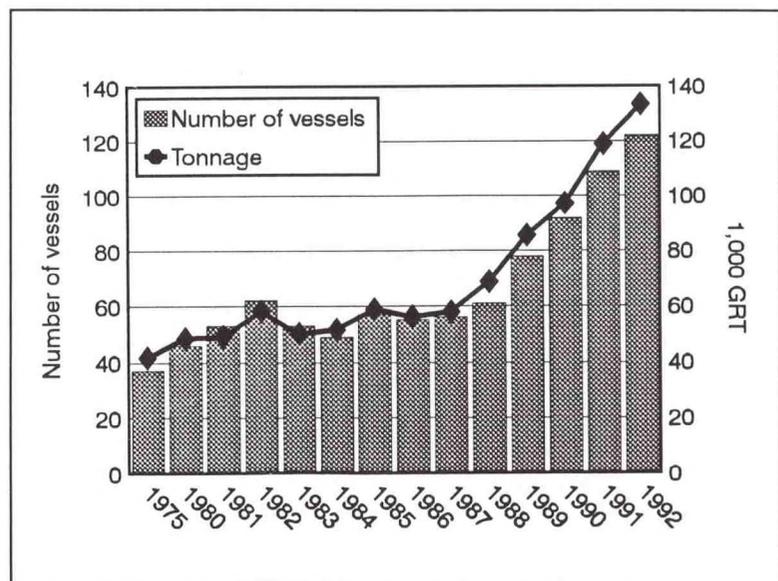


Figure 2.--Panama. Panama has steadily increased the number of large, mostly foreign-owned, vessels in its fleet.

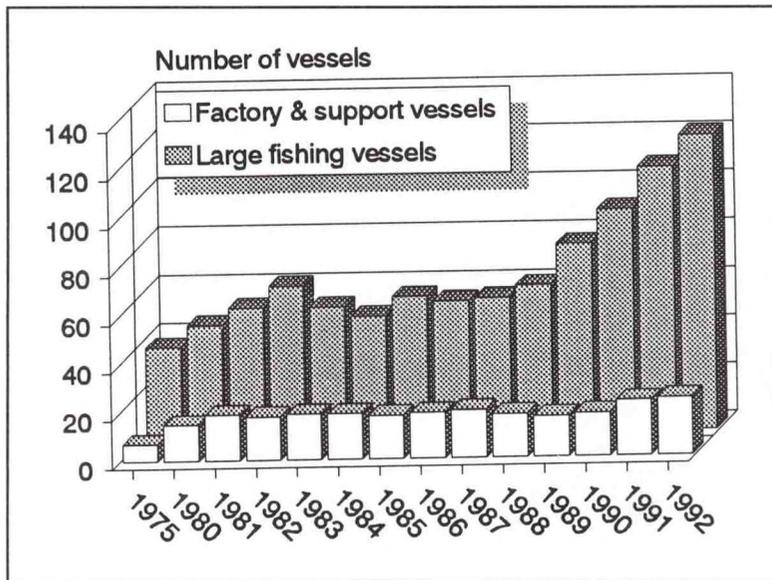


Figure 3.--Panama. Panama has registered large numbers of fishing vessels and fishery support vessels since 1988.

Affairs (SECNAVES) is responsible for foreign vessel registration. The Dirección General de Recursos Marinos (DIGEREMA) in the Department of Commerce Department is responsible for issuing fishing licenses.

The authors have little information on the foreign companies registering vessels in Panama. Many appear to be older vessels which are no longer profitable to operate in the originating country. Many were built during the 1960s (appendix A). Several newer vessels, however, are also involved, suggesting that various groups are registering the vessels as part of a carefully planned business activity. Several of the vessels appear to be former-Soviet vessels involved with the ongoing privatization process in Russia and the other successor states (especially the Ukraine).

Germany (GDR): Nine German (GDR) vessels have been reflagged in Panama. Most of the vessels are extremely large (12,000 GRT) refrigerated transport vessels. No information is available on the current owners, but they may be Russian.

Japan: More than 30 of the flag-of-convenience vessels registered in Panama were built in Japan (appendix A). Few of the vessels, however, seem to be currently owned by Japanese companies. No information is available on their current owners, but it is likely that several are actually owned by Korean or Taiwan companies.

Korea: Korean companies have registered an unknown number of vessels in Panama. Some of them are owned and operated by Panamanian-Korean joint ventures. (See 5. Joint Ventures.)

Mexico: An unidentified Mexican company apparently owns four Panamanian-flag vessels.

Poland: Six Polish-built factory trawlers have been reflagged in Panama. The vessels are relatively old, built in 1968-69. No details are available on the current owners.

Portugal: About 10 Portuguese-built vessels have been registered in Panama. These vessels may still be owned and operated by Portuguese companies.

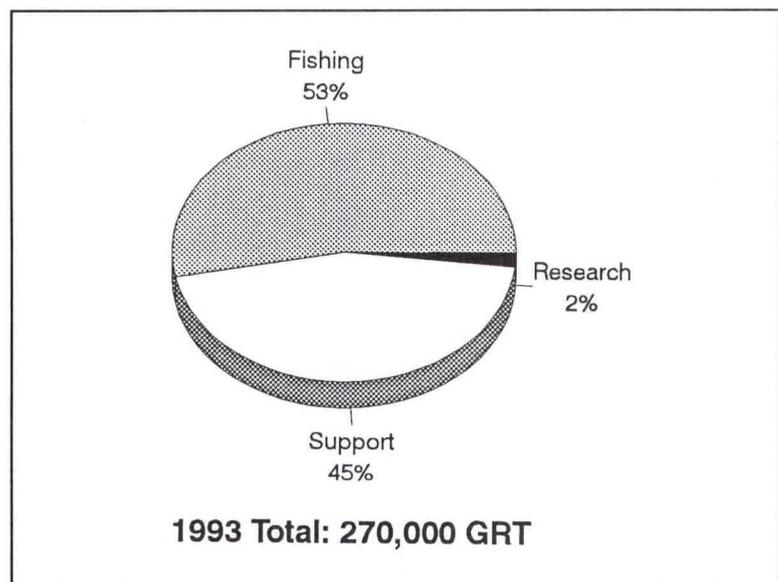


Figure 4.--Panama. Nearly half of the large vessels in the Panamanian fleet are support vessels, primarily refrigerated fish carriers. Most of the vessels are foreign-owned.

Russia: Unconfirmed reports suggest that a Russian company has transferred about 13 newly-built vessels to the Panamanian flag and hopes to operate them off Peru in association with a Peruvian company. The vessels have reportedly been delivered in Peru along with Russian crews.⁷ An unknown Russian group has transferred seven fairly modern refrigerated fish transport vessels, 12,400-GRT Karl Libknekht class vessels and three small refrigerated transports to the Panamanian flag (appendix A). The reason for these flag transfers are unclear.

Singapore: About 12 Panamanian-flag vessels originated in Singapore and may still be owned by Singapore-based companies (appendix A). Most are modern vessels built since 1989. No information is available on the current owners, but they may be Taiwan or overseas Chinese groups.

Spain: About 35 large Panamanian-flag vessels have been built in Spain (appendix A). The authors believe that many of the vessels are still owned and operated by Spanish companies.

Taiwan: At least 10 of the large vessels appear to be registered by Taiwan companies. This appears to be a much smaller number than the flag-of-convenience vessels registered in Honduras. The authors are unable to explain why the Taiwan companies have generally chosen to register vessels primarily in Honduras rather than Panama.⁸

Ukraine: Three large vessels (two factory trawlers and a support vessel) built in the Ukraine have been flagged in Panama. These are large, modern vessels built in 1992-93. No details are available on the current owners.

United States: Several U.S.-built tuna seiners have been registered in Panama. Details on the ownership are unavailable.

USSR: Six Soviet-built vessels (mostly factory trawlers) have been registered in Panama, but no details are available on the current owners.

III. VESSEL SOURCES

Panamanian shipyards produce small artisanal fishing vessels for local use and also service ships travelling through the Panama canal. The country's largest shipyard is Astilleros Braswell, located in Balboa at the Pacific entrance to the Canal. Braswell offers general ship repair and maintenance services. The yard has three drydocks capable of repairing large maritime vessels.

Braswell is the only yard currently advertising vessel construction services and reports building a 35-meter (m) shrimp trawler. An older report suggests Panamanian shipyards could build vessels up to 200 GRT.⁹ Vessel construction in Panama appears to have declined in recent years. Ingenieria Amado S.A., for example, signed a contract to build 44 vessels in 1977 and Astilleros de Chiriqui also reported a vessel contract.¹⁰ Vessel construction has been affected by Government attempts to limit effort on many heavily fished Panamanian stocks, especially shrimp.¹¹ Several small yards provide vessels to artisanal fishermen.¹²

Panama has five shipyards dedicated primarily to servicing and repairing fishing vessels. These yards can accommodate vessels from 60-120 tons,

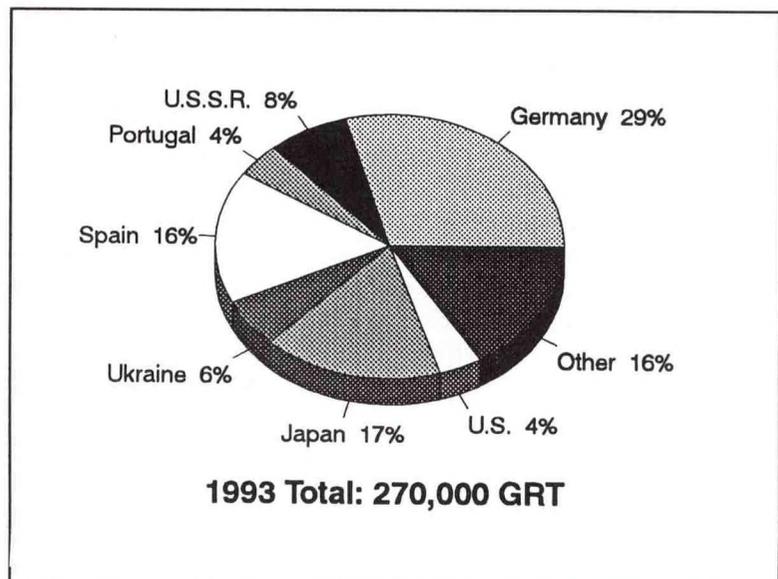


Figure 5.--Panama. Many of the large vessels in the Panamanian fishing fleet were built in Germany. The bulk of the German-built vessels are refrigerated fish carriers built in the GDR during 1984-88.

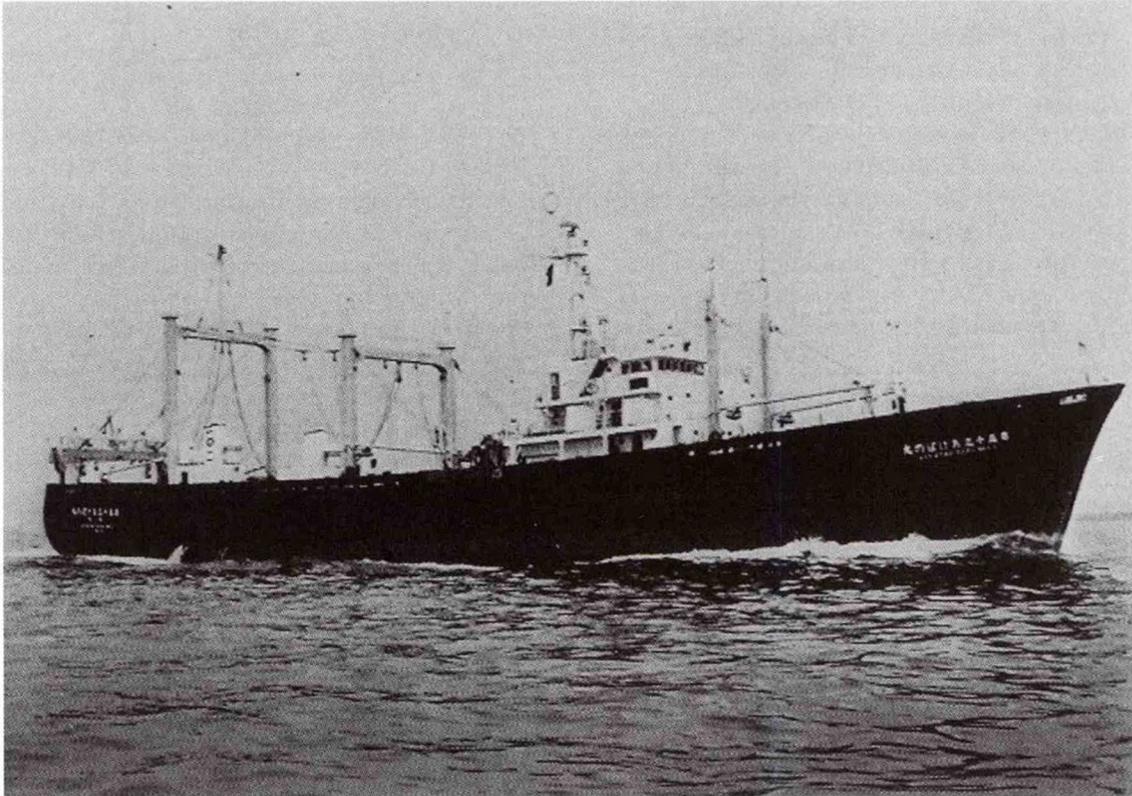


Photo 5.--Large numbers of Japanese-built fishing vessels have been registered in Panama by various foreign owners.

and one yard has reported working on a 400-ton vessel. The Vacamonte shipyard services Panama's Pacific fishing fleet which totaled about 240 shrimp trawlers as well as other small vessels in 1991.¹³

Panamanian fishing companies have ordered commercial fishing vessels from several different countries. Most of the imported vessels are less than 300 GRT, but a few larger trawlers have also been imported, primarily from Spain and the United States. Panamanian companies have also imported refrigerated fish transports. The Government's concern with the overfishing of shrimp and other key resources has caused it to limit fishing vessel imports as well as domestic construction. The only vessel imports reported in recent years have been tuna seiners.

Germany: An unidentified Panamanian company purchased a used 724-GRT trawler in 1981 from Germany.¹⁴

Hong Kong: Pesquera Corutu imported two shrimp trawlers from the Dashwood Shipyard in 1985.¹⁵

Japan: Panamanian buyers imported two unidentified Japanese fishing vessels in 1976.¹⁶

Mexico: A Mexican fiberglass (GRP) yard won a contract to build 86 artisanal boats as part of a IDB-sponsored Government fisheries development project in 1977.¹⁷

Peru: Panamanian companies imported many of the small seiners used in the anchovy/small pelagic fishery from the Peruvian shipyard Pisca Astilleros.¹⁸

Spain: Two Panamanian companies imported three shrimp freezer trawlers from Astilleros Armon in 1989.¹⁹

United States: Several Panamanian companies have purchased shrimp trawlers in the United States. Two Panamanian companies, for example, purchased 10

shrimp trawlers from Atlantic & Gulf Boat Building and Master Marine in 1981.²⁰ Panamanian interests have also purchased modern tuna purse seiners exceeding 1,200 t from U.S. shipyards. The Las Perlas Fishing Company, for example, ordered three large seiners from Peterson in 1979.²¹ Pesquera San Jose ordered the *Granada* from Campbell Shipyards in 1981.²² Others companies have purchased used seiners. The owners of the Panamanian seiners include a diverse group of Panamanians, foreigners (reportedly United States, Spanish, and other nationalities), and resident aliens.

Yugoslavia: The Freshwater Marine company ordered the *Atlantic Frigo*, a 9,500 dead weight ton (DWT) refrigerated transport from a shipyard at Split in the former Yugoslavia, now Croatia.

IV. FOREIGN FISHING

Panama strictly limits most foreign fishing, but grants a few licenses to foreign tuna fishermen. The current fisheries law was enacted in 1959 and establishes the basic legal framework for fisheries management. The only specific provisions related to fishing licenses for foreign vessels are included in the Executive Decree regulating the tuna fishery. The number of license applications varies sharply from year to year, primarily due to variations in tuna migratory patterns. The Government issued four licenses in 1991, five in 1992, and thirty in 1993. The nationalities of the vessels are not available. Foreign fishermen targeting other species desiring to operate off Panama would have to register their vessels in Panama, pay import duties, and apply for fishing licenses. Foreign owners can maintain their equity interest in a vessel even after registering it in Panama.²³

Foreign vessel owners applying for Panamanian tuna licenses have reportedly requested permission to transship their catch through Vacamonte. The Government reportedly authorized 10 vessels fishing tuna under Panamanian licenses to transship their catch through Vacamonte during 1993. The

Government encourages this activity and vessels transshipping their tuna catch are eligible for fishing licenses at reduced fees.²⁴

Other foreign fishermen also transship tuna and other species through Vacamonte. Panama has for years been a major center for transshipping tuna harvested in the eastern tropical Pacific (ETP). Fishermen operating off Central America found it cost effective to transship their catch through Panama rather than returning to a distant home port or using the fishing boat to transport the catch to buyers. Transshipping significantly reduces lost fishing days. Foreign tuna fishermen reportedly transshipped substantial quantities near Taboga Island until 1991. The tuna fishermen used local workers to off load their catch directly onto cargo vessels as no port facilities were available on the island. This practice reportedly ended after the U.S. imposed a tuna embargo on Panama in 1991. Difficulties marketing ETP tuna in Europe during 1992 will almost certainly further reduce transshipments through Panama.

Fishing vessels from more than 10 countries regularly call at the Panamanian port of Vacamonte. The port at Vacamonte can handle vessels of up to 3,000 tons and with a 6-m draft. Vessels calling at Vacamonte routinely take on fuel and supplies. The vessels use the port to obtain provisions, replace equipment, secure spare parts, and transship their catch (appendix D). The largest company involved with the transshipments is PANAFRIO.

The primary foreign users of the port are Mexico, Ecuador, and Venezuela, all important Latin American tuna fishing countries. The United States, Vanuatu, and Cyprus were also important users in 1991.²⁵ The total number of foreign vessels calling at Vacamonte totaled only 55 in 1992, a small decline from the 63 vessels noted in 1991 (appendix D). The vessels were primarily tuna seiners 1,000-2,000 GRT. Most of the fishery product currently transshipped through Panama takes place at Vacamonte, especially the international pier.²⁶ Most of vessels involved are tuna seiners, although the number of seiners transshipping tuna declined sharply in 1992 (appendix I). Much of the foreign traffic is from Colombia (Barranquilla and Buenaventura), Ecuador, and Costa Rica and destined for Colombia and Ecuador (appendix G and H).

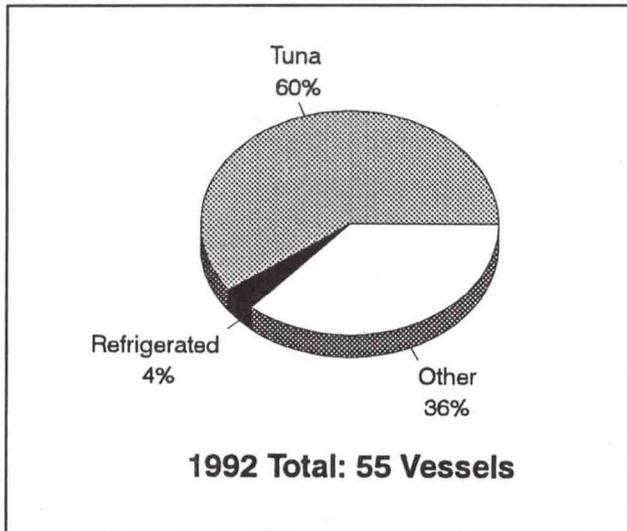


Figure 6.--Panama. Tuna fishermen operating in the eastern tropical Pacific use Vacamonte to transship their catch and for various port services.

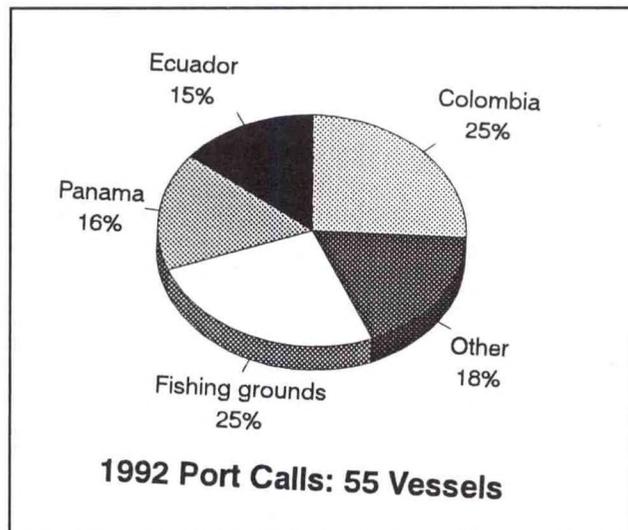


Figure 7.--Panama. Vessels using the international pier at Vacamonte generally return to the fishing grounds or home ports in neighboring countries.

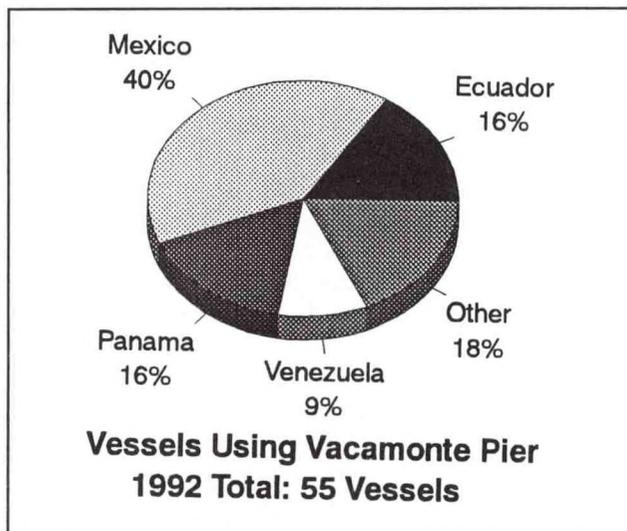


Figure 8.--Panama. Foreign fishermen, especially Mexican fishermen, make extensive use of Vacamonte.

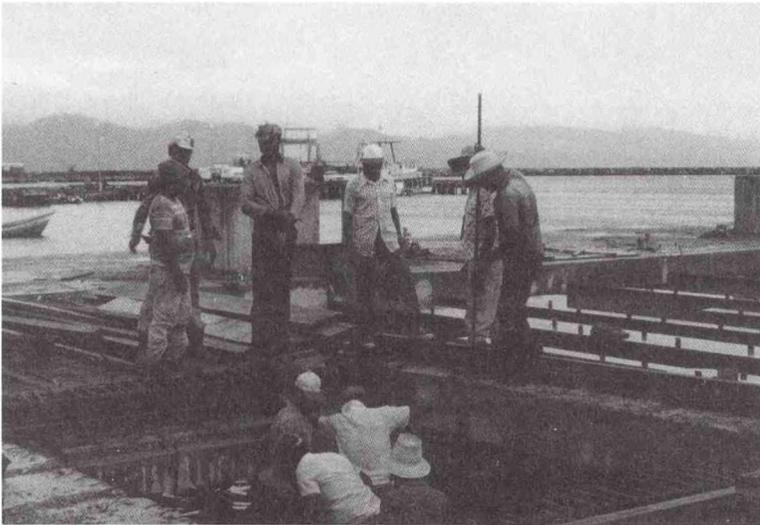


Photo 6.--The construction of the Vacamonte fishing port in 1979 provided Panama the most important fisheries port in Central America. The port is widely used by foreign fishermen. D. Weidner

The authors believe that Soviet, Cuban, and other foreign fishermen have transshipped fishery products through Vacamonte, but do not appear to have done so in significant quantities since 1991 (appendix C). The Soviets reportedly expanded their operations in Panama during the late 1980s because they were experiencing difficulties in Peru.²⁷ One report does indicate that the Russians have transshipped some lobster (*Procyis bajamondes*) through Balboa (appendix K).²⁸ Soviet officials also arranged to exchange crews for their vessels operating in the southeastern Pacific through Balboa.²⁹

Panama has only a limited ability to enforce its 200-mile EEZ. The National Maritime Service (SMN) reports only a few seizures annually (appendix J) even though they believe extensive illegal fishing occurs in Panamanian waters. SMN is in the process of building a professional service after years of Government neglect. According to SMN Director José Rosas, the SMN has seven patrol boats for Pacific-coast enforcement and two for the Caribbean-coast. SMN would ideally like to deploy these vessels 17 days per month, but actual deployment is limited by maintenance problems. The most serious difficulty is the involved, bureaucratic process required to procure spare parts. A fishing industry trade group, the National Association of the Panamanian Fishing Industry (ANDELAIPP) supports

the enforcement effort by maintaining one of the SMN patrol boats which SMN officials have agreed to use for Pacific-coast fisheries enforcement.

V. JOINT VENTURES

Several foreign companies have formed joint ventures with Panamanian companies. Some have foreign equity participation, but few details are available. Panama has no law specifically regulating joint-venture companies.

Japan: Two Japanese companies have formed joint ventures in Panama. None are known to be active. Mitsui Bussan in 1978 formed Mtg. Marine Inc. with unknown Panamanian partners to lease tuna longline vessels. Universal Suisan in 1989 formed Universal Fisheries Panama Inc. with unknown Panamanian partners to lease trawlers.³⁰

United States: The authors have no details on United States-Panamanian joint ventures, but believe that some U.S. investors are active in Panama.

VI. DISTANT-WATER OPERATIONS

Panamanian fishermen primarily conduct coastal fishing operations. The only known foreign distant-water fishing, at least in part by Panamanian-owned vessels, is for tuna. In recent years, Panama has acquired several modern tuna purse seiners. One report indicated a Panamanian tuna fleet of seven purse seiners (six large and one medium-sized vessel) in 1991.³¹ Several of the vessels were reportedly transferred to Panama before Panamanian tuna was embargoed in 1992.³² The authors do not have information on who owns the vessels, but believes they are owned by a variety of individuals, including Panamanians (United States, Spanish, Mexican, and other foreign nationals), resident aliens, and foreign nationals.³³ Even though most of the tuna seiners are owned by foreigners, they are quite different from the flag-of-convenience vessels. The vessels are

deployed in the ETP, off Panama and neighboring countries--especially Colombia.³⁴

Colombian officials issue licenses for a relatively large number of Panamanian fishermen to fish in Colombian waters in association with Colombian companies. Colombian officials reported in 1993 that they licensed 40 Panamanian vessels to operate in their 200-mile zone (Colombia, appendix E). Interestingly, the Colombians are licensing Panamanian-owned vessels and not the large number of flag-of-convenience vessels that foreign owners have registered in Panama.³⁵ The vessels are crewed by Panamanians and normally land or transship much of their catch through Panamanian ports. Colombia in 1993 issued licenses to Panamanians for demersal fish (primarily in the Pacific), shrimp (Caribbean and Pacific), and tuna. Several different Colombian companies are contracting the Panamanians (Colombia, appendix E).



Photo 7.--Various groups in Panama have acquired several tuna purse seiners for operations in the eastern tropical Pacific.

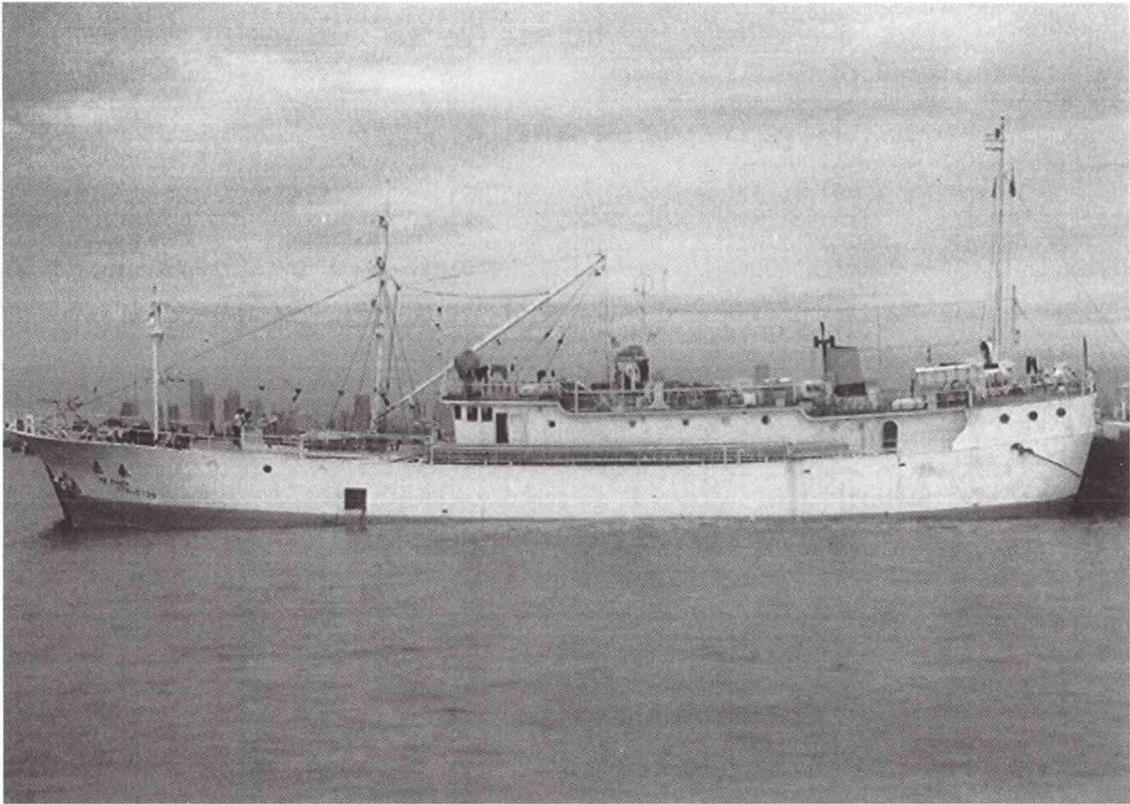


Photo 8.--Many of the vessels reflagged in Panama are tuna longliners, like this vessel currently operated by a Taiwan company.

Vessel owners of various nationalities have registered vessels in Panama to obtain flags of convenience. There are numerous reasons why foreign vessel owners are seeking flag-of-convenience registrations.³⁶ Incomplete information on the extent, deployment, activities, trends, and motivations of these fishermen makes it impossible to determine precisely why the owners are registering them in Panama. Vessel owners have a variety of legitimate reasons for transferring the registration. Taiwan owners, for example, find it difficult to deal with many coastal countries which do not recognize their Government. Thus they register vessels in Panama and Honduras to facilitate their distant-water operations.³⁷ Other fishermen may have a variety of other reasons for seeking a Panamanian registration. Some owners may be trying to evade strict regulations on fishing effort, safety, pollution, taxes, etc. At least some vessel owners, however, are operating on the high seas in violation of the management regimes of various international regional fishery organizations as well as the U.N. resolution prohibiting the use of large-scale driftnets. Reports of such activities have been noted in the Bearing Sea and the northeastern, northwestern and southern

Atlantic. The regional international bodies affected include ICCAT, NAFO, and NASCO. Panama is not a member of these organizations and has not ratified the 1982 Law of the Sea Convention. Vessels under Panamanian registry thus can, for the most part, not be prosecuted under Panamanian law for violations of the management regimes established by these international bodies. The authors have noted unconfirmed reports that Panamanian officials in 1992 did levy small fines to vessels violating NAFO regulations, largely because of the great concern expressed by Canadian officials. Most Panamanian-flag vessels violating international fishery management plans, however, have not been prosecuted.

Some of the countries³⁸ which have registered vessels in Panama include:

Denmark: Danish interests have registered vessels in Panama for northern Atlantic salmon operations.³⁹ Such operations were first noted in 1989, but may have been initiated even earlier.⁴⁰ Danish authorities seized the Panamanian-registered

Onkel Sam in 1991 when it entered a Danish port after catching salmon in the northern Atlantic.⁴¹ The Danish owners had received a subsidy for removing it from the EC roles.⁴² Apparently, instead of retiring the vessel, they proceeded to register it in Panama. The Danish owners then continued to fish in the northern Atlantic in violation of the NASCO management regime. Norwegian Coast Guard aerial surveillance flights observed the Panamanian-registered vessel *Brodal* fishing for salmon in the northeastern Atlantic between Iceland and Norway (71° 35'N, 4° 20' E) on June 3, 1993.⁴³ Unconfirmed reports suggest that the *Brodal* as well as other flag-of-convenience vessels, deployed for salmon in the North Atlantic, may be owned by Danish interests. As Panama is not a member of NASCO, the *Brodal* is being deployed in violation of the NASCO management regime without concern for legal sanctions. Port authorities indicate that the *Brodal* called at Norwegian ports in 1991 and 1992 and Polish ports in 1992.⁴⁴ Polish authorities report

that the *Brodal* landed 36 t of salmon in the port of Kolobrzeg where it was trucked to Switzerland for processing and sale.⁴⁵

Korea: Korean companies have also used Panama as a flag-of-convenience country. Korea Marine Products Development (KMPD) operated a five-vessel fleet during 1976 under the Panamanian flag off the United States (California), through a Panamanian company, Nike International Ocean Company.⁴⁶ More recently, another Korean company is participating in a joint venture company, Procesadora Vacamonte (PROVASA), to longline swordfish in Panamanian waters.⁴⁷ Korean companies have continued similar operations off other countries and on the high seas, although the full scale of their current activities is unknown. Korean owners are believed to have registered at least two vessels in Panama for operations in the northwestern Atlantic (Latin America, appendix C4b4). Information on Korean-owned vessels operating in

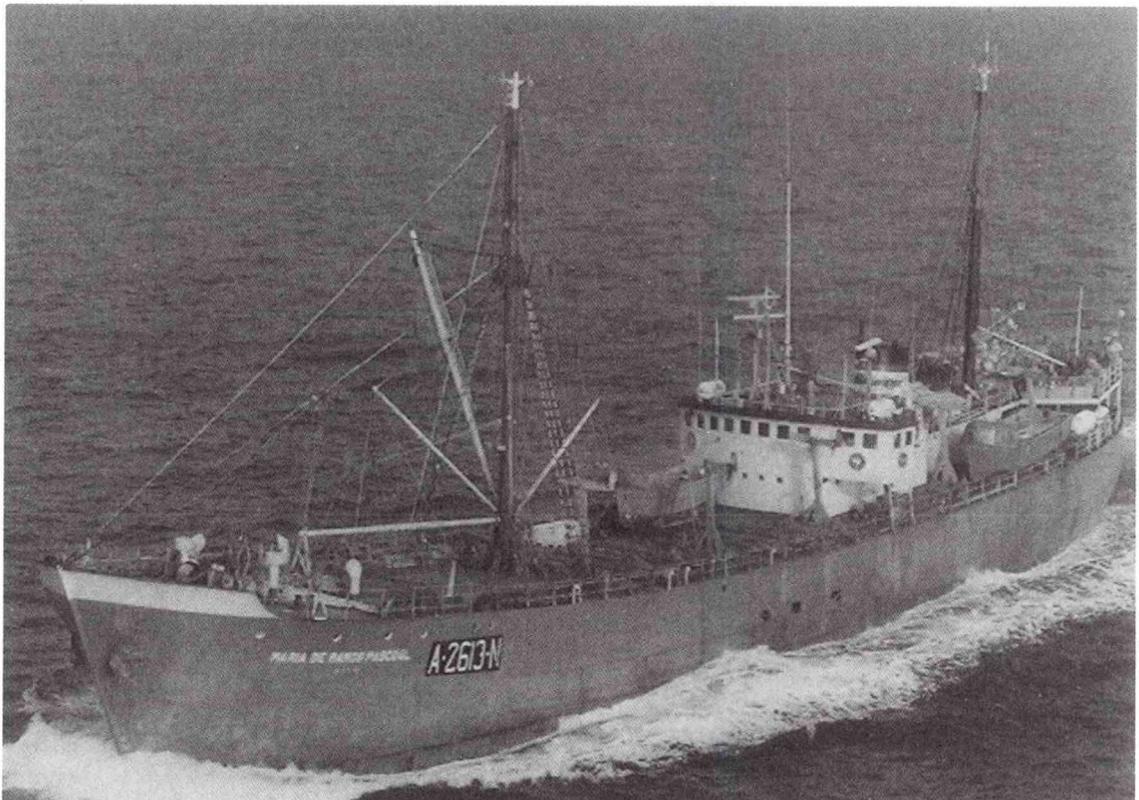


Photo 9.--Unknown foreign interests are operating this Polish-built vessel, which is rigged for either longlining or driftnetting, under the Panamanian flag.

other areas is unavailable.

Portugal: Portuguese companies use Panama as a flag-of-convenience country. An unidentified Portuguese company, for example, registered its vessel, *Martins Mar*, in Panama and obtained a Panamanian fishing license. The vessel was reportedly planning to deploy large-scale driftnets in 1993. DIGEREMA denied the renewal of the fishing license and recommended to SECNAVES that the vessel's Panamanian registry be revoked.⁴⁸

Russia: Russian companies have reportedly registered merchant and fishing vessels under the Panamanian flag. Many of these registrations appear to have been carried out by a variety of different groups with little or no control because of the ill defined status of the former Soviet state fishing companies.⁴⁹ Russian officials complain that many vessels have been transferred to foreign flag registry without following procedures established under Russian law.⁵⁰ It is possible that some Russian officials have transferred Government-owned vessels to countries like Panama now have a personal equity interest in the vessels. Notably the Russians have transferred 10 refrigerated fish transports to the Panamanian flag. This appears to have been a well thought-out commercial venture as the vessels were some of the most modern fish transports in the Russian fishing fleet. Two of the vessels were built as recently as 1991-92 (appendix A). It is unclear if these vessels are being operated as a Panamanian-Soviet (or perhaps with other foreign partners) joint venture or if the vessels have been registered in Panama while still primarily servicing the Russian distant-water fleet. The authors have noted reports of Taiwan vessels transshipping their catch in the southern Atlantic to Panamanian-flag refrigerated transports.⁵¹ Some of these transport vessels may be vessels transferred from the former Soviet Union or Russia and the other successor states. A unidentified Russian group has reportedly deployed some reflagged vessels in Peru as part of a joint venture with Peruvian companies. About 11 small Russian-built vessels (about 600-700 tons), reflagged in Panama, with Russian crews hope to fish under contracts with Peruvian companies.⁵²

Spain: A Spanish company has reportedly registered a driftnet vessel in Panama and deployed it on the Vera Seamount in the southeastern Atlantic off South Africa. Other European-owned (probably Spanish) Panamanian-flag vessels are deployed in the northwest Atlantic groundfish fishery (Latin America, appendix C4b4). As many as 25 Spanish-owned vessels may be operating in the northwest Atlantic during 1993 under Panamanian flags (Latin America, appendix C4b4).

Taiwan: Taiwanese companies operate vessels under the Panamanian flag, but few details are available. Two Taiwan companies (Fei Long Ocean Co. Ltd. and Highly Co. Ltd.) operated two Taiwanese trawlers under the Panamanian flag during the 1970s.⁵³ These companies do not appear to have had any Panamanian participation. No information is available concerning the operations of these companies. Taiwan officials report that their companies operating distant-water fishing vessels have found it difficult to obtain fishing licenses or sign joint venture/vessel leasing agreements with coastal countries that do not recognize their Government. Several countries (such as India, Myanmar, and Sri Lanka) are particularly concerned about China's possible reaction if they approve arrangements with Taiwan flag vessels.⁵⁴ As a result many Taiwan vessel owners have registered their vessels in Panama and Honduras.

Other countries: Other unidentified countries have deployed Panamanian-registered vessels on both Atlantic and Pacific grounds.

The foreign companies with fishing vessels registered in Panama are reporting only a small part of their distant-water catch.⁵⁵ The fishermen operating in the southeastern Pacific (off Latin America), the eastern central Atlantic (off west Africa), and the western Indian Ocean since 1985 have reported at least part of their catch. Such reported catches ranged between 12,000-18,000 t between 1985 and 1989. The activity of these flag-of-convenience vessels has since increased. The foreign companies reported substantial catch increases during 1990 and the distant-water catch reached nearly 38,000 t, although the catch declined in 1991 (appendix L). Such reported catches, however, appear to be only a small part of the overall activity conducted by the foreign companies operating flag-of-

convenience vessels. Many of the foreign companies are clearly not reporting their catch. The various reports noted above confirm Panamanian-flag vessels operating in the north Pacific and north Atlantic. The companies operating those vessels, for example, are not reporting their catches.

The Panamanian flag-of-convenience catch is impossible to determine because so many of the vessels are not reporting their catch. It is possible, however, to make rough estimates based on the number and capacity of the vessels involved. Using available estimates of the number of vessels and size of those vessels (Latin America, appendices B5b1-2), the catch of the large distant-water vessels (over 500 GRT) registered in Panama could total 430,000 t and that of the medium-sized vessels (100-499 GRT) could total 350,000 t (Latin America, appendix C5). This means that the Panamanian flag-of-convenience vessels may be catching nearly 0.8 million t annually.

Available information on the operation of the Panamanian flag-of-convenience vessels on major fishing grounds is as follows:

Northwestern Atlantic (FAO area 21): A substantial number of Panamanian-flag vessels operate in the northwestern Atlantic. The number has increased steadily from 8 vessels in 1985 to 27 vessels in 1992. Most of these vessels are apparently operated by European companies (probably Spanish companies), but two are operated by Korean companies (Latin America, appendix C4b4). None of these fishermen report their catch to FAO, but it is believed that they took about 26,000 t of groundfish in 1992, mostly cod, redfish, and Greenland halibut (Latin America, appendix C4b1).

Eastern central Atlantic (FAO area 34): Panamanian-flag vessels reported a record 1990 catch of over 13,000 t in the eastern central Atlantic, off West Africa (appendix L). The catch increased sharply in 1990, but declined substantially in 1991. The 1991 catch was primarily composed of porgies/seabreams, croakers, and cuttlefish as well as smaller quantities of octopus, shrimp, and squid.

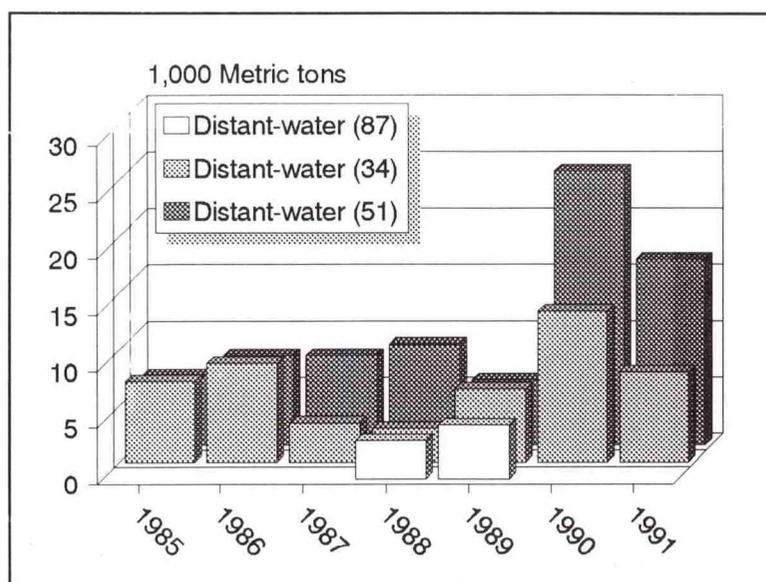


Figure 9.--Panama reports catches on two distant-water grounds, the southeastern Pacific (87) and the eastern Indian Ocean (51). Most flag-of-convenience vessels are not reporting their catches.

Only small catches of tunas (bigeye, bluefin, yellowfin, and other tuna-like species) were reported. There may be, however, substantial unreported catches. Some of these vessels may be deployed for bluefin tuna in the Atlantic.

Northwestern Pacific (FAO area 61): Two Panamanian-flag vessels, the *Spynta Marie* and an unknown vessel, were observed fishing pollock during 1992 in international waters of the Bearing Sea "donut hole" while the United States Government was trying to reduce the number of foreign vessels and their catch to preserve the rapidly declining pollock resource. These vessels have not been sighted in the donut during 1993 when a 2-year fishing moratorium negotiated by six North Pacific countries became effective.

Western Indian Ocean (FAO area 51): Panamanian-flag vessels reported a record 1990 catch of over 24,000 t in the western Indian Ocean, off East Africa (appendix L). The 1990 catch increased sharply in 1990, but declined substantially in 1991. Almost the entire catch was tunas (yellowfin, skipjack, albacore, and bigeye.)

Southeastern Pacific (FAO area 87): Panamanian-flag vessels reported a 1989 catch (the last year for which data is available) in the southeastern Pacific of

5,000 t, mostly tuna (appendix L). In previous years, U.S. and other seiner owners registered their vessels in Panama to avoid U.S. dolphin protection laws. Panamanian companies now own and operate some of these vessels.⁵⁶ Much of the harvest in this region was probably taken off Colombia where Panamanian fishermen have obtained fishing licenses (Colombia, appendix E).⁵⁷ The Panamanians participate in several different Colombian fisheries, including shrimp (shallow and deep-water species), demersal finfish, and tuna (Colombia, appendix E). Panamanian-flagged, Russian-owned vessels are being deployed off Peru.⁵⁸ Chilean officials report that Panamanian-flagged fishing vessels have purchased supplies in the northern port of Arica.⁵⁹

No information is available on the fees charged or income generated by Panama through flag-of-convenience registrations. At least one Taiwan source indicates that the fees are substantial.⁶⁰ One Panamanian observer indicates that some distant-water fishermen are considering other possible

countries to register their vessels because of increasing Panamanian fees.⁶¹ One Belizian observer reports that several foreign fishermen have registered their vessels in Belize because of the high Panamanian fees.

Several countries (including Canada, the European Community, and the United States), have complained to Panamanian officials concerning the violation of international management regimes and the potential impact on fishery stocks such as Atlantic salmon, Atlantic bluefin, and pollock. The EC imposed a 22.5 percent tariff on Panamanian fishery products in September 1993, partly over concern with Panama's flag-of-convenience registrations.⁶² Panamanian officials are studying possible legal changes, but there is a strong vested interest in SECNAVES to continue existing registration practices because of the income generated.

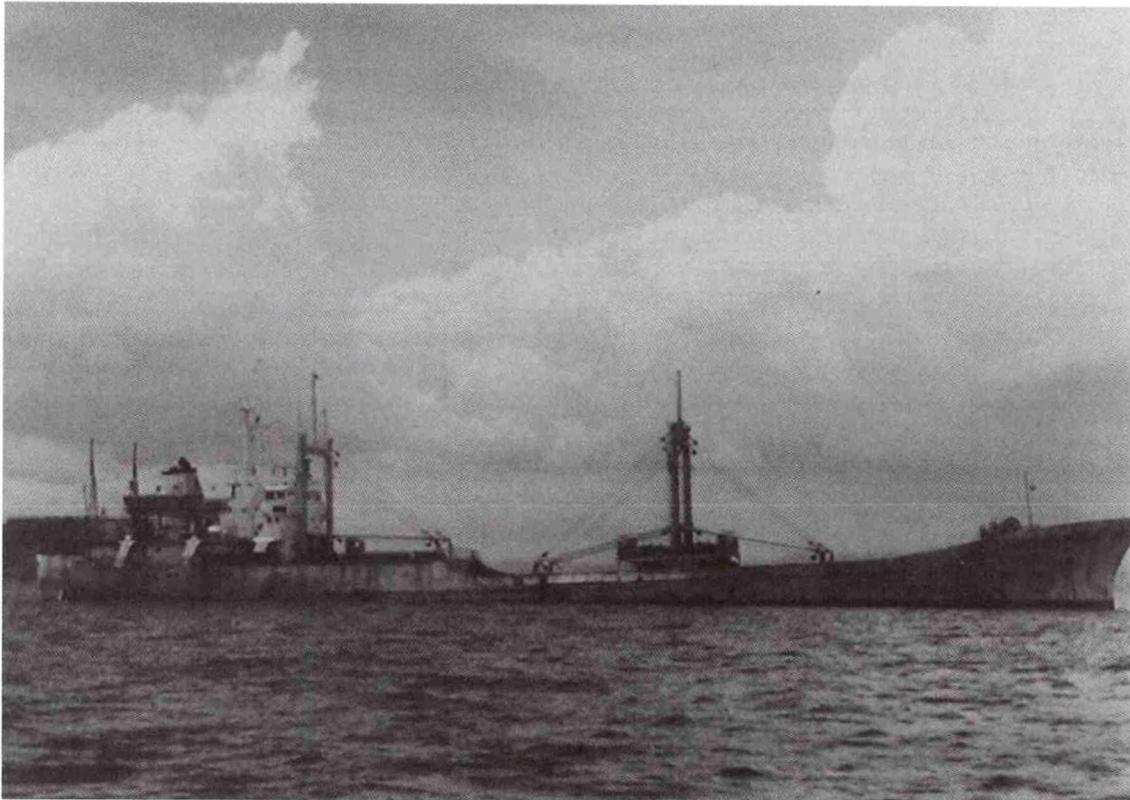


Photo 10.—Several large refrigerated fish carriers, like this Japanese-built vessel, have been transferred to Panamanian flag to support the distant-water fleets of Taiwan and other countries.

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ENDNOTES

SECTION I. (General Background)

1. U.S. Embassy, Panama City, March 23, 1993.
2. The Government has added restrictions on artisanal fishermen to the annual closed season for the trawler fishermen. The artisanal fishermen now have to use nets with mesh no smaller than 3 inches. Victor Nishio, personal communications, September 21, 1993.
3. U.S. Embassy, Panama, March 23, 1993
4. U.S. Embassy, Panama City, July 30, 1993.
5. The number of flag-of-convenience registrations for foreign-owned fishing vessels appears to have increased steadily since from 1988-92. Some Panamanian sources report, however, that the increase has slowed in 1993, because of rising Panamanian registration fees. Armando Martinez, OLDEPESCA, personal communications, October 25, 1993.

SECTION II. (High-seas Fleet)

6. *Suisan Keizai Shinbun*, July 29, 1992.
7. Reports on this venture are confused. One source described the vessels and crews as Russians and another as from one of the Soviet successor states, probably Estonia.
8. For details see the Honduran chapter of this report.

SECTION III. (Vessel Sources)

9. U.S. Embassy, Panama City, October 1, 1978.
10. Panama City Circuito RPC 1720 GMT, March 30, 1977.
11. Panamanian regulations require, for example, that shrimp fishermen turn in two vessel licenses before obtaining a license for a new trawler. As a result, fishermen prefer to continue operating their old vessels. U.S. Embassy, Panama City, July 2, 1993.
12. "Preocupa a pesqueros la construcción de naves," *La Prensa*, September 8, 1981.
13. "Vacamonte: puente para el aprovechamiento de los recursos naturales de la nación," *La Republica*, August 14, 1980 and U.S. Embassy, Panama City, March 23, 1993.
14. "Sale of German trawler 'Arcturus N,'" *Eurofish Report*, December 9, 1981, p. 6.
15. *World Fishing*, March, 1985.

16. "1976 Japanese fishing vessel exports," *Minato Shinbun*, March 27, 1977, p. 1.
17. "Fishing boat construction," Panama City Circuito RPC, 1720 GMT, March 30, 1977.
18. "Panama: Adquiere 10 buques de cerco en Peru," *Industrias Pesqueras*, October, 1979, p. 15 and "Panama pursers fitted out," *Fishing News International*, February, 1980.
19. "Vessels on order at Spanish yards for 1989," *World Fishing* April 1989, p. 12.
20. "U.S. fishing vessel construction, 1981," *The Fish Boat*, December, 1981.
21. "Panama: Construye 3 grandes atuneros," *Industrias Pesqueras*, September 1, 1979.
22. "U.S. fishing vessel construction, 1981," *op. cit.*

SECTION IV. (Foreign Fishing)

23. U.S. Embassy, Panama City, July 2, 1993.
24. U.S. Embassy, Panama, July 30, 1993.
25. U.S. Embassy, Panama, September 10, 1993.
26. U.S. Embassy, September 10, 1993.
27. For details see the Peruvian chapter of this report.
28. Few details are available. Panamanian sources, however, report that the Panamanian company Mr. Fish was buying lobster from Russian trawlers calling at Balboa. He said the Russians are catching the lobster in fisheries off Peru and Chile. Different Panamanian companies have been involved in processing the lobster, including Mr. Fish, Ocean Queen Seafood, Altrix, and Agromarina. Some problems processing the lobster has been reported, apparently as a result of paint from the vessel holds. The lobster involved is reportedly *Procyris bajamondes*, which the Panamanians identify as a deep-water species. Official documents indicated that these lobster sales ended in 1991. One local report suggest that the companies involved may have lost about \$1 million. U.S. Embassy, Panama City, June 15 and July 20, 1993 and Nishio, *op. cit.*
29. Andrew Plowman, U.S. Embassy, Panama City, personal communications, July 20, 1993. Previously most Soviet crew exchanges were conducted through Callao in Peru.

SECTION V. (Joint Ventures)

30. Suisan Sha, *Suisan Nemkan*, 1992, (Suisan Sha: Tokyo, 1992), pp. 194.
31. IATTC, *Annual Report, 1991* (IATTC: La Jolla, 1992), p. 156.

SECTION VI. (Distant-water Operations)

32. One flag of convenience tuna seiner was removed from Panamanian registry in 1993 because of violations of Panamanian regulations protecting dolphins. U.S. Embassy, Panama City, March 29, 1993.

33. The vessels appear to be owned by Panamanian incorporated companies. The nationality of the company owners can become quite murky. For example one owner is a Greek national who has lived in Panama for many years and now makes his home there.
34. The ETP includes both FAO areas 77 and 87. As the northern boundary of area 87 is close to Panama, a cursory examination of FAO statistics given the mistaken impression that the Panamanian catch in area 87 is a distant-water fishery (Latin America, appendix C4g1).
35. For details see the Panamanian chapter of this report.
36. For a discussion of the various reasons for such flag transfers see the overview section of this report.
37. Cheng-Fei Huang, Fisheries Specialist, Taiwan Coordinating Council for North American Affairs, personal communications, October 21, 1993.
38. The authors do not have data on ownership. Available data on country of construction provides some clues. Many vessels are still owned in the country where they were constructed, but such an assumption is imperfect at best due to sales and resales.
39. One source indicates that Danish interests have registered vessels in both Panama and Poland, and perhaps other countries, to avoid restrictions on salmon fishing in the northern Atlantic. The vessels are targeting international waters north of Iceland. R.B. Williamson, Inspector of Salmon and Freshwater Fisheries for Scotland, personal communications, September 30, 1993.
40. The *Brodal* fished for salmon in the North Atlantic October 17-December 9, 1989. NASCO Council, "Report of the international meeting on surveillance for salmon in international waters," CNL(93)27, paper presented at the Ninth ICES Dialogue Meeting and the 10th Annual Meeting of the North Atlantic Salmon Conservation Organization (NASCO), June 7-11, 1993.
41. While the vessel was registered in Panama, Danish authorities took legal action because the crew was Danish citizens.
42. *Eurofish Report*, March 15, 1990.
43. U.S. Embassy, Panama City, May 26, 1993, and June 24, 1993.
44. NASCO Council, "Report of the international meeting," *op. cit.*
45. U.S. Embassy, Panama City, June 24, 1993.
46. Gene Witham, NMFS Special Agent, personal communication, July 27, 1976.
47. The swordfish catch as well as small quantities of tuna and shark fins is reportedly being shipped to Venezuela for processing. Nishio, *op. cit.*
48. U.S. Embassy, Panama City, June 18, 1993.
49. Information on the privatization process in Russia is limited. The authors note the major former Russian state fishing companies (SEVRYBA, DALRYBA, and SOVRYBFLOT) are now referred to as "associations." Many of the same officials that previously ran the state corporations appear to have management control of the new associations. No information is available, however, on their current legal status. Some of the vessels transferred

to Panamanian and other flag-of-convenience flags, however, may now be owned and operate by new private corporations set up outside Russia.

50. "Russian vessels raise 'pirate' flags," *Izvestiya*, June 4, 1993. Unsubstantiated reports charge that some former Soviet officials have made substantial sums by transferring vessels from the state companies at a fraction of their value.

51. One 1990 report, for example, described a Taiwan squid jigger with about 20 other Taiwanese vessels. The vessel and two other Taiwan fishing vessels were transshipping their catch to the Panamanian-flag reefer, the *Sea Frost* for shipment to Japan. Jonathan Gordon, "Drift netting in the vicinity of the Azores," International Fund for Animal Welfare, press release, 1990.

52. See the Peruvian chapter of this report for details.

53. Charles A. Diaz, NMFS Special Agent, personal communication, October 14, 1976.

54. Huang, personal communications, *op. cit.*, October 21, 1993.

55. Panamanian fishery officials have told U.S. Embassy personnel that they do not include the catch outside Panamanian waters in Panamanian fishery statistics. U.S. Embassy, Panama City, August 13, 1992. The FAO, however, includes some, but not complete, distant-water catches in its statistical entries for Panama. Presumably, some Panamanian agency is passing on reports from the foreign companies operating the vessels.

56. As mentioned above the owners are a varied group, but include some Panamanians and resident aliens.

57. For details see the Colombian chapter of this report.

58. See the Peruvian chapter of this report.

59. U.S. Embassy, Santiago, January, 14, 1993.

60. Huang, personal communications, *op. cit.*, October 21, 1993.

61. Armando Martinez, OLDEPESCA, personal communications, October 25, 1993.

62. EC officials reportedly informed the Panamanian Government at an October 18 meeting that the tariff is justified on the following grounds: 1) Panamanian-flag vessels fishing in contravention to international fishery conservation agreements, 2) flag-of-convenience issues, 3) overfishing causing unemployment in the EC, 4) "excessive" imports of fishery products into the EC. Panamanian officials have requested a technical meeting with the EC in December to discuss the problem. U.S. Embassy, Panama, November 2, 1993.

APPENDICES

Appendix A.--Panama. Large* fishing vessels registered, 1993

Country#/Vessel	Size	Built	Vessel type**
	GRT	Year	
Belgium			
Klondyke	709	1965	510
Hai Fa No 11	706	1985	510
Ying Hui Hsiang	705	1989	510
Yuh Yow No 102	719	1989	510
	<u>2,839</u>		
Canada			
Mitzi	662	1967	510
France			
Celebes Reefer	1,130	1963	534
Germany (GFR)			
Stella Maris	2,557	1965	512
Milu Vieira	914	1960	512
Nigata Maru	1,544	1966	512
Pheintal	2,176	1965	512
Tony Vieira	914	1961	512
	<u>8,105</u>		
Germany (GDR)			
Dubrava##	12,403	1988	129
Kildinsky Proliv##	12,406	1989	129
Kolskiy Zaliv##	12,410	1986	129
Motovskiy Zaliv##	12,383	1984	129
Pamyat Ilyicha##	12,403	1988	129
Vasiliy Poleshchuk##	11,755	1987	129
Kabli	507	1960	511
Mar Caribe 3	644	1966	511
Mar Caribe 5	644	1966	511
	<u>75,555</u>		
Greece			
Kapitan Churilov	12,413	1991	129
Italy			
Mare Serenitatis	631	1968	510
Rosanna S	1,509	1950	511
Tontini Pesca Quarto	1,584	1970	510
Vida	615	1966	510
	<u>4,339</u>		
Japan			
Agua Verde I	656	1975	510
Aurola No 1	1,502	1962	512
Dae Sung No 2	991	1966	510
Dae Sung No 3	991	1966	510
Donfico No 701	1,497	1971	510
Dong Bang No 99	733	1979	510
Ghafar No 68	1,877	1965	512
Gibmondial I	1,493	1962	512
Golden Discovery	1,551	1967	512
Great Hope	832	1983	510
Hakko Atenea	1,176	1990	540
Jenny No 11	1,392	1960	511
Jia Ming	1,278	1965	511
Jupiter 90	582	1990	510
Melilla No 201	1,878	1966	512
Michelle No 1	1,597	1961	511
Orion VI	672	1979	510
Peonia No 1	1,597	1961	511
Peonia 7	1,597	1962	512

Peonia No 9	2,780	1963	512
Porfesa III	1,006	1960	566
Puk Yang No 7	999	1967	512
Reina No 101	999	1971	510
Sagami Maru	653	1956	510
Sea Express	2,267	1973	129
Sea Princess III	999	1966	510
Serrekunda No 3	752	1974	510
Skyfrost	1,894	1970	534
Solomon Star	1,184	1957	510
Sun Panama	2,899	1971	534
Sur Este No 707	816	1983	510
Venture Luna	1,246	1982	564
Young No 9	634	1970	510
	<u>43,020</u>		
Netherlands			
Aguas Santas	1,606	1949	510
Amazonas	1,219	1948	510
	<u>2,825</u>		
Peru			
Celebes Uno	559	1974	510
Poland			
Cidade De Aveiro	1,478	1969	512
Cidade De Ilhavo	1,488	1968	512
Gafanha Do Carmo	1,485	1969	512
Porto De Aveiro	1,482	1969	512
Santa Barbara I	836	1969	510
Santa Joana	836	1969	510
	<u>7,605</u>		
Portugal			
Alpes I	1,174	1958	510
Alpes II	1,257	1941	510
Alpes III	1,165	1956	510
Leone	1,818	1962	510
Leone II	957	1939	510
Leone III	1,395	1952	510
Leone IV	1,161	1952	510
Privateer	767	1958	510
Rio Cabril	1,298	1952	510
	<u>10,992</u>		
Singapore			
Western Pacific I	825	1980	566
Atun Tres	617	1989	510
Chance No 101	652	1990	510
Ibermar VI	638	1989	510
La Paz 301	617	1989	510
La Paz 302	617	1990	510
La Paz 303	617	1990	510
La Paz 202	617	1989	510
Penta Marine No 372	569	1990	510
Penta Marine No 373	569	1990	510
Tonina III	617	1989	510
Tonina V	617	1989	510
	<u>7,572</u>		
Spain			
Arcay Dos	1,293	1965	511
Al-Nasim	937	1991	510
Al-Shafq	937	1992	510
Albacora Caribe	2,058	1990	510
Albacora Diez	1,281	1977	516
Albacora Nueve	1,281	1976	516
Albacora Seis	1,836	1976	516
Alnajma Albaidha	937	1992	510
Arcay	541	1974	510
Baffin Bay	1,754	1993	510
Columbo III	589	1967	510
Columbo IV	589	1967	510
Columbo V	713	1966	511
Columbo VI	698	1964	510
Columbo VII	830	1967	510
Columbo VIII	830	1966	511
Dushinka	612	1965	511

Ensenada	1,209	1983	516
Garrido Primero	590	1967	510
Intertuna Dos	2,058	1990	500
Intertuna Uno	1,498	1980	516
Juan Maria Soroa	984	1975	512
Julie L	1,516	1972	511
Lagoscho	2,052	1977	510
Mar Caribe 1	2,497	1970	512
Mar Caribe 2	2,396	1969	512
Mariano Otero	1,213	1983	516
Pescamex I	666	1969	510
Pescamex II	666	1969	510
Pescamex III	666	1968	510
Pescamex IV	666	1968	510
Salaino	1,213	1988	510
Santa Ines	1,360	1954	510
Txori Aundi	2,030	1984	516
Zarqa Alyamana	937	1991	500
	<u>41,933</u>		
Sweden			
Tjamar	582	1948	510
Ukraine			
Frio Crimea	6,989	1992	129
Igor	4,407	1993	512
Starfish	4,407	1993	512
	<u>15,803</u>		
United Kingdom			
Arctic Cavalier	764	1960	510
Volesus	577	1956	510
	<u>1,341</u>		
USSR			
Golden Valley I	6,607	1985	129
Komtek II	1,178	1979	512
Kommunary Nikolayeva	6,989	1989	129
Odyssey	2,788	1970	566
Porto Santo	1,823	1962	512
Rybak Amura	732	1987	511
	<u>20,117</u>		
United States			
Chiriqui I	1,157	1975	517
Eastern Pacific	724	1965	510
Hornet	778	1962	510
Namburg Pioneer	1,106	1980	516
Palinurus	998	1972	510
Queen Mary	509	1968	510
Reefer Star	3,759	1945	534
Sea Chase	1,020	1981	516
Trinidad III	509	1969	511
	<u>10,560</u>		
Yugoslavia			
Jasna	612	1966	510
Total	<u>268,564</u>		

* 500 GRT or larger

** ONI vessel types

- 129 - Refrigerated cargo, fishing
- 500 - Fishing vessel, unspecified
- 510 - Trawler
- 511 - Refrigerated trawler
- 512 - Fish factory trawler
- 516 - Tuna seiner
- 517 - Seiner
- 534 - Processing refrigerated fish transport
- 540 - Fish base ship, supply and transport
- 564 - Transport, fishing fleet
- 566 - Fisheries research vessel

Country where constructed

Probably sold to the Soviet Union.

Source: U.S. Office of Naval Intelligence (ONI)

Appendix B.--Panama. Fishing fleet of large* vessels

Type	Vessels	
	Number	Capacity
	Number	1,000 GRT
Fishing#	125	142.8
Support/transport##	17	121.1
Research	3	4.6
Total**	145	268.6

* 500 GRT or larger

** Totals may not agree due to rounding

ONI vessel types

- 129 - Refrigerated cargo, fishing
- 500 - Fishing vessel, unspecified
- 510 - Trawler
- 511 - Refrigerated trawler
- 512 - Fish factory trawler
- 516 - Tuna seiner
- 517 - Seiner
- 534 - Processing refrigerated fish transport
- 540 - Fish base ship, supply and transport
- 564 - Transport, fishing fleet
- 566 - Fisheries research vessel

Types 500, 510, 511, 512, 516, and 517

Types 129, 534, 540, and 564

Source: U.S. Office of Naval Intelligence (ONI)

Appendix C.--Panama. Vessels using the Vacamonte international pier, by flag of registry, 1991-92

Country*	Vessels	
	1991	1992
	Number	
Colombia	1	2
Cyprus	5	2
Ecuador	7	9
El Salvador	-	1
Greece	-	2
Ireland	-	1
Iceland	-	1
Spain	1	-
United States	5	-
Honduras	3	-
Mexico	17	22
Panama	9	9
Peru	1	-
St. Vincent	2	-
Vanuatu	10	1
Venezuela	2	5
Total	63	55

* Country of registry

Source: National Port Authority

Appendix D.--Panama. Vessels using the Vacamonte International Pier, by service provided, 1991-92

Service provided	Vessels	
	1991	1992
Provisions	7	3
Provisions and launch service	-	11
Equipment	17	-
Equipment and launch service	-	7
Provisions, launch service and equipment	-	10
Provisions and equipment	30	6
Launch service	-	12
Others	9	6
Total	63	55

Source: National Port Authority

Appendix E--Panama. Vessels using the Vacamonte International Pier, by type and tonnage, 1991

Size class	Tuna boat	Vessel type		
		Refrigerated vessels	Bulk carriers	Other
<u>GRT</u>		<u>Number</u>		
0-500	4	-	-	5
501-1,00	2	-	-	1
1,001-1,500	22	3	1	1
1,501-2,000	10	3	-	-
2,001-2,500	-	2	-	-
2,501-3,000	1	1	-	-
3,001-Over	-	-	-	7
Total	39	9	1	14

Source: National Port Authority

Appendix F.--Panama. Vessels using the Vacamonte International Pier, by type and tonnage, 1992

Size class	Vessel type			
	Tuna vessel	Refrigerated vessels	Bulk carriers	Other
GRT		Number		
0-500	2	-	-	8
501-1,000	2	-	-	-
1,001-1,500	21	1	-	2
1,501-2,000	8	1	3	1
2,001-2,500	-	-	-	-
2,501-3,000	-	-	-	2
3,001-over	-	-	-	4
Total	33	2	3	17

Source: National Port Authority

Appendix G.--Panama. Vessels using the Vacamonte International Pier, by country of origin and destination, 1991

Country	Vessels	
	Originating in	Destined to
	Number of vessels	
Germany	1	-
Colombia	13	8
Costa Rica	6	2
Ecuador	7	7
El Salvador	-	1
Spain	1	2
United Kingdom	1	-
Guatemala	-	2
Mexico	2	-
Panama	24	22
U.S. (Puerto Rico)	1	-
Venezuela	1	2
Fishing grounds	6	15
Unspecified	-	2
Total	63	63

Source: National Port Authority

Appendix H.--Panama. Vessels using vacamonte international pier,
by place of origin and destination, 1992

Country	Vessels	
	Originating	Destined
	Number of vessels	
Colombia		
Barranquilla	5	5
Buenaventura	9	8
Ecuador	8	7
United Kingdom	1	-
Guatemala	-	2
Ecuador (Guayaquil)	2	1
Honduras	2	2
Iceland	1	1
Martinique	-	1
U.S.		
Puerto Rico (Mayaguez)	1	-
New Orleans	2	-
Mexico	-	1
Panama	9	8
Fishing grounds	14	17
Unspecified	1	2
Total	55	55

Source: National Port Authority

Appendix I.--Panama. Vessels using the Vacamonte International Pier,
offloading or onloading cargo, 1991-92

Vessel type	1991		1992	
	Total	Loading*	Total	Loading*
	Number			
Bulk carrier	1	1	3	3
Refrigerated vessels	9	9	2	2
Tuna vessel	39	30	33	16
Others	14	12	17	15

* Off loading or onloading

Source: National Port Authority

Appendix J.--Panama. Foreign fishing vessel seizures.

Year	Country	Vessels
		Number
1990	NA	-
1991	United States	1
	Venezuela	1
1992	Colombia	1
	Costa Rica	3
	Ecuador	2
1993*	Vanuatu	1

NA - Not available

* Through June 1993.

Source: U.S. Embassy, Panama, July 2, 1993.

Appendix K.--Panama. Soviet lobster*
landings in Panama (Balboa)

Date	Quantity
<u>Metric tons</u>	
1990	
November 8	30
December 6	37
1991	
January 31	47
March 14	8
1992	-
1993**	-

Note: Data prior to November 1990 is not available, but the Soviets/Russians are not believed to have made any further shipments after March 1991. The landings were packed and mostly exported to the United States.

* *Procyris bajamondes* (A deep-water lobster believed to be taken off Ecuador and Peru.)

** Through September

Source: Dirección General de Recursos Marinos.

Appendix L.--Panama. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
<u>1,000 Metric tons</u>									
Inland (02)	Negl	Negl	0.3	0.7	0.9	0.7	0.2	0.3	0.3
Coastal									
31	3.3	NA	0.6	0.9	1.0	1.8	2.0	2.6	1.3
77	108.0	194.7	274.9	113.2	142.2	109.9	173.9	105.8	121.3
Subtotal	111.3	194.7	275.5	114.0	143.2	111.7	175.9	108.4	122.6
Distant Water									
34	-	-	7.2	8.8	3.5	3.0	6.5	13.4	8.0
51	-	-	6.2	8.0	8.0	9.0	5.8	24.3	16.5
87	-	-	NA	NA	NA	3.4	4.8	NA	NA
Subtotal	-	-	13.4	16.8	11.5	15.4	17.1	37.7	24.5
Total	111.3	194.7	289.2	131.5	155.5	127.7	193.3	146.4	147.4

NA - Not available

Negl - Negligible

Source: FAO, Yearbook of Fishery Statistics, various years.

4. SOUTH AMERICA

4.1

ARGENTINA

Argentine fishermen are developing an important modern fishing fleet, increasing capable of utilizing the country's significant fishery resources. The country's growing fleet of large freezer and factory trawlers is giving Argentine fishermen an increasing capability to conduct fisheries in the still not heavily fished grounds along the lightly populated southern coast. An increasing number of Argentine vessels are capable of distant-water operations. It is unlikely that the Argentines, however, will initiate such operations. Productive grounds are still available within the Argentine 200-mile Exclusive Economic Zone on which the vessels could be deployed. The fishing industry is still a relatively new activity in Argentina. Many fishermen would probably object to the extended voyages that would be required for distant-water operations. Two other possibilities exist for the Argentina fleet. One, they could be deployed on the high-seas north of the Falklands and fish on *Illex* squid stocks before they move south into the Falkland Islands Conservation Zone. Two, the Argentines could deploy vessels in the Antarctic. Argentina through 1991 has not reported an Antarctic catch, but as the fleet expands and Argentine fishermen begin to more fully utilize resources off their southern coast it is quite possible that in the future may desire to begin Antarctic operations. Neighboring Chile has already initiated such activities.

There appear to be only limited prospects for expanded distant-water fishing in the southwestern Atlantic. The Argentine Government in 1992 decided for the first time to offer foreign fishermen access to Argentine grounds under terms allowing some reasonable return to the fishermen. Japan and Taiwan fishermen have already deployed vessels. European Economic Community (EC) countries (mainly Spain) may be able to deploy vessels under a 1992 bilateral agreement through which the Argentines are offering allocations totaling 250,000 metric tons. These shifts will, however, probably not result in significantly increased distant-water fishing in the southwestern Atlantic.

Argentine charters: The Japanese and Taiwan fishermen have simply shifted vessels from the Falklands fishery and have not added additional vessels. It is possible that competition between the Falklands and Argentina for greater fishing fee income may result in the licensing of increased numbers of foreign fishermen. Many of the major stocks, especially the key squid stocks, however, are already heavily fished. Even if Falklands and Argentine officials cannot cooperate to limit allocations to foreign fishermen, stocks such as squids will not be able to support greatly increased allocations on a sustained basis.

EC bilateral: It is still unclear how many EC companies will decide to participate in Argentine ventures if, and when, the agreement is finally ratified. The access conditions are quite involved. Vessel owners will have to shift ownership or establish an Argentine operation. The EC vessels will have to be transferred to the Argentine flag and Argentine ownership and the ventures will thus, in many instances, be of only temporary assistance to distressed Spanish and other European fishermen. The EC fishermen, however, can form majority-owned companies in Argentina to operate some of the vessels and this seems to be attracting considerable Spanish interest. A massive 250,000ton allocation is projected in the agreement. This is a very substantial allocation and may not prove realistic.

High seas: Foreign fishermen operating on the high seas, often under flags of convenience, will almost certainly have their operations curtailed during the 1990s. The current United Nations highseas talks could result in a convention limiting this activity. If the United Nations talks are not successful, coastal states like Argentina may act unilaterally to restrict high-seas fishing.

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I. GENERAL BACKGROUND

Argentina conducts Latin America's largest trawl fishery, focusing primarily on Patagonian hake (*Merluccius hubbsi*) and other demersal fish. The country's fishermen also carry out smaller, but still important, fisheries for squid, shrimp and a variety of other species.¹ The demersal fisheries conducted mostly with coastal trawlers were relatively stable in the early 1980s at about 0.4 million metric tons (t)

(Latin America, appendix C2a1).² Most of the hake catch was landed at the northern port of Mar del Plata. Argentine fishermen increased the catch to nearly 0.6 million t in 1987, but reported disappointing results in 1988 and 1989. The fishermen with their expanding fleet are achieving much improved catches, reporting substantial increases in 1990 and 1991 (Latin America, appendix C2a1) and setting an all-time record of 0.7 million t in 1992, nearly a 10 percent increase over 1991 levels.³ Fishermen reported a big 1992 increase in blue whiting, squid, and shrimp, but lower hake catches.⁴

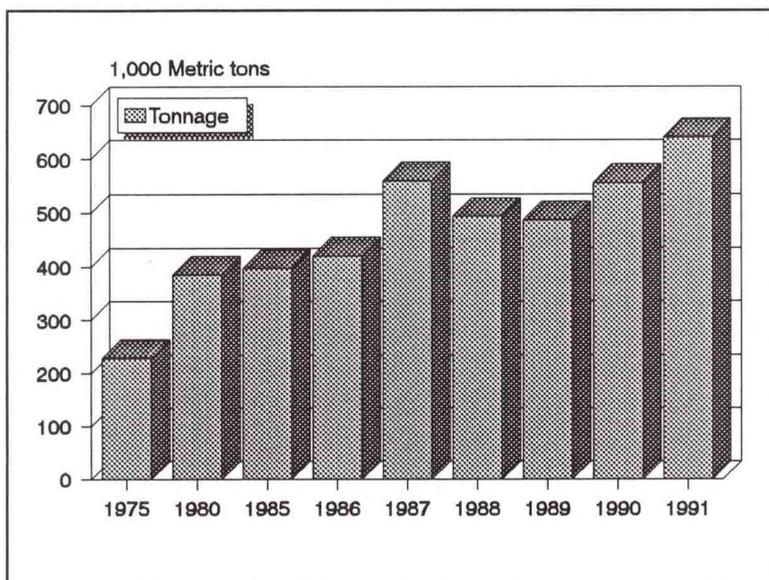


Figure 1.--Argentine fishermen have reported substantial catch increases since 1989, taking advantage of strong export markets.

The Argentine fishing industry has undergone a major restructuring since 1989. Much of the recent catch increase is due to the country's expanding fleet of freezer and factory trawlers (Latin America, appendices B2a1-2). The introduction of these larger vessels in changing the profile of the Argentine fishing industry.⁵ The larger freezer trawlers and factory trawlers are becoming an increasing important part of the industry. Conversely many of the long-established fishing companies operating shore-based processing plants in Mar del Plata are reporting financial problems. Some bankruptcies have been reported. The larger vessels generally land their catch at the developing ports along the central and

southern coast, especially at Ushuaia, Puerto Deseado, Puerto Madryn, C. Rivadavia, and Necochea. Nearly half the total catch, however, is still landed at Mar del Plata, especially that of the smaller coastal vessels. The respected Fundación Atlantica is participating in a major study to assess the economic changes affecting the fishing industry.

Argentina exports most of its landings because the country has only a small domestic market for fishery products. Argentine consumers have traditionally preferred beef, reflecting the ready availability of high-quality domestically produced meat at low cost. Exporters have achieved some impressive results since 1985 as they took advantages of declining groundfish catches in Europe and the United States to expand their market. Argentine exporters have increased shipments from \$150 million in 1985 to \$450 million in 1991 (Latin America, appendix E1).

The Argentine Government's macro-economic policies during the 1980s impaired export oriented industries like fisheries. The Government maintained restrictive trade practices, overvalued the currency, pursued fiscal policies resulting in high domestic inflation rates, and operated huge inefficient state conglomerates responsible for perhaps half of the country's overall production. Exporters could barely recovered their costs with foreign exchange earnings because the Government maintained such an unrealistically high exchange rate.

Argentine fishing companies and other exporters during the 1980s reported a variety of economic problems. Many companies, as a result, found it difficult to finance improvements needed to meet the demand for better quality products in key export markets. The creation of joint ventures and other arrangements with several foreign companies proved of some assistance, but restrictive Argentine regulations discouraged many foreign investors. The country's deepening economic crisis in the late 1980s exacerbated the problems fishing companies were encountering. As the companies were unable to finance modernization programs, the fishing fleet reportedly deteriorated significantly.⁶

The substantial successes reported by Argentine fishing companies since 1989 are probably due to three principal factors:

World market shifts: Declining cod stocks in the North Atlantic created market opportunities for Argentine exporters during the late 1980s and early 1990s, partially explaining the recent catch increases.⁷ Argentine fishermen were able to capitalize on rising demand and higher prices for cod substitutes like hake.

Menem Administration: The Menem Administration took office in 1989 amid an economic crisis that included a hyper-inflation that had left the country's currency nearly worthless. At the peak of the economic crisis in 1989 the inflation rate was about 200 percent per month. President Menem moved quickly to stabilize the economy.⁸ The Government introduced major economic reforms, what President Menem referred to as "major surgery without anesthesia." The reforms included a new stable currency system, stricter tax collection, Government spending cuts, and privatization of deficit-plagued state corporations. These reforms have had a profound impact on the Argentine economy.⁹ Argentine observers report that the reforms have stabilized the currency; reduced the Government budget deficit; privatized state companies; liberalized foreign investment laws; and reduced inflation.

Joint ventures: Hard pressed foreign fishermen gave increased attention to Argentina in the 1990s. Both escalating prices for groundfish and access difficulties off other countries encouraged foreign fishermen to renew efforts to participate in the Argentine fishing industry.

Argentine observers vary as to the long-term impact of the Menem reforms on the fishing industry.

Positive impact: Mario López Olaciregui, an executive with the Argentine fishing company Harengus, credits the Menem reforms with establishing a relatively stable economic and political environment conducive to long-term investment.¹⁰ Néstor Sánchez Real, with Antártida Pesquera Industrial (API), concurs that the Menem reforms are having a positive impact on the Argentine economy.¹¹ Lower domestic inflation, more efficient port and utility service, as well as the reduction of import duties, have benefitted the fishing industry.

Negative impact: Not all fishing industry observers, however, are as impressed with the Menem reforms. Victor Tarigo, with ARGENOVA, believes that while the industry will, in the long run, benefit from the Government's reforms, they are currently causing a painful period of adjustment.¹² Other local observers insist that export-oriented industries, such as fisheries, are being adversely affected by the reforms. Spiraling domestic costs have caused severe financial problems at some companies, primarily because of the recent imposition of new fixed exchange rates. The fixed exchange rate limits export revenues (in local currency) because the Government has so overvalued the currency.

Fishing company executives, despite some concerns, are generally optimistic about the impact of the Menem reforms. López, for example, believes that the reforms have enabled many companies to cut costs and improve efficiency despite falling export earnings.¹³ He adds, however, that the fishing industry still faces significant problems and is not yet fully competitive in the world market.¹⁴

II. HIGH-SEAS FLEET

Argentina operates the third largest Latin American fleet of large vessels capable of high-seas operations. The country reported a fleet of 72 large (500 Gross Registered Tons-GRT or greater) fishing and fishery support vessels totaling nearly 110,000GRT to Lloyd's of London in 1992. Almost all of these vessels are freezer trawlers and factory trawlers with a total tonnage of over 105,000GRT (appendix B2a1-2). In addition, two refrigerated fish carriers and/or processing vessels, totaling nearly 3,000GRT, were also registered in Argentina (Latin America, appendix B4b1-2). These estimates are basically confirmed by data collected by FAO (appendices A and B) and the U.S. Navy Office of Naval Intelligence (ONI) (appendix C).

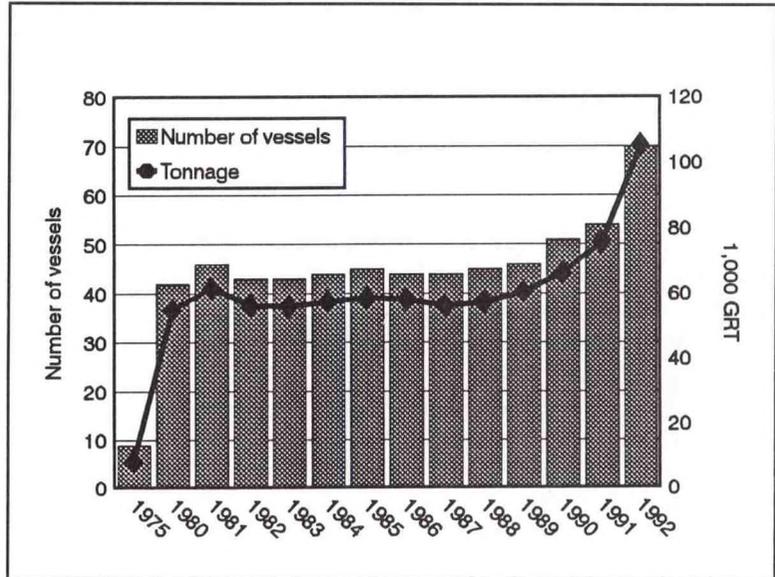


Figure 2.--Argentine companies since 1989 have steadily increased the number of large vessels in the fleet.

The Argentine high-seas fleet remained little changed at 42-46 vessels from 1980 through 1989 (Latin America, appendix B2a2). Fishing companies, reacting to market opportunities in Europe, began expanding in 1990--adding 16 vessels in 1992 alone. The authors believe that the companies acquiring these vessels were reacting, in part, to the Menem economic reforms and the improving economic conditions in Argentina. The increasing activity of foreign companies (primarily Spain, Japan, and Korea) and formation of new joint ventures have played a critical role. The lowering of tariffs on vessel imports has made the importation of vessels possible. Most of the imports have been brought in by joint venture companies. The larger vessels in the Argentine fleet during the 1990s have been operated mostly by joint venture companies (Japan and Spain), but Argentine companies have also been gradually expanding their fleets and the size of the vessels deployed along the central and southern coasts.

The Argentine fleet primarily targets hake and other demersal stocks. Much of the country's key hake catch has traditionally been taken in the northern fishery by small coastal trawlers out of Mar del Plata. The fleet is also deployed in smaller fisheries for squid and shrimp. The larger high-seas vessels with freezer capacity are deployed mainly off central and southern Argentina from Puerto Madryn, Puerto Deseado, Bahía Blanca and other

ports.

III. VESSEL SOURCES

Argentine fishing vessels have been built in both domestic and foreign shipyards. Most small coastal trawlers which dominated the fleet during the 1970s were built in domestic yards. Many larger, foreign-built vessels with refrigerated holds were used vessels imported from Europe. Changing laws and regulations have a substantial impact on both domestic vessel construction and imports. The Menem policy since 1989 has had a major impact permitting the importation of many used, but modern vessels that have significantly expanded the capabilities of the Argentine fishing fleet.

A. Domestic Shipyards

The smaller trawlers, deployed in the northern fishery, have mostly been built in domestic yards.¹⁵ Argentine sources report that domestic yards built 100 fishing vessels in 1979 alone.¹⁶ Domestic vessel construction, however, appears to have declined sharply.¹⁷ Argentine companies reportedly imported 85 fishing vessels during 1982, but ordered only 15 from domestic shipyards.¹⁸ Argentine shipyards can potentially build ships of up to 60,000 Dead Weight Tons (DWT), but have not built large fishing vessels. The largest Argentine-built fishing vessel noted by the authors had been only about 350 GRT.¹⁹ Argentine yards have reported some export sales, but the authors believe that such foreign sales are limited.²⁰

B. Government Import Policy

Argentine import policies during the 1970s and 1980s significantly affected the fishing fleet. The Government attempted to balance the need for modern, low-cost vessels against demands from local shipyards for high protective tariffs on imported vessels. The Government ultimately chose to maintain high tariffs, and, as a result, domestic shipyards continued to demand relatively high prices. Various administrations during the pre-Menem years continued this policy of maintaining high import duties on foreign-built vessels, making such purchases uneconomical for fishing companies. Few companies, most barely profitable, could afford

to make substantial investments in such costly vessels. The Government did, however, implement some special programs permitting the import of used vessels at reduced tariff rates. Most such vessels were purchased in Europe.

Argentine shipyards did not benefit greatly from the rapid expansion of distant-water activity in the South Atlantic during the 1980s. Argentina's strict foreign fishing law and surveillance activity meant that most foreign vessels fishing without a license could not call at Argentine ports. (Yards in Uruguay and southern Chile, in contrast, did benefit from the growing demand for vessel repair and maintenance services from the expanding international fleet.) One Buenos Aires shipyard, Tandanor, was awarded a contract to repair and service Soviet trawlers after the two countries signed a fisheries agreement in 1986 and Argentina began licensing Soviet trawlers.²¹

The Menem Administration in 1989 decided to promote the importation of modern fishing vessels. The Administration lowered import duties in 1989 (Decree 342) to 10 percent of the vessel's value.²² Shipbuilders sharply criticized the Government's decision, calling it an increased burden on the domestic shipbuilding industry.²³ The Menem Administration, however, continued to favor the fishing industry and upon the expiration of Decree 342 in 1990, issued another Decree further lowering the tariff rates for imported vessels. The 1990 Decree maintained a 10 percent tax on vessels 10 years or older, but lowered the duty on newer vessels.²⁴ The tariff policy on vessel imports is aimed at modernizing the Argentine fishing fleet to help make Argentine exports more competitive on the world markets. Recent Argentine Executive Decrees, administrative regulations, legislation, and international agreements are aimed at helping Argentine fishermen take advantage of the large number of relatively modern, but inexpensive used vessels available on the international market. Argentine companies in association with foreign companies (primarily Spain, Japan and Korea) have thus been able to modernize their fishing fleets at relatively modest cost. This is resulting in a major shift in the character of the Argentine fleet. Government officials and company executives hope that the various steps taken in 1992 (new fisheries law, vessel chartering system, EC agreement) will



Photo 1.--Argentine companies have obtained vessels from several European countries. This Laskara class trawler was built in Poland.



Photo 2.--Argentine companies have also acquired substantial numbers of vessels in Japan, like this stern factory trawler.

allow the import of even more used, but relatively modern, vessels in the near future.²⁵

C. Imports

Argentina has imported both new and used fishing vessels from many countries. The larger freezer trawlers, which are becoming an increasingly important part of the Argentine fleet, have been built entirely in foreign shipyards. Most of the vessels have been imported from Europe, primarily Spain, but some of the largest vessels have been imported from Japan. Available information on imports from specific countries is as follows:

Chile: Argentine companies have obtained some used vessels from Chilean fishing companies. Pesca Chile, the Chilean counterpart of the Argentine-Spanish joint venture, Pescanova, for example, transferred two longliners to Argentina in 1992.²⁶

China: Argentina has imported vessels from China as part of a joint venture between Harengus and the China National Fisheries Company.²⁷ The 37.6-m *Codepeca I* and the *Codepeca II* are each capable of processing 10 t of fish per day, and can remain at sea for 30 days.

Japan: Several Argentine companies imported fishing vessels from Japan. Empresa Pesquera de la Patagonia y Antártida (Pesantar) has incorporated two large fishing vessels into its fleet, the *Kongo Maru* (3,200 GRT), and the *Yamato* (3,900 GRT).²⁸ Explotación Pesquera de Patagonia (PESPASA) has in its service the *Rokko Maru*. PRODESUR acquired the *Ohtori* (4,663 GRT) in 1991. Pesqueras, a U.S.-Argentine joint venture, has imported the largest fishing vessel in the Argentine fleet, the *Centurion del Atlantico* (5,900 GRT) (appendix C).

Norway: The Norwegian shipyard Aukra Industries in 1993 built the 50-m longliner *Antarctic I* with a freezing capacity of 50 t per day and a storage capacity of 725 cubic meters, for the American Seafoods Company.²⁹ The vessel is the most modern longliner in the Argentine fleet and is capable of deployment on distant-water grounds, probably in the Antarctic for Patagonian toothfish.

Spain: Spain has been one of the primary sources of imported vessels. Over half of the large fishing vessels in the Argentine fleet were built in Spain (appendix C). Many of these vessels were acquired through associations with Spanish companies. Most are older vessels built in the 1960s and 1970s, but seven newer vessels (built since 1988) were operating with the fleet in 1993 (appendix C). Antártida Pesquera Industrial's (API) fleet includes four Spanish freezer vessels. Albatross Compañía Armadora de Pesca of Mar de Plata imported four 850-GRT Spanish vessels in 1979.³⁰ Unidentified Argentine companies imported four 650-GRT freezer stern trawlers from Construcciones Navales P. Freire of Vigo, Spain in 1981.³¹ Pesurasa imported five vessels from Spain in 1981. These vessels ranged from fishing vessels as small as 269 GRT to a factory vessel of 1,157 GRT.³² COALSUD imported two ships from Spain, the *Coalsa Segundo* and the *Coalsa Tercero*, each of 1,480 GRT, for the formation of its joint venture in 1992.³³ Argentine companies have also imported Spanish-built vessels indirectly. Argentine companies purchased two Spanish-built shrimp trawlers from Mozambique in 1991.³⁴

IV. FOREIGN FISHING

A. Trends

1. 1960s

The southwestern Atlantic off Argentina is a major distant-water ground for the international fishing fleet. Distant-water catches in the area were minimal until 1966 when the Soviets began fishing. Since the Argentines enforced only a 3-mile Territorial Sea, restrictions on foreign fishing were minimal.³⁵ Virtually the entire region was open to the Soviet distant-water fleet, including the virgin grounds of the Patagonian Shelf. The Soviets achieved excellent exploratory results in 1966 and immediately deployed a massive fleet which caught 0.7 million t in 1967. The Argentine Government responded to this major Soviet effort by extending

its Territorial Sea to 200 miles and requiring foreign fishermen to apply for fishing permits.³⁶ The Argentine enforcement effort led to some violent incidents, but by 1969, the Soviets withdrew most of their vessels from Argentine-claimed waters.³⁷

The Argentine Government has since provided only limited access to foreign fishermen. Officials have not normally granted permits and quotas to foreign fishermen, although some permits have been granted through bilateral agreements.³⁸ The only way for foreign companies to gain access to Argentine fisheries has normally been through joint venture arrangements. (See "5. Joint Ventures" below.) The basic Argentine policy adopted in 1967, and for the most part pursued until 1992, has been to discourage foreign-flag fishing. This policy was initially successful and except for a few anomalous years, foreign fishing was very limited in the southwestern Atlantic during the late 1960s and the 1970s.

2. 1970s

Distant-water fishermen began to increase operations in the southwestern Atlantic again during the late 1970s. Foreign fishermen, displaced from many traditional grounds because of the extension of coastal zones, actively sought alternative grounds—especially grounds on which they could deploy large factory trawlers for demersal species. The problems faced by distant-water fishermen became especially severe after the United States, Canada, the European Community, and several other important coastal countries declared 200-mile zones in 1976 and 1977. Fishermen found they could achieve surprisingly good catches on the highseas in the southwestern Atlantic. As a result, foreign distant-water fleet owners shifted effort to the southwestern Atlantic and increased catches from only 12,000t in 1975 to 136,000t in 1980 (Latin America, appendix C4d1). Despite these impressive catches, foreign fishermen were constrained by the Argentine Navy which effectively limited harvesting operations in Argentine waters.

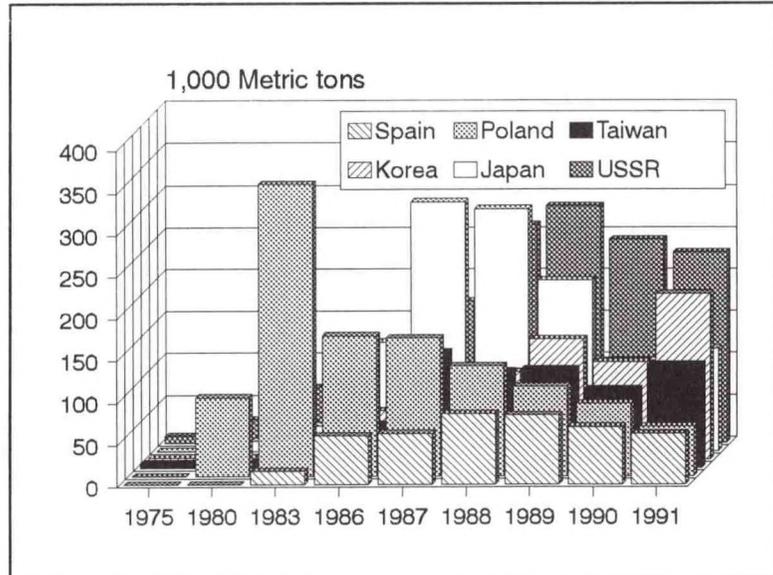


Figure 3.--Most countries, especially Poland reported catch declines in the southwestern Atlantic during the late 1980s. Korean fishermen, however, have increased their catch of mostly squid.

3. 1980s

The 1982 Falklands conflict between Argentina and the United Kingdom proved a bonanza to several hard-pressed distant-water fishing countries. The British implementation of a 150-mile military protection zone around the Falklands made it difficult for the Argentine Navy to effectively control the distant-water fishermen. Foreign fishermen, as a result, were able to increase their catch to nearly 0.5 million in 1983 (Latin America, appendix C4d1). The Argentine Government expressed increasing concern over the constantly escalating levels of foreign fishing. One Argentine source estimated that over 600 distant-water fishing vessels were operating in the southwestern Atlantic, either off the Falklands or just outside of the Argentine 200-mile limit during 1986.³⁹

The situation in the southwestern Atlantic was further complicated in 1986 when Argentina attempted to negotiate fishery access agreements with the distant-water fishing countries operating off the Falklands. The effort was part of a larger Argentine diplomatic initiative to gain international acceptance for its claims to the Falklands and other South Atlantic islands.⁴⁰ The Argentine demands for access to their 200-mile zone were so involved and costly, however, they were unable to successfully conclude an agreement with any country

having a market-oriented economy. Most distant-water fishermen chose to continue fishing off the Falklands, or on the high seas.

Argentina intensified its fisheries enforcement activities and some violent incidents occurred. The Argentine Navy seized foreign vessels detected fishing without permits, and in several instances fired on vessels trying to elude the enforcement patrols and escape to international waters.⁴¹ The Argentine Navy seized vessels from Bulgaria, Japan, Korea (ROK), Poland, Spain, the Soviet Union, and other countries.⁴² The Navy reports seizing about six vessels annually and in 1993 (through July) had seized five foreign vessels (Korean, Japanese, Polish, Russian, and Spanish). The standard fine is \$0.5 million, but is sometimes reduced depending on circumstances.⁴³

Argentina did succeed in negotiating agreements with the Soviet Union and Bulgaria in 1986.⁴⁴ These two agreements were exceptions to the overall Argentine policy of discouraging foreign fishing and instead promoting joint ventures.⁴⁵ The Argentine-Soviet fisheries agreement permitted Soviet vessels to catch up to 180,000 t of fish annually in Argentine waters. A portion of this catch had to be landed for processing in Argentina and marketed through Argentine companies. The Soviets and Bulgarians were also required to purchase Argentine semi-processed fishery products. While this proved financially beneficial for the Argentine companies involved, there appears to have been little lasting benefit to the Argentine fishing industry as a whole. The Soviets operated their vessels as a distant-water fishery and did not transfer any vessels to Argentine partners. Neither were the Soviets able to offer technical assistance or investment capital to upgrade Argentine processing plants.

The British declared the 150-mile Falklands Interim Conservation Zone (FICMZ) in 1987 and authorized the Falklands Island Government (FIG) to begin licensing foreign fishermen.⁴⁶ The British action was, at least partly, a response to the Argentine effort to negotiate fisheries access agreements.

The British were also concerned with the increasing pressure on stocks by distant-water fishermen. Argentine officials noted that many of the countries which refused to accept their offer for bilateral access agreements in 1986 opted instead to purchase Falklands licenses. The sale of these licenses quickly became a major income source for FIG.⁴⁷

Both Argentina and the United Kingdom continue to be concerned about the status of stocks and the massive distant-water fishing effort, especially unlicensed distant-water catches on the high seas. Distant-water fishing in the southwestern Atlantic reached nearly 1.0 million t in 1987 (Latin America, appendix C4d1). British officials, as a result, reduced the number of FIG licenses issued in 1988. Argentine and British officials initiated periodic meetings in an effort to improve management of southwestern Atlantic resources.

4. 1990s

The current Menem administration in Argentina has instituted major economic reforms designed to open the economy by liberalizing many long-entrenched policies. Although a minor part of the Government's overall policy, the fishing industry has also been affected by these reforms. The Government passed a comprehensive fisheries law

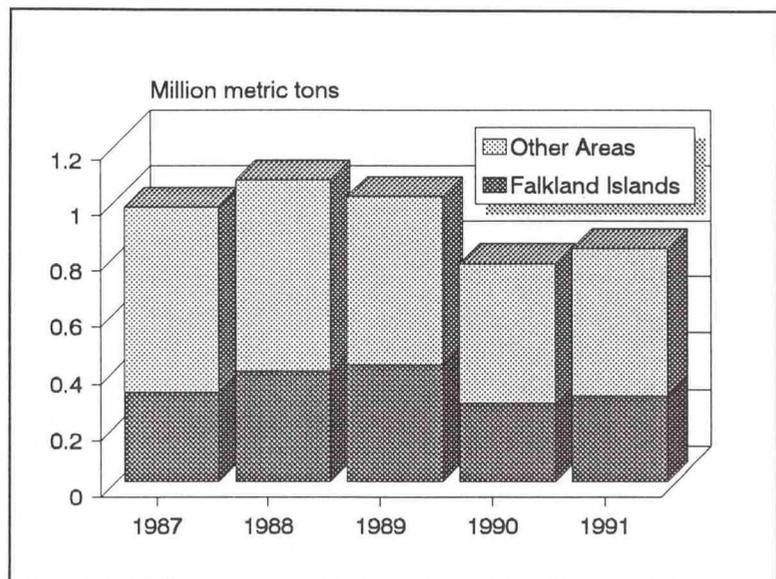


Figure 4.--Distant-water catches in the southwestern Atlantic are reported off the Falklands and in other areas, mostly beyond Argentina's 200-mile zone. Catches have declined in recent years.

in 1992 which authorized less restrictive measures for incorporating foreign vessels into the Argentine fishing fleet.⁴⁸ This has apparently made it much easier to add foreign-built vessels to the Argentine fleet.

President Menem issued a Decree (executive order) in 1992 instituting a new vessel-leasing system designed to make it easier for Argentine fishing companies to lease or charter foreign fishing vessels.⁴⁹ The Decree is, in effect, a vessel licensing system similar to that implemented in the Falkland Islands. The Ministry of Agriculture, Livestock, and Fisheries (SEAGyP) is administering the newly implemented vessel-leasing system.⁵⁰ The Decree authorizes the Ministry to establish a "Registry of Foreign Vessels and Ships." Companies contracting foreign vessels under this law must inscribe them in the Registry. The major provisions of the Decree allow an Argentine company to lease or charter foreign-flag cargo and fishing vessels for periods of from 6 months up to 3 years. The parties can subsequently extend vessel contracts. If either contracting party withdraws before the contract is fully performed, the vessel will immediately be removed from the Registry. Fishing vessels to be contracted may be older than the 7-year maximum specified for cargo ships, but only if the vessel meets the other, previously established, criteria for Argentine fishing vessels.⁵¹ Each application for contracting foreign fishing vessels must be accompanied by a proposal detailing the species and quantities to be harvested by each vessel. All vessels inscribed in the Registry will, for the term of the contract, be considered Argentine vessels and thus subject to Argentine law. The catch of contracted vessels to be exported will be labeled as Argentine product and will be subject to Argentine taxes. The SEAGyP has issued detailed implementing regulations to administer the vessel-leasing system.⁵² The regulations explain the requirements for Argentine companies seeking to lease foreign vessels. Theoretically, foreign vessels can be used to fish both surplus and non-surplus stocks.⁵³ The only species, however, for which the SEAGyP is currently approving fishing permits for leased vessels is a surplus species--squid.⁵⁴ Contracted foreign vessels can only be deployed for non-surplus stocks if they replace an already licensed vessel being withdrawn from a company's fleet.⁵⁵ The foreign vessels are subject to a maximum fee of \$120,000 per season.⁵⁶ SEAGyP

permits are issued to each contracted foreign vessel and cannot be transferred.⁵⁷ The SEAGyP regulations provide for a variety of sanctions for violations, including fines of up to \$150,000.⁵⁸ Several Spanish, Japanese, and Taiwanese companies have chartered vessels with Argentine companies under the new arrangements.⁵⁹

B. Species

The primary foreign interest in the southwestern Atlantic has been squid. Major demersal finfish stocks also occur in the area. The Soviets in their initial fishery during the 1960s, for example, primarily targeted demersal finfish. The most important demersal stock in the southwestern Atlantic is hake, but the most productive fishing grounds are along the northern and central Argentine coast and are already heavily fished by the Argentines. A variety of other demersal finfish occur further south and many of these stocks are not being fully utilized by the Argentines. The most important is southern blue whiting (*Micromesistius australis*). Some fishermen have reported problems with heavy parasite infestations. Other observers believe that this could eventually prove to be a key species. One U.S. observer reports that tests with individually-quick-frozen (IQF) fillets and blocks produced excellent results.⁶⁰ Polish companies have reported good results in their operations off the Falklands.

C. Country Activities

Many countries have operated fishing vessels in the southwestern Atlantic, including Brazil, Bulgaria, Chile, China, Cuba, Germany (FRG and GDR), Italy, Korea, Panama, Portugal, Peru, Poland, Portugal, Spain, Taiwan, the USSR, and Uruguay. The principal distant-water countries, however, have been Japan, Korea, Poland, Spain, and the USSR (Latin America, appendix C4d1).⁶¹ Available information on individual countries is as follows:

Bulgaria: The earliest reports of Bulgarian fishing in the southwestern Atlantic were during the late 1960s.⁶² The Bulgarians, however, did not report their catches during this period. Bulgaria reportedly dispatched a small number of vessels to the southwestern Atlantic along with the large Soviet fleet in 1966-67. The Bulgarian fleet took small

amounts of hake, but was withdrawn after Argentina declared a 200-mile zone. Violent incidents with the Argentine Navy hastened the Bulgarian withdrawal.⁶³ Bulgaria did not resume fishing in the region until 1984, after the British-Falklands conflict and Argentine enforcement patrols were curtailed. The authors believe that Bulgarian fishing during 1984 and 1985 took place mostly off the Falklands or off Argentina, but outside the 200-mile zone. The Bulgarians increased their catch from 10,000t in 1984 to 18,000t in 1985, primarily consisting of southern blue whiting and a small amount of squid. Bulgaria signed a fisheries access agreement in 1986 with Argentina, similar to the Soviet agreement, permitting the Bulgarians to further expand their fishery to six trawlers which were authorized to catch 60,000 t in 1988.⁶⁴ The Bulgarians, following the Soviet lead, stopped fishing off the Falklands and refused to purchase FIG licenses after the British began to manage fisheries within the 150-mile FICZ in 1987. The Bulgarian fleet moved outside the Falklands FICZ to fish near 46°S within the Argentine 200-mile zone.⁶⁵ The Argentines reported major difficulties with the Bulgarians, charging that they were not buying semi-processed products as they were required to do under the terms of the agreement.⁶⁶ As a result, Argentina abrogated the agreement in 1989.⁶⁷ The Bulgarians have, however, continued to fish in the southwestern Atlantic, both off the Falklands with FIG licenses and outside Argentina's 200-mile zone on the high seas. The primary species taken was southern blue whiting. The Bulgarian catch has declined, but still totaled 22,000 t in 1991. Falkland officials report that the Bulgarians are continuing to purchase FIG licenses.⁶⁸

Cuba: Cuba has conducted a small fishery in the southwestern Atlantic, apparently outside Argentina's 200-mile zone.⁶⁹ The Cubans are believed to have terminated the fishery along with their other distant-water fisheries.

Denmark: The Danes do not currently fish in the southwestern Atlantic, but did buy a Falklands license in 1987. Some fishermen are reportedly now interested in initiating a new fishery off Argentina. Minister of Agriculture and Fisheries Bjoern Westh led a Danish trade/fisheries mission composed of representatives from 32 Danish companies to Argentine and Chile during August 1993. The

discussions in Argentina focused on fisheries access and trade matters. The Danes reportedly urged Argentine officials to ratify the bilateral agreement signed with the EC in 1992.⁷⁰

European Community: Argentina attempted to negotiate a fisheries access agreement with the EC in 1986 as part of its overall Falklands policy. The EC, however, showed little interest in the terms offered by Argentina. Fishing companies in EC-member countries decided that it was preferable to purchase FIG licenses and fish off the Falklands. Both the EC and Argentina, however, have since re-evaluated their positions. Distant-water fishermen in many EC-member countries experienced great difficulties during the late 1980s and early 1990s, losing access to coastal fishing grounds. Namibia's decision to close its 200-mile EEZ to distant-water fishermen in 1991 had a disastrous impact on foreign fishermen, especially the large Spanish fleet.⁷¹ The EC launched a major fleet restructuring program to reduce the size of member country fishing fleets.⁷² Part of the EC program is a diplomatic effort to negotiate access arrangements in Latin America. The Argentines have reevaluated their foreign fishing policy and the Menem Administration has decided to offer more favorable access arrangements than were offered to the EC in 1986. Argentina and the EC in 1992 concluded a comprehensive fisheries access and cooperation agreement, the only success the EC has so far achieved in Latin America.⁷³ While EC and Argentine officials signed the agreement in 1992, the EC did not ratify it until September 1993.⁷⁴ Argentina has reportedly still not ratified the agreement.⁷⁵ This Agreement is not a classic access agreement, but instead provides for the formation of different types of joint venture companies and temporary associations that will reportedly give EC vessels access to Argentine waters.⁷⁶ The agreement would theoretically allow the EC to deploy about 70 vessels, mostly Spanish, to Argentine waters and catch up to 250,000 t of fish and squid. Many of these vessels will be operating as part of Argentine-EC joint venture companies. Some (up to 30 vessels) will operate as part of "temporary associations," and some will be transferred to new Argentine-based companies. EC-companies could retain majority ownership of these Argentine-based companies. In exchange for this access, the EC owners will have to transfer vessel registry to the Argentine flag and ownership

to a joint venture or Argentine company.⁷⁷ In addition, the EC is providing credits to the participating companies and the Argentine Government.⁷⁸ It is currently unclear if the agreement will attract large numbers of EC vessel owners. Some EC fishermen (mostly Spanish) are guardedly optimistic. The agreement, however, has been criticized in both the United Kingdom (because of the Falklands implications) and Spain (primarily because many vessels will have to be transferred to Argentine ownership). The agreement has also been criticized in Argentina by elements hostile to foreign fishing, but the major industry trade associations support the agreement.⁷⁹

Japan: Japanese fishing was limited in the southwestern Atlantic during the 1970s and primarily consisted of tunas and billfish. The fishermen began reporting major catch increases in 1978-79 when they began targeting squid, but until 1982 never caught more than 22,000 t (Latin America, appendix C4d1). The Japanese further increased fishing effort in 1984, benefitting from the inability of the Argentine Navy to limit operations off the Falklands. The Japanese caught a record 297,000 t during 1987 in the region as a whole. Most of this activity was conducted off Argentina outside the 200-mile zone and not off the Falklands (Falkland Islands, appendices C4d4-5). Much of the Japanese deployment off Argentina, outside 200-miles, has been north of the Falklands, generally at 44-46° South.⁸⁰ Some press reports mention limited Japanese fishing in Argentine waters, but few details are available. A limited number of Japanese fishermen were reportedly allowed to fish in Argentine waters during 1985 in exchange for technical fisheries training provided by the Japanese.⁸¹ The Argentine Government permitted three Japanese trawlers access to Argentine waters to conduct test fishing on groundfish to produce surimi.⁸² Such operations, however, are of less importance than the more significant effort outside of Argentine waters. Japanese companies have primarily deployed vessels targeting *Illex* squid. Smaller quantities of *Loligo* squid and tuna and billfish are also

taken. Various companies have participated in the fishery, including Hoko, Hokkaido Fisheries, Kyokuyo, Nichiro, Nissui (Nipon Suisan), and Taiyo. Some of the vessels involved have also been deployed for krill in the Antarctic Ocean. Japan has been trying to improve relations with Argentina and has provided extensive fisheries assistance.⁸³ The Japanese companies which formerly operated off the Falklands decided in 1993 to apply for Argentine fishing licenses through the new vessel leasing system. Press reports indicate that Argentina issued 32 licenses for Japanese vessels in 1993.⁸⁴ Another account reports that the Japanese caught 81,000 t of squid during the 1992/93 season.⁸⁵

Korea (ROK): Korea conducted some trial fishing in the southwestern Atlantic during 1975 as part of a joint research project with Argentina. Catches were initially low, only about 3,000 tons (Latin America, appendix C4d1). The Koreans expanded this fishing effort taking 16,000t in 1985. The two countries held bilateral talks in 1985, discussing among other subjects the settlement of 2,000 Korean fishermen and needed support services in southern Argentina. The authors have no information on whether this plan was ever implemented.⁸⁶ Korean fishermen sharply increased effort during the mid-1980s and by 1987 their catch exceeded 100,000 tons. Only about a third of the catch is taken off the Falklands with

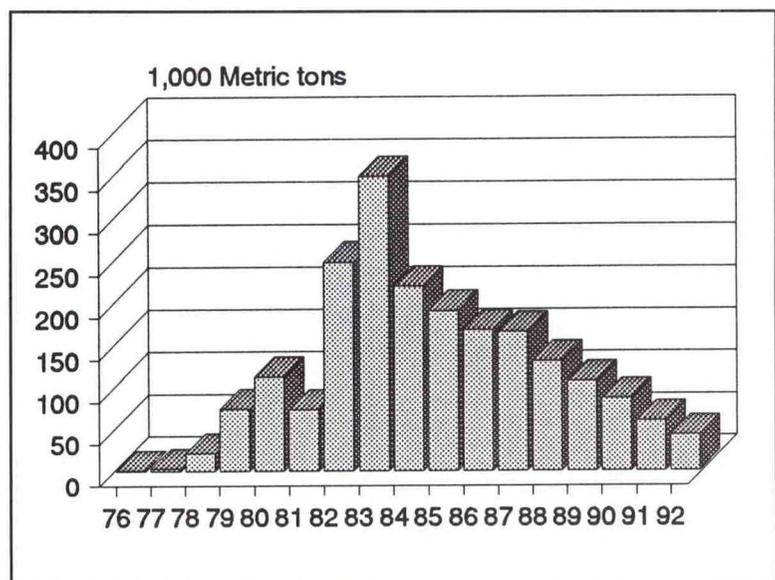


Figure 5.--Polish catches in the southwestern Atlantic peaked in 1983 after the Falklands conflict and have since steadily declined.

FIG licenses, most of the Korean catch is taken off Argentina outside the 200-mile zone (Falkland Islands, appendices C4d4-5). The catch is primarily squid. The Koreans now appear to be shifting to Argentine waters. Korean companies decided in 1992 to take advantage of the new Argentine vessel chartering system and deployed 30 squid vessels in Argentine waters.⁸⁷ Korean fishermen reportedly caught close to 200,000 t in the southwestern Atlantic during 1992.

Poland: Argentina reportedly signed a bilateral fisheries access agreement with Poland in 1974, but the agreement was never implemented.⁸⁸ FAO catch statistics show no Polish catch in the southwestern Atlantic until 1977. Press reports indicate that in the years after 1977, close to 70 Polish vessels were regularly deployed just outside of the Argentine 200-mile zone.⁸⁹ The Poles initially targeted blue whiting and to a lesser extent Patagonian grenadier. Polish vessels during the late 1970s and early 1980s fished the area around the Falkland Islands. The Poles rapidly expanded catches from only 600 t in 1976 to nearly 250,000 t in 1982. The increases in the Polish catch were unaffected by the 1982 Falklands conflict although some fishing vessels, which continued to operate during the conflict, were damaged or destroyed during the hostilities.⁹⁰ After the cessation of hostilities, Polish fishermen further expanded effort, harvesting a record 350,000 t in 1983. The Argentine government allowed the Poles to transship their catch through Argentine ports during 1982-83. It was only with the realization of the enormity of the Polish catch that Argentine authorities withdrew permission for such transshipments.⁹¹ Polish southwestern Atlantic catches declined sharply after 1983 but still totaled 170,000 t in 1986 (Latin America, appendix C4d1). Polish fishermen began in 1986 to target squid (both *Illex* and *Loligo*) along with blue whiting. When the British implemented the FICZ in 1987, the Poles broke ranks with their Soviet allies and applied for FIG licenses. Polish fishermen caught 165,000 t in 1987, mostly off the Falklands, but also reported substantial catches off Argentina outside the 200-mile zone (Latin America, appendix C4d3).⁹² Almost the entire catch is squid and blue whiting. The Polish catch has since steadily declined, totaling only 60,000 t in 1991 and 42,000 t in 1992. The authors have no current information available on

Argentine-Polish bilateral fishery relations, although a Polish-Argentine joint venture was reportedly operating during 1991-93.⁹³

Russia: The bilateral agreement between Argentina and the former Soviet Union expired in May, 1993, and had not been renewed. Some cooperation continues through a joint venture with DALRYBA. The Russian Committee on Fisheries continues to maintain a fisheries attache in Buenos Aires, reflecting the continued interest of Russian fishery officials in Argentine fishing grounds.

Spain: Spain is the principal EC country operating in the southwestern Atlantic. The country first deployed a significant fleet in 1986 which caught almost 60,000 t (Latin America, appendix C4d1). Since then Spanish fishermen have reported catches of from 60,000-85,000 t annually. The Spanish primarily target squid (mostly *Loligo*) and to a lesser extent hake. Almost all Spanish fishing in the southwestern Atlantic is conducted off the Falklands, very limited Spanish effort is conducted off Argentina (Falkland Islands, appendices C4d4-5). Most of the Spanish fishing occurs off the Falklands under FIG licenses.⁹⁴ Spanish officials, however, have stressed to the Argentine Government that the decision to purchase FIG licenses has been the commercial decisions of individual companies and does not imply Spanish Government recognition of British jurisdiction over the Falklands.⁹⁵ Spanish fishermen stand to be the principal beneficiary of the 1992 EC-Argentine access agreement.⁹⁶

Taiwan: Taiwan fishermen have fished in the southwestern Atlantic for years, but reported catches only during the 1970s and early 1980s. Catches ranged from only 3,000-7,000 t, primarily of albacore, other tunas, and swordfish. Taiwan fishermen first entered the squid fishery in 1986 and reported very substantial catches for the first time. They achieved a record 137,000 t catch in 1987. Taiwan catches have since declined somewhat, but with the exception of 1990 have continued at about 100,000 t (Latin America, appendix C4d1). Most of this activity takes place off Argentina outside the 200-mile zone (Falkland Islands, appendices C4d4-5). Taiwan fishermen conduct more limited operations off the Falklands under FIG licenses (Falkland Islands, appendix B1a).⁹⁷ Periodic

Argentine seizure reports confirm this, which suggests a substantial Taiwan fishery near the limits of the Argentine 200-mile zone.⁹⁸ Unconfirmed reports suggest that Taiwan vessels fish widely in the South Atlantic. One 1990 report, for example, described a Taiwan squid jigger, the *Song of the Whale*, spotted near the Azorian port of Horte with about 20 other Taiwanese vessels. The vessel and two other Taiwan fishing vessels were transshipping their catch to a Panamanian-flag reefer, the *Sea Frost*, for shipment to Japan. The vessel had been adapted for driftnetting. The crew consisted of Filipinos and Thais as well as Taiwan nationals and was deployed in the South Atlantic for 2½ years, operating from the Canary Islands south to Argentina.⁹⁹ Some Taiwan companies which formerly operated off the Falklands decided in 1993 to apply for Argentine fishing licenses through the new vessel chartering system. Press reports indicate that Argentina issued fishing licenses for 13 Taiwanese vessels in 1993.¹⁰⁰ The Taiwan companies involved reportedly paid a fee of \$260,000 per vessel.¹⁰¹

USSR: The Soviets first entered the southwestern Atlantic in 1961, deploying research vessels to assess stocks on the virtually untouched Patagonian shelf. The Soviets, based on the favorable reports from these research cruises, decided to deploy a substantial commercial fleet. Soviet vessels first appeared in large numbers off Argentina during 1966. In their first year of fishing in the area, the Soviet fleet caught 73,000 t of fish. This amount was equal to one third of the entire 1966 Argentine catch. The Argentine government, concerned that the large Soviet hake catch would decrease the yields of Argentine fishermen, declared a 200-mile Territorial Sea in 1967 and required foreign fishermen to purchase licenses. Argentine authorities initially implemented licensing regulations that required foreign vessel owners to pay only a nominal licensing fee. Soviet fishermen in 1967 paid the nominal fee (\$30) despite the orders of the Soviet Government not to do so. Soviet catches in 1967 reached 677,000t, three times that of the Argentine catch. In response to this massive Soviet fishing effort, the Argentine Government increased licensing fees to \$10 per net registered ton. Processing vessels had to pay \$20 per net registered ton. The Soviets refused to purchase fishing permits at these substantially

increased rates and withdrew their vessels on April 1, 1968. The Argentine Government reported a number of enforcement problems during the next few years, but Soviet catches fell sharply. The Argentine Navy seized, and at times fired upon, Soviet vessels. Soviet catches in the southwestern Atlantic continued at low levels (less than 30,000t) during the 1970s and early 1980s. The Soviets began expanding fishing operations in the southwestern Atlantic again after the 1982 Falklands conflict, increasing catches from only 19,000 t in 1982 to 77,000 t in 1989. Almost all of this catch until 1986 was off the Falklands or outside the Argentine 200-mile zone.¹⁰² The principal species taken was southern blue whiting, squid, and grenadiers (other than blue grenadiers), depending on the year, but smaller catches of hake, Patagonian toothfish, and other species were also reported. The Soviets in 1986 responded favorably to the Argentine proposal for a bilateral fisheries access agreement. This agreement allowed Soviet vessels to catch 180,000 t of fish per year off the Patagonian coast, south of 46° South.¹⁰³ The agreement precluded the Soviets from catching hake or shellfish, two species which the Argentine fishing fleet heavily target, and required them to purchase semi-processed Argentine fishery products.¹⁰⁴ The Soviets deployed vessels in Argentine waters under the new agreement beginning in 1987. The Soviet 1987 catch in Argentine waters was 189,000 tons. Unlike most other distant-water countries, the Soviets did not apply for British FIG licenses to fish off the Falklands. The catch of the former Soviet Union and successor states in the southwestern Atlantic has remained at over 200,000 t through 1991 (Latin America, appendix C4d1). The shift from the Falklands to the Argentine EEZ does not seem to have significantly affected the species taken by the Soviets who continued to take primarily squid, southern blue whiting, and grenadiers. The Soviets have reported much larger squid catches than they ever achieved off the Falklands, taking a record 134,000 t in 1991. The only important difference in the Soviet catch was a larger catch of blue grenadiers, a species they never took in significant quantities off the Falklands. The Soviet-Argentine 1986 agreement expired in May, 1993, and it has not been renewed by the Soviet successor states.¹⁰⁵

Uruguay: Argentina and Uruguay signed a reciprocal fisheries agreement in 1975 allowing both



Photo 3.--Vessels like this Prometey class stern factory trawler were used extensively by the Soviets off Argentina after they negotiated a bilateral agreement in 1986.

countries to operate in a common fisheries zone comprised of the Uruguayan EEZ and the northern Argentine EEZ. The two countries have established a total allowable catch of 190,000 tons.¹⁰⁶ Occasional incidents are still reported by the two countries.¹⁰⁷

V. JOINT VENTURES

The Argentine Government has, for many years, permitted Argentine companies to form joint fishery ventures with foreign companies. Pre-Menem Argentine governments, however, pursued highly nationalistic economic programs that established extremely restrictive foreign investment

policies. As a result, Government regulations posed obstacles to all but the most determined foreign investors. During this period relatively few Argentine companies entered into meaningful joint ventures and other contractual arrangements with companies in the United States, Western Europe, and Japan. The overall impact of Argentine policies was to discourage many ventures. Some Argentine industry sources insist that this has protected Argentine interests, but other observers believe that discouraging potential foreign investors has prevented the formation of business relationships that could have helped to modernize both the Argentine fleet and the processing industry.

The Menem administration has instituted major economic reforms designed to open the economy by liberalizing many long-entrenched policies. One key Administration goal was to attract foreign capital by removing many restrictions

that formerly discouraged investment in Argentina. As a result, foreign companies have shown renewed interest in Argentine fisheries. A variety of joint ventures, including those with foreign equity participation, as well as a variety of other contractual arrangements, have been formed. Information on joint ventures companies in specific countries is as follows:

China: The China National Fisheries Corporation in 1989 formed a joint venture with Harengus, one of Argentina's largest fishing companies.¹⁰⁸ The joint venture built the vessels *Codepeca I, II, III,* and *IV* which as of 1993 were deployed in the shrimp fishery.¹⁰⁹

European Community: Several EC companies have formed joint ventures in Argentina. Most of the EC joint ventures are with Spanish companies which is Argentina's most important joint venture partner. The Argentine Government negotiated a fisheries access agreement with the EC providing three options for EC companies interested in forming Argentine joint ventures.¹¹⁰ The Argentine-EC agreement was signed in 1992, but not ratified by the EC until 1993. Argentina will allow about 70 EC vessels, mostly Spanish, to operate in Argentine waters. Many of these vessels will be operating as part of Argentine-EC joint venture companies, some (up to 30 vessels) will operate as part of a temporary association, and some will function as companies based in Argentina. The EC company which will be providing vessels and operating capital will be permitted to have majority ownership in the company. In exchange for this access, the EC owners will have to transfer registry of the vessel to the Argentine flag and ownership of the vessel to a joint venture or Argentine company.¹¹¹ In addition, the EC is providing credits to the participating companies and the Argentine Government as well as assistance in improving Argentine fish processing standards, fisheries infrastructure, and access to European markets.¹¹² The EC is Argentina's principal export market and closer association with EC companies could enable Argentina to improve the quality and market penetration of their shipments to the EC.

Germany (FRG): The German government negotiated a basic fisheries cooperation agreement with Argentina in 1977. Shortly thereafter protests

from the EC pressured Germany to withdraw from the agreement and pursue its future fishery-oriented relations with Argentina through the EC.¹¹³ Pickenpack, a German company, reportedly formed a joint venture with an Argentine company in 1980, but no reports of its success are available.

Japan: Japan is another principal joint venture partner for Argentina. Several Japanese companies have been active in Argentina.

Pionera: Kaiyo Gyogyo and Hosui, two Japanese companies, formed this trawling joint venture in 1987.¹¹⁴ The company targets sea breams and shrimp with two Japanese-built trawlers.¹¹⁵

Empresa Pesquera de la Patagonia y Antartida (Pesantar): Nissui formed this trawling joint venture in 1989. Pesantar operates two large fishing vessels, the *Kongo Maru* (3,200 GRT), and the *Yamato* (3,900 GRT).¹¹⁶

Explotación Pesquera de Patagonia (PESPASA): Nissui and Mitsui Busan formed this trawling and processing joint venture in 1982. This joint venture company was an important contributor to the development of Puerto Deseado in the 1970s.¹¹⁷ PESPASA deployed the *Rokko Maru*, one of the largest factory ships in the Argentine fleet.

Pesquera Sakyu: Sakyu Shoten, a Japanese company, formed this trawling and tuna longlining joint venture in 1987. This company joined with Pionera in 1990 to build a large processing plant in Puerto Deseado.¹¹⁸

Prodesur: Prodesur is a joint venture between Harengus and two Japanese companies, Kyokuyo and Mitsui, which acquired the 4,663-GRT *Ohtori* in 1991 to produce surimi.¹¹⁹

Others: S.A. Marine formed a squid jigging operation in 1988. Tokai Denbu initiated a venture to produce surimi in 1991.¹²⁰

Korea (ROK): About 20 Korean companies deployed approximately 30 jiggers in Argentine waters during 1992. The vessels have operated extensively in the southwestern Atlantic, especially off the Falklands, for several years. The jiggers target squid and one factory ship was deployed to process surimi from hake and other demersal species. All of the Korean vessels were contracted by joint ventures.¹²¹ Some of the larger companies involved are Daerim and Samho (Korean) and Harengus, Antartida Pesquera Industrial, and Mellino (Argentine).¹²²

Lithuania: A well informed industry source reports that an Argentine-Lithuanian joint venture was active in 1992. The Lithuanian partner reportedly withdrew from the venture when they could not collect their \$1-2 million share of the earnings from the Argentine partner in 1993.

Poland: Only one Polish-Argentine fishing joint venture, Arpolco S.A., is known to the authors.¹²³ This joint venture was formed by the Polish company Odra and the Argentine company Harengus and was operational as of 1991.

Russia: The primary companies from the former Soviet republics involved in Argentine joint ventures are Russian, although some Baltic companies may also be involved. At least three joint ventures between Argentine and Soviet companies have continued these operations, including DALRYBA.¹²⁴

Spain: Argentine and Spanish joint ventures have existed for many years, several having been formed in the late 1970s. Spanish companies have played a major role in the development of the Argentine fishing industry. Along with the Koreans and the Japanese, Spanish companies, through joint venture associations, have been the principle investors in the ports of Deseado and Madryn. Spanish companies have play a key role since 1989 in the introduction of large, modern vessels in to the Argentine fleet. The signing of the EC-Argentine agreement in 1992 suggests that several new Argentine-Spanish joint ventures may be established in the near future.

Antartida Pesquera Industrial (API): This Spanish-Argentine joint venture operates four Spanish freezer vessels. Together these vessels spent almost 900 days at sea in 1990.¹²⁵

ARBUMASA: Robert Goldszer, an Argentine businessman, and Amador Suarez, a Spanish businessman, formed ARBUMASA in 1981. The joint venture operates six freezer vessels in Patagonian waters. ARBUMASA has a base for support services in Puerto Deseado.¹²⁶

COALSUD: Pesquera Santa Elena (Argentina) and Conservación de Alimentos (Spain) formed this joint venture in 1982.¹²⁷ The Spanish partner

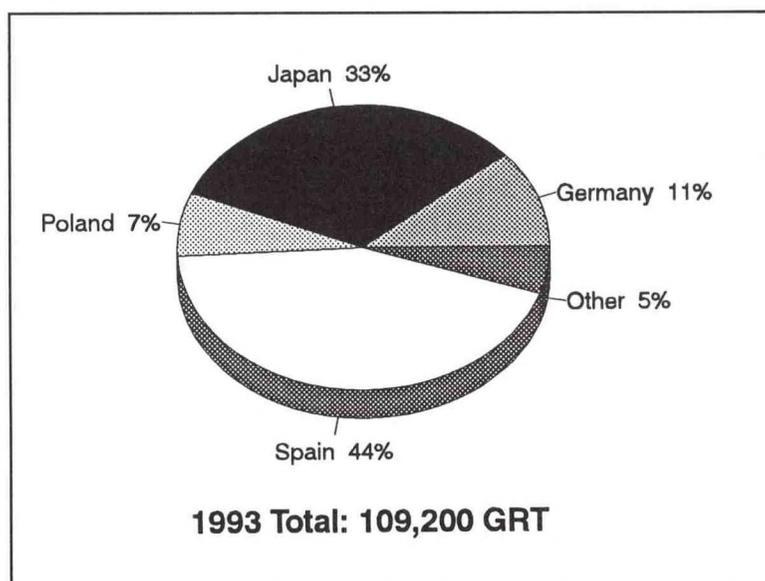


Figure 6.--Most of the foreign-built vessels in the Argentine fleet have been imported from Spain, often as part of joint venture associations.

provided COALSUD two vessels, the *Coalsa Segundo* and the *Coalsa Tercero*, each of 1,480 GRT.¹²⁸

CONARPESCA: CONARPESCA was created in 1978 with 49 percent Spanish capital and 51 percent Argentine capital. Today the company operates a 22 vessel fleet and three processing plants in Patagonia.¹²⁹

PESCASUR: Delfín Gomez de la Flor, president of two Spanish fishing companies, formed PESCASUR, an Argentine-Spanish joint venture in 1980.¹³⁰ PESCASUR was involved in the early development of the southern ports of Deseado and Madryn.

Pesquera Del Atlántico: Pesquera Del Atlantico was formed in 1976 with 49 percent Spanish capital and 51 percent Argentine capital. This joint venture employed 220 fishermen and had a support staff of 22 by 1991.¹³¹

USSR: Negotiations between Argentine and Soviet companies to form a joint krill venture continued throughout the 1980s. No information is available, however, on the conclusion of these negotiations on actual fishing operations conducted by any such krill joint ventures.¹³² Soviet companies in 1986 signed commercial contracts with Baja Mar and other Argentine companies as part of the 1986 fisheries access agreement. The contractual arrangements

are not believed to have involved equity partnerships.¹³³ The Soviet Union and Argentina in 1992 signed a letter of intent to create three joint ventures with the purpose of exploiting krill in the South Atlantic.

United Kingdom: Although British-Argentine joint ventures were in operation before the Falklands conflict, there is no indication of any continuing joint venture between the two countries.¹³⁴

United States: U.S. companies had a variety of contractual arrangements with Argentine companies during the 1970s and 1980s. The authors know, however, of only one equity partnership. The American Seafoods Company in 1993 joined with Pesqueras. The joint venture will operate a trawler to produce surimi and a modern new longliner which may be deployed in the southern Atlantic/Antarctic for Patagonian toothfish.¹³⁵

VI. DISTANT-WATER OPERATIONS

Argentine fishermen do not conduct distant-water fishing operations. The countries fishing companies, especially those associated with joint ventures, are acquiring larger vessels and are increasingly capable of distant-water operations. Such operations, however, are unlikely in the near future as productive grounds are still available along the country's southern coast. One company has acquired a modern Norwegian-built longliner and reportedly plans to initiate operations for Patagonian toothfish in the Antarctic during 1993.¹³⁶

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ENDNOTES

SECTION I. (General Background)

1. Details on the shrimp fishery are available in William Gibbons-Fly and Dennis Weidner, "The Argentine shrimp fishery, 1984" *International Fisheries Report*, (IFR-85/17), May 9, 1985.
2. An excellent review of the Argentine fishing industry during the mid-1980s is available in Cpt. Milciades Espoz Espoz, *Introducción a la Pesca Argentina: Su Rol en la Economía Nacional y Mundial* (Fundación Atlántica: Mar del Plata, 1985), 336p.
3. "Nueva récord de la captura," *Redes*, No. 67, 1993, p. 12.
4. "Argentina lands record catch in 1992," *Eurofish Report*, August 12, 1993, p. SP/3.
5. Milciades Espoz Espoz, President, Fundación Atlantica, personal communications, October 7, 1993.
6. U.S. Embassy, Buenos Aires, September 15, 1989.
7. Dennis Weidner, "The EEC groundfish market," *GLOBEFISH Research Programme*, Vol. 5, June, 1990, p. 128.
8. A good brief overview of the economic situation is available in U.S. Department of State, "Argentina," *Background Notes*, February, 1993.
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10. Manuel López Olaciregui, "Harengus," *Redes*, No. 67, 1993, p.39-42.
11. Néstor Sánchez Real, "Antártida Pesquera Industrial" *Redes*, No. 67, 1993, p.15.
12. Victor Tarigo, "ARGENOVA," *Redes*, No. 67, 1993, p. 21.
13. López believes that falling hake prices in Europe during 1992 have forced Argentine companies to adopt a variety of cost cutting measures to improve efficiency. Such efficiencies may prove highly beneficial for future operations. López, *op. cit.*, p. 39.
14. López, *op. cit.*

SECTION III. (Vessel Sources)

15. The important SANYM shipyard, for example, is currently building a fleet of nine small trawlers. The 20.5-26.5 meter (m) vessels will have carrying capacities of from 100-170 cubic meters. "Nine stern trawlers from Argentina," *Fishing News International*, June 1993, p. 12.
16. "Argentine shipbuilding in brief," *Navitecnia*, July, 1979, pp. 38-40.
17. The authors do not have annual vessel production data.

18. Victor Tarigo, "Un industria en transformación," *Industrias Pesqueras*, November 1, 1992, p. 28.
19. See for example "1987 fishing vessel completions," *World Fishing*, March 1988, p. 4, "1988 fishing vessel completions," *World Fishing*, March 1989, p. 3, "1990 fishing vessel completions," *World Fishing*, March 1991, pp. 3-4, and "1992 fishing vessel completions," *World Fishing*, March 1993, p. 48.
20. Argentina in 1983, for example, exported one fishing vessel to Guyana. Raúl R. Podetti, "Aspectos de la industria naval de Argentina," *Navitecnia*, 1983, p. 38.
21. U.S. Embassy, Buenos Aires, April 10, 1986. See "USSR" below.
22. "Barcos I," *Redes*, No. 50, 1990.
23. "Arancel de diez por ciento para los pesqueros importados," *Redes*, No. 44, 1989, pp. 6-9.
24. Vessels of up to 2 years of age will not be taxed. Vessels between 2 and 5 years old will be taxed 6 percent. Vessels between 5 and 10 years old will be taxed 8 percent. "Barcos I," *Redes*, No. 50, 1990.
25. U.S. Embassy, Buenos Aires, August 2, 1993.
26. "Nacionales e importados," *Redes*, No. 64, 1992, pp 60-69.
27. Ing. Mario López Olaciregui, President, Harengus, personal communications, October 27, 1993. See V. "Joint Ventures" for additional details.
28. "Un producto revolucionario," *Redes*, No. 55, 1991, pp. 36-42; "Nippon Suisan will start trawl surimi production in Argentine waters by joint venture in 1989," *Suisan Keizai*, October 18, 1988.
29. "Argentina será la base para palangrero," *Infopesca*, June 5, 1993 and "Southern Ocean autoliner arrives in Argentina," *Fishing News International*, October, 1993.
30. "Mayor plazo para ingresar cuatro barcos," *Navitecnia*, October, 1979, p.20.
31. "New Vessels," *World Fishing*, March 1981, p.49; "Spanish yard builds Argentine stern trawlers," *Fishing News International*, May 1980, p. 88.
32. "Nuevos plazos para importar buques," *Industrias Pesqueras*, July 15, 1981.
33. "Los barcos de la flota," *Redes*, No. 63, 1992, p. 33.
34. "De Mozambique a la Patagonia," *Redes*, No. 56, 1991.

SECTION IV. (Foreign Fishing)

35. Miliciades Espoz Espoz, "Autorizar a las flotas pesqueras extranjeras a operar desde puertos argentinos es lesiva a los intereses del país?" *Tratados*, No. 4.
36. Decree number 17094 of January 19, 1967. Freedom of navigation and overflight were not affected beyond 12 miles.

37. Details on the Argentine-Soviet fisheries relationship are available in Don Jacobson and Dennis Weidner, "Argentine-Soviet fishery relations, 1966-88," *International Fishery Reports*, (IFR-88/108), December 16, 1988.
38. U.S. Embassy, Buenos Aires, February 1, 1991. Argentina has signed a few agreements permitting foreign-flag fishing. The most significant was with the USSR. For details see Jacobson and Weidner, "Argentine-Soviet fishery relations," *op. cit.*
39. In 1986 there were over 600 foreign fishing vessels operating in the Falklands/Argentine exclusionary zones. "Acquerdos pesqueros:son convenientes para el pais?" *Pesca Argentina y Mundial*, September, 1988, p. 43.
40. Tim Coone, "Argentina launches diplomatic offensive to counter British claim," *Christian Science Monitor*, November 6, 1986.
41. Spanish vessels, Javier Gonzales, "Patrol boats fire on Spanish fishing vessel," Madrid RNE-1 Radio Network, June 18, 1991; Korean vessels, "Navyfires on, seizes Korean fishing trawler," *Buenos Aires Herald* May 15, 1991, p. 13; Taiwanese vessels, U.S. Embassy, Buenos Aires, May 29, 1986.
42. "Capturan a cuatro extranjeros con los manos en la biomasa," *Redes*, No. 50, 1990, p. 22; "CIS trawler charged with illegal fishing," *Noticias Argentinas*, March 2, 1992. Between 1985 and 1990 the Argentine navy captured 34 vessels for fishing in violation of fisheries law N° 17.500. These vessels came from: Korea, Japan, Uruguay, Spain, Poland, Panama, Taiwan, Venezuela, and West Germany. "Pesqueros extranjeros detenidos por infracción a la ley de pesca 17.500," *Redes*, 1990, p. 13 and "Las principales empresas españolas operan dentro del marco de la ley argentina," *Industrias Pesqueras*, October 15, 1991.
43. U.S. Embassy, Buenos Aires, August 2, 1993.
44. Details on the Soviet agreement and background on Soviet-Argentine fishery relations are available in Jacobson and Weidner, "Argentine-Soviet fishery relations," *op. cit.*
45. The Argentine decision to sign these agreements was undoubtedly linked to diplomatic efforts to gain international recognition for their Falklands claims. After signing the agreements the Soviets never applied for British FIG licenses. Fisheries companies in Japan, Korea, Poland, and Spain, on the other hand gave *de facto* recognition to the British Falklands claim by purchasing FIG licenses. Provisions of the Soviet and Bulgarian agreements established links with Argentine companies similar to those involved in some joint venture agreements. There was not, however, any Soviet or Bulgarian equity participation with the Argentine companies.
46. For details see the Falklands chapter of this report.
47. Argentine sources report that income from the sale of Falklands fishing licenses totalled \$25 million in 1988. "Tiempo negociación en Atlantico Sur," *Redes*, 1989, p. 10. British sources list income from licensing revenue and investment income at: \$38 million in 1987; \$45 million in 1988; and a projected \$48 million for 1989. Andrew Marshall, "Boundary row stymies Falkland fishing plan," *Financial Times*, March 10, 1989.
48. "Decreto N° 1493 del P.E.," Art. 2(b), 1992 in *Redes: Suplemento*, No. 54, 1992.
49. "Decreto N° I1493 del P.E.," Art. 2(b), 1992 in *Redes: Suplemento*, No. 54, 1992.
50. "Decreto," *op. cit.*, Art. 9.
51. "Decreto," *op. cit.*, Art. 2(c).
52. "Resolución N° 948 de la S.E.A.G. y P.," 1992, in *Redes: Suplemento*, No. 54, 1992.

53. Non-surplus stocks are those which are presently being fished at their maximum sustainable yield (MSY) by Argentine fishermen. Surplus stocks are those which are not being fished at MSY by Argentine fishermen.
54. "Resolución," *op. cit.*, Ch. I, Art. 2.
55. A major restriction on this policy is that if the ship being replaced was inactive for more than a year, the permit may not be transferred. The authors believe that this is to allow for the creation of the new joint ventures under the 1992 EC-Argentine agreement. The vessel permits currently assigned to vessels inactive for more than a year will be assigned to EC vessels. See "EC" below.
56. "Resolución," Ch I, Art. 4. The tax is paid to the Ministry of Economy as authorized in Resolution N° 408/92. Victor Tarigo, "Análisis de la situación del sector pesquero en Argentina, Chile y Uruguay: un industria en transformación," *Industrias Pesqueras*, October 15-November 1, 1992, pp. 28-31, 88-89.
57. "Resolución," Ch. I, Art. 9.
58. "Resolución," *op. cit.*, Ch. I, Art 15.
59. U.S. Embassy, Buenos Aires, August 4, 1993.
60. Jim Ackert, fisheries consultant, personal communications, September 7, 1993.
61. The authors are unsure as to which former-Soviet republics will continue the distant-water operations. Many of the vessels were formerly based in Baltic ports, but some may have operated from Black Sea ports. Preliminary reports suggest that it will be primarily Russian companies that continue operations in the southwestern Atlantic because they have better access to fuel. Some Latvian vessels have been reported in the southwestern Atlantic by Argentine and Uruguayan authorities. The Latvians are reportedly fishing for squid outside the Falklands 150-mile zone.
62. "Les chalutiers bulgares pêchent sur les côtes d'Afrique du sud et d'Argentine," *La Pêche Maritime*, January 20, 1968, p. 3. This could have been exploratory fishing, but no additional details are available.
63. "Shelled trawler rescued," *Japan Times*, October 4, 1977; "Argentina opens fire on two fishing vessels," *Japan Times*, October 2, 1977.
64. U.S. Embassy, Buenos Aires, August 4, 1993.
65. "Complementary fishing accords signed with Bulgaria," Madrid EFE, 1400 GMT, June 12, 1987.
66. "Luz rojo para el acuerdo búlgaro," *Redes*, No. 42, 1989.
67. "Fishing agreement with Bulgaria suspended," Buenos Aires DYN 2045 GMT, March 2, 1989 and Jacobson and Weidner, "Argentine-Soviet fishery relations," *op. cit.*
68. For details see the Falklands chapter of this report.
69. For details see the Cuban chapter of this report.
70. U.S. Embassy, Copenhagen, August 27, 1993.

71. For details see William Folsom, David Rovinsky, and Dennis Weidner, "Western Europe and Canada," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, (NMFS: Silver Spring, MD., 1993).

72. For details see Folsom, Rovinsky, and Weidner, *op. cit.*

73. Acuerdo Sobre las Relaciones en Materia de Pesca Maritima Entre la Argentina y la CEE [Agreement on Relations in the Sea Fisheries Sector Between the European Economic Community and the Argentine Republic], Nov. 30, 1992, EEC-Arg., protocol I, art. 1, 2 [hereinafter Agreement on Relations], in *Redes: Suplemento*, No. 65, 1993, p. 5.

74. "Access deals take more time," *Fishing News International*, July, 1993. EC ministers declined to ratify the agreement at the June 1993 Fisheries Council because of reservations from the Dutch, Germans, and the U.K. over the financial implications. Argentina may receive up to \$33 million in grants from the EC. "Ministers approve EC-Argentine agreement," *Eurofish Report*, September 23, 1993, BB/3. The U.K. objections may have involved more than the financial arrangements because of the possible impact on the Falklands fishery of promoting EC joint ventures with Argentina. The EC Committee of Permanent Representatives (COREPER) finally ratified the Agreement on September 15, 1993. Press reports suggest that both the U.K. and Germany finally decided to withdraw objections to the Agreement. The U.K. reportedly agreed to abstain. The Germans, who were concerned about future costs, settled for an undertaking that the financial basis for the Agreement would not become a precedent for future fisheries access agreements. The Germans favored the Agreement, but wanted to ensure that in the future, the countries that benefit most from so called "second generation" agreements would make a larger contribution to the costs. This understanding will not affect the financial arrangements with Argentina, but could affect future such agreements with Namibia and Peru. "Agreement deal moving closer," *Fishing News International*, October, 1993.

75. Espoz, personal communications, *op. cit.*, October 7, 1993. The Argentine Senate's Fisheries Committee reportedly endorsed the Agreement during September 1993, but the Chamber of Deputies has not yet considered it. "Argentine deal moving closer," *Fishing News International*, October 1993.

76. For more information on the types of joint-venture companies to be formed under the EC-Argentine agreement, see Dennis Weidner, "Argentine-European Community fisheries agreement," *International Fisheries Report*, (IFR-93/23), in press.

77. A third option is available under the 1992 agreement, EC vessel owners. They can establish companies in Argentina, register the vessels under the Argentine flag, but retain their ownership of the vessels. It is unclear, however, how such companies will actually operate.

78. For details, see Weidner, "Argentine-European Community fisheries agreement," *op. cit.*

79. Espoz, personal communications, *op. cit.*, October 7, 1993.

80. "Trawling for Illex squid in southwest Atlantic full-dress since start of May," *Suisan Keizai*, May 28, 1987; "Illex squid fishing in southwest Atlantic in favorable condition," *Suisan Keizai*, March 30, 1987; and *Minato Shimbun*, March 16, 1987.

81. "Training vessel for fishermen in Argentina," *Fishing News International*, August, 1985.

82. Tokai Denbu subsequently announced plans to begin producing surimi in Argentina. *Nikkan Suisan Shinbun*, September 17, 1991.

83. During 1985-89, Japan built a \$6 million fisheries training school (1985), contributed to the construction of the port at Puerto Deseado (1986-87), and helped conduct fisheries research cruises (1988-89). Since 1991, Japan has helped construct facilities for a privately operated fisheries research institute at Mar del Plata and has contributed \$11 million to the principal Argentine fisheries research institute, the Instituto Nacional de Investigación Pesquero (INIDEP). Japan is expected to help build a dock at the southern port of Ushuaia in 1994. U.S. Embassy, Buenos Aires, January, 1992 and August 2, 1993.
84. "Late Falklands license rush," *Fishing News International*, June, 1993.
85. *Nikkan Suisan Keizai Shinbun*, July 20, 1993.
86. "Korean fishermen in Chubut," *La Prensa*, June 20, 1985, p. 12.
87. "El negocio de moda: Calamares a la coreana," *Redes*, No. 61, 1992, p.6.
88. "The fishing agreement with Poland," *La Prensa*, August 7, 1974, p. 4. Although the text of the agreement is unavailable, some of its major aspects were publicized by the Argentine press. The Agreement was, however, criticized by many Argentine observers. Article 5 of the agreement, for example, established that Polish vessels operating within the context of a joint venture, but flying the Polish flag, would be subject to the same regulations as Argentine vessels. Argentine observers condemned this provision as giving away access to a national resource for no concrete benefit to Argentina. Other critics claimed that the agreement, which called for the formation of joint ventures, was signed without any consultation with Argentine industry groups.
89. "Preocupa la presencia de pesqueros polacos," *Navitecnia*, April 1983, p. 8; "Entró al puerto de Bahía Blanca un pesquero de bandera polaca," *La Nación*, July 29, 1983, p. 12.
90. "British may have sunk Polish fishing vessel," *Noticias Argentinas*, 0309 GMT May 5, 1982. This is one of the few instances when fishermen actually expanded fishing effort in a war zone during hostilities.
91. "Explica a Polonia la prohibición de pescar," *La Voz*, September 13, 1983; "Buques de Polonia no podrán trasbordar capturas pesqueras," *La Prensa*, September 9, 1983; "Revocan autorización a pesqueros polacos," *La Nación*, September 7, 1983.
92. For details see the Falklands chapter of this report.
93. A press report indicated a Argentine-Polish joint venture was functioning in 1993, but provided no details. "Dalmor-Nº 1 in Poland," *World Fishing*, February 1993. An anonymous Polish Government source indicated that one Polish vessel was deployed off Argentina in 1993.
94. Enrique López Veiga (interview), "Ni Falklands ni Malvinas: caladeros del Atlántico Sur," *Industrias Pesqueras*, March 15, 1987, pp. 15-18.
95. "Dijo Caputo que 'no daña a la imagen argentina' que empresarios españoles pesquen en torno a las Malvinas," *Diario las Americas*, December 18, 1986 and "Spanish fishing in the Falklands continues," *Fish Trade*, March 28, 1987.
96. Weidner, "Argentine-European Community fisheries agreement," *op. cit.*
97. See the Falklands chapter of this report.
98. Some of the Taiwan vessels have been fired on by the Argentine Navy. "Award for advice in Falklands," *Fishing News International*, November, 1988.

99. Jonathan Gordon, "Drift netting in the vicinity of the Azores," International Fund for Animal Welfare press release, 1990.
100. "Late Falklands license rush," *Fishing News International*, June, 1993.
101. The Taiwan fishermen, perhaps optimistically, told reporters that the access arrangements end 7 years of negotiations over illegal Taiwan fishing in Argentine waters. *Free China Journal*, February 16, 1993.
102. See the Falkland Islands section of this report.
103. In the early years of the agreement the Soviets were limited to 18 vessels and 180,000t per year, and the Government of Argentina was paid 3 percent of the export value of the catch. In 1990 the limits were dropped to 15 vessels and 150,000t, and the fee was raised to 15 percent of the export value. In 1991, the limits were dropped further, to 10 vessels and 100,000t; they fell to 5 vessels and 50,000tons in 1992. U.S. Embassy, Buenos Aires, August 4, 1993.
104. For details on the agreement see Jacobson and Weidner, "Argentine-Soviet fishery relations," *op. cit.*, and Jacobson and Weidner, "Soviet-Latin American fishery relations, 1961-89," *International Fishery Reports*, (IFR-89/9), May 5, 1989.
105. U.S. Embassy, Buenos Aires, August 4, 1993.
106. U.S. Embassy, Buenos Aires, August 2, 1993.
107. The Argentine Navy occasionally seizes Uruguayan vessels for infractions of the agreement. See for example, "Uruguayan vessels caught fishing illegally," *Noticias Argentinas*, 1920 GMT, August 26, 1993.

SECTION V. (Joint Ventures)

108. "Harengus S.A., one of Argentina's largest fishing companies, forms new JV company with China National Fisheries Corporation," *World Fishing*, September 1989, p. 65.
109. López, personal communications, *op. cit.*, October 27, 1993.
110. Acuerdo Sobre las Relaciones en Materia de Pesca Maritima Entre la Argentina y la CEE [Agreement on Relations in the Sea Fisheries Sector Between the European Economic Community and the Argentine Republic], Nov. 30, 1992, EEC-Arg., protocol I, art. 1, 2 [hereinafter Agreement on Relations], in *Redes: Suplemento*, No. 65, 1993, p. 5. A detailed description of the types of joint ventures established by the EC-Argentine agreement is available in the EC section of this report.
111. A third option is available under the 1992 agreement, EC vessel owners. They can establish companies in Argentina, register the vessels under the Argentine flag, but retain their ownership of the vessels. It is unclear, however, how such companies will actually operate.
112. For details on the agreement, see Weidner, *op. cit.*
113. Dennis Weidner, "Argentine-German cooperation," *International Fishery Reports*, (IFR 80-22), March 6, 1980.
114. Siusan Sha, *Suisan Nemkan, 1992*, (Suisan Sha: Tokyo, 1992), pp. 194-195.

115. *Nikkan Suisan Keizai Shinbun*, July 19, 1993.
116. "Un producto revolucionario," *Redes*, No. 55, 1991, pp. 36-42; "Nippon Suisan will start trawl surimi production in Argentine waters by joint venture in 1989," *Suisan Keizai*, October 18, 1988.
117. "Los japoneses," *Redes*, No. 54, 1991, pp. 24-25.
118. "Otro eslabón industrial en Puerto Deseado," *Redes*, No. 50, 1990.
119. López, personal communications, *op. cit.*, October 27, 1993.
120. *Nikkan Suisan Keizai Shinbun*, September 17, 1991.
121. "Landings increased about 15% last year," *Infofish Trade News*, September 15, 1992.
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123. "Defender el pabellón es garantizar el crecimiento," *Redes* No. 54, 1991, pp. 34-5.
124. Two of the Russian--Argentine joint ventures were: Bospor S.A. and Latar S.A. "Empresa mixta con U.R.S.S.," *Redes*, No. 57, 1991, p. 60.
125. Néstor Sánchez Réal, "El impacto de un mundo en transformación," *Redes*, No. 58, 1991, pp. 36-37.
126. "En las vísperas del primer aniversario," *Redes*, No. 58, 1991, pp. 40-41.
127. "Otro emprendimiento hispano-argentino," *Redes*, No. 63, 1992, pp. 31-32.
128. "Los barcos de la flota," *Redes*, No. 63, 1992, p. 33.
129. "Sostenido ritmo de inversiones," *Redes*, No. 58, 1991, pp. 42-43.
130. "Delfín Gómez de la Flor, "Las reflexiones de un pionero," *Redes*, No. 58, 1991, pp. 38-39.
131. "Del la costa gallega al Atlántico Sur," *Redes*, No. 58, 1991, pp.46-47.
132. "Krill project with U.S.S.R.," *Paris AFP*, July 24, 1982.
133. For more details see Jacobson and Weidner, "Soviet-Latin American fishery relations, 1961-89," *op. cit.*
134. "Freezer trawler will test Patagonian hake stocks," *Fishing News International*, October, 1972.
135. "Star trawls for Argentine surimi," *Fishing News International*, February, 1993, p. 11 and "Southern Ocean autoliner," *op. cit.*

SECTION VI. (Distant-water Operations)

136. "Southern Ocean autoliner," *op. cit.*

APPENDICES

Appendix A.--Argentina. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>1,000 GRT</u>							
Fish carriers								
B	-	-	-	1.6	1.6	1.6	1.6	1.6
C	-	-	2.7	2.7	2.7	2.7	2.7	2.7
Trawlers								
A	-	4.3	10.7	12.9	12.4	12.9	12.9	12.9
B	-	1.4	26.8	24.6	24.6	24.6	25.6	25.6
C	-	2.7	17.4	21.0	21.0	18.7	18.7	21.9
Total	-	8.4	57.6	62.8	62.3	60.5	61.5	64.7

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.--Argentina. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>Number of vessels</u>							
Fish carriers								
B	-	-	-	1	1	1	1	1
C	-	-	1	1	1	1	1	1
Trawlers								
A	-	7	16	19	18	19	19	19
B	-	1	19	18	18	18	19	19
C	-	1	7	8	8	7	7	8
Total	-	9	43	47	46	46	47	48

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix C.--Argentina. Large* fishing vessels registered, 1993

Country/Vessel	Size	Built	Vessel type**
	GRT	Year	
Belgium			
Cecilia	710	1966	510
Lisandro	628	1958	510
Margot	617	1959	510
Pierre	617	1958	510
	<u>2,572</u>		
France			
Nelly	774	1968	510
Virgen Maria	633	1971	510
	<u>1,407</u>		
Germany (GDR)			
Bospor I	2,177	1967	512
Capitan OCA Balda	1,180	1983	566
Galemar	522	1957	510
Harengus	1,728	1972	512
Mellino VI	681	1957	510
Revolution Produktiva	3,977	1977	512
San Marcos	1,786	1965	512
	<u>12,051</u>		
Italy			
Sirius	608	1965	510
Sirius II	610	1966	510
Sirius III	611	1967	510
	<u>1,829</u>		
Japan			
Arco Iris	1,445	1965	512
Centurion Del Atlantico	5,946	1986	512
Doctor Eduardo L Holmberg	958	1980	566
Esparanza DOS	569	1971	510
Esparanza UNO	758	1974	510
Kasuga Maru	3,279	1971	512
Kongo	3,249	1968	512
Marcala IV	1,598	1966	511
Ohtori	4,662	1971	512
Rikuzen	3,989	1971	512
Tenyo Maru No 3	4,357	1972	511
Triunfo	1,001	1966	510
Yamato	3,889	1970	512
	<u>35,700</u>		
Netherlands			
Mar Del Sud	501	1973	510
Norway			
Beagle I	958	1973	510
Poland			
Humbak	2,448	1970	512
Mapuche	1,480	1968	512
Neptune	2,318	1961	512
Tehuelche	1,434	1972	512
	<u>7,680</u>		
Spain			
Alvamar DOS	1,850	1977	511
Alvamar UNO	1,272	1967	511
Antartida	1,180	1967	511
Antonio Alvarez	550	1989	510
API II	1,495	1978	512
API III	1,173	1967	511
API IV	1,495	1976	512
Aracena	2,396	1969	512
Arcos	2,396	1969	512
Carlos Alvarez	560	1988	510
Coalsa Segundo	1,480	1974	512
Coalsa Tercero	1,480	1974	512
Conarpesca II	860	1969	510
Conarpesca Primero	860	1969	510
Congelador Mar DOS	1,758	1974	511

Corcubion	929	1965	510
Faro De Hercules	820	1988	510
Fernando Alvarez	560	1988	510
ILA	1,233	1969	511
Jose Luis Alvarez	550	1989	510
Joseph Duhamel	2,333	1973	512
Juan Alvarez	560	1988	510
Jueves Santo	508	1988	510
Lapataie	1,073	1968	512
Marcelina De Ciriza	2,625	1965	512
Mataco	2,431	1968	511
Orca	1,500	1975	510
Pescargen III	879	1974	511
Pescargen IV	865	1974	510
Pesuarsa II	1,480	1973	510
Ribera Gallega	1,550	1966	511
Santa Eugenia	1,342	1951	510
Santa Rita	1,370	1951	510
Uchi	700	1968	510
Urquil	1,461	1967	511
Userbil	1,338	1968	511
Virgen De La Estrella	1,078	1965	512
	<u>47,990</u>		
Sweden			
Lobo	2,930	1988	512
United Kingdom			
Knossos	2,668	1953	512
Total	<u>116,286</u>		

* 500 GRT or larger

** ONI vessel types

 510 - Trawler

 511 - Refrigerated trawler

 512 - Fish factory trawler

 566 - Fisheries research vessel

Source: U.S. Office of Naval Intelligence (ONI)

Appendix D.--Argentina. Species glossary and maximum sustainable yields

English	Spanish	Scientific	Maximum sustainable
			yield 1,000 Metric tons
Fish			
Anchovy	Anchoveta	Anchoita engraulis	120.0
Blue whiting	Polaca	Micromesistius australis	100.0
Hake	Merluza	Merluccius hubbsi*	390.0
Hoki	Merluza de cola	Macruronus magellanicus	150.0
Kingclip	Abadejo	Genypterus blacodes	23.0
Rays	Ray spp.		NA
Red cod	Bacalao austral	Salilota australis	40.0
Toothfish	Dissostichus eleginoides		NA
	Besugo	Sparus pagrus	3.0
	Bonito		1.6
	Caballa		9.0
	Castaneta	Cheilodactylus bergi	48.0
	Cazon	Galeorhinus vitaminicus	2.6
	Corvina rubia	Micropogon opercularis	37.4
	Gatuza	Mustelus schmitti	9.0
	Granadero	Macruronus whiesoni	60.0
	Lenguados	Bithidae spp.	7.6
	Merluza austral	Merluccius polilepis	30.0
	Mero	Acanthistius vasillanus	20.0
	Pescadilla	Cynoscion stratus	20.0
	Salmon del mar	Mugeiloides semifasciatus	6.0
Squid			
Black	Martialia hyadesi		
Loligo	Loligo gahi		
Illex	Calamar	Illex argentinus	330.0

* Small quantities of *M. polylepis/australis* are also taken.

Source: INIDEP estimates, 295/93, May 10, 1993.

4.2

BRAZIL

Brazil is unlikely to approve the deployment of any significant number of distant-water vessels off its coast during the 1990s. The Brazilian Government has pursued highly restrictive policies toward foreign fishermen and there is no indication of any future policy change. Brazil has only limited grounds on which foreign factory trawlers could be deployed, but press reports suggest that distant-water longline fishermen operating in the mid-Atlantic would like access to Brazilian waters. Brazilian authorities, however, have indicated no interest in such access and have expressed concern over unauthorized operations by these fishermen.

The Brazilian fishing fleet, largely composed of artisanal and small commercial vessels, is unlikely to initiate distant-water operations during the 1990s.

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I. GENERAL BACKGROUND

The Brazilian fishing industry consists of a commercial fishery as well as a massive artisanal fishery--the largest in Latin America. The major

commercial fisheries are for lobster, shrimp, tuna, catfish, snappers, and sardines. These fisheries are conducted mostly in coastal waters within Brazil's 200-mile zone. The lobster and shrimp fisheries are two of the most important in Latin America. Both



Photo 1.--Brazil. Artisanal fishermen with small craft land a substantial part of the catch, but quality standards are often primitive. Dennis Weidner.

generate substantial foreign exchange earnings, although unlike many other Latin American countries, much of the shrimp catch is marketed domestically. Almost all of the commercial fishery is conducted with small trawlers, seiners, and combination trawler-trap vessels, few of which exceed 250 gross registered tons (GRT). The artisanal fishermen catch a wide variety of finfish and shellfish species. The artisanal fishery is conducted in small boats, often of 20 GRT or less and in many cases very small craft without motors. The Brazilian fisheries catch peaked at nearly 1.0

million t in 1985 and has since declined to only about 0.8 million tons in 1991.

The Brazilian Government, during the 1980s, promoted fisheries development. One of the most important Government programs was offering a variety of fiscal incentives to the industry. Most of the incentives were made available to the processing industry and considerable progress was achieved in modernizing plants during the 1980s. Fishermen received little help in modernizing their fleet, partially because commercial banks appeared more hesitant to make loans for vessels than for shore-based processing plant.

II. HIGH-SEAS FLEET

Brazil is the largest country in Latin America, and has a substantial portion of South America's coastline.¹ The country, however, has no high seas fleet. Brazil reported only one high seas fishing vessel totaling less than 1,000 GRT to Lloyd's of London in 1992 (Latin America, appendix B2a1-2).

This data is confirmed by the U.S. Office of Naval Intelligence. The country's commercial fishing fleet is primarily composed of shrimp trawlers, lobster boats, and small sardine and tuna seiners.

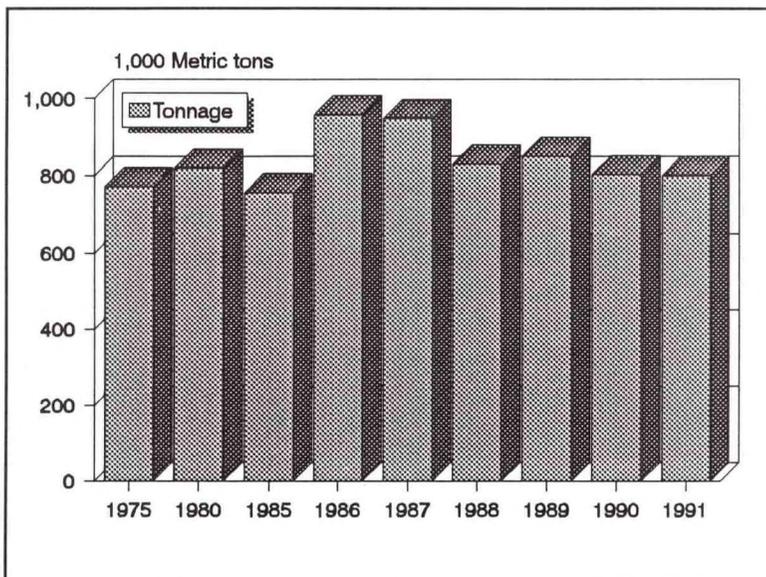


Figure 1.--The Brazilian fisheries catch peaked in 1986.

III. VESSEL SOURCES

Brazil has a large shipbuilding industry. One report suggests that in the 1970s Brazil was one of the world's 10 leading shipbuilders. The Brazilian industry is primarily focused on merchant vessels; the construction of fishing vessels was apparently a minor part of their overall activities. The

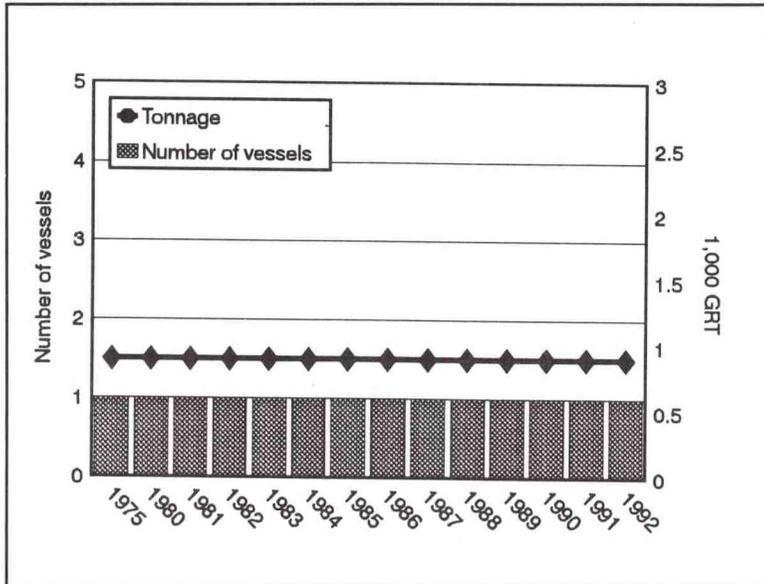


Figure 2.--Brazil has only one large fishing vessel in its fleet.

major yards involved in fishing vessel construction are located in Itaji, Rio de Janeiro, and Santos. Two of the largest companies building vessels in Brazil are the Corena company, based in Santos, and Empresa Brasileira de Construcao (EBRASA). These yards have the capability to build and repair large ships up to 110 meters in length.² They have modern equipment, including lateral launch dry docks.³ While Brazilian yards are capable of building large merchant vessels, the authors know of no large fishing vessels built in Brazil.⁴ Brazilian yards have little experience in building fishing vessels over 300 GRT, although the one large vessel in the Brazilian fleet was built domestically (appendix A1). Brazilian construction seems to have been limited primarily to trawlers, multiple purpose vessels for the shrimp and lobster fisheries, and small seiners for the sardine and tuna fisheries.⁵ The authors have little information on the industry, but believe that most of the fishing vessels used by the domestic fishermen are built locally in Brazilian yards. Scattered press reports also suggest that Brazil exports some fishing vessels, primarily to other Latin American and West African countries.⁶

IV. FOREIGN FISHING

Brazil has pursued highly restrictive policies regarding foreign fishermen. The Brazilian policy has been basically to discourage foreign-flag fishing in Brazilian waters.⁷ Various countries (including Italy, Japan, Korea, Poland, Spain, the USSR, the United States) have contacted Brazilian authorities regarding fisheries access, but the Brazilians have repeatedly shown little interest and have discouraged such proposals.⁸ Brazilian officials have instead encouraged distant-water companies to consider joint ventures. The terms offered, however, were of interest to few foreign fishermen.

Japan: Japanese fishermen operated shrimp trawlers off northeastern Brazil, but had to terminate the fishery after Brazil declared a 200-mile zone in 1969. The Japanese Government made overtures to the Brazilians in 1976 to gain access to Brazilian grounds. The Brazilians indicated that while they would consider the formation of joint ventures, they would not issue foreign fishing licenses.⁹ Unconfirmed reports indicate, however, that three Japanese jiggers were operating off Brazil in 1993.¹⁰

Korea: Korean fishermen operated approximately 80 shrimp trawlers in Brazilian waters during 1976.¹¹ Korea attempted to retain access for its fishermen by offering development assistance to Brazil. Korean and Brazilian Government officials met in 1979 to discuss bilateral technical cooperation through information exchange and the mutual interchange of fishery technicians and researchers. The two countries signed an agreement to train a number of Brazilian fishermen in Korea. Brazil, despite the Korean assistance, gradually reduced the number of Brazilian shrimp trawlers operating off its coast. Scattered reports suggest that in 1979 only about 40 Korean shrimp trawlers were still operating in Brazilian coastal waters, but there were no such operations by 1983.

USSR: Soviet fishermen have never conducted extensive operations off Brazil. There were some limited contacts during the 1960s before Brazil declared a 200-mile zone, but Soviet fishermen have not since operated in Brazilian waters. Scattered press reports have subsequently indicated occasional efforts by the Soviets to negotiate fishery cooperation and joint venture agreements. Although some negotiations were held, the authors know of no actual agreements which were finalized.¹²

United States: U.S. fishermen operated shrimp trawlers off northern Brazil during the 1960s. After Brazil declared a 200-mile zone, the United States Government negotiated bilateral access agreements allowing continued fishing during the early 1970s.¹³ The Brazilian Government allowed these agreements to lapse in 1977, and attempted to negotiate a joint venture umbrella agreement with the United States. Brazilian demands were so costly, however, that no actual agreement was signed.

Other countries: Other countries, including Trinidad and the Netherlands Antilles also operated shrimp trawlers off northeastern Brazil during the 1960s. All of these countries were required to terminate their distant-water operations in the 1970s, but Trinidad agreed to a joint venture permitting some continued access.

The Brazilian Government after excluding foreign distant-water fishing, encouraged domestic fishing companies to lease foreign vessels. Thus, domestic fishing companies which during the 1980s did not have an adequate fleet could lease vessels from foreign companies. Brazilian companies reportedly leased nearly 100 such vessels as of the mid-1980s. Most of the leased vessels were shrimp trawlers, but nearly 15 tuna vessels were also involved.¹⁴ The involvement of Japanese companies, for example, played an important role in the development of the Brazilian tuna fishery.¹⁵ Japan and Korea were the two countries most involved.¹⁶ At least some of the Korean companies reported difficulties including high fuel prices.¹⁷ The authors believe that Brazil has since substantially reduced the number of foreign vessels licensed.

Brazil initiated strict enforcement patrols in its 200-mile zone during the 1980s. U.S. and foreign shrimp fishermen continued to operate illegally off northern Brazil after bilateral access agreements expired. The Brazilian Navy reported recurring violations of the country's 200-mile zone, seizing and in several cases firing upon vessels which refused orders to stop. Many of the vessels involved were U.S. shrimp trawlers. Brazilian Naval authorities, in the early 1980s, informed the embassies of distant-water fishing nations that they would fire on foreign vessels disregarding orders to halt.¹⁸ Such violations declined sharply after 1983. Officials are still concerned, however, with distant-water fishing in the Atlantic. Brazilian sources report that, in 1990, 117 foreign-flag vessels called at Brazilian ports (Recife, Natal, and Cabedelo) for supplies, fuels, repairs, and emergencies. Local officials are convinced that many of these port calls are pretexts for entering Brazilian waters to fish, primarily for tuna and related species.¹⁹ Information is not readily available on the countries and types of vessels involved, but the authors believe that some of the major countries are Japan, Korea, Spain, and Taiwan.²⁰ Brazilian sources indicate that the Japanese vessels are tuna longliners.²¹ Spanish sources report that Spanish longliners call regularly at Brazilian ports.²² Foreign press reports suggest that Brazil deals harshly with foreign fishermen which Brazilian authorities believe fish illegally off Brazil.²³

V. JOINT VENTURES

The Brazilian Government has actively promoted the formation of joint fishery ventures. The regulations, however, especially a requirement for majority Brazilian ownership, has discouraged many potential foreign investors.²⁴ A few countries have entered joint fishing venture agreements with Brazilian companies. The authors have noted scattered press reports, but have few details on the commercial arrangements involved or on the results.²⁵ Companies from Canada, Japan, Korea,

Poland, Spain, and the United States have been involved. Japan and Korea have been especially active, but the arrangements do not normally involve access for foreign-flag vessels, although, as described above, quite a number of foreign-owned vessels were leased by Brazilian companies.²⁶

Cayman Islands: Brazilian companies leased tuna vessels (a baitboat and a purse seiner) registered in the Cayman Islands during 1982-83 (appendix B). No information is available on the companies involved.

Japan: Several Japanese companies have been active in Brazil, forming a variety of joint venture companies beginning in the 1960s. Brazilian companies are known to have leased tuna longliners and baitboats (appendix B) from the Japanese and may have leased other types of vessels as well.

AIA: Nichirei created the Amazonas Industriais Alimenticias joint venture in 1979 with unknown Brazilian partners. The company processed frozen seafood.²⁷

CPT: The Companhia de Pesca Taiyo (CPT) was probably the first Japanese joint venture in Brazil and was established in 1956. CPT together with another Taiyo affiliate in 1976 operated 9 large trawlers, 13 small trawlers, 1 purse seiner, and a processing plant.²⁸

COPENOBRA: The Companhia do Pesca do Norte do Brasil (COPENOBRA) was created in 1960. It operated shrimp trawlers owned by Nippon Reizo, Taiyo, and other Japanese companies.²⁹ The company focused primarily on shrimping, but also did some whaling.³⁰

IBPF: Nichirei established the Industria Brasileira de Pescados Frios in 1960 to produce frozen and canned fish. It is currently inactive.³¹

Nihaku: Nihaku Suisan formed Suisan SA Pesca Industria Comercio in 1979 with unknown Brazilian partners to longline tuna and trawl for other species. It is currently inactive.³²

Santoku: Santoku Busan formed San Tokuro Piscicultura, an aquaculture venture, in 1975 with unknown Brazilian partners.

Others: A Japanese-Brazilian cooperative expressed interest in joint ventures with Brazilian cooperatives.³³ Japanese companies participated in early ventures to develop Brazil's tuna fishery.³⁴ Another joint venture financed equally by Brazil's Matarazo financial group and the Japanese Nichiro company conducted test fishing for croakers and other groundfish in 1977 and 1978 with plans to form a permanent joint venture association.³⁵ Details on the results are unavailable. The authors have noted few recent reports of joint ventures with Japanese companies. Brazilian press reports during the early 1980s indicated Japanese interest in expanded fisheries cooperation, but no details are available on any actual ventures.³⁶

Korea: The authors know of no joint ventures with Korean equity interest, but Brazilian companies and a U.S.-Brazilian joint venture have leased vessels from Korean companies for Brazilian operations. The vessels involved are believed to be primarily shrimp trawlers. The South Korean National Fisheries Administration and the Superintendencia de Desarrollo Pesqueiro (SUDEPE)³⁷ signed an agreement in 1980 which among other provisions addressed the incorporation of joint ventures for the purpose of leasing Korean vessels.³⁸

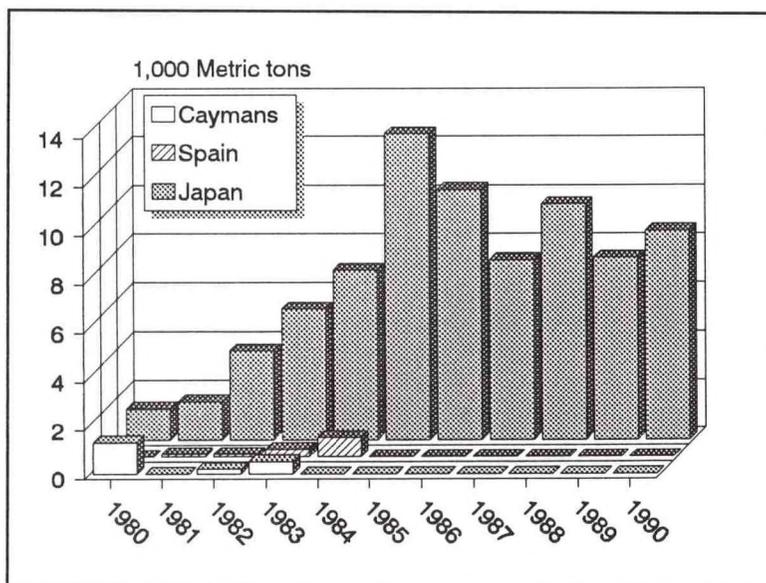


Figure 3.--Brazilian companies have licensed foreign tuna vessels, primarily from Japanese companies.

Portugal: The Portuguese company Pesca Alvarez Mascareñas formed a temporary association with a Brazilian company in 1991 to deploy two trawlers and a longliner off Brazil for demersal finfish.³⁹ Portuguese Government officials and industry representatives met with Brazilian companies in 1991 to discuss possible joint fishery ventures.⁴⁰ A Portuguese company in 1992 formed a joint venture with both Russian and Brazilian partners.⁴¹

Russia: A Russian company reportedly formed a fishery joint venture in 1992 with Brazilian and Portuguese companies, but no details are available.⁴²

Spain: Various press reports indicated that Spanish companies had affiliates or joint ventures in Brazil during the 1970s, but no information is available to confirm the existence of current joint venture companies.⁴³

USSR: Press reports indicated that SOVRYBFLOT in 1987 negotiated a joint venture with a Brazilian company to establish a joint venture, Brasovpesca. No actual contracts, however, were signed, partially because the Brazilian Navy objected.⁴⁴

United States: U.S. companies formed joint fishery ventures which operated shrimp fleets and processing plants off northern Brazil during the 1970s. U.S. companies were also reportedly involved in sardine and tuna canning.⁴⁵ Castle and Cooke was one of the major companies involved. Brazilian officials during the late 1970s phased out distant-water shrimp fishing off its northern coast and encouraged the foreign fishermen to form local joint ventures. Brazilian officials in 1978 indicated that they would only consider continued U.S. participation in the shrimp fishery as part of joint venture arrangements. The two Governments attempted without success to negotiate an umbrella joint venture agreement. The U.S. companies involved did not find the terms offered by the Brazilian Government attractive, especially flag transfers and majority Brazilian ownership.⁴⁶ Scattered press reports indicate continued U.S. interest in forming joint ventures in Brazil. A Massachusetts company signed an agreement with the Brazilian Mantuano company to do test fishing for scallops in Brazilian waters. Most private efforts to form joint ventures by various U.S. companies during the 1980s have generally failed because the

U.S. investors decided that the terms offered by Brazilian partners were unacceptable.

Venezuela: The authors noted one 1991 report suggesting a possible joint tuna venture/access arrangement with Venezuela.⁴⁷ No information is available on whether or not the agreement was actually signed.

VI. DISTANT-WATER OPERATIONS

Brazilian fishermen do not currently conduct distant-water operations. The country's fishermen did conduct demersal trawl fisheries in the South Atlantic off Uruguay and northern Argentina during the 1960s, but this fishery was terminated when the two neighboring countries implemented 200-mile zones.⁴⁸

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5. "Naval fishing industry in Brazil," *Revista Nacional da Pesca*, October, 1974, p. 32.
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APPENDICES

Appendix A.--Brazil. Large* fishing vessels registered, 1993

Country/Vessel	Class	Size	Built	Vessel type**
		GRT	Year	
Brazil				
Apollo VI		860	1973	510

* 500 GRT or larger

** ONI vessel types

510 - Trawler

Source: U.S. Office of Naval Intelligence (ONI)

Appendix B.--Brazil. Tuna* catch of fishing vessels leased from foreign companies

Year	Countries			Total**
	Caymans	Japan	Spain	
	1,000 Metric tons			
1980	-	1.3	-	1.3
1981	-	1.6	0.1	1.6
1982	0.2	3.7	0.1	4.0
1983	0.5	5.4	0.3	6.2
1984	-	7.0	0.8	7.9
1985	-	12.6	-	12.6
1986	-	10.3	-	10.3
1987	-	7.4	-	7.4
1988	-	9.7	-	9.7
1989	-	7.5	-	7.5
1990	-	8.6	-	8.6

* And related species

** Totals may not agree due to rounding

Source: International Commission for the Conservation of Atlantic Tunas (ICCAT), Statistical Bulletin, 1990, 1991.

4.3

CHILE

Chile appears unlikely to permit any significant deployment of foreign vessels in their EEZ during the 1990s. Chile has strictly limited foreign operations within its 200-mile zone. The Chilean industry appears to be fully capable of developing the capacity to fully utilize available resources, although technical assistance from foreign countries is still needed to develop new fishing methods and processing procedures. As a result, officials have shown little interest in inquiries from the European Community and other countries about access arrangements for distant-water fishermen. Opportunities may exist, however, for possible joint venture projects. Joint ventures with foreign companies (especially Japan and Spain) have played an important role in the development of some Chilean fisheries, especially the trawl fishery and the surimi industry. While the Chileans may consider proposals involving further joint venture operations, there appears to be little likelihood that they will authorize access for any significant number of foreign vessels.

Chilean officials have expressed considerable concern about high-seas fishing in the southeastern Pacific. Chilean officials are working hard on the diplomatic level to limit distant-water fishing on the high-seas. The Soviets and other countries have for years fished extensively in the southeastern Pacific, but since 1991 have reduced or terminated their operations in the area. While the Soviet/Russian withdrawal from the southeastern Pacific has sharply reduced foreign fishing off Chile, several countries continue to conduct smaller fisheries, but ones that target high-value species. Chilean officials continue to aggressively push for a new international convention on high-seas fisheries. The Chileans discourage high-seas fishing by restricting transshipments through Chilean ports of certain species of interest to Chilean fishermen, especially swordfish and jack mackerel.

Chile also appears to be launching new high-seas fisheries of its own. Chile is one of the world's most important fishing countries. In recent years Chilean companies have significantly increased both the quantity of fish harvested and the range and quality of product exported. Several fishing companies have emerged as major Chilean enterprises. The scale of operations and resulting profits achieved have permitted companies to acquire significant technical capabilities. Some companies have initiated limited high-seas operations, both longlining in the southeastern Pacific and trawling off South Atlantic islands. Chilean companies have been acquiring larger fishing vessels and are proceeding to harvest offshore jack mackerel which was previously taken primarily by the Soviets. Some of the longliners acquired in recent years are fully capable of high-seas operations. While these operations are currently relatively small-scale activities, they could eventually develop into significant high-seas activities. Some of these operations, especially operations off the South Georgia and South Sandwich Islands pose some potential difficulties as they exceed Chile's Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) quota. The Chilean Government is prosecuting the individuals involved.

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I. GENERAL BACKGROUND

The expanding Chilean fishing industry is playing an increasingly important role in the country's economy. Chile regularly reports one of the largest fishery catches in Latin America (Latin America, appendix C2a1). The 1992 catch was a near-record 6.4 million metric tons (t), exceeding the Peruvian catch for the first time since 1987. Most of the Chilean catch is small pelagic species which are primarily reduced to fishmeal and oil, but

the catch of a variety of other, more valuable edible species has expanded in recent years. The principal commodities produced, however, continue to be fishmeal and oil. Most of the Chilean production of both fishmeal and edible commodities is exported.

The Chilean fishing fleet is dominated by the country's pelagic sector. Chilean companies reported a fleet of 390 seiners in 1992.¹ The vessels are primarily purse seiners deployed for small pelagic species (anchovy, sardines, and mackerel) in coastal waters. Most of the vessels do not have refrigerated holds which restricts their range, preventing them from fishing on offshore grounds. Such operations would require extended voyages of greater duration than is now common. This would mean delays in landing the catch which could cause the fish to spoil. Chilean companies have been acquiring larger seiners in recent years and some now have insulated holds to help preserve the quality of the catch.² The new, larger vessels are capable of increasingly long voyages.³ The U.S. Embassy in Santiago estimates that 79 new seiners totaling over 45,000 cubic meters will be added in 1993 alone. The total hold capacity of the fleet has increased an incredible 50 percent between 1990 and 1993.⁴ Chilean companies rushed to add new vessels before the end of September 1993 when

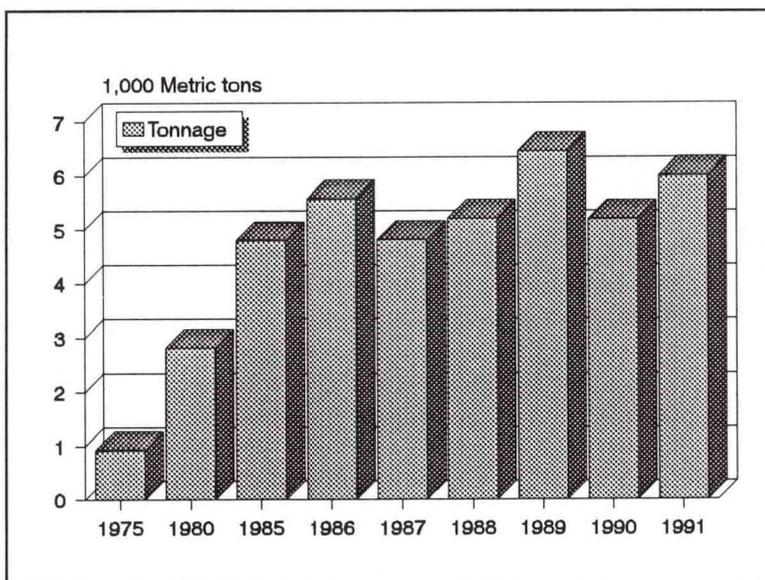


Figure 1.—Chile's catch is dominated by small pelagic fisheries, but fishermen are rapidly diversifying into more lucrative species.

the pelagic fleet was frozen in size. The Government will now only allow replacement vessels to be added to the fleet.⁵ Despite the fleet expansion in recent years, the average size of the Chilean vessels is still less than the Argentine fleet which is composed primarily of trawlers.⁶

Chilean fishing companies reported considerable success during the 1980s. The profits achieved have enabled several companies to make major investments in vessels and processing plants. One source estimates that investments in the fishing industry reached \$100 million in 1988, although new investment apparently slowed during 1989 and 1990.⁷ A more recent analysis indicates that investments totaling \$400 million are likely in 1993 and 1994. One source estimates that fishing companies are likely to invest about \$600 million in the fishing industry during the next 5 years (1993-98).⁸

Fishmeal: Fishing companies have reported profitable operations and, as a result, have acquired larger, more modern seiners to target offshore jack mackerel stocks. Chilean companies have been steadily increasing jack mackerel catches from 1.2 million t in 1986 to 3.0 million t in 1991 (appendix F). The Chileans in 1991 replaced the declining Soviet effort on offshore jack mackerel. Many observers believe that Chilean companies will report major catch increases during 1994 because of all the new vessels which have been added to the fleet.⁹ The modern seiners added to the fleet have allowed the companies to improve the quality of fish delivered to the reduction plants. This has enabled the fishmeal companies to begin producing more profitable high-quality fishmeal for both Chile's expanding aquaculture industry and for export. Companies are reporting disappointing financial results in 1993, however, due to depressed fishmeal prices. Government officials are encouraging companies to expand markets by identifying new buyers.¹⁰

Edible products: The substantial investments in recent years have also enabled the industry to significantly expand the fleet deployed for edible

species. Fishermen have been acquiring larger trawlers (Latin America, appendix B2a2) which has enabled them to extend their range of operations to the lightly populated southern coast. Other fishermen have been acquiring longliners for the new swordfish fishery. As a result demersal catches have increased from only 110,000t in 1985 to over 550,000t in 1990.¹¹

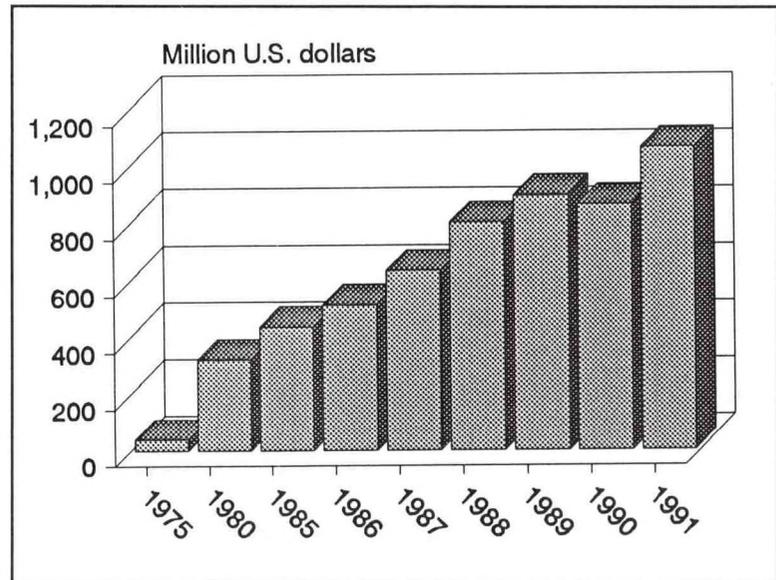


Figure 2.--Chile. Exporters have steadily increased fishery shipments during the 1980s and exceeded the \$1.0 billion mark for the first time in 1991.

Exports: Chile's growing fishing industry has developed into one of the country's leading export sectors. Fishing companies have reported impressive increases in export shipments during the 1980s. Exporters increased shipments from only \$0.3 billion in 1980 to nearly \$1.1 billion in 1991 (Latin America, appendix E1). Chile is now the most important exporter of fishery products in Latin America and provides more than 25 percent of the region's fishery exports.

II. HIGH-SEAS FLEET

Chile reported a fleet of 90 large fishing and fishery support vessels (500 GRT and over) to Lloyd's totaling nearly 80,000 gross registered tons (GRT) in 1992. Of this total, the country has registered 89 large fishing vessels totaling nearly 78,000 GRT (Latin America, appendices B2a1-2). In addition, 1 refrigerated fish carrier or processing vessel of about 2,000 GRT is also registered in Chile (Latin America, appendices B4a1-2). This is the second largest Latin American fleet of large vessels, many of which are capable of distant-water operations. Data available from FAO shows a somewhat larger fleet as of 1989 (the last year for which data was available) consisting of 68 fishing and support vessels totaling 66,000 GRT (Latin America, appendix B3b1-2).

While an increasing number of Chilean vessels is capable of distant-water operations on the high seas, few are so employed. Most of the Chilean vessels, as explained above, are seiners deployed for pelagic species in coastal fisheries. Chilean companies are, however, acquiring modern trawlers and longliners which can be deployed on distant-water grounds.

Trawlers: Chile also deploys a smaller, but expanding, trawler fleet targeting groundfish off the central and southern coast and to a lesser extent off Antarctica and South Atlantic islands. Chilean companies require larger, modern vessels for such fisheries. The vessels have to withstand the severe, difficult weather conditions which they face in these southern fisheries. The distances from the home port for such operations also require larger vessels.¹²

Longliners: Some companies have also begun to acquire longliners, mostly from Spanish shipyards, presumably to deploy for swordfish in the eastern Pacific. Chilean fishermen operated about 25 longliners of various sizes in 1993.¹³

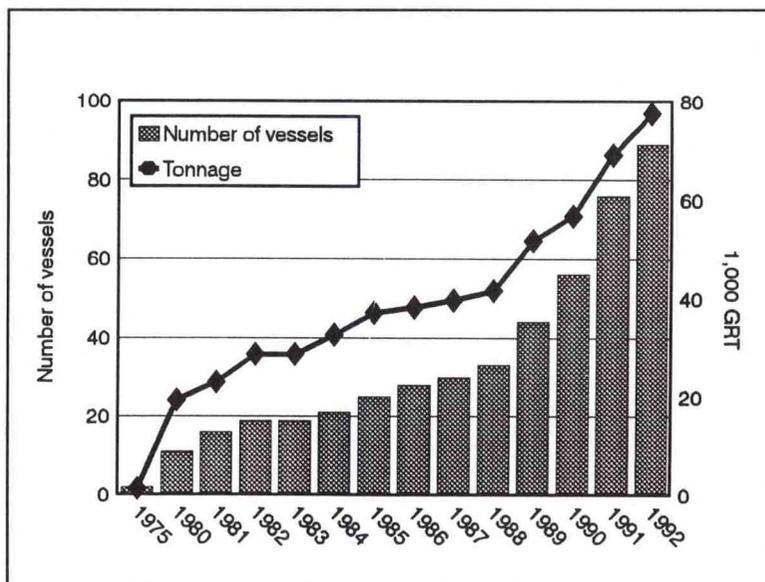


Figure 3.--Chile's aggressive private fishing industry has steadily expanded the number of large vessels in the fleet.

III. VESSEL SOURCES

Chilean shipyards are some of the most productive in Latin America and build many of the vessels needed by domestic fishermen.¹⁴ Chile had 58 shipyards active in 1986, 16 of which were major yards, 33 minor yards, and 9 artisanal yards.¹⁵ These yards built over 500 fishing vessels between 1984 and 1989. Chile was reportedly the world's tenth most important builder of fishing vessels in 1990, but construction activity reportedly declined somewhat during 1991.¹⁶ Unlike most other Latin American countries, a substantial number of the large vessels (500 GRT or greater) have been built in domestic shipyards, most of them since 1990 (appendix C).

The more important Chilean yards are able to build fairly large fishing vessels.

Astilleros y Servicios Navales (ASENAV): ASENAV is one of the largest Chilean shipyards and recently built a large purse seiner, the *Malleco*, for Pesquera Iquique Guanaye.¹⁷

Astilleros y Maestranzas de la Armada (ASMAR): ASMAR has built fishing vessels up to about 600 cubic meters in capacity and 50 meters in length. The company recently helped to expand the capacity of the purse seiner *Yagan* from 680 to 1,600 cubic meters.¹⁸

Marco: Marco is located at the northern port of Iquique. It is building six purse seiners for Chilean companies during 1993. Some are equipped with insulated holds.¹⁹ The largest has a carrying capacity of 1,000 tons, but the company plans to construct a seiner in 1994 with a 1,500 ton carrying capacity.²⁰

Chilean shipyards vary greatly in capability and facilities. The larger yards are well-equipped with modern facilities and equipment. Some are associated with foreign yards in Spain, South Africa, the United States, and other countries. Several yards have floating repair docks, drydocks, synchrolift platforms, and track movers.²¹ Chilean officials assert that their major shipyards produce vessels of a quality comparable to that of European countries.²² The Government sets standards to which all vessels are to be built which some observers believe has helped raise and maintain high quality standards at Chilean shipyards.²³

Chilean fishing companies significantly expanded their operations during the 1980s. So great was the demand for fishing vessels in Chile during this period that several yards reported a substantial backlog of orders.²⁴ Many companies reportedly decided to purchase imported vessels rather than wait for their ships to be built domestically. Some industry sources have reported problems with financing the expansion and improvement of the major yards.²⁵ Fishing company executives postponed expansion plans and vessel construction orders because of uncertainty over the provisions of a new comprehensive fisheries law under consideration during the late 1980s and early 1990s. Final passage of the new law in September 1991, resolved the uncertainty and appears to have allowed many companies to finalize their expansion

and modernization plans.²⁶ One Chilean source indicates, however, that in 1993, new Chilean banking regulations were making it difficult to finance vessel construction.²⁷ The U.S. Embassy in Santiago, on the other hand, reports that Chilean shipyards are currently so busy that they cannot take new orders. Many of the existing orders are associated with the massive expansion of the fishing industry in San Antonio.²⁸

Chilean companies have obtained fishing vessels from many different countries. The authors have only incomplete details on vessel imports, but the following reports from various countries give a general idea of the level of activity:

Argentina: Argentine shipyards, because of their proximity to Chile, are well-situated to construct vessels for the Chilean fleet. Argentine yards reportedly built 20 small (15-20 meters) fishing vessels for Chilean companies in 1978.²⁹ Chilean companies, however, have made few purchases from Argentine companies in recent years.

Greenland: Pesquera de Golfo in 1992 imported the *Sisimut*, a 56-meter (m) stern trawler built in Denmark. The vessel was purchased from the Royal Greenland company.³⁰

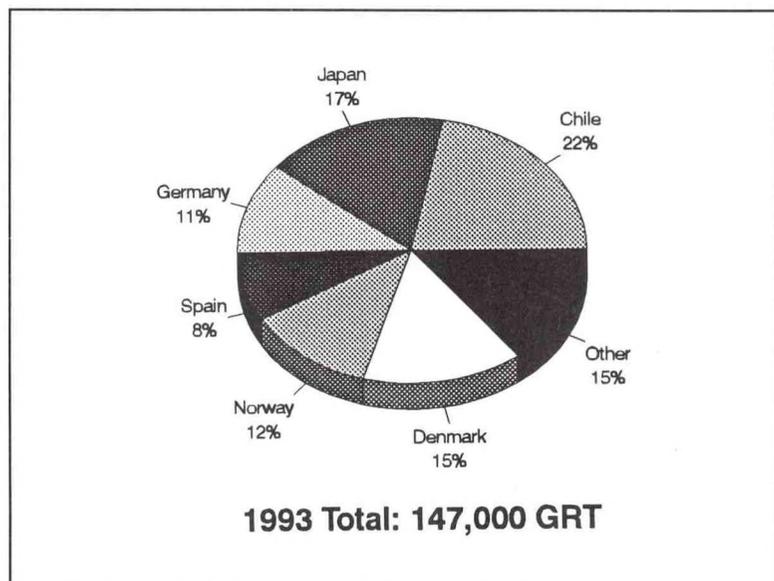


Figure 4.--Chile. Fishermen have obtained large fishing vessels from a variety of domestic and foreign shipyards.

Iceland: Friosur imported the former Icelandic trawler *Karlsefni* in 1990.³¹ Unnamed Chilean vessel operators negotiated in 1992 for the purchase of the 11,400-t factory vessel *Hólmaborg* from an Icelandic company.³² Friosur may acquire another Icelandic trawler in 1994.

Ireland: Chilean purchases of Irish vessels are not well-documented, but some sales have been reported. Chile purchased the 55-m, Norwegian-built trawler *Antarctic* from Eamon McHugh of Ireland in 1990.³³

The Netherlands: Chilean companies have obtained several vessels from the Netherlands. They purchased 10 beam trawlers (29-34-m long) from the Netherlands in 1989.³⁴

Norway: Norway is one of the major suppliers of fishing vessels to Chile. Norwegian shipyards have both designed and built vessels for Chilean fishing companies. The Chilean-South Africa joint venture Playa Blanca Ltd. in 1982 ordered 12 small seiners in Norway.³⁵ Previously, Chilean companies had bought six custom-built vessels from the Norwegian firm of Fiskerstrand and Eldoy.³⁶ Pesquera Bio Bío of Chile purchased a modern 1,000-ton-capacity purse seiner from a Norwegian company in 1988.³⁷ One press report indicated that 20 modern, Norwegian-style purse seiners are currently on order in Norwegian shipyards.³⁸ Norway is one of the most important sources of vessel imports. Office of Naval Intelligence (ONI) indicates that about 15 large (500 GRT or greater) vessels in the current Chilean fishing fleet originated in Norway (appendix C). Most of the Norwegian-built vessels were built in the 1970s, suggesting that they have been imported used.

Spain: Numerous Spanish shipyards have built fishing vessels for Chile.³⁹ Chilean companies ordered several large, used Spanish factory vessels which were deployed in the demersal trawl fishery off southern Chile during the 1970s and 1980s. The Barros shipyard built the 80-m *Barrerasos Masso Dos*.⁴⁰ Spanish shipyards have also built longliners for Chile. One company ordered three 30-m fiberglass (GRP) longliners.⁴¹ Pescanova ordered two 53-m longliners from the Santodomingo and Factorías Volcano yards, located in Vigo; these vessels were completed in May 1987.⁴² Another

Chilean company purchased two, 30-m longliners from Polyships, a Vigo based shipbuilder, in 1988.⁴³

Sweden: Pesquera Iquique, one of Chile's largest fishing companies, purchased two vessels from an unidentified Swedish company in 1983.⁴⁴

United Kingdom: Pesquera Guafo bought two 45-m trawlers from the Boston Deep Sea Fishing Company (UK) in 1980.⁴⁵ Chile acquired the *l'Interpeche*, a huge British-built factoryship in 1985.⁴⁶ It was never deployed in the fishery, but rather surrounded in concrete at Caldera and used as a fishmeal plant.⁴⁷

United States: U.S. shipyards provided some of the first modern commercial fishing vessels to Chile in the early 1960s.⁴⁸ Chilean companies placed some orders with U.S. shipyards during the 1980s. The Coloso company imported a 600-ton-capacity high-seas tuna vessel from a U.S. yard in 1985.⁴⁹

Chilean shipyards provide support and repair services to the extensive foreign fleets operating in the southwestern Atlantic.⁵⁰ The Argentine decision to close their ports to foreign fishermen, meant that Punta Arenas in Chile was the closest port for vessels operating off the Falklands and southern Argentina outside the 200-mile zone. Various press reports mention foreign fishermen using Punta Arenas. The SAEM shipyard in Punta Arenas, Chile's southern-most city, has reported some success in obtaining orders from foreign fishermen and is working on British, Japanese, and Korean vessels.⁵¹ SAEM has repaired vessels as large as 3,400 tons.⁵² Other Chilean shipyards less favorably placed than SAEM have also advertized for foreign business. Major Chilean shipyards like ASENAV located at Valdivia, for example, have also advertised extensively for foreign fleet business.⁵³

IV. FOREIGN FISHING

Foreign fishermen conducted extensive fisheries off Chile during the 1970s and 1980s. Most of the foreign effort was conducted outside Chile's 200-mile limit, primarily for jack mackerel. The Soviet Union was the most prominent country involved but Bulgaria, Cuba, Japan, Korea (ROK), Poland, and other countries also deployed some vessels (Latin America, appendix C4g). Catches peaked in 1991 at 1.3 million t, but have declined sharply because of the withdrawal of the Soviet/Russian fleet from the southeastern Pacific during 1991 and 1992 (appendix G).

Chile has not had a formal licensing system for foreign vessels operating in its 200-mile zone, with a few exceptions. The Government in 1959 did establish a licensing system for tuna vessels.⁵⁴ The Chilean Government has also allowed some foreign fishermen to operate within Chilean waters under "research/experimental" permits, especially off southern Chile. The foreign fishermen provided detailed research and operational reports to Chile and in return were allowed to keep the catch.⁵⁵ These reports not only provided important biological data, but the foreign operations also furnished information on grounds, fishing and handling methods, and the economic feasibility of such operations.⁵⁶ This data and the experience gained by Chileans working with the foreigners has proven of great assistance to Chilean companies which have since launched their own fisheries for species that foreigners initially targeted.

Foreign research/experimental fishing was first approved in 1972 when a Soviet trawler was deployed. After the 1973 military coup the Soviet vessels were expelled. The Government in 1978 issued new regulations allowing some limited access to the southern coast.⁵⁷ The foreign companies had to establish local subsidiaries and transfer vessel registry to the Chilean flag and, as a result, their catch is reported as part of the overall Chilean catch.⁵⁸ As many as 16 vessels have been licensed, but in most years participation has been limited to 8-10 vessels.⁵⁹ The participating foreign fishermen mostly deployed factory trawlers for hake and other demersal species.⁶⁰ The vessels have varied widely

in size, however, from the 617-GRT *Carnation* to the 3,918-GRT *Fuji*. The number of vessels have been sharply reduced in recent years. Only four foreign vessels were operating off Chile in 1993, two Japanese vessels and one vessel each from Korea (ROK) and the United States.⁶¹

The Government limited the foreign vessels to waters off southern Chile where no Chilean fishermen had operated before. The Chilean Government gradually moved the area further south as the domestic Chilean fishing fleet expanded. The foreign factory vessels had to operate south of 37°S during 1977, but the limit was shifted further south to 43°S by 1978 and 43°33'S by 1987. The new 1991 Ley de Pesca (Fisheries Law) further restricted the foreign fishermen to the southern-most waters off Chile, south of 47°South.⁶² One observer indicates that the foreign fishermen have to operate more than 150 miles off the coast, but the authors have yet to confirm this. Even in this remote location, the vessel operator would have to demonstrate that he intended to target a new resource.⁶³

The licensing of the foreign vessels became increasingly controversial in Chile. As domestic fishermen expanded their own fleet and fishing capabilities, they had less need for associations with foreign countries. Most fishermen as well as the operators of shore-based processing plants object to the licensing of foreign vessels, primarily factory vessels.

Foreign factory vessel operators: Factory vessel operators argued that their presence was a boon to the Chilean economy. They maintained that they utilized stocks not fished by Chileans, introduced foreign investment capital, added value to the catch, paid taxes, and employed local workers.⁶⁴

Chilean fishermen/plant owners: Domestic fishermen and shore-based factory owners, however, increasingly saw the foreign-owned vessels as unfair competition and criticized the Government for permitting what they charged was thinly veiled foreign fishing. The Chilean fishermen using smaller vessels with ice holds claimed that their operations were more beneficial to Chile in terms of employment, economic returns, and resource preservation.⁶⁵ The shore-based processing plant owners also insisted that they provide more

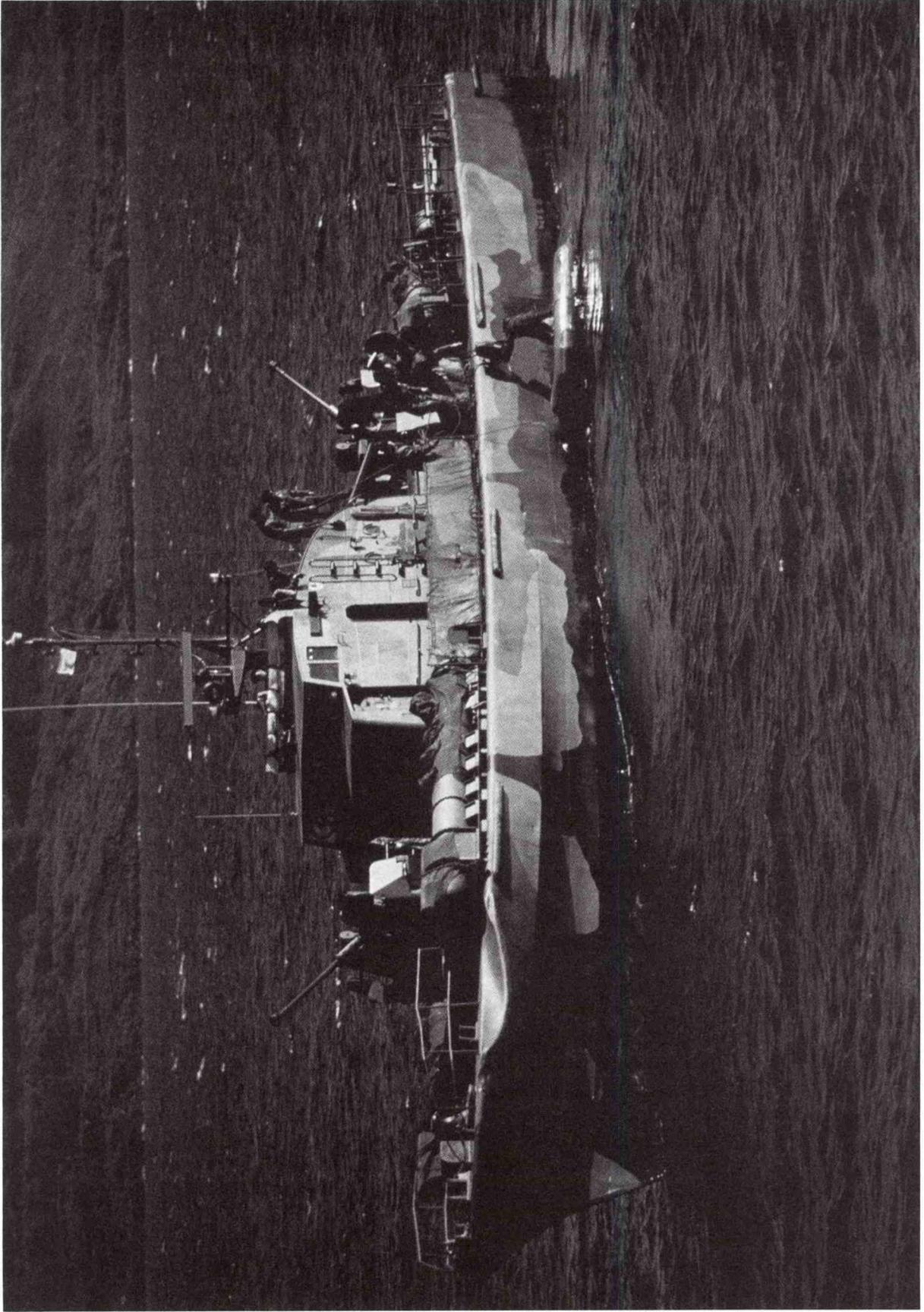


Photo 1.—The Chilean Navy has closely monitored foreign fishing vessels operating off its coast. Dennis Weidner.

employment and better economic returns.⁶⁶

Government officials: Government officials defended the program and denied many of the accusations made by the local fishermen. Former Subsecretario de Pesca Robert Verdugo pointed out that the factory trawlers are Chilean-flag vessels operated by Chilean registered companies and employ at least 80 percent Chilean crews. He maintained that the program of licensing these vessels was highly beneficial to Chile, both in terms of economic earnings and technology transfer.⁶⁷ Chilean officials do not plan, however, to issue any future licenses to distant-water fishermen. They are willing, however, to consider possible joint ventures.⁶⁸

Chilean law strictly limits the operations of foreign-owned fishing vessels in Chile. The 1991 Ley de Pesca invokes the Navigation Law which forbids the operation of vessels of any kind that are majority owned by foreign concerns. The Navigation Law requires a vessel has to be at least 51 percent Chilean owned to fly the Chilean flag. The 1991 Fisheries Law also prohibits the operation of factory vessels within the country's 200-mile EEZ. The only exception is for possible Chilean factory vessel operations mentioned above.

Chilean officials do not believe significant illegal fishing occurs in Chilean waters. One Chilean official expressed considerable confidence that the Chilean Navy was strictly enforcing the country's fishing regulations and 200-mile zone.⁶⁹ The only recent incident reported by the Chileans has been the seizure of a Spanish vessel.

Available information on fishing by individual foreign countries is as follows:

Bulgaria: Bulgaria initiated a distant-water fishery off the western coast of South America in 1979. The Bulgarian operations were primarily conducted outside of Chile and Peru's 200-mile zone, but no details are available. Catches peaked in 1984 at over 25,000t (Latin America, appendix C4g). The Bulgarians terminated the fishery in 1986, but resumed limited fishing in 1990.

Cuba: The Cubans deployed some vessels from Chilean ports in the early 1970s as part of an overall cooperative effort with the leftist-oriented Allende regime.⁷⁰ Such efforts ended abruptly when the

Allende Government was overthrown in 1973. Cuban-Chilean political and economic relations, including the fisheries agreement, were broken off. The political differences between the Chilean military regime and the Cuban communist government prevented any Chilean-Cuban fishery relations during the 1970s and 80s. The Cubans and the Soviets, however, using the information they gathered from their research conducted during the Allende regime, initiated a fishery outside Chile's 200-mile limit. Cuba reported a 24,000t catch in 1975. The Chilean Navy conducted constant surveillance of their activities off Chile's coast, primarily because of security concerns. Press reports have suggested that weapons may have been supplied to guerrilla groups by Cuban and Soviet fishing vessels. The Cubans developed their southeastern Pacific fishery into one of their principal distant-water fisheries. Cuban catches fluctuated widely from year to year, reporting only 19,000 t in 1979, but nearly 90,000 t only a year later in 1980. The Cuban distant-water fleet (FLOCUBA) was able to significantly expand their distant-water catches with the addition of the Rio Damuji class stern factory trawlers in the late 1970s.⁷¹ Cuban southeastern Pacific catches in some years exceeded even the quantity caught in Cuban coastal waters. This fishery totaled 87,000 t of mostly jack mackerel as late as 1988. Cuban catches during the 1980s fluctuated widely. FLOPESCA reported catches under 50,000 t in 1984, 1985, 1987, and 1989. FLOCUBA caught 60,000 t in 1990 and 56,000 t in 1991 (Latin America, appendix C4g). Russia's decision to sharply cut the quantities of oil formerly delivered by the Soviet Government, however, has forced FLOCUBA to terminate its southwestern Pacific operations in 1992 or 1993.⁷²

Denmark: The Danes do not fish off Chile, but are interested in initiating a new fishery off Argentina.⁷³ A Danish trade/fisheries mission with representatives from 32 Danish companies visited Argentina and Chile during August 1993.⁷⁴ The discussions in Chile probably focused on trade matters, but the Danes may have also raised fisheries access.

European Community: EC countries did not report distant-water catches off Chile during the 1980s. EC officials have contacted Chilean fishery officials in the hope of negotiating an access agreement for

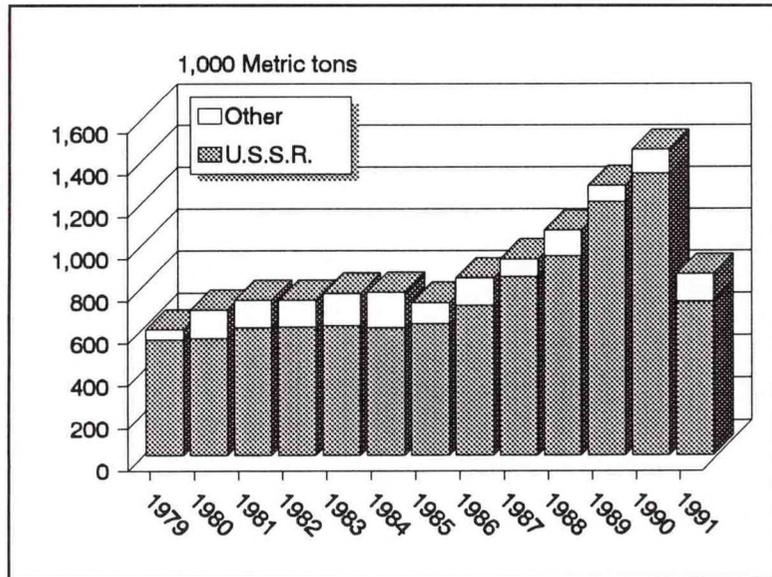


Figure 5.--Southeastern Pacific. Distant-water fishing increased steadily during the 1980s, peaking at 1.5 million metric tons in 1990. The principal fishing country was the Soviet Union.

European fishermen.⁷⁵ Chilean officials have, however, not been responsive to these contacts and have expressed little interest in arranging access for EC fishermen. These contacts have not yet resulted in the opening of formal talks and such talks are unlikely in the foreseeable future.⁷⁶ Chilean officials have expressed concern over the impact on Chile of the 1992 EC-Argentine agreement. Chilean companies are worried that if the EC grants market preferences to Argentina, it will adversely affect Chilean hake exports to the EC.⁷⁷

Germany: German companies deployed a few vessels off southern Chile during the 1970s, but few details are available.⁷⁸ One unconfirmed report suggests that Germany and Chile signed an access agreement in 1978 allowing German vessels to fish for hake.⁷⁹ The Germans have not deployed vessels off Chile in recent years.

Japan: Japanese fishermen began fishing off Chile as early as 1971.⁸⁰ Reported catches in the southeastern Pacific as a whole, however, have never significantly exceeded 40,000t through 1991 (Latin America, appendix C4g),⁸¹ although some of the Japanese catch may have been reported as part of the Chilean catch because the vessels operating within Chilean waters under research/experimental licenses flew the Chilean flag.⁸² The Chilean Government granted Japanese fishermen permission

in 1978 to fish in Chilean waters, although the terms of this agreement are not available to the authors.⁸³ The two countries signed a cooperation agreement in 1979 involving Japanese technical assistance for Chile's developing salmon culture industry.⁸⁴ Chile has issued several research/experimental licenses to Japanese vessels. Japan's Nippon Suisan Company (Nissui) reportedly obtained Chilean Government approval to conduct research/experimental fishing off southern Chile during the late 1970s, which the company hoped would lead to the establishment of a joint venture.⁸⁵ Other Japanese companies were also active during the mid 1980s.⁸⁶ The reported Japanese catch in the southeastern Pacific was nearly 21,000t in 1991, consisting primarily of tuna and billfish, much of which was probably

taken north of Chilean latitudes. Various reports in 1992 suggested that 11-15 Japanese tuna longliners were to be based in the northern Chilean port of Arica, to longline for tuna outside of Chile's 200-mile limit.⁸⁷ The Japanese shifted the vessels from the Peruvian port of Callao⁸⁸ and plan to transship their tuna catch through Arica.⁸⁹ Two Japanese vessels were authorized to conduct research/experimental operations in Chilean waters during 1993. One vessel has been deployed for tuna off Easter Island and another is targeting squid stocks along the southern coast.⁹⁰

Korea (ROK): Korea and Chile signed a bilateral technical cooperation agreement in 1969 focusing on the fishing industry.⁹¹ Officials agreed in 1975, at least in principle, to conclude a fisheries cooperation agreement which provided for krill fishing off Chile, technical assistance, and joint ventures.⁹² Little information is available, however, on any cooperation which actually occurred. Korean trade negotiators have repeatedly raised the issue of fishery quotas at annual economic cooperation talks between the two countries.⁹³ Korean vessels conducted some exploratory fishing off the coast of Chile in 1978.⁹⁴ The two 1,500-ton vessels deployed were owned by Daeim Fisheries Co., and were the first Korean vessels authorized to fish in Chilean waters. Korean fishermen conducted only limited fishing in the southeastern Pacific

during the 1980s, never exceeding 5,000 tons. The catch which totaled 2,100 t in 1990 was mostly squid, tunas, and billfish. The authors believe, however, that only small quantities of this catch was taken off Chile. Korean fishermen reported a major catch increase in their southeastern Pacific fishery during 1991, taking over 19,000t--but again mostly harvested off Peru.⁹⁵ One Korean vessel was authorized to conduct research/experimental operations for squid ("jibia") in Chilean waters during 1993.⁹⁶

Norway: The Norwegians do not fish off Chile, but officials would like to obtain access and held discussions with Chilean officials in 1993. The Chilean officials made it clear that they were not prepared to offer access to foreign fishermen.⁹⁷ Press reports in 1993 suggested that the two countries planned to sign a fisheries cooperation agreement focusing on trade and aquaculture.⁹⁸

Peru: Fishermen from Chile and Peru occasionally cross their common marine border and fish in each others' waters.⁹⁹ There is no reciprocal fishing agreement and occasional seizures result, mostly by the Chilean Navy. Despite the common boundary and a mutual interest in better managing shared resources, there has been little fisheries cooperation between the two countries. Such cooperation was complicated in the 1970s and 1980s by long-standing territorial disputes and sharp philosophical differences between the two governments.¹⁰⁰ Chilean and Peruvian fishery officials have recently held meetings to discuss closer cooperation.¹⁰¹ Fishery officials from the two countries reached agreement on actions needed to better manage shared resources.¹⁰² The authors are not aware, however, of any formal reciprocal fishing agreement or cooperative fisheries management program. Unconfirmed reports, however, suggest Peru's last anchovy closure ("veda") was informally discussed with Chilean officials.¹⁰³ Both countries report some progress in cooperation on research projects, but the sharply different roles of the Government and economic systems complicate joint management.¹⁰⁴

Poland: Polish fishermen have conducted mid-water trawls for jack mackerel and other species outside Chilean waters in the southeastern Pacific. One Polish vessel sank off Chile in 1982.¹⁰⁵ The Polish catch totaled over 80,000t in 1984, but that

was the last year the Poles operated in the southeastern Pacific (Latin America, appendix C4g).¹⁰⁶ Chile has not permitted Polish vessels to fish within its 200-mile zone.

Portugal: Portuguese fishermen have not operated in Chilean waters, but the fishermen have expressed an interest in obtaining access. Government officials held discussions in 1980 and signed a cooperation agreement.¹⁰⁷ The authors, however, know of no actual fishing or joint ventures resulting from the agreement.

Russia: Now that Russian fishing companies no longer have access to cheap oil, the southeastern Pacific fishery previously conducted by the Soviets is not economically feasible. While few details are available, Soviet and Russian fishing companies in 1991 and 1992 terminated the fishery, presumably because of rising domestic oil prices and other costs.¹⁰⁸ Jack mackerel and other species taken in this fishery were low-value species which could not be exported for significant hard-currency earnings to defray costs. The Russian fishing companies now operating on increasingly free-market principles are unable to afford the massive quantities of fuel required for distant-water operations and the various hard currency costs associated with doing business at such great distances from home ports, especially when the primary target species has such a low-market value. Unconfirmed reports suggest that some Russian fishing continues in Peruvian waters, but Russian fishery officials have assured the authors that no fishing operations have been conducted in the southeastern Pacific since their withdrawal was completed in 1992. Russian catch data for 1992 are not yet available. Chile and Russia signed a basic cooperation agreement in 1992, but the agreement did not deal with, and is unlikely to lead to, fisheries access.¹⁰⁹

Spain: Detailed statistics on Spanish fishing off Chile are not available. Spain and Chile reportedly signed a fisheries access agreement in 1977, allowing Spanish vessels to operate in Chilean waters, but few details on actual vessel deployment are available.¹¹⁰ The authors believe that Spain has deployed small numbers of factory trawlers (mostly within Chile's 200-mile zone under research/experimental licenses) and longliners (mostly outside the 200-mile zone). Since Spain reports no catch off the western coast of South

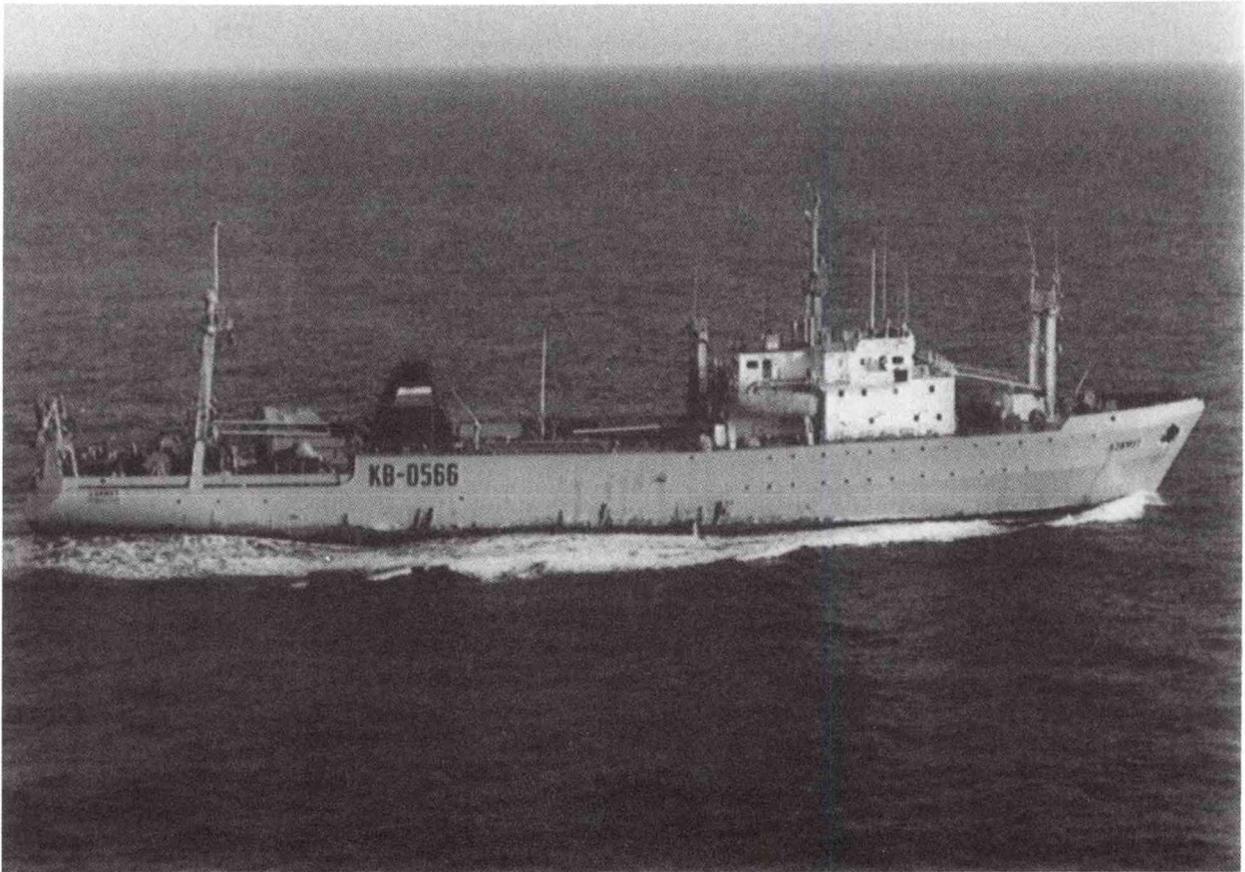


Photo 2.--Soviet vessels -like this Prometey Mod. A Class factory trawler- were extensively deployed off Chile and Peru beyond the 200-mile limit to conduct mid-water fisheries.

Chilean waters appear to be reported as part of the catch of the coastal country. Several Spanish trawlers are known to have participated in the trawl fishery off southern Chile. Chilean sources reported, for example, that three Spanish vessels were deployed off southern Chile in 1978.¹¹¹ At least one vessel, the trawler *Betanzos*, is known to have fished in Chilean waters during 1983.¹¹² Currently the primary Spanish activity in the southeastern Pacific, conducted outside Chile's 200-mile limit, is longlining for swordfish. The Spanish Asociación Nacional de Armadores de Buques Congeladores de Altura (ANAPA) complained to Spanish officials in 1991 over restrictions that Chilean officials placed on attempts by Spanish longline fishermen to tranship swordfish species through Chilean ports.¹¹³ Chilean officials are using port restrictions as a way to limit high-seas fishing in the southeastern Pacific.

United States: U.S. fishermen fish for tuna and swordfish¹¹⁴ in the southern Pacific. The vessels normally refuel in French Polynesia or American Samoa, but recently the fishery has shifted east and they have been operating about 1,000 miles off the Chilean coast. Chilean officials prohibit the transshipment of swordfish and certain other species.¹¹⁵ The Chileans are concerned about fishing in the southeastern Pacific. As with the Spanish longliners, the Chileans are also trying to limit the U.S. and other foreign longline catch of species which Chilean fishermen also target by refusing to permit the foreign vessels to transship their catch through Chilean ports.¹¹⁶ Chilean officials report that they have licensed one U.S. stern trawler, the *American Dynasty*, to conduct research/experimental surimi operations in Chilean waters during 1993.¹¹⁷ The vessel is carrying out mid-water research/experimental operations

waters during 1993.¹¹⁷ The vessel is carrying out mid-water research/experimental operations targeting species which can be used to produce surimi.¹¹⁸

USSR: The southeastern Pacific off Chile and Peru was one of the principal Soviet distant-water fishing grounds (appendix G).¹¹⁹ Chile has never, however, permitted Soviet-flag vessels to operate in Chilean waters. The leftist-oriented Allende Government, however, did permit one Soviet fishery research vessel, the *Akademik Knipovich*, to operate off southern Chile during 1972-73.¹²⁰ All such cooperative programs, including fishery projects, were abruptly terminated when the Allende Government was overthrown in 1973 by anti-communist military officers. The Soviets subsequently suspended fishing in the southeastern Pacific for several years, but resumed limited operations there outside Chile's and Peru's 200-mile zone in 1978. Based on the favorable results, Soviet fishermen in 1979, only 1 year later, deployed a massive fleet which used mid-water trawls to harvest 0.5 million t of fish, mostly jack mackerel. Virtually the entire catch was shipped back to the Soviet Union for sale as low-priced fish in domestic markets. The Soviets steadily expanded this fishery until reaching 1.3 million t in 1990 (Latin America, appendix C4g). The southeastern Pacific fishery was the Soviet Union's third most important fishery, exceeded in quantity only by their northwestern Pacific coastal fishery and the eastern central Atlantic fishery off West Africa (appendix G). The Soviets significantly scaled back their southeastern Pacific fishery in 1991, catching only 0.7 million tons.¹²¹ The primary reason for the Soviet decision to reduce effort was the increasing difficulties in obtaining diesel fuel and substantial domestic price increases for petroleum products. The Russian, Ukrainian, and Baltic companies which inherited the assets of Soviet fishery "administrations" are believed to have terminated the fishery in 1992. Such distant-water operations were extremely costly to conduct. Distant-water operations at such great distances from home ports required enormous quantities of fuel. The fact that Soviet fishing vessels are generally not fuel efficient compounded the problem. Now that the Baltics and Ukraine no longer have access to cheap Russian oil, the southeastern Pacific fishery is not economically feasible for companies in these Soviet-successor

countries. The jack mackerel and other species taken in this fishery are low-value species which cannot be exported for significant hard-currency earnings to defray distant-water operating costs. The fishing companies forced to operate with at least some minimal cost accounting were unable to afford the fuel and the various hard currency costs associated with doing business at such great distances from home ports.

V. JOINT VENTURES

A substantial number of foreign companies participate in the Chilean fishing industry. Chile has one of the most open investment codes in Latin America. Foreign companies can and have established wholly-owned subsidiaries.¹²² These ventures have brought capital, vessels, fishing and processing technology, and marketing expertise to the Chilean fishing industry. Two countries (Japan and Spain) have played particularly important roles. They have helped Chile build one of the most modern and profitable fishing industries in Latin America. Their participation, however, is a subject of some debate in Chile. Some Chileans believe that the foreign joint ventures provide unneeded competition for increasingly scarce resources and compete with Chilean companies in export markets.¹²³ Chilean officials do not currently issue fishing licenses to foreign distant-water fishermen. Interested foreign fishermen are required to form joint ventures to qualify for Chilean licenses. Qualifying vessels must have at least 51 percent Chilean equity participation.¹²⁴ The registration of the vessels operated by the joint ventures must be transferred to the Chilean flag.¹²⁵ Some observers are concerned with the difficulties Chile has had in entering the EC market and hope that the commercial contacts formed with EC companies, especially Spanish companies, will help improve market access.¹²⁶

Several foreign companies have formed fishery joint ventures in Chile:

China: Chinese and Chilean companies have formed several joint fishery ventures in recent years.¹²⁷ None are known to include vessel access arrangements, but available details are sketchy. Chilean officials have discussed the possibility of fishery joint ventures and the importation of fishing vessels during their annual cooperative talks.¹²⁸ Chinese and Chilean businessmen reportedly studied various proposals in 1989. China's Agribusiness Trust and Investment Corporation has invested \$20 million in a fishmeal plant as part of a joint venture with SIPSA (extension unknown). The venture will also reportedly handle possible Chinese imports from Chile, including edible commodities.¹²⁹ Another press report indicated that the Chinese Corporation for Agricultural Credit and Investment signed three contracts in 1990 with the Chilean Company of Industrial and Fishery Investments and the San José de Coquimbo Fisheries Corporation (SJC) to purchase \$19 million worth of identified stock.¹³⁰ The Chilean company Pesquera Nacional subsequently signed a joint venture agreement with China's National Fishing Company for a project situated along Chile's central coast. Press reports in 1990 indicated that the Chinese partner will invest \$10-20 million to produce fishmeal and edible commodities, much of it for export to China.¹³¹ No current details are available and it appears that the venture never materialized.¹³²

France: Commercial fishery missions from France and Chile have exchanged visits,¹³³ but the authors know of no actual joint fishery that has been formed.

Iceland: The Icelandic company Grandi hf (trawler operators and processors) in 1993 purchased a 22-percent share in the Chilean company Friosur (also vessel operators and processors). Grandi will reportedly provide technical assistance in fishing and processing to its Chilean partner.¹³⁴ Grandi technicians have already helped Friosur implement mid-water trawling for hake through test fishing with the former Icelandic trawler *Karlsefni*, previously purchased by Friosur.¹³⁵ Grandi has provided half its investment in cash and the remaining half will be provided in the form of machinery, equipment, and possibly a vessel. Icelandic companies are reportedly watching the Grandi-Friosur deal as a precursor of future

arrangements permitting Icelandic companies to export fisheries technology.

Japan: Several Japanese companies have been active in Chile. The Japanese have played key roles in the development of several Chilean fisheries/industries, including demersal finfish, longlining, krill, surimi, seaweed, and salmon aquaculture. Japan provides preferential import quotas for Chilean companies with at least 40 percent Japanese equity participation.¹³⁶

Hoko: The joint venture Hoko Chile operated factory trawlers off southern Chile for several years. Hoko Chile sold its factory trawler *Harumi* in 1985 and shifted the company's focus to export marketing.¹³⁷

Kyokuyo/Nissui: These two large Japanese companies began a surimi joint venture in 1991.¹³⁸

Mitsui: The Mitsui company announced a surimi joint venture in 1991 with E.L. Golfo Company and hoped to produce 5,000 t of surimi per year for export to Japan.¹³⁹

Mitsui/Nippon Suisan Kaisha: These two Japanese companies in 1978 formed a joint venture with an unidentified Chilean company using Chilean vessels to fish for hake and other species for export to Japan. The Japanese companies had an 83 percent equity share in the company.¹⁴⁰

New Nippon: The New Nippon company formed the FRIOAYSEN company with unknown Chilean partners in 1989 to operate longliners.¹⁴¹

Nichiro: The Nichiro Chile joint venture, the Empresa Pesquera Nichiro, was formed in 1979. It operates vessels off southern Chile in Antarctic waters for krill.¹⁴² The company is also involved with aquaculture. Nichiro also participates in a joint venture with the Alimentos Marinos Company. The joint venture hopes to produce 4,000 t of jack mackerel surimi per year for the Japanese market.¹⁴³

Nissui/Mitsui Bussan: Nissui and Mitsui Bussan formed the Empresa de Desarrolla Pesquera de Chile (EMDEPES) in 1979. The venture operates factory trawlers off southern Chile.¹⁴⁴

Taiyo: Japan's Taiyo Gyogyo fishing company operated factory trawlers off southern Chile through its joint venture, Sociedad Pesquera Taiyo Chile, formed in 1979.¹⁴⁵ The joint venture operated vessels off southern Chile. It reportedly had three factory trawlers in 1987.¹⁴⁶

Tokai Denbu: This Japanese fishing company

announced in 1991 that it planned to set up surimi processing operations in Chile.¹⁴⁷

Other: Japanese companies are also active in other sectors of Chile's fishing industry. Japanese companies are involved in the seaweed industry¹⁴⁸ and have played an important role in the expanding salmon aquaculture industry.¹⁴⁹ Japanese companies also operate krill processing plants in Chile. Japanese companies have played a key role in developing economical methods of producing surimi from this pelagic species. Initial efforts to produce surimi from jack mackerel resulted in extremely high operating costs and complaints from Japanese consumers of poor product quality.¹⁵⁰ A variety of other Japanese companies, including gear and equipment manufacturers have also established Chilean joint ventures and subsidiaries. The Japanese company Nepro opened a subsidiary at Iquique in 1990.¹⁵¹ The Cellular Material Company formed a Chilean affiliate, Vinycon Chilena, to produce floats.¹⁵²

Korea: The Daerim company initiated a joint venture in 1978 and has deployed two 1,486-GRT factory vessels in the southern trawl fishery.¹⁵³

New Zealand: The New Zealand company Carter Holt Harvey reportedly bought a minority interest (48 percent) in Pesquera Iquique, one of Chile's largest fishing companies, in 1987 for \$62 million.¹⁵⁴ A New Zealand company has also invested in Chile's salmon culture industry.¹⁵⁵

Norway: Pacific-Protein, a Norwegian-Swedish venture, deployed the newly-built *Libas*, a 48-m combination (seiner-trawler) vessel, for mid-water operations targeting jack mackerel along Chile's central coast in 1991. The vessel was based in Valparaíso and manned by a mainly Chilean crew.¹⁵⁶ A Norwegian company is participating in Chile's salmon culture industry.¹⁵⁷ Norwegian manufacturing companies also have Chilean joint ventures.¹⁵⁸

Peru: Chilean and Peruvian companies reportedly formed a joint venture in Iquique during 1979, but no subsequent reports are available.¹⁵⁹

Portugal: Portuguese Government officials and industry representatives met with Chilean officials to discuss possible fishery and fishing equipment joint

ventures and other cooperative projects in 1991,¹⁶⁰ but the authors know of no companies which were actually formed.

Russia: The Russian Federation Government has probably assumed responsibility for the Chilean-Soviet krill agreement signed in 1990. (See "USSR" below.) The agreement, however, appears to have been essentially wishful thinking as no actual Chilean-Russian krill fishing has occurred and Chilean officials confirm that such operations are unlikely in the foreseeable future.

South Africa: Two South African companies (Premier Milling and Ovenstone Investments) and a Chilean investor (Guillermo Montt) formed the joint venture company Empresa Playa Blanca Ltd. (EPB) in 1982. The \$24 million joint venture was created to produce frozen and canned fish and fishmeal for export to South Africa, Nigeria, and various European countries.¹⁶¹ Ovenstone reportedly turned to Chile after withdrawing a huge factory ship, *l'Interpeche*, from fisheries off West Africa because of rising costs for fishing rights.¹⁶² EPB renamed the *l'Interpeche* the *Playa Blanca* and began using it as a floating processing plant at Caldera in November 1982.¹⁶³ Two other South African companies (Kaap-Kunene and Fedood) formed a joint venture with Tarapacá (Camelio industrial group) to build a cannery in Iquique to compliment Tarapacá's existing fishmeal plant.¹⁶⁴ The South Africans are supplying investment capital, technical expertise, and marketing assistance.¹⁶⁵ One report in the early 1980s indicated that other South African companies have been active in Chile, transferring vessels, processing equipment, and personnel. South African companies between 1977-82 reportedly invested about \$36 million in Chile. Ovenstone transferred an entire fishmeal plant in 1979.¹⁶⁶ Chilean shipyards have used some South African technology.¹⁶⁷ After 1982 the authors have noted no further press articles describing South African activities in Chile. The authors cannot explain the apparent sudden ending of commercial activities.

Spain: Several different Spanish companies have actively participated in the Chilean fishing industry. The EC promotes the formation of joint ventures by conferring preferential treatment to hake and other imports produced by the Spanish joint ventures in

Chile.¹⁶⁸ The most important Spanish company in Chile is Pescanova. The Spanish ventures at times have reported serious problems in Chile. Many of the joint ventures, for example, experienced poor catches and financial losses in 1983.¹⁶⁹ Spanish companies appear to be playing an important role in Chile's new longline industry, but few details are available.

Grupo Suarez: The Spanish Grupo Suarez purchased a \$25-million fisheries complex with vessels in Magallanes, but no details are available.¹⁷⁰

Mesamar: The Spanish company Mesamar in 1992 announced plans to build a mollusk cannery.¹⁷¹

Pescanova: The most important Spanish investor in Chile is Pescanova which operates Pesca Chile, based in Chacabuco. Pesca Chile produces frozen hake and other finfish, much of which is exported to Spain. The large Spanish company Pescanova transferred one of its trawlers, the 1,517-GRT *Betanzos*, to Pesca Chile in 1983.¹⁷² Pesca Chile announced plans in 1980 to build a second plant at Punta Arenas. The company has begun to diversify its products by initiating shipments of fresh fish (hake and salmon) to Spain.¹⁷³ One 1991 report indicated that Pesca Chile operated a total of 16 vessels.¹⁷⁴ The Pescanova joint venture, Pesca Chile, added longliners to its operations in the mid-1980s. Pescanova took possession of two newly-built 53-m longliners for Pesca Chile in 1987.¹⁷⁵

Pesquerías Españolas de Bacalao: Another Spanish joint venture, the Punta Arenas-based Pesquera del Estrecho clam canning company, reported financial problems in 1990 because of the failure of its Spanish partner, Pesquerías Españolas de Bacalao, to make payments.¹⁷⁶

Other: Spanish sources report that one unidentified joint venture was active in Chile during 1978, operating one trawler, the *Alamo*.¹⁷⁷ The Chilean company Pesquera Dos Oceanos reportedly chartered two Spanish trawlers in 1981, *Arosa Sexto* and *Arosa Séptimo*, to operate out of the southern port of Magallanes.¹⁷⁸ Unipesca, which reportedly works with a Spanish company, had to tie up one of its factory trawlers at Puerto Montt from 1983-86.¹⁷⁹

USSR: Soviet and Chilean cooperation projects initiated in the early 1970s ended abruptly in 1973 when the Chilean military overthrew the Allende Government.¹⁸⁰ For the decade and a half which

followed there were virtually no fishery contacts between the two countries despite an enormous expansion of Soviet fishing in the southeastern Pacific. The election of a new democratic Chilean Government in 1989 has made possible renewed fisheries cooperation. Soviet trade officials visited Chile in September 1990, seeking permission to operate five vessels under the Chilean flag, offering half of the catch to the Chileans.¹⁸¹ The discussions led to the signing of contracts with two Chilean companies and a framework agreement for fisheries cooperation with a Government-owned corporation promoting economic development, PROCHILE. Two Chilean companies (Compañía de Inversiones y Comercio and Servicios Portuarios) signed a joint venture agreement with the Soviet Global Research Institute¹⁸² to catch and market krill. The authors know of no joint krill fishing, however, which actually resulted. The authors believe that responsibility for this agreement has been assumed by the Russian Federation as the successor to the now defunct Union of Soviet Socialist Republics. Compañía de Inversiones also signed another joint venture with the Soviet Fishermen's Union of Kerch which is now in the Ukraine. The authors believe that new Ukrainian companies have become responsible for this venture.¹⁸³

United States: U.S. companies were active in Chile during the early development of the Chilean fishmeal industry.¹⁸⁴ The authors know of no United States-Chilean fishery joint venture formed during the 1980s. One U.S. group, however, conducted research/experimental surimi trials during 1993 and may eventually form a joint venture to produce surimi.¹⁸⁵

Ukraine: Ukrainian companies have formed Kerchval, S.A., a \$4.5 million joint venture negotiated by Soviet officials.¹⁸⁶ (See "USSR" above.) The Chilean partners are Sodimin, Serpor, and Conico. The joint venture had hoped to operate two 3,000-GRT factory trawlers that were to be transferred from the Ukrainian fleet and reflagged in Chile. Chilean regulations require the Ukrainians to transfer at least a 51-percent ownership share of the vessels to Chilean partners. Kerchval planned to catch, process, and market fishery products (fresh, frozen, and canned) on international markets, including those of Eastern Europe.¹⁸⁷ Knowledgeable Chilean sources report

that the venture is inadequately capitalized and is unlikely to actually initiate operations. Some of the principals, however, are participating in a lobster venture. Apparently a Ukrainian vessel and crew was stranded at the Peruvian port of Callao during 1992. The Ukrainians could not afford to purchase fuel or even food for the crew. They signed an agreement with a Chilean group and during 1993 are fishing for lobster on Nazca Ridge, outside the 200-mile limit and are transshipping their catch through the Chilean port of Arica.

United Kingdom: The British Metal Bloc Company, through a South African affiliate which closed its Walvis Bay can factory, invested \$4 million in Chile's largest can factory, Fabrica de Envases (FESA) during 1980. New plants were to be installed in Iquique and Talcahuano, using some of the machinery from the Walvis Bay factory.¹⁸⁸

Other countries: A variety of additional ventures have been launched with other countries. The Chilean company PROMAR and the Mozambique company EMOPESCA have formed a joint venture, Indico Pacifico, to market Chilean seafood in southern Africa.¹⁸⁹

VI. DISTANT-WATER OPERATIONS

Chilean fishermen have traditionally conducted primarily coastal fisheries, rarely fishing more than 50 miles off the coast. The steady expansion of the fleet and the acquisition of larger vessels is giving the country's fishermen an increasing ability to conduct off-shore fisheries. Fishermen are now increasing pelagic operations for jack mackerel as far as 120-150 miles off the coast and expanding operations for demersal species off the southern coast.¹⁹⁰ This increasing range is reflected by the expanding catch of jack mackerel (appendix F), a species formerly harvested largely by foreign distant-

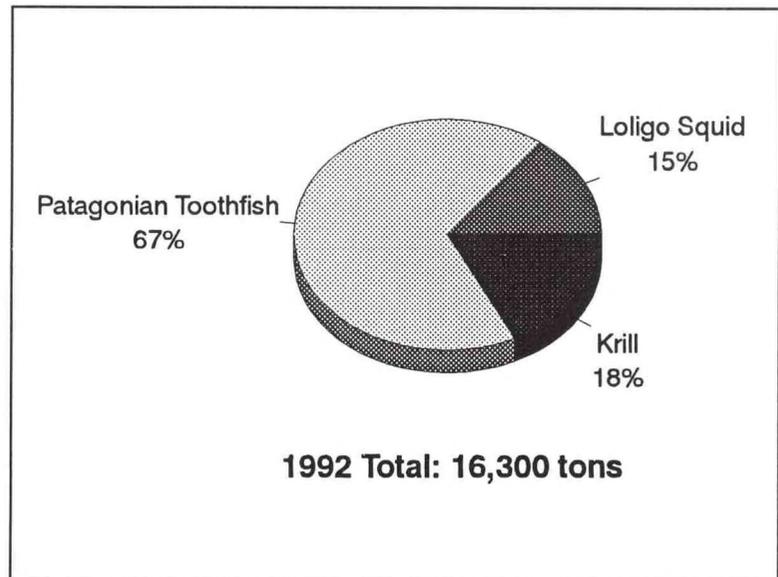


Figure 6.--Chile. Most of the Chilean distant-water factory vessel catches during 1992 were Patagonia toothfish taken in the Antarctic.

water fleets in fisheries outside the 200-mile limit. Chile may have difficulty expanding the fishery further at this time because the lack of refrigerated holds limits the range of the fishery. It may well not be economical to invest in refrigerated holds. Not only is jack mackerel a low value species, but catch rates beyond on the high seas are probably less than those achieved within the 200-mile limit.

Some Chilean fishermen are initiating limited distant-water operations. Chilean fishermen have not previously conducted significant distant-water operations. The modernization and expansion of the Chilean fleet has meant, however, that the

fishermen are developing the capacity to launch offshore or distantwater operations. Available data suggests that factory vessels produced 5,900 t of fishery products in 1991 and 16,300 t in 1992 from catches in international waters (appendix D).

South Pacific: Companies appear to be expanding longline operations with new Spanish-built vessels. About 25 longliners were deployed in this fishery during 1993.¹⁹¹ Chile also reported some yellowfin catches by factory vessels in 1991, but not in 1992 (appendix D)

Antarctic: Chile has reported small catches in the Antarctic of 3,000-6,000 t since 1985 (appendix E). Much of it is has been krill. Recently the Chileans have been fishing off South Georgia/South Sandwich. Unconfirmed reports suggest that as many as 8 Chilean factory trawlers in 1992 and 10 factory trawlers in 1993 have been deployed off the South Georgia and South Sandwich islands for Patagonian toothfish (*Disostyophus elginoides*). The catch far exceeds the Chilean Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) quota.¹⁹² Chilean officials are concerned about these violations and are currently prosecuting three Chileans.¹⁹³ Officials report that the legal actions involved are difficult because the violations occurred outside of Chilean waters.¹⁹⁴

Southwestern Atlantic: Chile has regularly since 1987 purchased at least one Falkland squid license annually. Chilean fishermen in 1992 purchased 6 Falklands (Loligo and experimental) licenses (Falklands, appendices B2k-l). Catches are highly variable, but have never exceeded 4,000 t (Chile, appendix E and Latin America, appendix C4d4). No information is available on the Chilean company.

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ENDNOTES

SECTION I. (General Background)

1. Carlos Capurro, Economics Section, U.S. Embassy, Santiago, personal communications, September 16, 1993.
2. Some newer vessels, however, have insulated holds and can carry ice to preserve the quality of the catch. Marco News release, September 20, 1993.
3. See section III. Vessel Sources for details on the newer vessels being constructed in Chilean shipyards.
4. Capurro, *op. cit.*, September 16, 1993. The Embassy's estimate includes both the pelagic and trawl fleet.
5. Ley de Pesca, ley N° 18.892, article 3. Vessels can only be replaced by other vessels with equal or smaller capacity. Alejandro Covarrubias Perez, Jefe, Departamento Administración Pesquera, Servicio Nacional de Pesca, personal communications, October 13, 1993.
6. Argentine companies have acquired larger trawlers in recent years which they deploy in groundfish fisheries, sometimes at considerable distance from port. For details see the Argentine chapter of this report.
7. The declining investment may have, at least in part, been due to the uncertainty associated with delays in passage of a new fisheries law. U.S. Embassy, Santiago, September, 1991. The passage of the act in late 1991, however, has stimulated substantial new investment. San Antonio, for example, a multi-purpose port 110 km west from Santiago with a sharply declining economy is being renovated to become a major fisheries center. About half of the new investment in the Chilean fishing industry during 1993 and 1994 is being directed at San Antonio. About a third of the new investment is for seven new fishmeal plants which had to be in operation by September 1993, a deadline established in the transitory article of the 1991 Ley de Pesca. The investment include modern fishmeal processing equipment, capable of producing "high-quality" meal, as well as pollution control equipment. The remainder of the investments in San Antonio are primarily being directed at new vessels to supply the 1.0-1.5 million t of fish needed to supply the new plants. The total requirements of the plants will be 700-1,000 t of raw material per hour when all the plants, currently in the final stages of construction, come on stream. Carlos Capurro, U.S. Embassy, personal communication, September 16, 1993.
8. The Chilean Congress is currently considering an environmental framework law. If and when passed, such legislation will probably require the fishing industry to make major investments in pollution control systems. Many Chilean fishing companies currently have only minimal systems to treat waste water. Addressing this problem make take a large share of any new investment in the fishing industry for the next few years. The proposed environmental legislation is currently being discussed in the Senado after being approved by the Cámara de Diputados. Carlos Capurro, U.S. Embassy, Santiago, September 13, 1993.
9. Capurro, *op. cit.*, September 16, 1993.
10. "Fishing industry must expand markets," *Chile Economic Report*, July, 1993, pp. 6-7.
11. Servicio Nacional de Pesca, *Anuario Estadístico de Pesca*, 1990.
12. Capurro, *op. cit.*, September 16, 1993.

SECTION II. (High-seas Fleet)

13. Andrés Couve, Under-Secretary for Fisheries, personal communication, July 29, 1993.

SECTION III. (Vessel Sources)

14. Gerson F. Lizama, Walter W. Espinoza, "El sector pesquero y la industria naval," Instituto de Fomento Pesquero, in *Chile Pesquero*, February, 1989, pp. 45-47.

15. Lizama and Espinoza, "El sector pesquero," *op. cit.* p. 46.

16. D. Ya Eidel'man, "World construction of fishing vessels in 1991," *Rybnoe Khoziastvo*, No. 2, 1993, pp. 17-18.

17. "Chile purses' wider beam," *Fishing News International*, June, 1993.

18. "ASMAR hace entrega del PAM 'Golondrina' a Empresa Pesquera San Miguel," *Chile Pesquero*, January-February, 1990, p. 19 and "Chile's biggest purse," *Fishing News International*, June, 1993, p. 9.

19. Marco press release, September 20, 1993.

20. "Chilean yard going bigger next year," *Fishing News International*, August, 1993.

21. Lizama and Espinoza, "El sector pesquero," *op. cit.* p. 45 and "En operación el primer dique flotante del Norte Grande," *Chile Pesquero*, January-February, 1990, p. 19.

22. Clara Muñita, "Construcción naval: a vencer barreras y después exportar," *Chile Pesquero*, February, 1989, pp. 35-38. Also see Marco press release, September 20, 1993.

23. The principal law is Decreto Ley No 146. For details see "Reglamento para la construcción de naves mercantes y especiales mayores y de artefactos navales, sus inspecciones y su reconocimiento," June 2, 1987, in Lizama and Espinoza, "El sector pesquero," *op. cit.* p. 47.

24. "Construir en Chile vs. importar barcos usados," *Chile Pesquero*, February, 1989, p. 5.

25. Clara Muñita, "Construcción naval," *op. cit.* p. 35.

26. Ley de Pesca, Ley N° 18.892.

27. "Peru next for boat packages," *Fishing News International*, January 1993, p.12.

28. Reportedly 79 new vessels with a carrying capacity totaling 45,350 cubic meters are entering the pelagic fishery. Capurro, *op. cit.*, September 13, 1993.

29. "Fishing boats for Chile," Paris radio broadcast, AFP, 1232 GMT, January 23, 1978.

30. "Big sales in Greenland," *Fishing News International*, January 1992, p. 51.

31. "Grandi: Elín Thorbjarnardóttir sails for Chile," *News From Iceland*, March, 1992.

32. "Chileans discuss purchase," *News From Iceland*, January, 1992.

33. "Irish tank ship heads for Chile," *Fishing News International*, October 1990, p. 58; "Distance no object for electronics firm South American mission," *Fishing News International*, October 5, 1990, pp. 26-27.
34. "Dutch lose 11,145hp at a stroke!," *Fishing News International*, December 1989, p. 66.
35. "Industria Pesquera recibe aporte de US\$24 millones," *La Nación*, October 4, 1982.
36. "Norway design for six vessels: and South American firm may increase it to twenty," *Fishing News International*, 1984. Further data unavailable.
37. "Italian tuna: sale and purchase," *Fishing News International*, November, 1988, pp. 76-77.
- 38.38. "Norway catches Chilean market," *Fishing News International*, November, 1992, p. 1.
39. "New vessel orders 1988," *World Fishing*, March 1988, p. 33.
40. The vessel has been purchased by a U.K. company, Fishing Explorer Ltd., for operations off the Falklands. "Freezer from Chile to fish Falklands," *Fishing News International*, February 27, 1987.
41. "Nuevo camaronero en poliester reforzado con fibra de vidrio," *Industrias Pesqueras*, October 15, 1987, p. 15. Presumably these vessels are also for Pescanova's Chilean joint venture, Pesca Chile.
42. "Two longliners join Pescanova fleet," *World Fishing*, June, 1987, pp. 5-6.
43. "Longliners catch hake off Chile," *Fishing News International*, December 1989, pp. 26-27.
44. "Fishing company adds two ships to its fleet," *Chile Economic Report*, October 1983, p. 4.
45. "Former UK trawlers supply Chile plant," *Fishing News International*, April 1989.
46. "Last stop for a factory ship," *Fish Farming International*, January, 1985, p. 15.
47. Capurro, *op. cit.*, September 13, 1993.
48. Marco press release, September 20, 1993.
49. "Coloso adquiere nueva embarcación pesquera," *Chile Pesquero*, March 1985, p. 10.
50. For details see the Argentine and Falklands chapters of this report.
51. "First far eastern conversion contract for SAEM," *World Fishing*, June, 1993, p. 69.
52. *Fishing News International*, September, 1993, p. 64.
53. Fears for Falkland fishing ventures," *Fishing News International*, August, 1988.

SECTION IV. (Foreign Fishing)

54. Decree N° 130, February 11, 1993.

55. Couve, personal communications, *op. cit.*
56. Dr. Juan Rusque, Director Nacional de Pesca, personal communications, October 13, 1993.
57. Decree 500 allowed German (FRG), Japanese, Korean (ROK), and Spanish companies to deploy vessels to explore for new grounds south of 38° South. Carlos Capurro, U.S. Embassy, Santiago, personal communications, April 11, 1988.
58. These subsidiaries are dealt with under "Joint Ventures" below, even though they may be fully owned by the distantwater company.
59. Max Agüero N. and Vilma Correa R., "Análisis de rentabilidad relativa y perspectivas de los barcos factorías en Chile," *Estudios en Pesquerías Chilenas*, Teófilo Melo, editor (Universidad Católica de Valparaíso: Valparaíso, 1985), pp.87-94.
60. Primarily *Merluccius polylepis*, *Macroronus magellanicus*, *Micromesistius australis*, *Seriorella sp.*, and *Genypterus blacodes*.
61. Rusque, personal communications, *op. cit.*, October 13, 1993. For details on the specific operations by the fishermen from these countries, see the individual country entry in section IV Foreign Fishing.
62. Ley de Pesca, Ley N° 18.892.
63. Capurro, *op. cit.*, September 13, 1993.
64. "Industriales armadores de barcos factorías exponen sus puntos de vista," *El Mercurio*, December 19, 1986.
65. "Polémica sobre buques factoría," *Chile Pesquero*, May, 1977, pp. 23-25; "Chile y los buques factoría," *Industrias Pesqueras*, March, 1984; and Ronald Gilchrist Bórquez, Administrator, Pesquera Guafo, "Actividad pesquera," *El Mercurio*, December 31, 1986. The small-boat fishermen charge, for example, that they generate \$1,097 in earnings per ton of hake compared to only \$439 generated by the factory trawlers. "Aportes económicos de buques-factorías son menores a lo esperado," *El Mercurio*, December 18, 1986.
66. "Conflicto pesquera austral: Empresas pesqueras con planta en tierra responden a armadores de barcos factoría," *El Mercurio*, January 10, 1987. One company official insist that shore-based plants provide up to five times more employment. "En el litoral Chileno: Preocupa expansión de operaciones de buques factorías extranjeros," *El Mercurio*, October 15, 1986.
67. Verdugo also denies that the factory vessels conduct wasteful fishing practices such as taking and discarding large quantities of incidental catch. "Buques factorías también tributan y emplean a Chilenos," *Mercurio*, January 12, 1987, p. B10.
68. Esperia Bonilla, Office of the Under-Secretariat of Fisheries, personal communications, August 9, 1993.
69. Bonilla, *op. cit.*
70. "Cuban fishing boat leaves for Chile," *Granma*, May 22, 1971, p. 1. For details on Cuba's fishery relations with Latin American countries, including Chile see Tracy Thomas and Dennis Weidner, "Cuban Fishery Relations in the Americas, 59-88," *International Fishery Reports*, (IFR-88/70), July 29, 1988.
71. For details see the Cuban chapter of this report.

72. FLOCUBA was unable to operate in the southwestern Pacific without the Soviet fuel subsidies. Anonymous FLOCUBA official, personal communications, October 7, 1993. Not only do mid-water trawls require enormous quantities of fuel, FLOCUBA's fleet of aging vessels are increasingly costly to maintain.

73. For details see the Argentine chapter of this report.

74. U.S. Embassy, Copenhagen, August 27, 1993.

75. "Accords de pêche Europeens avec l'Equateur et le Venezuela," *Le Marin*, November 29, 1991.

76. Bonilla, *op. cit.*

77. "Threat to Chile," *Fishing News International*, February 1993 and Rusque, personal communications, *op. cit.*, October 13, 1993.

78. Capurro, *op. cit.*, April 11, 1988.

79. Owen Stolpe, Wilhelm Wiese, Inc., personal communications, February 3, 1978.

80. "Japanese salmon survey team to develop Chilean salmon resources," *Shin Suisan Shimbun Sokuho*, February 22, 1971.

81. The authors believe that the Japanese may report sharply higher 1992 and 1993 catches in the southeastern Pacific because of their new squid fishery off Peru and Ecuador. For details see the Ecuadorean and Peruvian chapters of this report.

82. The established convention in fisheries reporting is to record a vessel's catch under the country where the vessel is registered and not by ownership or area of operations.

83. "Japanese ship out of Chile," *Fishing News International*, July, 1978. The vessels were authorized under the authority of Decree Law N°500 of 1978.

84. "Japan-Chile salmon farm pact signed," *Japan Times*, September 18, 1979, p. 2.

85. "Nissui sends a trawler to Chilean waters," *Minato Shimbun*, December 10, 1976, p. 1; "Japanese authorized to fish," Buenos Aires broadcast, 1553 GMT, March 27, 1978; and "Two big fishery firms envisage ventures to meet 200-mile era," *Japan Economic Journal*, January 17, 1978.

86. The Japanese were particularly interested in assessing the market potential of jack mackerel. "Research development center to conduct joint research with Chile on jack mackerel resources, to explore possibility of commercialization: 'Echizen Maru' to start research," *Suisan Keizai*, August 13, 1986.

87. One press report indicated 15 Japanese vessels were involved. "Aumenta presencia de pesqueros japoneses en puerto de Arica," *Boletín Informativo SIM*, August, 1992, p. 38. A Chilean Government source indicated only 11 Japanese vessels had been shifted. The U.S. Embassy reports that Arica has rarely been used for tuna transshipments. Capurro, *op. cit.*, September 13, 1993.

88. The reasons for the shift are unknown, but one Peruvian source suggested to the authors that the cholera problem in Peru adversely affects the price of fishery products shipped from Peruvian ports.

89. Chilean officials stress that foreign fishermen can use Arica to tranship tuna, because it is not one of the species (like swordfish and jack mackerel) that foreigners are not allowed to tranship. Some foreign fishermen prevented from transshipping swordfish have complained that the Chileans were discriminating in favor of the Japanese. Chilean officials indicate that all foreign fishermen are treated equally, but the regulations do restrict transshipping specific species. Rusque, personal communications, *op. cit.*, October 13, 1993.
90. Rusque, personal communications, *op. cit.*, October 13, 1993.
91. U.S. Embassy, Santiago, February 12, 1969.
92. "Chile: Fishery," Haptong, Seoul radio broadcast, 0104 GMT, October 22, 1975 and "S.Korea and Chile in joint venture," *Fishing News International*, January 1976.
93. "ROK-Chilean fishery cooperation," Tokyo radio broadcast, Kyodo, October 13, 1980 and "Chile-Seoul meeting on improving economic cooperation," Yonhap, 0544 GMT, December 10, 1983.
94. "Korean fishing boats start exploratory operations in Chilean waters," *Korean Trade News*, May 2, 1978. The vessels operated under the authority of Decree Law N° 500 of 1978.
95. For details see the Peruvian chapter of this report.
96. Rusque, personal communications, *op. cit.*, October 13, 1993.
97. Capurro, *op. cit.*, September 13, 1993.
98. "Norway/Chile fisheries cooperation agreement," *Eurofish Report*, July 1, 1993, p. FS/3.
99. "Fishing in Peruvian waters denied," Paris AFP, 0211 GMT, August 20, 1980.
100. Jeremiah O'Leary, "Peru watches for move against Chile," *Washington Star News*, August 4, 1974, p. A14.
101. "Ministerio de pesca del Peru visita Chile," *Aquanoticias Internacional*, December 1990, p. 13 and "Chile y Peru evaluarán comportamiento de recursos compartidos," *Chile Pesquero*, December 1991, p.6.
102. INFOPESCA, "Chile/Peru: Joint action on pelagic resource," *Trade News*, March 15, 1991.
103. Capurro, *op. cit.*, September 13, 1993.
104. Covarrubias Perez, personal communications, *op. cit.*, October 13, 1993.
105. "Soviet, Polish, Cuban fishing ships sighted," Paris AFP, 0444 GMT, February 12, 1983.
106. The Poles were also active off neighboring Peru. For details see the Peruvian chapter of this report.
107. "Visita de importante delegación pesquera portuguesa," *Chile Pesquero*, June 1980, p. 3; "Agreements with Portugal," Chile Diplomatic Information Service, Santiago broadcast, 0434 GMT, April 26, 1980; "Negociações em marcha com vários países," *Revista do Pescador*, September, 1982.
108. Soviet officials reportedly withdrew SEVRYBA in 1991. This is partially confirmed by a substantial decline in the Soviet catch in the southeastern Pacific during 1991 (Latin America, appendix C4g1). Russian officials indicate that they subsequently withdrew DALRYBA in 1992.

109. Bonilla, *op. cit.*

110. "Fisheries Cooperation Agreement between the Government of the Republic of Chile and the Government of the Kingdom of Spain," June 7, 1977, Chile-Spain, published in FAO, *Fisheries Circular*, No. 709, (FID/C709), April, 1978. Chile provided access to Spanish fishermen to catch hake and squid. License fees were set at \$60 per trip per vessel GRT. "Empresas mixtas," *España Pesquero*, October, 1977, p. 3. Spain also offered to grant scholarships and to give import preferences to Chilean seafood to Chileans, but other details are not available. "The new international law of fisheries emerging from bilateral agreements," *Marine Policy*, April, 1979, p. 89-94.

111. Agüero and Correa, "Análisis de rentabilidad," *op. cit.*, p. 90. Spanish fishermen apparently wanted to deploy more, but were restricted by the Chileans. "Chile: Fischerei mit Spanien," *Informationen*, February, 1978.

112. Mareiro "1983, Mejor de lo que se esperaba," *Industrias Pesqueras*, January, 1984.

113. "Prosiguen las protestas de los armadores de la flota palangera congeladora," *Industrias Pesqueras*, April 15, 1991, p. 35 and "Los armadores de barcos palangreros contrarios a la actitud de las autoridades chilenas," *Industrias Pesqueras*, March 15, 1991, p. 31. Chilean officials report that while foreign fishermen are not permitted to tranship swordfish, many other species can be transhipped through Chilean ports. Rusque, personal communications, *op. cit.*, October 13, 1993.

114. The Chileans commonly refer to swordfish as "albacora" as well as "pez espada" which is commonly used elsewhere in Latin America. English-language readers using Chilean sources need to realize that when Chilean authors refer to "albacora," they do not mean albacore tuna.

115. U.S. Embassy, Santiago, March 10, 1992 and Rusque, personal communications, *op. cit.*, October 13, 1993.

116. Chilean officials stress that these are not discriminatory regulations aimed at U.S. fishermen who could tranship tuna and other species like the Japanese are doing. The prohibition on transshipping swordfish is designed to limit effort on that species because it is of interest to a growing Chilean longline fishery.

117. Rusque, personal communications, *op. cit.*, October 13, 1993.

118. Andrés Couve Rioseco, Chilean Undersecretary for Fisheries, personal communications, July 30, 1993 and Capurro, *op. cit.*, September 13, 1993.

119. For details on the Soviet fishery see Don Jacobson and Dennis Weidner, Dennis Weidner, "Soviet-Latin American fishery relations, 1961-89" *International Fishery Reports*, (IFR-89/9), May 5, 1989.

120. Agüero and Correa, "Análisis de rentabilidad," *op. cit.*, p. 89. Another observer recalls that several other Soviet vessels operated off Chile during 1971-73, including the *Nogliky* and three 100-m factory trawlers. Capurro, *op. cit.*, September 13, 1993.

121. Soviet officials reportedly terminated SEVRYBA operations in the southeastern Pacific during 1991, but allowed DALRYBA to continue operating. Russian officials decided in 1992 to also end DALRYBA operations in the area.

SECTION V. (Joint Ventures)

122. A wholly-owned subsidiary would not precisely be a joint venture, but for organizational simplicity and because full information on ownership is not available, the authors have chosen to include these foreign subsidiaries in the joint venture section.

123. "Chile: Advertencia sobre inversiones extranjeras," *Industrias Pesqueras*, February 15, 1988, p. 37.
124. This restriction applies to fishing vessels only. Processing plants can be fully foreign owned.
125. Bonilla, *op. cit.*
126. C. Elgueta, "Chile Pesquero," *Industrias Pesqueras*, October 15-November 11, 1992, p. 43.
127. China has also been active in neighboring Peru. Presumably the Chinese are interested in gaining some control over the foreign companies where they are purchasing fishmeal. China has a huge aquaculture industry, the world's largest which requires massive quantities of fishmeal to produce feed. Much of the aquaculture industry produces for the domestic Chinese market, but some sectors (especially shrimp farmers) produce primarily for export. For details on Chinese activities in Peru, see the Peruvian chapter of this report.
128. "Sino-Chilean Commission meets; accords signed," Santiago domestic service, 2300 GMT, June 10, 1988.
129. "Future joint ventures with PRC being studied," *El Mercurio*, June 19, 1989, p. B1 and "Briefly noted," *Chile Economic Report*, March 1990. China has imported fishery products, mostly fishmeal from Peru, but because of political differences with Chile's military government after 1973, China did not import from Chile. Now that Chile has a democratic Government trade with China is likely to increase during the 1990s. The most important commodity will probably be fishmeal as China requires substantial quantities for its growing aquaculture industry.
130. "Chinese investment in fisheries," Xinhua, 1601 GMT, November 28, 1989. SJC reportedly has 17 fishing vessels and two plants producing fishmeal, oil, and canned seafood. The Chinese investment gives it a 25.6 percent share of the company. This is reportedly the largest Chinese investment to date in Latin America. "China moves into Chile," *Seafood International*, February, 1990, p. 23.
131. "Briefly noted," *Chile Economic Report*, March and June 1990 and "Pesquera Nacional firmo acuerdo con China," *Chile Pesquero*, June-July 1990, p. 7.
132. Capurro, personal communications, *op. cit.*, September 16, 1993.
133. Manuel Achurra L., "La pesca refuerza vínculos comerciales entre Francia y Chile," *Chile Pesquero*, November-December, 1988, pp. 42-44.
134. Grandi may transfer the trawler *Elín Thorbjarnardóttir* to Friosur. "22% share in Friosur," *News from Iceland*, January 1993 and U.S. Embassy, Reykjavik, September 24, 1993.
135. "Grandi: Elín Thorbjarnardóttir sails for Chile," *News from Iceland*, March 1992.
136. U.S. Embassy, Tokyo, February 24, 1993.
137. "Se vende buque factoria 'Harumi' de la empresa Hoko Chile," *Chile Pesquero*, March 1985, p. 9.
138. *Nikkan Suisan Keizai Shinbun*, February 18, 1992.
139. *Nikkan Suisan Keizai Shinbun*, August 22, 1991.
140. "Joint fishery ventures with Chile," VWD, March 30, 1978.
141. Suisan Sha, *op. cit.*, pp. 194-195.

142. "'Piloto pardo' auxilió a pesquero en aguas antárticas," *La Tercera*, January 18, 1984. Mitsubichi reportedly also participates in the joint venture. Suisan Sha, *op. cit.*, pp. 194-195.
143. *Nikkan Suisan Keizai Shinbun*, June 15, 1992.
144. Suisan Sha, *Suisan Nemkan, 1993* (Suisan Sha: Tokyo, 1992), pp. 194-195.
145. Suisan Sha, *op. cit.*, pp. 194-195.
146. "Polemica sobre buques factoría," *op. cit.*, p. 23.
147. *Nikkan Suisan Keizai Shinbun*, September 17, 1991.
148. "Planta faenadora de algas marinas," *Chile Pesquero*, April, 1976.
149. "Podrían surgir empresas Chileno-Japonesas para agregar mayor valor a salmonidos," *Chile Pesquero*, March, 1992, p. 15.
150. "Chile, South America," *Suisan Keizai*, February 19, 1987.
151. The merged Japanese companies were Kinoshita Fishing Nets Co. and Nippon Kenmo Co. "Fabrica Japonesa en Iquique," *Pesca*, July-August, 1991, p. 20 and "Empresas Japonesas de equipos pesqueros se instalan en Zofri de Iquique," *Chile Pesquero*, April-May 1990, p. 9.
152. "Inaguran fábrica de flotadores en Chile," *Pesca*, November-December, 1987.
153. Suisan Sha, *op. cit.*, pp. 194-195.
154. "Chile expansion," *Commercial Fishing*, September, 1987, p. 3 and "Conglomerates boost economic development," *Chile Economic Report*, April, 1988, p. 6. Carter Holt Harvey is the parent company of Sealord Products, one of New Zealand's largest fishing companies. "NZ company into Chile," *Fishing News International*, September, 1987.
155. Clara Munita O., "Aquacultivos una empresa multiproductora," *Chile Pesquero*, March, 1992, pp. 50-53.
156. "Purser-trawler joins Chilean fleet," *Fishing News International*, July, 1991.
157. "Briefly noted," *Chile Economic Report*, June, 1990, p. 8.
158. Kvaerner Eureka, for example, has entered a partnership with Pesquera Eperva to build fishmeal manufacturing equipment. "Kvaerner's Chilean joint venture," *Fishing News International*, November, 1992.
159. "Six-milliondollar venture in N. Chile," *Fishing News International*, March, 1979 and "Integración Peruano-Chilena a través de la pesca," *Pesca*, May, 1979, pp. 9-10.
160. "Una delegación portuguesa se desplaza a Chile para estudiar formas de cooperación," *Industrias Pesqueras*, March 15, 1991, p. 35 "Visita Ministerio de Pesca de Portugal," *Boletín Informativo SIM*, May 1991, p. 17.
161. "Industria pesquera recibe aporte de US\$24 millones," *La Nación*, October 4, 1982.
162. Alex Petersen, "Ovenstone pulls out of West African fishing," *Cape Times*, June 24, 1982.

163. "Ovenstone send dumb barge to Chile," *South African Shipping News and Fishing Industry Review*, January, 1983.
164. "Invertirá en el ramo pesquero Chileno compañía Sudafricana," *Excelsior*, February 19, 1981.
165. The venture is associated with Federal Marines Ltd., South Africa's principal buyer and exporter of canned seafood. "Two new seafood canneries to be built," *Chile Economic Report*, April, 1981, p. 8.
166. "Ovenstones, Gen Dev pool resources at Walvis Bay," *The South African Shipping News and Fishing Industry Review*, March, 1982, p. 24 and "South African ventures in Chile," *Kaigai Suisan News*, September, 1982.
167. "Schottel drive Chilean seiners, SA gear hauls nets," *The South African Shipping News and Fishing Industry Review*, October, 1981, p. 23.
168. "Desventajas de empresas Chilenas en la pesquería austral," *Chile Pesquero*, May-June, 1988, p. 5.
169. "Declinación de capturas en Chile," *Industrias Pesqueras*, October, 1983.
170. "Empresario Español invierte en Magallanes," *Chile Pesquero*, January-February, 1990, p. 7.
171. "España: Grupo invierte en Chile," *Boletín Informativo SIM*, May 1992, pp. 26-27.
172. "Pescanova sends trawler to Chile," *Fishing News Internacional*, September, 1983.
173. "Pescanova to build second factory in Chile," *GLOBEFISH Highlights*, February, 1990, p. 30.
174. "Chile: Crecen inversiones Españoles durante 1989," *Industrias Pesqueras*, January, 1991.
175. "Two longliners join Pescanova fleet," *World Fishing*, June, 1987, pp. 5-6.
176. The clams were marketed in Spain under the "Pleama" brand. "Empresa Española que opera en Magallanes enfrenta problemas financieros," *Chile Pesquero*, April-May, 1990, p. 10.
177. Marfrío, "Los mejores pesqueros en el extranjero," *Industrias Pesqueras*, February, 1978.
178. "Spaniards due in Chile joint venture," *Fishing News International*, October, 1981.
179. "Zarpó el B/F Barreras Masso Dos," *Chile Pesquero*, August, 1986.
180. For background on Soviet-Chilean fishery relations, see Jacobson and Weidner, *op. cit.*
181. "Soviet fishing consortium deal under discussion," Radio Cooperativa Network, Santiago broadcast, 2200 GMT, September 26, 1990.
182. The authors have not been able to identify the Global Research Institute, but the Chileans could be referring to the former All-Union Research Institute for Fisheries and Oceanography (VNIRO) which is now the Russian Research Institute for Fisheries and Oceanography (VNIRO).
183. "Commercial agreement with the USSR signed," *Chile Economic Report*, November, 1990, p. 3.
184. Marco press release, September 20, 1993.

185. Andrés Couve Rioseco, Chilean Undersecretary for Fisheries, personal communications, July 30, 1993 and Capurro, *op. cit.*, September 13, 1993.

186. ONI data indicates that as of mid-1993, no Ukrainian or Soviet-built vessels had been transferred to Chile (appendix C) and the U.S. Embassy confirmed as of September 16, 1993, that the transfer had not taken place. Capurro, *op. cit.*, September 16, 1993.

187. "Sociedad conjunta Chileno-Sovietica," *Industrias Pesqueras*, August 10, 1991, p. 35.

188. "Boost for Chile's canners," *Fishing News International*, September, 1980.

189. "Empresas mixtas con Mozambique," *Boletín Informativo SIM*, February, 1992, p. 14.

SECTION VI. (Distant-water Operations)

190. Capurro, *op. cit.*, September 13, 1993.

191. Couve, *op. cit.*, July 29, 1993.

192. The CCAMLR catch limit in statistical subarea for 1992/93 for all member countries was 3,350 tons. Press reports indicate that Chile alone has far exceeded that quota. "Southern seabass take 'doubles quota'" *Fishing News International*, August 1993. CCAMLR has also issued Chile a special quota for exploratory fishing in statistical area 48.4. Chile is the only country assigned a quota and at the 1992 CCAMLR meeting Chile was allocated a total allowable catch (TAC) of only 240 tons. CCAMLR Conservation Measure 44/XI.

193. Rusque, personal communications, *op. cit.* October 13, 1993.

194. Chilean fishermen have not traditionally fished outside of Chilean waters. Existing legislation does not clearly establish Chilean Government jurisdiction on its fishermen operating in distant waters.

APPENDICES

Appendix A.--Chile. Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	Number of vessels							
Fish carriers								
B	NA	NA	NA	1	1	1	1	2
Long liners								
Factory								
A	-	-	-	-	-	-	1	7
Wet-fish								
A	-	-	-	-	-	-	-	2
Nei purse seiners								
A	-	-	1	4	8	13	22	34
Stern trawlers								
Factory								
B	-	-	4	7	6	5	6	5
C	-	-	3	6	6	6	6	6
D	-	-	-	-	-	-	-	1
Wet-fish								
A	3	3	3	5	10	12	12	11
Total	3	3	11	23	31	37	48	68

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Appendix B.--Chile. Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Fish carriers								
B	NA	NA	NA	1.3	1.4	1.4	1.4	2.8
Long liners								
Factory								
A	-	-	-	-	-	-	0.5	4.5
Wet-fish								
A	-	-	-	-	-	-	-	1.6
Nei purse seiners								
A	-	-	0.8F	2.9	5.2	7.8	13.2	20.2
Stern trawlers								
Factory								
B	-	-	5.9	10.4	8.6	7.3	8.6	7.3
C	-	-	10.2	17.7	17.8	18.0	17.8	16.5
D	-	-	-	-	-	-	-	4.7
Wet-fish								
A	1.8	1.8	2.4	4.3	7.8	9.3	9.2	8.4
Total	1.8	1.8	19.3	36.6	40.8	43.8	50.7	66.0

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Appendix C.--Chilean. Large* fishing vessels registered, 1993

Country/Vessel	Size	Built	Vessel type**
	GRT	Year	
Chile			
Guanaye 4	540	1991	510
Guanaye 5	540	1991	510
Albimer	583	1990	510
Allipen I	724	1990	510
Barracuda IV	500	1989	510
Blanquillo	500	1989	510
Carolina I	734	1993	510
Claudia Alejandra	512	1988	510
Colchane	545	1990	510
Colomba	506	1990	510
Coral I	734	1992	510
Don Gregorio	763	1992	517
Don Pedro	724	1987	510
Don Roberto I	734	1993	510
Don Telesforo	629	1991	510
Fox	697	1992	510
Guanaye 2	500	1992	510
Guanaye 3	525	1990	510
Huachinango	733	1991	510
Huracan	512	1990	510
Intrepido	512	1985	510
Macarena	500	1993	510
Magdalena	500	1993	510
Mero	500	1989	510
Montserrat	602	1990	510
Panilonco	734	1992	510
Plabnik	502	1987	510
Quilpolemo	734	1992	510
Relampago	512	1989	510
Sagasca	545	1990	510
Salmon	500	1989	510
San Bosco	525	1990	510
Southport	516	1988	510
Tolten I	734	1992	510
Denmark			
Araucano	11,647	1966	219
Dona Maria	1,022	1978	512
Pelagos II	721	1973	510
France			
Libas	759	1991	510
Italy			
Mar Del Sur III	612	1966	510
Germany			
Pelagos	691	1963	510
Friosur IV	1,047	1966	511
Arauco I	750	1949	510
Bio Mar I	917	1961	512
Bio Mar II	916	1961	512
Curanipe	546	1955	510
Friosur I	842	1963	510
Friosur II	842	1963	510
Margot Maria Stengel	1,950	1967	512
Polaris	981	1965	510
Valparaiso	640	1955	510
Japan			
Kirishima	3,612	1964	512
Gualas	2,811	1964	512
Guamblin	2,886	1964	512
Jin Yang No 1	1,482	1960	512

Jin Yang No 2	1,486	1960	512
Mar Del Sur I	690	1970	510
Unzen	2,591	1982	510
Netherlands			
Freia	771	1968	510
Guafo	1,314	1961	511
Norway			
Antartic	782	1980	510
Balder	702	1974	510
Bio Mar III	623	1973	510
Cullinto	543	1966	510
Gangstad Junior	518	1941	510
Gardar	798	1978	510
Haugagut	782	1977	510
Jasper Sea	543	1980	510
Mar Austral	782	1975	510
Ordinat	889	1950	510
Remoy Viking	705	1979	510
Tranoi	680	1978	510
Vestliner	547	1942	510
Vikingo	963	1978	510
Yagan	1,242	1976	516
Peru			
Landes	600	1992	510
Licanten	508	1990	510
San Diego	948	1980	510
Poland			
St John	596	1972	510
Spain			
San Rafael	2,150	1975	512
Betanzos	1,534	1974	521
Elqui	507	1966	511
Mino	2,715	1968	512
Puerto Ballena	753	1987	510
United Kingdom			
Boston Beverley	517	1971	510
Boston Blenheim	517	1972	510
Hoddevik	612	1950	510
Sorfold	797	1951	510
United States			
Colorado 1	617	1955	510
Colorado 2	617	1959	510
Colorado 3	517	1959	510
Of Iquique	646	1975	510
Of Porvenir	646	1975	510
Of Progresso	607	1973	510
Of Union	607	1973	510
South Africa			
Karibib	671	1980	512

*500 GRT or Larger

** ONI vessel types

510 - Trawler

511 - Refrigerated trawler

512 - Fish factory trawler

566 - Fisheries research vessel

Source: U.S. Office of Naval Intelligence (ONI)

Appendix D.--Chile. Factory vessel production* in international waters, 1991-92

Species		Year	
English	Spanish	1991	1992
1,000 Metric tons			
Finfish			
Hake,	Merluza		
Patagonian	Merluza de Atlantico	0.1	-
Southern	Merluza del sur	-	Negl
Ling (black)	Congrio negro	Negl	-
Longtailed hake	Merluza de cola	Negl	-
Red cod	Brotula#	Negl	Negl
P. toothfish*	Bacalao de profundidad	0.3	10.9
NA	Pampanito##	Negl	-
Rays	Raya	Negl	-
Shark	Azulejo/tiburon/marrajo	0.1	-
Tuna	Atun		
Long fin	Aleta larga	Negl	-
Yellowfin	Albacora	0.2	-
Mollusks			
Illex squid	Pota	3.6	-
Loligo squid	Calamar	-	2.4
Crustaceans			
Krill	Krill	1.5	2.9
Total**		5.9	16.3

* Processed product, mostly frozen.

** Totals may not agree due to rounding

Also known as bacalao austral

Believed to be *Scorpius chilensis*

• Patagonian toothfish

Source: SERNAP, *Anuario Estadístico de Pesca*, 1991 and 1992.

Appendix E.--Chile. Fisheries catch by FAO statistical area, 1975-1991

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
1,000 Metric tons									
Inland (03)	Negl	0.1	0.6	1.0	0.9	1.3	1.9	3.7	6.9
Coastal (87)	1,157.1	2,816.6	4,801.2	5,567.4	4,809.3	5,201.3	6,446.9	5,187.2	5,987.9
Distant Water									
41	-	-	-	-	0.4	1.3	-	-	3.9
48	-	-	2.6	3.3	4.1	5.9	5.3	4.5	4.2
Total	1,157.1	2,816.7	4,804.4	5,571.6	4,814.6	5,209.9	6,454.1	5,195.4	6,002.9

F - FAO estimate

Negl - Negligible

Source: FAO, *Yearbook of Fishery Statistics*, various years.

Appendix F.--Chile. Catch of jack mackerel, 1985-91

Year	Quantity
	Million metric tons
1985	1.5
1986	1.2
1987	1.8
1988	2.1
1989	2.4
1990	2.5
1991	3.0

Source: FAO. Yearbook of Fishery Statistics, 1991

Appendix G.-- Soviet Union. Fishery catches by area, 1975-1991.

Area	Year								
	1975	1980	1985	1986	1987	1988	1989	1990	1991
	1,000 Metric tons								
Inland(07)	944.0	747.0	905.6	926.9	988.4	995.6	1019.7	974.9	1030.8
Coastal									
27	2406.3	1983.5	1239.2	999.9	945.3	781.4	644.2	524.4	967.2
37	349.8	397.2	344.6	390.6	261.3	347.3	206.9	93.0	53.7
61	2719.0	3195.8	5462.3	5823.0	5457.0	5296.9	4957.7	4516.3	3973.3
67	572.6	59.2	11.0	9.0	11.2	12.1	12.9	0.2	1.0
Subtotal	6047.7	5635.7	7057.0	7222.3	7500.1	6437.7	5821.7	5133.9	4995.2
Distant Water									
21	1166.9	108.3	133.4	147.7	152.3	149.6	155.4	197.1	125.5
31	69.0	-	-	-	-	-	-	0.8	-
34	1165.7	942.3	708.1	854.2	106.3	1395.0	1629.0	1688.6	1261.3
41	9.0	27.7	70.9	77.1	168.5	259.8	282.3	242.2	226.7
47	420.7	825.2	697.9	679.2	670.5	634.6	654.3	310.9	394.2
48	-	424.0	188.0	397.4	348.8	355.4	373.4	342.7	199.5
51	35.0	36.8	32.0	42.4	46.4	39.6	28.7	8.7	12.1
57	-	0.4	0.5	-	-	0.03	-	-	-
58	2.1	102.6	28.3	31.9	35.1	14.5	30.8	5.6	1.3
71	-	3.6	10.3	12.4	16.7	10.6	10.5	5.5	3.6
77	30.6	-	1.1	2.7	0.1	0.08	3.0	12.6	0.1
81	44.8	69.6	65.6	152.8	149.9	94.9	97.9	127.0	236.8
87	-	552.4	624.5	710.9	844.9	944.8	1202.3	1337.7	729.8
88	-	-	-	1.9	0.3	-	1.1	0.7	-
Subtotal	2943.8	3093.0	2560.6	3110.6	3616.1	3898.9	4468.7	4280.1	3190.9
Total	9935.6	9475.6	10522.8	11259.8	11159.6	11332.2	11310.1	10388.9	9216.9

Note: The totals may not add because of rounding.

Source: FAO. Yearbook of Fishery Statistics, various years.

4.4

COLOMBIA

Colombia is unlikely to initiate significant distant-water operations during the 1990s. Tuna fishermen are the only Colombian fishermen currently capable of distant-water operations and they only operated two tuna purse seiners in 1992. This fishery is unlikely to expand in the near future because it faces severe marketing problems. Colombian fishermen rely on dolphins to locate the tuna and some are killed when the fish are harvested. International efforts to protect dolphins are adversely affecting the market for such non-dolphin safe tuna. Colombia is currently unable to export to the United States and has also encountered difficulties in important European markets. Until this problem is resolved, the Colombian tuna fishery is unlikely to expand significantly. Colombian officials note that their fishermen have sharply reduced dolphin mortalities in the eastern tropical Pacific and are hopeful that the fleet now meets U.S. dolphin protection standards. This could result in the removal of the U.S. embargoes, but marketing problems may persist because of new U.S. legislation. Thus the long-term future of the Colombian tuna fleet is still uncertain.

Colombia has for years licensed foreign vessels operating under contract with domestic companies. Colombian officials have been more interested in such access arrangements than many other Latin American countries and conduct one of the largest licensing programs in the region. Many of the vessels involved have been smaller vessels, especially shrimp trawlers and lobster boats, but a variety of other vessels have been licensed, including substantial numbers of tuna seiners. There continues to be some opportunities in Colombia for distant-water fishermen willing to work with local companies. Such opportunities, however, are limited given the already extensive licensing program. Few opportunities exist on Colombian grounds for the foreign fishermen with factory trawlers or other large vessels currently unable to find suitable fishing grounds.

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I. GENERAL BACKGROUND

Colombia reports the smallest fishery of all the major Latin American countries. The country has two extensive coasts on both the Caribbean and Pacific, as well as jurisdiction over important areas of the western Caribbean.¹ Despite the country's expansive Exclusive Economic Zone (EEZ) with important commercial stocks, Colombian marine fishermen until 1989 caught less than artisanal inland fishermen. Fishermen steadily increased catches during the 1980s. The country's catch peaked in 1990 at nearly 130,000 metric tons (t) and declined to about 110,000 t in 1991 t (Latin America, appendix C2a1).

The Colombian catch consists primarily of tunas, shrimp, anchovies, and various freshwater species. The principal commercial marine fishery has been for shrimp and is conducted along both the Caribbean and Pacific coasts. The Pacific coast shrimp fishery developed first (1953) and a Caribbean coast fishery did not begin until much later (1968).² The country's dynamic shrimp culture industry, however, has supplanted the trawler fishery as the main source of shrimp in recent years. Most of the increased marine catch reported since 1988 has been of yellowfin and other tunas. Almost all fishing, with the exception of the tuna fishery, is conducted in coastal waters. Most

observers believe that Colombia has significant underutilized resources and that fishermen could easily double the current catch.

The Colombian Government has been giving increasing priority to fishery and marine affair matters in recent years. The Government passed a new General Fisheries Law in 1990.³ The law stresses the development of the fishing industry through "rational management" of fishery resources.⁴ The Government assigned the newly-created Instituto Nacional de Pesca y Acuicultura (INPA) responsibility for coordinating the country's fisheries development effort with other Government agencies.⁵ INPA currently sponsors a substantial research effort focusing on subjects of practical use for increasing fishery harvests (appendix G)

Colombia has reported notable efforts to expand fishery exports during the 1980s. Exporters have increased shipments from only \$35 million in 1980 to nearly \$120 million in 1990 (Latin America, appendix E1). Most of the recent increase, however, has been due to the rapidly growing shrimp culture industry.

II. HIGH-SEAS FLEET

The authors know of only a few large Colombian vessels capable of high-seas operations. Colombia reported three large fishing vessels (500-GRT or larger) to Lloyd's of London in 1992. This data is roughly confirmed by the U.S. Office of Naval Intelligence which reported three large Colombian fishing vessels and one research vessel in 1993 (appendix D). The large fishing vessels appear to be primarily tuna purse seiners. Two Colombian seiners participated in the eastern tropical Pacific (ETP) tuna fishery during 1992. The Colombian Government confirms that the country's fishermen operated only four large fishing vessels (over 24 meters) during 1992 (appendix C).

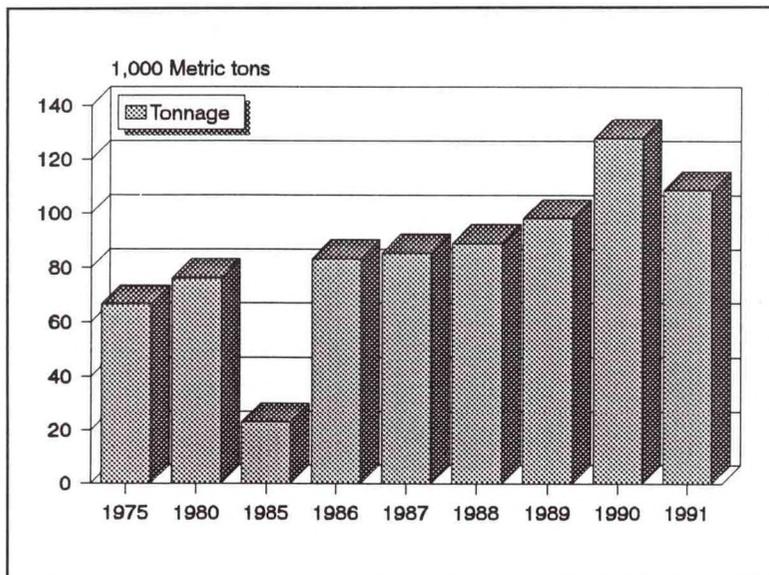


Figure 1.-- Colombia has been making some progress in expanding its fisheries catch.

III. VESSEL SOURCES

Colombia has only a few small shipyards. The country's largest shipyard, the Compañía Colombiana de Astilleros (CONASTIL) located in Cartagena, has the capacity to build vessels of up to 10,000 tons and potentially could build tuna seiners and fisheries support vessels. The yard, however, is devoted primarily to vessel maintenance and repair. CONASTIL reportedly services a significant number of foreign-flag vessels each year.⁶ Small yards in Colombia also provide some support and maintenance services to fishing vessels, mostly shrimp trawlers.

Most Colombian commercial fishing vessels are imported, primarily from the United States.⁷ Colombia has also imported small numbers of fishing vessels from Cuba, Mexico, the Netherlands, Spain, and the United Kingdom. Colombia reportedly imported two 850-ton *Atún*-class tuna purse seiners from Mexico in 1989 and 1991.⁸ The Colombian Government has facilitated such imports to promote the development of the domestic fishing industry. Under Colombian law, all imports of vessels and equipment are exempt from taxes for 10 years from January 15, 1990.⁹

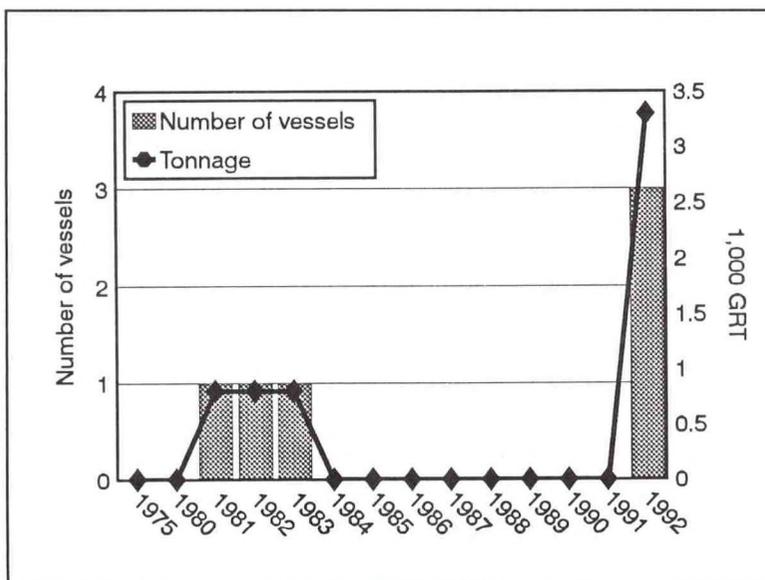


Figure 2.--Colombia has been making some progress in expanding its fisheries catch.

IV. FOREIGN FISHING

Colombia permits foreign commercial and experimental fishing within its 200-mile Exclusive Economic Zone (EEZ).¹⁰ The Colombian Government, through INPA and the Directorate of Ports and Maritime Affairs (DIMAR), regulates foreign fishing. While INPA reports one of the largest licensing programs in Latin America, the Government requires that virtually all the foreign fishing be done under contract to a Colombian company.¹¹ The Colombian Government introduced the licensing system in 1968 and authorized Colombian fishing companies to contract foreign-owned vessels for fishing operations in Colombian waters.¹² Foreign fishermen who desire to fish in the Colombian EEZ must meet the requirements established for the Colombian merchant marine¹³ and then obtain two major documents: a fishing permit and a fishing license. Permits are issued for demersal and pelagic fish, shrimp (deep and shallow water), lobster, tuna, and multiple species (lobster, conch, and finfish). Permits are valid for either the Pacific or Atlantic, but not for both, except for tuna licenses which are valid for both coasts. Upon receiving a permit, fishermen must also obtain a license for each vessel. Foreign fishermen are required to land their catch in Colombian ports and market part of it domestically.¹⁴ Foreign-flag tuna vessels operating in association with Colombian companies inside the country's EEZ may fish only for yellowfin and are required to have Inter-American Tropical Tuna Commission (IATTC) observers on board.¹⁵ All foreign-flag vessels using Colombian ports must also have on board a Maritime Agent (Agente Marítimo) accredited by the Colombian Government.¹⁶

Fishermen from many different foreign companies have obtained Colombian licenses. INPA in 1993 reports licensing 150 foreign fishing vessels: for Pacific operations (21 vessels), Caribbean operations (76 vessels), and tuna operations off both

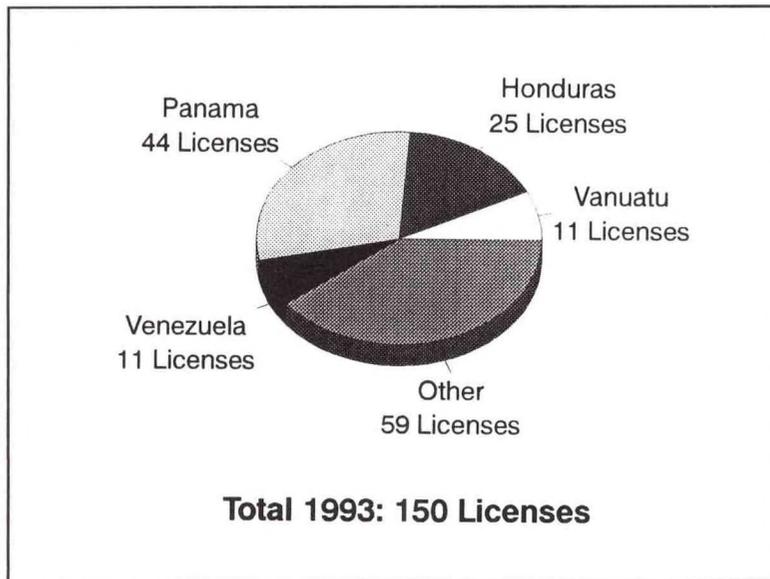


Figure 3.--Colombia. Foreign fishermen can obtain Colombian licenses if they have vessel leasing contracts with Colombian fishing companies.

coasts (53 vessels) (appendix E).¹⁷ The licenses were primarily issued for tuna, shrimp, lobster, demersal species, and multiple species (lobster, conch, and finfish). Most of the licenses were issued to Honduran (25), Panamanian (44), and United States (26) fishermen, but smaller numbers were also issued to fishermen from the Dominican Republic (2), Ecuador (3), Korea (3), Japan (15), Mexico (1), New Zealand (1), Russia (4), Spain (2), the U.K. (2), Vanuatu (11), and Venezuela (11) (appendix E).

Ecuador: One Colombian press report indicates that the Colombian company Compañía Pesquera Colombiana contracted six small Ecuadorean tuna vessels (100-150 tons) in 1989 to supply its new fish processing plant in Buenaventura.¹⁸ Colombian officials licensed three Ecuadorean vessels in 1993, a shrimp trawler, and two small seiners (appendix E). The tuna seiners were contracted by Atunes de Colombia and Frigopesca.

Estonia: The Estonian Moonsund Shipping company operated vessels off Colombia in association with an unidentified Colombian company in 1992, but no details are available. The contract was not renewed in 1993.¹⁹

Honduras: Most of the Honduran vessels licensed to fish off Colombia in 1993 were contracted by the

Antillana del Mar Caribe company to fish for lobster (appendix E).

Japan: Colombia has authorized Japanese fishermen in 1993 to fish for deep-water shrimp and tuna. The shrimp trawlers are working with Coapesca and Naviera Barbacoas. The tuna vessels are working with COPESCAL, Frigopesca, and INPESCA (appendix E).

Panama: Colombian officials issue more licenses to Panamanian fishermen than for fishermen from any other country (appendix E). Interestingly, the Colombians are licensing Panamanian-owned vessels and not the large number of flag-of-convenience vessels that foreign owners have registered in Panama.²⁰ Colombia in 1993 has licensed Panamanians to fish demersal

fish (primarily in the Pacific), shrimp (Caribbean and Pacific), and tuna. Several different Colombian companies are contracting the Panamanians (appendix E).

Russia: Colombia has licensed four Russian tuna vessels in 1993 to work with Frigomarina (appendix E).

United States: Colombia has granted licenses to a wide variety of U.S. fishermen involved in most of the different Colombian commercial fisheries (appendix E). About half of the licenses issued in 1993, however, have been granted to U.S. tuna fishermen for operations with Atunes de Colombia (1), COPESCAL (3), Frigogan (6), Marisol de Pacifico (1), and Rios Calero Pesca (1).

Vanuatu: Colombia has granted licenses in 1993 for 11 Vanuatu-flagged tuna seiners. The vessels were all contracted by Atunes de Colombia (appendix E).

Colombia has also negotiated bilateral agreements with two countries permitting their fishermen to operate in Colombian waters. Foreign fishermen fishing under such agreements are not required to land their catch in Colombia.

Jamaica: Jamaica and Colombia signed an agreement in 1981 permitting Jamaican fishermen

to fish within 12 nautical miles of the Bajo Nuevo and Seranilla cays. The agreement permitted Jamaican fishermen to catch 840 t of fish annually for 2 years. The fishermen were allowed to catch 11 different species, including red snapper, grouper, jacks, grunt, mullet, goat fish, tiger fish, parrot fish, shark, king fish, mackerel, and file fish.²¹ A new 2-year agreement signed in 1984 allowed only 10 vessels to operate in the area at any given time and reduced the number of species which could be fished to nine.²² The agreement was not renewed by Colombian officials.²³

United States: The United States has a bilateral fishing agreement with Colombia. The two countries signed a treaty in 1972 (commonly known as the Saccio-Vasquez Treaty) which relinquished the U.S. claim of sovereignty over the Caribbean cays and banks of Quita Sueño, Roncador, and Serrana in exchange for Colombia granting the United States fishing rights in perpetuity. Under the terms of the treaty, which went into effect in 1983, U.S. fishermen may fish the treaty waters, subject to agreed conservation measures. To operate in treaty waters, INPA issues certificates to U.S. fishermen. The Colombian Government is obligated to issue the certificates to all U.S. applicants pre-approved by the U.S. Government. Colombia's enforcement authority is limited to escorting violators out of the treaty area.²⁴ The Colombian Government in 1993 requested talks with the United States to discuss conservation measures and other matters associated with the treaty.²⁵

The Colombian Navy has reported some recent seizures in the Colombian EEZ. Naval patrol vessels have seized six vessels since 1991, two along the Pacific coast and four along the Caribbean coast. The vessels were retained and the equipment and catch confiscated. Fines totaled about \$400,000.²⁶

V. JOINT VENTURES

Foreign companies participate in the Colombian fishing industry through a variety of arrangements with Colombian companies. Foreign companies have formed a few joint ventures with local partners, usually contributing vessels, equipment, and technical expertise. Colombian companies have also entered into a variety of contractual relationships with foreign companies besides equity participation joint ventures. Available information on ventures with individual countries is as follows:

Japan: The authors know of only one Japanese-Colombian joint venture, International Maritima Pesquera. It was formed in 1975 by two Japanese companies (Konan Suisan and Kanematsue Sho) to fish for skipjack tuna, but it is currently inactive.²⁷

Mexico: Mexico agreed in 1983 to assist Colombia in the development of its tuna and sardine fisheries. Under the agreement, the former Mexican state enterprise Productos Pesqueros Mexicanos (PPM) was to provide technical assistance and 17 vessels to the Colombian firm Vikingos, which planned to fish experimentally for tunas (skipjack and yellowfin) and sardines in Colombia's Pacific and Atlantic 200-mile zones.²⁸ No details are available to the authors on the outcome of this project.

Norway: A Norwegian consortium of vessel owners (Norse Group) and the Colombian Vikingos company signed an 11-year agreement in 1979 allowing Norwegian fishermen to deploy up to 20 vessels in Colombian waters. The agreement permitted Norwegian crews to fish under their own flag in exchange for training Colombian fishermen.²⁹ The authors have no confirmation that the vessels were ever deployed.

Poland: A Polish fishing company (Gryf) and a Colombian fishing enterprise (PESCOLOMBIA) formed a joint venture in 1976 to conduct exploratory and commercial sardine fishing in Colombian Pacific waters with two trawlers. The joint venture did not operate profitably during its 2-year trial run and was terminated in 1978.³⁰ No Polish-Colombian joint ventures are currently known to exist.

USSR: The Soviet Union began pursuing joint venture agreements with Colombia during the early 1980s. The first Soviet-Colombian joint venture was formed in 1981 to develop Colombia's tuna fishery using several Soviet-built 720-ton seiner-trawlers. It is not clear whether the joint venture was successful. Unconfirmed reports suggest that the Soviets had little success with the seiners they deployed. The Soviets subsequently expressed interest during 1986 in establishing further joint ventures with Colombian companies, but none were established.³¹ No further details are available, but Colombian companies are currently leasing four Russian tuna seiners (appendix E).

United States: There have been few U.S.-Colombian joint fishery ventures. The Colombian company PESCOLOMBIA reportedly formed a joint venture with a U.S. fishing company to develop Colombia's tuna fishery in the early 1980s, but no details on the outcome are available. One local press report indicated that another Colombian company, the Compañía Pesquera Colombiana, agreed in 1989 to process tuna for the U.S.-owned Star-Kist company at a new plant in Buenaventura. The plant was to be supplied by Star-Kist-operated seiners.³² It is unclear if the seiners could be deployed in Colombian waters.

tuna. Colombia is currently unable to export to the United States because of a U.S. tuna embargo (appendix F). The country has also encountered difficulties in important European markets, especially Italy and Spain, because of dolphin mortalities. Until the dolphin problem is resolved, the Colombian tuna fishery is unlikely to expand significantly.

Colombia has implemented an effective dolphin protection program. Colombian officials protect dolphins under a provision of the General Fisheries Law³³ and their fishermen have reduced ETP dolphin mortalities sharply. Data obtained through the IATTC indicates that the Colombian fleet has in fact achieved zero mortality.³⁴ Officials are hopeful that the fleet now meets U.S. dolphin protection standards.³⁵ NMFS officials have determined that Colombia has met almost all the requirements, but has asked INPA for additional technical details concerning regulations affecting eastern spinner and coastal spotted dolphins. Final Colombian clarification could result in the removal of the U.S. embargo as well as the reestablishment of European markets, but it would not reopen the U.S. market. U.S. tuna companies have implemented a voluntary dolphin-safe policy. Beginning in June 1994, a new U.S. law will require a dolphin-safe U.S. tuna market. All yellowfin tuna shipments to the United States from the ETP thus must be dolphin safe. Given the importance of the U.S. market, this will be a major problem for Colombian tuna exporters as long as the country's tuna fishermen continue setting on dolphins. Thus the long-term future of the Colombian tuna fleet is still uncertain.

VI. DISTANT-WATER OPERATIONS

Colombian fishermen conduct very limited distant-water operations. Only Colombian tuna fishermen are capable of distant-water operations and they currently operate only two seiners. The authors believe that the Colombians primarily deploy their seiners off their own coasts and off neighboring ETP countries. The Colombian companies involved are unlikely to expand their tuna operations in the near future because they face severe marketing problems. Colombian fishermen rely primarily on dolphins to locate the tuna and some are killed when the fish are harvested. International efforts to protect dolphins are adversely affecting the market for non-dolphin safe

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- _____. Decree N° 1862 of 1962, Articles 4 and 159.
- _____. Decree N° 2324 of 1984, Article 5, Number 6.
- _____. Decree N° 2256 of 1991 (implementing regulations for the Estatuto General de Pesca), various articles.
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- _____, Warsaw, September 8, 1978.
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ENDNOTES

SECTION I. (General Background)

1. Nicaragua also claims some of the Caribbean islands now administered by Colombia. Several incidents with Nicaraguan patrol craft have been reported in 1993. "Military presence increased around San Andres Island," Inravisión Television Cadena 1, Bogota, 0130 GMT, August 29, 1993.
2. Alejandro Londoño García, Gerente General, Instituto Nacional de Pesca, personal communications, October 7, 1993.
3. Estatuto General de Pesca, Ley 13, 1990.
4. Nicolás Loreda, Deputy Director, Colombian Government Trade Bureau, Washington, D.C., personal communications, September 14, 1993.
5. All fishing affairs previously handled by the Instituto Nacional de Recursos Naturales Renovables (INDERENA) were transferred to INPA in 1991. U.S. Embassy, Bogotá, July 7, 1993 and Londoño, *op. cit.*, October 7, 1993.

SECTION III. (Vessel Sources)

6. Roberto Spicker Guzman, Gerente Commercial, Compañía Colombiana de Astilleros, personal communications, August 9, 1993.
7. U.S. Embassy, Bogotá, July 7, 1993.
8. Ing. Isaac Muñoz, Gerente de Construcción, Industria Naval del Pacífico, personal communications, July 1, 1993.
9. Ley 13, Estatuto General de Pesca (1990), especially Article 67, and implementing regulations, Decree 2256 of 1991, Article 156. U.S. Embassy, Bogotá, July 8, 1993.

SECTION IV. (Foreign Fishing)

10. Colombia declared a 200-mile Exclusive Economic Zone in 1978, but Colombian authorities made few efforts to control or regulate foreign fishing until 1985.
11. Law 13 of 1990, Art. 30 and Decreto Reglamentario N° 2256 of 1991. Foreign vessels in the past have occasionally obtained special permits to fish independently. For further details, see Dennis Weidner, "Colombian foreign fishing regulations," *International Fisheries Report*, (IFR-88/92), September 2, 1988.
12. Nicolás Loreda, *op. cit.*, September 14, 1993. Foreign-flag vessels, by law, may account for no more than 40 percent of the total dead weight of the fleet of the contracting Colombian company. Decree No. 1862 of 1962, Art. 159.
13. Decreto No. 1862 of 1962, Art. 4 and Decreto N° 2324 of 1984, Art. 5, Num. 6.

14. The amount which foreign fishermen are required to land in Colombia depends on local needs. "New fishing regulations," *INFOFISH International*, January 1989.
15. U.S. Embassy, Bogotá, July 7, 1993.
16. Código de Comercio, Art. 1455.
17. Alejandro Londoño García, Gerente General, Instituto Nacional de Pesca y Acuicultura, personal communication, August 5, 1993.
18. Edmer Tovar M., "Buenaventura entró en la era del atún," *El Tiempo*, January 24, 1989.
19. Tiit Pihel, Director of Moonsund Shipping as reported by the U.S. Embassy, Tallinn, September 1, 1993.
20. For details see the Panamanian chapter of this report.
21. "Fishing agreement becomes effective," Bogotá radio broadcast, 1730 GMT, August 26, 1982.
22. "Fishing pact with Colombia," *Daily Gleaner*, August 25, 1984.
23. Lloreda, *op. cit.*, September 14, 1993 and Londoño, *op. cit.*, October 7, 1993.
24. U.S. Embassy, Bogotá, December 28, 1990.
25. U.S. Embassy, Bogota, June 24, 1993.
26. U.S. Embassy, Bogota, July 7, 1993. No information is available on the nationality of the seized vessels.

SECTION V. (Joint Ventures)

27. Suisan Sha, *Suisan Nemkan, 1992*, (Suisan Sha: Tokyo, 1992), pp. 194-195.
28. INFOFISH, "Technical and economic assistance to Colombia," *Trade News*, August, 1983.
29. "Norwegians get 20 boats off to Colombia," *Fishing News International*, October, 1979.
30. U.S. Embassy, Warsaw, September 8, 1978.
31. Donald Jacobson and Dennis Weidner, "Soviet-Latin American fishery relations, 1961-89," *International Fishery Reports*, (IFR-89/9), May 5, 1989.
32. Tovar, "Buenaventura entró ...," *op. cit.*
33. Estatuto General de Pesca, Decreto Reglamentario N°2256, October 4, 1991, Article 69, paragraph 6. See also INPA Resolution 41, January 21, 1992.
34. Zero mortality was reported from August 1992 to August 1993 and confirmed through 100 percent observer coverage. U.S. Department of State, cable number 315234, October 15, 1993.
35. "The U.S. could lift the latest embargo against Colombian tuna," *La Republica*, August 21, 1993.

APPENDICES

Appendix A.--Colombia. Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>Number of vessels</u>							
Trawlers	-	-	-	-	-	1	1	1

Vessel size key

- A: 500 - 999.9 GRT
 B: 1,000 - 1,999.9 GRT
 C: 2,000 - 2,999.9 GRT
 D: Over 4,000 GRT

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.--Colombia. Large fishing vessels (over 500 GRT),1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>1,000 GRT</u>							
Trawlers	-	-	-	-	-	NA	NA	NA

Vessel size key

- A: 500 - 999.9 GRT
 B: 1,000 - 1,999.9 GRT
 C: 2,000 - 2,999.9 GRT
 D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix C.--Colombia. Large commercial fishing vessels

Species	Year					
	1991		1992		1993*	
	Col.	For.	Col.	For.	Col.	For.
	<u>Number of vessels</u>					
Tuna	-	7	4	54	4	61
Shrimp**	-	1	-	6	-	-
Total	-	8	4	60	4	61

Col. - Colombian-flag vessels

For. - Foreign-flag vessels

* First quarter

** Deepwater

Note: Large vessels (over 24 meters) operating from Buenaventura and Cartagena.

Source: INPA as reported by the U.S. Embassy, Bogota, July 7, 1993.

Appendix D.-Colombia. Large* fishing vessels registered, 1993

Country/Vessel	Class	Size	Built	Vessel type**
		<u>GRT</u>	<u>Year</u>	
Germany (GDR)				
ARC Malpelo		780	1981	566
Mexico				
Don Antonio	Atun VI	1,178	1991	516
Don Fausto		1,178	1989	510
United States				
Top Wave		971	1973	510

* 500 GRT or larger

** ONI vessel types

510 - Trawler

516 - Tuna seiner

566 - Fisheries research vessel

Source: U.S. Office of Naval Intelligence (ONI)

Appendix E.--Colombia. Fishing licenses issued to foreign companies, 1993.

Coast/Species	Vessel/Country	Company
Pacific		
Demersal Fish		
Salt Cay	U.K.	A.F.F. Comercializ. del Pacifico
Lutjanus	Panama	Jose Vicente Narvaez Polo
Natali I	Panama	Empresa Nacional de Pesca Maritima
Magallanes	Panama	Invers. Maritimas del Pacifico Invermarp
Aguila Del Mar	Panama	Invers. Maritimas del Pacifico Invermarp
Popeye	U.S.	Invers. Maritimas del Pacifico Invermarp
Pelagic Fish		
Carlos Benjamin	Ecuador	Jose A. Henao & Cia. S. En C.
Shrimp (Deepwater)		
Latin Maru 5	Panama	Agropesquera Industrial Bahia Cupica
Sam Hae 101	Korea	Marpescor Ltda.
Mustang	Panama	Agropesquera Industrial Bahia Cupica
Sea Wolf II	Panama	Agropesquera Industrial Bahia Cupica
Sunrise III	Panama	Agropesquera Industrial Bahia Cupica
Gladiator	Panama	Agropesquera Industrial Bahia Cupica
Shrimp (Shallow-water)		
Hifer	Panama	Compania Pesquera Maparo
Lisa	U.S.	Compania de Pesca Frutos Del Mar Ltda.
Latin Maru 1	Panama	Industria de Pesca Sobre El P/Co INPESCA
Maribel	U.S.	Compania de Pesca Frutos Del Mar Ltda.
Lady Sarah I	Panama	Industria de Pesca Sobre El P/Co INPESCA
Dona Isabel	Panama	Compania Pesquera de Langostinos Copela
Ana Maria I	Panama	Inversions Gongalves & Cia.
Canciller	Panama	Rafael Caicedo Ramos y Hector Caicedo Ramos
Atlantic		
Demersal Fish		
Si-Tex 7	U.S.	Inversiones Grajales Ltda. & Invergra
El Navegante	Venezuela	Vikingos de Colombia
Patao	Venezuela	Vikingos de Colombia
Long Line I	Honduras	Ramon Elias Vitery
Sea Swan	U.S.	Inversiones Grajales Ltda. & Invergra
Kastor	Panama	Vikingos de Colombia
Cristina C.	Venezuela	Pesquera Escualo Ltda.
Polluks	Panama	Vikingos de Colombia
Norther Star	U.S.	Inversions Grajales Ltda. & Invergra
Don Gustavo II	Venezuela	Vikingos de Colombia
Sea Dog	U.S.	Coapesca Ltda.
Arenas	U.S.	Coapesca Ltda.
Gaviota	Venezuela	Vikingos de Colombia
Chances R.	U.S.	Coapesca Ltda.
Shrimp (Deepwater)		
Jolly Roger	Panama	Coapesca Ltda.
Drakkar III	Panama	Antillana del Mar Caribe
Caribbean Star 23	Japan	Coapesca Ltda.
Don Fabio	Panama	Coapesca Ltda.
Caribbean Star 22	Japan	Coapesca Ltda.
Caribbean Star 21	Japan	Coapesca Ltda.
Albebaran III	Panama	Coapesca Ltda.
Vikita	Panama	Vikingos de Colombia
Lorena	Panama	Coapesca Ltda.
Drakkar II	Panama	Antillana del Mar Caribe
Caribbean Star 20	Japan	Coapesca Ltda.
Don Mane	Panama	Coapesca Ltda.
Tee Claude	Panama	Antillana del Mar Caribe
Don Tony	U.S.	Coapesca Ltda.
Don Guillo	Panama	Coapesca Ltda.
Don Agustin	Panama	Antillana del Mar Caribe
Caribbean Star 8	Japan	Naviera Barbacoas Ltda.
Don Pablo	Panama	Coapesca Ltda.

Don Pepo	Panama	Coapesca Ltda.
Caribbean Star 10	Japan	Naviera Barbacoas Ltda.
Caribbean Star 31	Japan	Naviera Barbacoas Ltda.
Don Pancho	Panama	Coapesca Ltda.
Caribbean Star 7	Japan	Naviera Barbacoas Ltda.
Don Ernesto	Panama	Naviera Barbacoas Ltda.
Caribbean Star 35	Japan	Coapesca Ltda.
Don Victor	Panama	Coapesca Ltda.
Adriatic	Panama	Antillana del Mar Caribe
Caribbean Star 36	Panama	Coapesca Ltda.
Don Poncho	Panama	Naviera Barbacoas Ltda.
Lobster		
Captain Dowie	Honduras	Antillana del Mar Caribe
Miss Wendy Joy II	Honduras	Antillana del Mar Caribe
Liberty Belle	Honduras	Antillana del Mar Caribe
Lynn & Brothers	Honduras	Antillana del Mar Caribe
Lady Mira	Honduras	Antillana del Mar Caribe
Satelite II	Honduras	Antillana del Mar Caribe
Stingray	Honduras	Antillana del Mar Caribe
Miss Bianca II	Honduras	Antillana del Mar Caribe
Tele Star	Honduras	Antillana del Mar Caribe
Fair Winds	Honduras	Antillana del Mar Caribe
Captain Bodden	Honduras	Antillana del Mar Caribe
Rough Rider	Honduras	Antillana del Mar Caribe
Cabinda	Honduras	Antillana del Mar Caribe
Lone Star	Honduras	Antillana del Mar Caribe
Conch		
Harc-MC-II	Honduras	Antillana del Mar Caribe
La Creole	Honduras	Antillana del Mar Caribe
Harc-MC-III	Honduras	Antillana del Mar Caribe
Golden Arrow	U.S.	Inversiones Grajales Ltda. & Invergra
Multiple Species (Langosto-Caracol-Peces)		
Cachita	Dominican Rep.	Vikingos de Colombia
Misaray	Venezuela	Explotaciones Pesqueras Explopesca
Marisela	U.S.	Tecnica
Oyster	Honduras	Comercializadora Lemaitre de la Espriella
Capitan Pecas	U.S.	Coapesca Ltda.
Bobby Joe	Venezuela	Halley
Sea Fox	Honduras	Pesca Isles
Rosalind	U.K.	Rebollo Pineros y Martelo Repimar
Miss Catherine	Honduras	Comercializadora Lemaitre de la Espriella
Janice	U.S.	Inversiones Grajales Ltda. & Invergra
Dion T.	Venezuela	Halley
Sea Witch	Honduras	Pesca Isles
Aconcagua	Dominican Rep.	Compania Pesqueria Bolivar
Sonia Esperanza	Honduras	Pesqueria King Krab
Danny Jr.	Honduras	Blas Retamoso & Cia. Ltda. Barco Ltda
Pacific/Atlantic		
Tuna		
Gabriela A	Panama	Copescal
Roberto A	Panama	Copescal
Ana Maria F.	U.S.	Copescal
Gloria A	U.S.	Copescal
Shilale	Russia	Frigomarina Ltda.
Mureks	Russia	Frigomarina Ltda.
Hamashu Maru	Japan	Copescol
Chigoda Maru No. 33	Japan	Industria de Pesca Sobre El P/Co INPESCA
Ramigala	Russia	Frigomarina Ltda.
Marginella	Russia	Frigomarina Ltda.
Juliana Maria	U.S.	Rios Calero PESCA Ltda. Ricapesca Ltda
Ingalapago	U.S.	Copescal
Chigoda Maru No. 11	Japan	Industria de Pesca Sobre El P/Co INPESCA
Victoria A	Panama	Copescal
Connie Jean	U.S.	Marisol del Pacifico Ltda.
Isomae Maru 21	Japan	Copescal
Sasano Maru No. 17	Japan	Industria de Pesca Sobre El P/Co INPESCA
Sun No. 701	Panama	Industria de Pesca Sobre El P/Co INPESCA
Ramoncho	U.S.	Atunes de Colombia
Sandra C.	Rep. Vanuatu	Atunes de Colombia

Enterprise	Rep. Vanuatu	Atunes de Colombia
Yelisava	Vanuatu	Frigogan
Julie L.	Panama	Frigogan
American Eagle	Rep. Vanuatu	Atunes de Colombia
Western Pacific	Nueva Zelandia	Industria Productos Alimenticios Neptuno
Pampano	Honduras	Ramon Elias Vitery
Betty Elizabeth	Ecuador	Frigopesca
Pamela Ann	U.S.	Frigogan
Bold Adventures	U.S.	Frigogan
Pacifico S.	Venezuela	Frigogan
Victoria 102	Korea	Frigopesca
Olimpia	Rep. Vanuatu	Atunes de Colombia
Tiuna	Rep. Vanuatu	Atunes de Colombia
Monteneme	Spain	Frigopesca
South Seas	U.S.	Frigogan
Monteclaro	Spain	Frigopesca
El Dorado	Rep. Vanuatu	Atunes de Colombia
Marinero	Rep. Vanuatu	Atunes de Colombia
El Rey	Rep. Vanuatu	Atunes de Colombia
Grenadier	Rep. Vanuatu	Atunes de Colombia
Cape San Vincent	U.S.	Frigogan
Lucile	Venezuela	Frigopesca
Sea Royal	Rep. Vanuatu	Atunes de Colombia
Ciudad de Manta	Ecuador	Atunes De Colombia
Victoria 103	Korea	Frigopesca
Atlantis	U.S.	Frigogan
Captain Vincent Gann	U.S.	Frigogan
La Foca	Venezuela	Frigogan
Yushu Maru #51	Japan	Frigopesca
Lupe Del Mar	Mexico	Vikingos de Colombia
Don Sebastian	Panama	Explotaciones Pesqueras Explopesca
Victoria 8	Panama	Pescaderia y Charcuteria Asturiana
Andreas II	Panama	Explotaciones Pesqueras Explopesca

Source: Instituto Nacional de Pesca y Acuicultura, unpublished statistics, August 5, 1993.

Appendix F.--United States. Tuna embargoes on Colombia

Type*	Date		Products covered
	Imposed	Rescinded	
Primary	4/27/92		
Intermediate	1/31/92#	10/30/92##	

ETP - Eastern Tropical Pacific

YFT - Yellowfin tuna

* All of the embargoes on Colombia are imposed under the authority of the Marine Mammal Protection Act.

A U.S. District Court order (Northern District of California) on January 10, 1992 significantly expanding scope and coverage of the intermediate embargoes.

Intermediate embargo lifted on the basis of a new definition of intermediate nation in the International Dolphin Conservation Act signed October 26, 1992.

Source: NMFS, Southwest Regional Office

Appendix G.--Colombia. Research program of the Instituto Nacional de Pesca y Acuicultura, 1993

Coast/fishery	Subject
Pacific	
Fisheries	Evaluation of deep-water shrimp Estimation of fishing effort on carduma and development potential Monitor shrimp (coastal) and tuna landings Fisheries mananagement plan for Tumaco Fisheries management plans for demersal species in the Gulf of Cúpica Evaluation of principle "white fish" species (snapper, grouper, pargo, and shark) Gear study in the Gulf of Cúpica Hydroacoustic study of small pelagic stocks (phase 2)
Aquaculture	Preliminary assessment of oyster culture Fish culture in intertidal canals Extensive shrimp culture
Caribbean	
Fisheries	Evaluation of conch and lobster stocks off San Andrés and Providencia Acoustic explorations off Santa Marta Artisanal fishing evaluations Monitoring of shrimp, tuna, lobster, and conch landings Biological monitoring of the shrimp (coastal) fishery
Aquaculture	Conch culture off San Bernardo Shrimp sex reversal studies Assessment on the development potential and environmental impact of Asian shrimp Preliminary oyster culture assessment in Cispata Bay Demonstration study of cage culture in Cispata Bay

Source: Alejandro Londoño García, Gerente General, Instituto Nacional de Pesca, personal communications, October 7, 1993.

4.5

ECUADOR

Ecuadorean fishermen do not conduct distant-water operations and are unlikely to initiate such operations during the 1990s. Only limited opportunities exist for expanded foreign fishing off Ecuador. The Government approves some foreign fishing, primarily for tuna, billfish, and squid, through association or leasing contracts with Ecuadorean companies. Concern over stocks, however, caused the Government in late 1992 to close the squid fishery, causing many foreign fishermen with association contracts to withdraw. There is some limited transshipping through Ecuadorean ports when foreign fishermen land their catch for in bond processing at maquila plants.

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I. GENERAL BACKGROUND

The fishing industry is one of Ecuador's leading economic sectors. Fisheries is an important source of food and employment as well as the country's principal non-petroleum export commodity. The Ecuadorean catch in recent years has declined sharply since peaking at 1.1 million

metric tons (t) in 1985 (Latin America, appendix C2a1). The 1991 catch totaled only 0.4 million tons. Almost all of the decline has been due to falling catches of small pelagics. Fishermen also land important quantities of shrimp, tuna, various finfish ("whitefish"), small pelagics, and other species.

Shrimp: Shrimp has traditionally been one of the major Ecuadorean fisheries and currently dominates

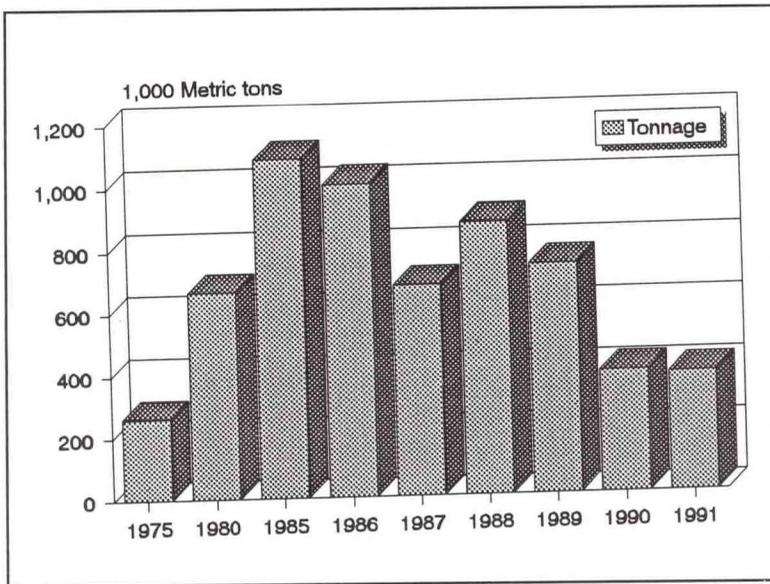


Figure 1.--Ecuador. The fisheries catch has declined substantially since peaking in 1985, primarily because of declining small pelagic catches.

the industry. Shrimp alone accounted for 17 percent of overall Ecuadorean exports in 1992.¹ Much of the current production, however, is harvested by shrimp farmers who have developed one of the world's leading shrimp culture industries. Shrimp farmers during the 1980s replaced fishermen as the most important producers.² Ecuador produces about \$0.5 billion of shrimp annually.

Tuna: Tuna is another important Ecuadorean fishery. The fishermen operate one of the larger Latin American tuna fleets, but it is composed of mostly smaller boats which primarily operate in Ecuadorean waters. The tuna fleet currently totals nearly 60 vessels, only about 7 of which are large vessels (greater than 400 GRT) (appendix E). Unlike several other Latin American fishermen, Ecuadorean tuna fishermen do not set on dolphins.³ Part of the tuna purse seine catch is canned for local consumption and for export to neighboring countries. Most of the remaining seiner catch is exported frozen. Several small boat operators in recent years have developed the technology to fish for high-quality tuna for the Japanese and United States (California) sashimi market.⁴

Small pelagics: Some of the catch also supports a small canning industry. Most

of the small pelagic catch is reduced to fishmeal. Catches have plummeted in recent years. The decline is probably due primarily to climatic conditions, but some observers believe that overfishing may also be a problem. The declining catch has resulted in lower fishmeal production and exports. The \$7 million exported in 1992 was only a fraction of the more than \$50 million earned as recently as 1988.⁵

White fish: Artisanal fishermen have made some progress in producing high-quality mahi-mahi and other hook-and-line fish which can be exported. This fishery now rivals the tuna fishery in importance and earnings actually surpassed tuna in 1992.⁶ White fish exports exceeded \$43 million in 1992. The growth of this fishery is due to the expanding artisanal fleet which the Government has promoted in recent years.⁷

Ecuador has become one of the leading Latin American exporters of fishery products. Export shipments of fishery products have soared during the 1980s, nearly tripling from \$0.2 billion in 1980 to nearly \$0.6 billion in 1991 (Latin America, appendix E1), primarily due to the expanding shipments of farmed shrimp.



Photo 1.--Ecuador. Ecuador has a substantial number of small coastal seiners which target small pelagics, but catches have declined in recent years. Dennis Weidner

The Ecuadorean fishing fleet is composed primarily of small vessels under 100-GRT. One estimate prepared in the mid-1980s indicated that Ecuadorean fishermen operated about 50-60 tuna boats (mostly small purse seiners and baitboats), 250 shrimp trawlers, and 200 small seiners and other little vessels. The number of vessels has fallen in recent years with the decline of the small pelagic fishery.

II. HIGH-SEAS FLEET

Ecuadorean fishermen operate only a few large (over 500 GRT) fishing vessels, all of which appear to be tuna purse seiners (appendices A, C, and E). Ecuadorean fishermen have gradually increased the number of large vessels they report to Lloyd's from five in 1980 to 11 in 1992 (Latin America, appendix

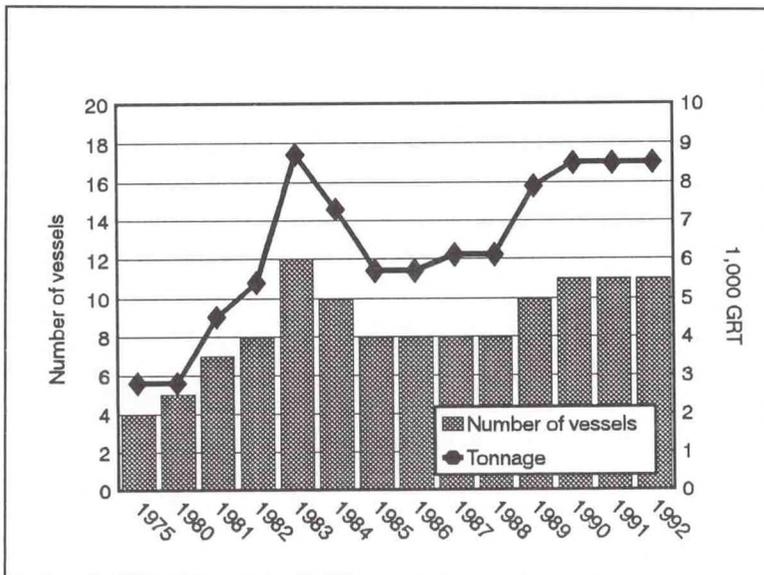


Figure 2.--Ecuador. The country's fleet of large vessels has increased little in recent years.

B2a2). U.S. Office of Naval Intelligence confirms the Lloyd's data and reports, reporting a fleet of about 10 large vessels in 1993, most of which was built in Peru (appendix C).⁸ FAO data through 1989 also confirms the Lloyd's data (appendices A and B).

III. VESSEL SOURCES

The Ministry of Industries, Trade, Integration, and Fisheries (MICIP) sets quotas for the construction, number, and type of fishing boats. Based on a favorable report from MICIP, the Merchant Marine authorizes the construction or remodeling of fishing boats. Ecuadorean shipyards build some of the small vessels used by domestic fishermen. Ecuadorean yards build very few vessels in excess of 100-GRT--although one yard is known to have built a 318-GRT seiner. Little information is available on specific Ecuadorean yards, but construction is believed to be primarily shrimp trawlers and small vessels for the hook-and-line fishery.

The importation of fishing vessels is regulated by the Merchant Marine. New vessels and used vessels (not exceeding 10 years old) are preferred.

The importation of factory vessels is prohibited.⁹ Almost all of the Ecuadorean vessels exceeding 100 GRT are imported, primarily from neighboring Peru.

IV. FOREIGN FISHING

Foreign fishermen may operate in Ecuador's 200-mile EEZ only if they have an association contract or lease arrangement with an Ecuadorean company. The Government until 1991 also licensed foreign-flag fishing, primarily for tuna, but no longer does so.¹⁰ Association contracts can only be arranged for vessels of 600 GRT or less.

Foreign vessels with association contracts receive the same treatment under Ecuadorean law as national vessels as long as the contract is in force.¹¹ This means that the owners do not have to purchase Ecuadorean fishing licenses. The associated vessels cannot, however, fish within 40 miles of the coast,

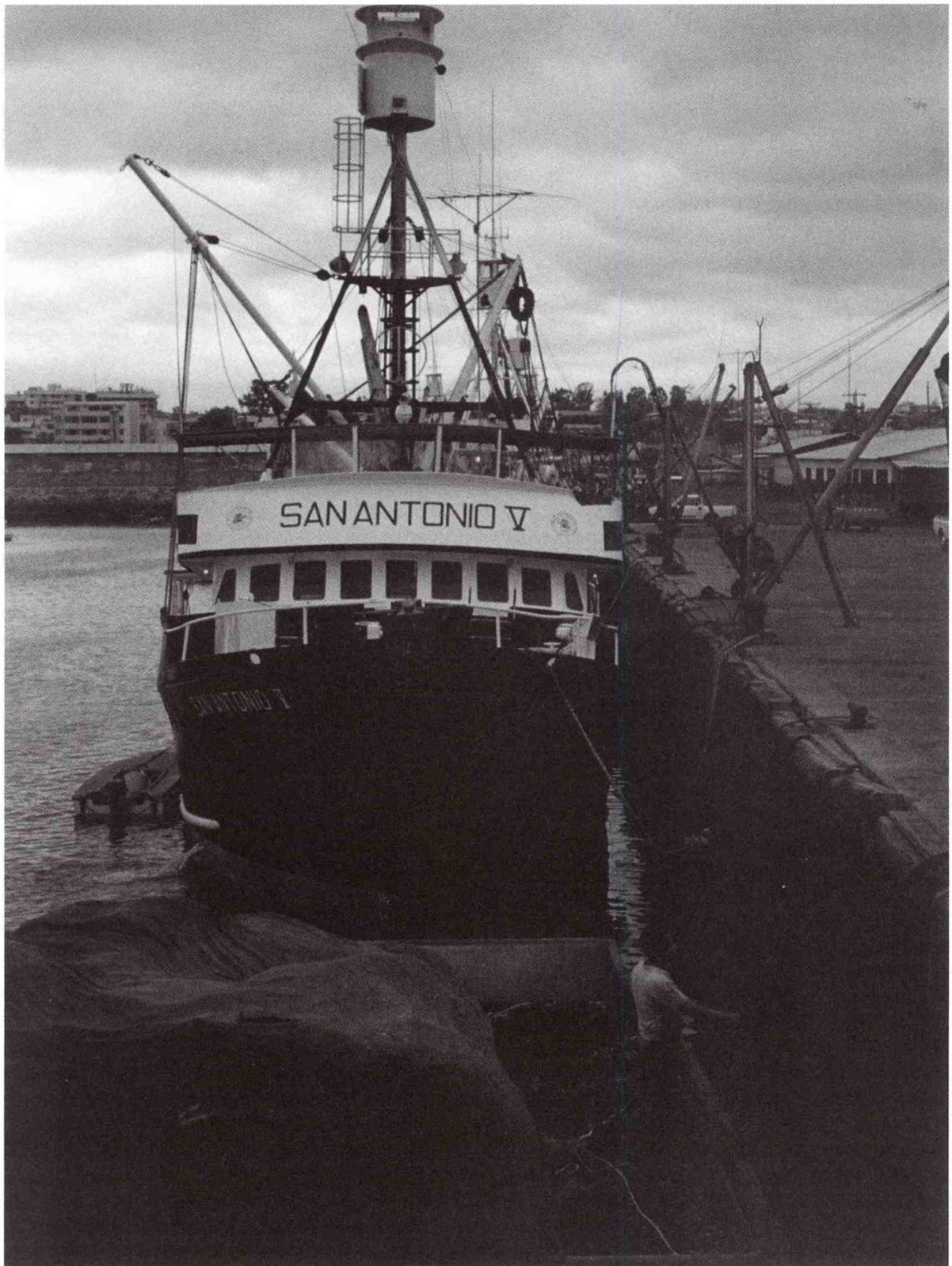


Photo 2.--Ecuador. Ecuador's tuna catch is taken primarily within Ecuadorean waters with small seiners and baitboats. Dennis Weidner



Photo 3.--Ecuador. Ecuador much of the foreign catch is landed at Manta, Ecuador's major fishing port. Dennis Weidner

either along the mainland or off the Galapagos Islands. Foreign fishing vessels without such contractual relations are prohibited from entering Ecuador's 200-mile zone, except for repairs at an Ecuadorean shipyard or in the case of emergencies.¹²

Ecuador authorizes limited foreign fishing off its coasts. The Government issued licenses to foreign tuna fishermen during the 1970s, but in recent years has required interested foreign fishermen to work with an Ecuadorean company. The Ecuadorean company can either lease the vessel or negotiate an association agreement. Leased or associated vessels can then operate in Ecuadorean waters and, for the most part, be treated as an Ecuadorean-flag vessel. The leasing arrangements were common in the mid 1970s, but since 1978 most foreign fishermen have operated under association contracts (appendix D). The Government approved a record 32 association contracts in 1988 (appendix D). Many of these contracts have been for tuna and billfish, but the Government during the 1990s has approved association contracts for a new squid fishery. Most of the foreign vessels leased by Ecuadorean companies are Japanese longliners. Data available for 1992,

however, suggest that longliners and purse seiners are also contracted from several other countries (appendix F). The number of foreign vessels approved for association contracts declined to 24. The Government prohibited squid fishing in October 1992, causing 12 of the foreign vessels to withdraw.¹³

Ecuador has no bilateral fishery agreement with other countries.¹⁴

European Community: EC officials have expressed an interest in negotiating a fishery access agreement with Ecuador.¹⁵ The Ecuadorean Government, however, has apparently expressed little interest in the EC initiative.

Japan: The Ecuadorean Instituto Nacional de Pesca and the Japan Marine Resources Research Institute (JACMAR) began a joint study on squid to locate fishing areas which could support a commercial fishery. The second phase of that study began in September 1993.

Foreign fishermen generally do not transship their high-seas catch through Ecuador, primarily because the Government discourages foreign fishermen from passing through Ecuadorean waters even when they are not fishing. Foreign vessels

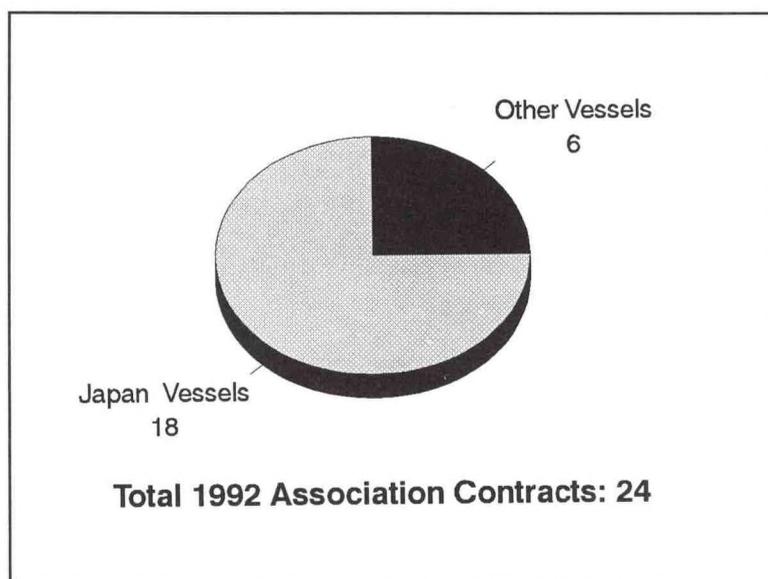


Figure 3.--Ecuador. Most of the fishermen entering association contracts have been Japanese.

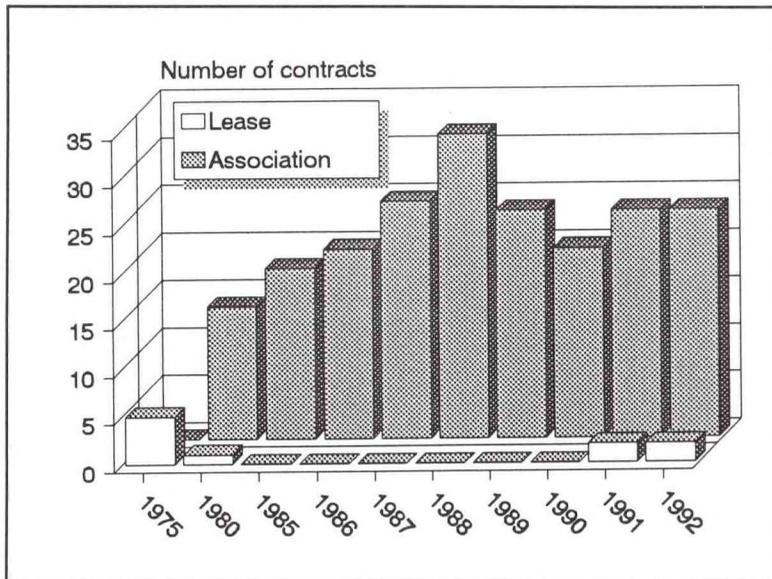


Figure 4.--Ecuador. Association contracts with foreign fishermen peaked in 1988.

transiting Ecuadorean waters have been seized by the Ecuadorean Navy even when they were not fishing. Press reports indicated in 1990, for example, that the Ecuadorean Navy seized a Soviet vessel, the *Prolog*.¹⁶ The catch of the association/lease vessels is landed in Ecuadorean ports, primarily for export. Some transshipping does take place. Foreign fishermen landing their catch for in-bond processing at two "maquila" plants can then transship it.¹⁷

V. JOINT VENTURES

The authors know of no currently active joint fishery ventures.

VI. DISTANT-WATER OPERATIONS

Ecuadorean fishermen do not conduct distant-water operations. The tuna fishermen probably make the longest voyages, but all of their operations are conducted in the southeastern Pacific, primarily

in Ecuadorean waters.¹⁸ Some fishermen purchase licenses to fish off neighboring countries. Other fishermen also occasionally cross the marine borders with Peru to the south and Colombia to the north and fish, sometimes without the necessary licenses. Occasional seizures result.

Colombia: Some Ecuadorean fishermen have signed lease arrangements with Colombian companies. The Colombian company *Compañía Pesquera Colombiana* contracted six small Ecuadorean tuna vessels (100-150 tons) in 1989 to supply its new fish processing plant in Buenaventura.¹⁹ Colombian officials licensed three Ecuadorean vessels in 1993, a shrimp trawler, and two small seiners (Colombia, appendix E). The tuna seiners were contracted by *Atunes de Colombia* and *Frigopesca*.

Peru: Ecuadorean and Peruvian fishermen regularly cross their common marine border without authorization, resulting in occasional seizures.²⁰ The vessels involved vary, but include shrimp trawlers, small-pelagic seiners, and tuna seiners. The two countries have no reciprocal fishing agreement or understanding on joint management of shared stocks, but are trying to negotiate one. Fishery officials from the two countries have initiated bilateral cooperation talks and have drafted a possible fisheries agreement.²¹ The draft agreement proved highly controversial, especially in Peru, and the authors have no further information indicating that the agreement was eventually signed and ratified by the two governments.²² Ecuadorean fishermen have in the past purchased some Peruvian tuna licenses. The authors have, however, been unable to obtain Peruvian licensing data to confirm this or determined details.

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Tovar M., Edmer. "Buenaventura entró en la era del atún," *El Tiempo*, January 24, 1989.

U.S. Embassy, Quito, November 5, 1991; April 23, 1992; and September 22 and 30, 1993.

U.S. Navy. Office of Naval Intelligence.

El Universal, November 14, 1991.

ENDNOTES

SECTION I. (General Background)

1. U.S. Embassy, Quito, September 22, 1993.
2. For details see Tom Revord and Dennis Weidner, "Ecuador," *World Shrimp Culture*, Vol. II, Part 3 (NMFS: Silver Spring, September, 1992), pp. 883-949.
3. U.S. Embassy, Quito, April 23, 1992.
4. U.S. Embassy, Quito, April 23, 1992.
5. U.S. Embassy, Quito, September 22, 1993.
6. David Seckler, U.S. Embassy, Quito, personal communications, October 8, 1993.
7. U.S. Embassy, Quito, September 22, 1993.

SECTION II. (High-seas Fleet)

8. ONI identifies most of the vessels as trawlers, but they are probably purse seiners.

Section III. (Vessel Sources)

9. U.S. Embassy, Quito, September 30, 1993.

Section IV. (Foreign Fishing)

10. "Suspenden los permisos de pesca a navíos extranjeros," *El Universal*, November 14, 1991 and Seckler, *op. cit.*, October 8, 1993.
11. Ley de Pesca as detailed by Ing. Luís Torres Navarrete, Asesor Tecnico, Subsecretaría de Recursos Pesqueros, personal communications, September 24, 1993.
12. U.S. Embassy, Quito, September 30, 1993.
13. U.S. Embassy, Quito, September 30, 1993.
14. Torres, *op. cit.*
15. "EC to negotiate fisheries pacts with Ecuador and Venezuela," *Eurofish Report*, November 21, 1991.
16. The Ecuadoreans seized the vessel about 70 miles off the coast and fined it \$9,980 for violating the 200-mile zone. The Soviet captain claimed that he had strayed off course on route from Peru to Panama. U.S. Embassy, Quito, November 5, 1991.

17. U.S. Embassy, Quito, April 23, 1992 and Seckler, *op. cit.*, October 8, 1993.

Section VI. (Distant-water Operations)

18. U.S. Embassy, Quito, April 23, 1992.

19. Edmer Tovar M., "Buenaventura entró en la era del atún," *El Tiempo*, January 24, 1989.

20. See for example "Embarcaciones de Ecuador pescan en aguas peruanas," *El Comercio*, April 12, 1986 and "Conflicto pesquero entre Ecuador and Perú," *Diario las Americas*, February 8, 1990.

21. "Proyecto inconveniente," *Pesca*, July-August, 1990; "Segunda reunion binacional," *Pesca*, September-October, 1990, pp. 6-8; and "Pesqueria dice no," *Pesca*, November-December, 1990, p. 13.

22. "Ecuatorianos nos toman por tantos," *Pesca*, September-October, 1990.

APPENDICES

Appendix A.--Ecuador. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	Number of vessels							
Purse seiners								
A	NA	NA	5	NA	NA	8	8	9
B	NA	NA	NA	NA	NA	1	-	1
Trawlers								
A	NA	NA	NA	NA	NA	1	-	-
Total	NA	NA	5	NA	NA	10	8	10

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.--Ecuador. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Purse seiners								
A	NA	NA	3.8	NA	NA	7.1	6.1	8.0
B	NA	NA	NA	NA	NA	1.1	-	1.0
Trawlers								
A	NA	NA	NA	NA	NA	0.7	-	-
Total	NA	NA	3.8	NA	NA	8.9	6.1	9.0

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix C.--Ecuador. Large fishing vessels registered, 1993

Country/Vessel	Size	Year Built	Vessel type
	<u>GRT</u>		
Peru			
Erasmio F	814	1975	516
Connie F	814	1989	510
Elizabeth F	990	1983	510
Manuel Ignacio F	814	1983	510
Monte Christi	513	1978	510
Pedro F	990	1983	510
Rosa F	814	1989	510
Spain			
Isabel Cuatro	824	1974	510
Isabel Dos	824	1974	510
United States			
Victoria A	1,007	1968	510

* 500 GRT or larger

** ONI vessel types

510 - Trawler

516 - Tuna seiner

Source: U.S. Office of Naval Intelligence (ONI)

Appendix D.--Ecuador. Number and tonnage of foreign vessels operating off Ecuador, 1975-92

Year	Contracts		Total
	Association	Lease	
	<u>Number</u>		<u>NRT</u>
1975	-	5	246.5
1976	-	9	719.8
1977	4	13	2,190.1
1978	3	5	1,783.5
1979	6	4	2,529.9
1980	14	1	3,345.9
1981	15	-	2,637.5
1982	11	-	1,853.3
1983	17	-	2,770.0
1984	22	-	4,167.0
1985	18	-	3,317.0
1986	20	-	4,118.0
1987	25	-	4,922.0
1988	32	-	6,043.0
1989	24	-	3,921.5
1990	20	-	3,132.3
1991	24	2	4,496.8
1992*	24	2	6,420.4

NRT - Net registered tons

* Twelve vessels dedicated to squid fishing left the country after this activity was prohibited in October 1992.

Source: U.S. Embassy, Quito, September 30, 1993. Based on information furnished by Ing. Luis Torres Navarrete, Asesor Técnico, Subsecretaría de Recursos Pesqueros, personal communications, September 24, 1993.

Appendix E.--Ecuador. Large Ecuadorean tuna vessels (over 400 GRT), 1992

Vessel	Size	
	GRT	NRT
Connie F	1,023	271
Elizabeth F	991	354
Erasno F	1,023	271
Pedro F	991	354
Manuel Ignacio F	1,023	271
Isabel Dos	984	373
Isabel Cuatro	984	373

Note: Ecuadorean fishermen also operate 50 smaller tuna boats.

Source: U.S. Embassy, Quito, April 23, 1992.

Appendix F.--Ecuador. Foreign tuna vessels operating in Ecuadorean waters, 1992

Country*/vessel	Type	Size	
		GRT	NRT
Japan			
Chokyu Maru 37	Longline	379	148
Hosei Maru 11	Longline	300	154
Hosei Maru 58	Longline	343	178
Hosei Maru 68	Longline	398	197
Isuzu Maru 23	Longline	284	144
Kaigata Maru 52	Longline	284	144
Nankay Maru 38	Longline	300	154
Sasano Maru 17	Longline	300	156
Sasano Maru 28	Longline	850	230
Shoei Maru 5	Longline	379	224
Shoei Maru 7	Longline	344	172
Shoei Maru 28	Longline	379	236
Taiho Maru 1	Longline	293	108
Taishin Maru 25	Longline	299	146
Tenyu Maru 8	Longline	299	150
Tenyu Maru 18	Longline	299	143
Tenyu Maru 38	Longline	379	169
Tenyu Maru 68	Longline	379	175
		6,488	3,028
Korea			
Tae Woong 502	Longline	284	144
Fae Woong 503	Longline	284	145
		568	289
Panama			
Star 101	Longline	195	86
Spain			
Isabel Cinco	Purse seine	1,065	490
United States			
Diamond Blue	Longline	98	57
Vanuatu			
El Dorado	Purse seine	417	167
Total		8,831	4,117

Source: U.S. Embassy, Quito, April 23, 1992.

4.6

FALKLAND ISLANDS AND BRITISH SOUTH ATLANTIC DEPENDENCIES

The Falklands is unlikely to initiate distant-water fisheries during the 1990s. Few fishing vessels are registered in the Falklands. The Falkland Islands Government (FIG) normally issues only a handful of licenses to Falkland vessels and the ownership of those vessels is unknown. FIG only licensed one Falkland vessel in 1993, the *Sao Rafael*. Falklands officials appear to have given up on the idea of rapidly developing a domestic Falklands fishing industry, although it still remains a long-term goal. FIG initially tried to develop local joint ventures with foreign fishing companies to build a domestic fishing industry. The sizeable losses experienced convinced FIG to reassess such plans. As a result, the Falklands is unlikely in the near future to develop a significant domestic industry targeting coastal resources, let alone initiate distant-water fisheries.

There appear to be only limited prospects for expanded distant-water fishing in the southwestern Atlantic, either off the Falklands or Argentina. FIG officials have been reducing the numbers of licenses granted to foreign fishermen in recent years out of concern over the massive effort targeting important southwestern Atlantic stocks. FIG issued 384 licenses in 1988, but has since reduced the number issued to 286-297 during 1990-91. As a result the catch in the Falklands Islands Interim Fisheries Conservation Zone (FICZ) has declined from 415,000tons in 1989 to only 313,000tons in 1992. Optimal management of southwestern Atlantic resources, many of which are shared stocks, will require the coordination of both Falklands and Argentine officials. It is unclear if FIG and the Argentine Government will be able to successfully develop such a cooperative relationship. Cooperation on fisheries management has been difficult to achieve even by countries with close cultural, political, and economic ties. The Falklands and Argentina do not have the advantage of such ties and the ongoing British-Falklands dispute makes it even more difficult for fishery officials to agree on joint management efforts. Argentina began in 1992 to license (under a charter relationship) some of the same foreign vessels that previously operated under FIG licenses off the Falklands. Japan and Taiwan fishermen have both redeployed vessels from the Falklands to Argentine waters. EC countries (mainly Spain) will be deploying vessels under a 1992 bilateral agreement. These shifts may, however, not result in greatly increased distant-water fishing in the southwestern Atlantic for three basic reasons:

Fishing licenses: Even if the competition between the Falklands and Argentina for greater fishing fee income results in the licensing of increased numbers of foreign fishermen, sustainable catch increases may not be possible. Many of the major stocks, especially the key squid stocks, are already heavily fished. If Falklands and Argentine officials cannot cooperate to limit fishery allocations, it will probably not result in sustained increases in foreign catches. The foreign fishermen are probably already fishing near or beyond Maximum Sustainable

Yield (MSY) and thus will be unable to take increased quantities on a sustainable basis.

EC companies: European Community (EC) companies have continued to purchase FIG licenses rather than apply for Argentine licenses. It is still unclear how many EC companies will decide to participate in the Argentine ventures that are authorized by the 1992 Argentine-EC agreement. The access conditions are still quite involved. Vessel owners will have to shift ownership or establish an Argentine operation. The EC vessels will have to be transferred to Argentine flag and in many cases Argentine ownership and thus may be of only temporary assistance to distressed Spanish and other European fishermen. Any major expansion of EC effort in Argentine waters could alienate Argentine fishermen and thus the long-term prospects for implementation of the agreement.

High seas: Foreign fishermen operating on the high seas, often under flags of convenience, will almost certainly have their operations curtailed during the 1990s. The current U.N. high-seas talks are addressing this problem and may result in a convention limiting such activity. If these talks are not successful, coastal states may act unilaterally to restrict high-seas fishing.

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I. GENERAL BACKGROUND

The Falklands Islands has virtually no domestic fishing industry. Almost all fishing off the Falklands is conducted by foreign fishermen. The fishery is regulated by the Falkland Islands Government (FIG) which introduced a management regime in 1987 to protect fishery stocks. FIG attempted to develop a local industry to take advantage of the rich fishing grounds surrounding the islands by forming joint ventures with foreign fishing companies. (See "V. Joint Ventures" below.) Some of the joint ventures formed, however, failed with sizeable losses that FIG had

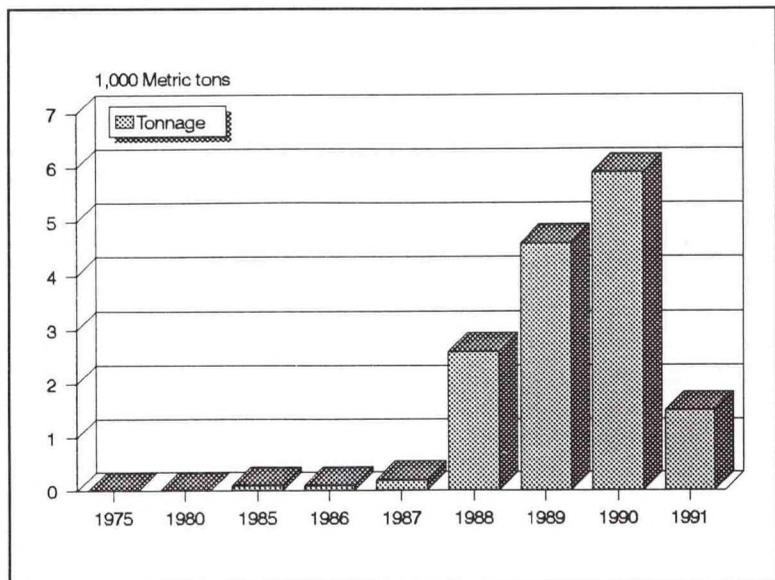


Figure 1.--The failure of the Falkland joint ventures has adversely affected the fisheries catch.

to cover. FIG is still encouraging the development of a domestic fishing industry through joint ventures, charters, and other arrangements, but is proceeding in a more cautious manner.¹ Some Falkland Islanders have established companies to participate in the fishing industry, primarily companies providing support services to the foreign fishermen.² Almost all fishing continues to be conducted by foreign fishermen.

II. HIGH-SEAS FLEET

The Falkland Islands has almost no high-seas fishing fleet (Latin America, appendix B2a1-2). The authors have noted that FIG has granted only small numbers of fishing licenses to Falklands fishing vessels (appendix B1a). The peak year was 1989 when FIG granted seven licenses to Falkland vessels.³ Recently FIG has only granted licenses to two Falklands-flag vessel, the 1,507 GRT *Sao Rafael* (appendices B3a-b) and the recently registered *De Giosa T*.⁴ The authors have no information as to the ownership of these two vessels.

III. VESSEL SOURCES

The Falklands has no shipyard or drydocks to build or service large, distant-water vessels.⁵ Some emergency repairs have been undertaken on vessels that were badly damaged in collisions, including work below the waterline.⁶

Various support services are available to foreign fishermen in the Falklands. Foreign fishermen can get electronic equipment (radios, radar, etc.) repaired in Stanley. They can also refuel and obtain supplies. Fuel is generally available at Berkeley Sound where some vessels transship their catch or from a floating port facility at Stanley. Fresh vegetables and other perishable foods are also

available. Ships equipment and chandlery supplies, however, are limited. Some companies exchange crews through Stanley. A tug is often available at Stanley. While it is rarely used for towing or salvage, it will deliver fuel and water and has a fire fighting and oil pollution control capability.⁷ A floating dock was purchased in 1988 which can handle vessels with a draft of up to 5.5 meters.⁸ It provides 300 meters (m) of berthing and a ro-ro dock. Water and fuel are available and the facility has large areas for open and covered storage. A private company operates a 900-ton cold store on the dock.⁹

Local companies also offer transshipping

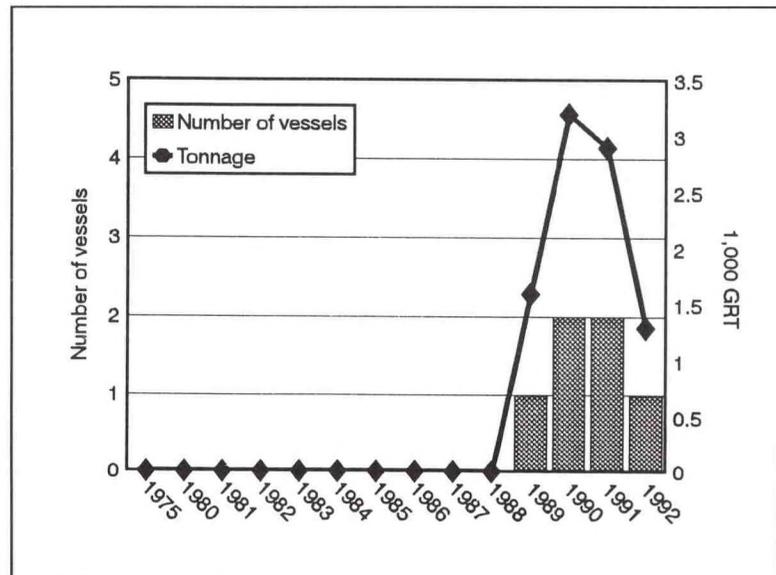


Figure 2.--The Falkland Islands fishing fleet consists of only 1-2 large fishing vessels.

services.¹⁰ At least three shipping agencies operate in Stanley. Transshipping generally takes place at Berkeley Sound, a large natural harbor close to Port Stanley. Reefer vessels lie at anchor while fishing vessels come alongside to transship product. The licenses issued by FIG specify whether foreign fishermen are permitted to transship their catch within the Falklands 12-mile Territorial Sea (TS). Such activity often takes place in the protected waters of Berkeley Sound. Falklands officials have seized vessels making unauthorized transshipments inside the TS.¹¹ Foreign fishermen also transship their catch outside the 12-mile TS.¹² FIG officials discourage this practice, but have not yet taken action against it.

IV. FOREIGN FISHING

Foreign fishermen conduct almost all of the fishing off the Falkland Islands. Foreign fishermen, especially from Japan, Korea, Poland, Spain, and Taiwan, have been the most active (Latin America, appendices C4d1-4). The major species taken are squid, southern blue whiting, hake, and a variety of other demersal species (appendices A and C1a-c).

Squid: The fishery is based on two species (*Illex* and *Loligo*) and small catches of black or seven star flying squid (*Martialia hyadesi*). The squid fishery is subject to significant annual fluctuations, but has generally been the species of greatest interest to the distant-water fishermen.¹³ Fairly large vessels are required for the difficult weather conditions in the South Atlantic.¹⁴ Often the vessels need to be designed or refitted specifically for South Atlantic operations. The methods required for the two major fisheries are quite different. *Illex* squid can only be taken by jigging and *loligo* can only be taken by trawling. Versatile vessels are required if they are to be deployed in both fisheries.

Blue whiting: The blue whiting resource is not fully utilized, primarily because parasite infestations have reduced the market value of the species.

Foreign fishing was limited during the 1960s and 1970s. The U.K. administration on the Falklands made no attempt to control offshore foreign fishing. Even so, few European and Asian fishermen ventured as far as the southern Atlantic. Most were able to find grounds closer to home ports. Foreign fishermen became increasingly interested in the Falklands and other southwestern Atlantic grounds as coastal countries began extending jurisdictions beyond 12 miles and limited or terminated traditional distant-water fisheries. The need to gain access to new, alternative grounds encouraged displaced European and Asian fishermen to look at available high-seas grounds, even grounds as distant as the southern Atlantic. The shift to the southern Atlantic began increasingly pronounced after 1976 when the United States and Canada declared 200-mile zones. Many distant-water fishermen during the late 1970s focused primarily on the southeastern Atlantic where few restrictions limited operations off Namibia. While the British did not restrict fishing off the Falklands in the southwestern Atlantic, the Argentines did. Argentine patrols in the southwestern Atlantic, including waters off the Falklands, thus acted to discourage foreign fishing.

The situation in the southwestern Atlantic changed dramatically in 1982 when Argentina seized the Falklands. The British, after retaking the Islands in June 1982, implemented a 150-mile military exclusion zone, the Falkland Islands Protection Zone (FIPZ) which prevented the Argentine Navy from seizing foreign fishing vessels operating off the Falklands.¹⁵ This opened important fishing grounds in the southwestern Atlantic, creating a bonanza for foreign distant-water fishermen. Initially the British made no effort to restrict foreign fishermen from deploying their vessels off the Falklands. They did, however, attempt to negotiate a multilateral fisheries management regime for the southwestern Atlantic.¹⁶ This effort failed, primarily because Argentine officials refused to participate, believing to do so would suggest *de facto* recognition of British jurisdiction over the Falklands.

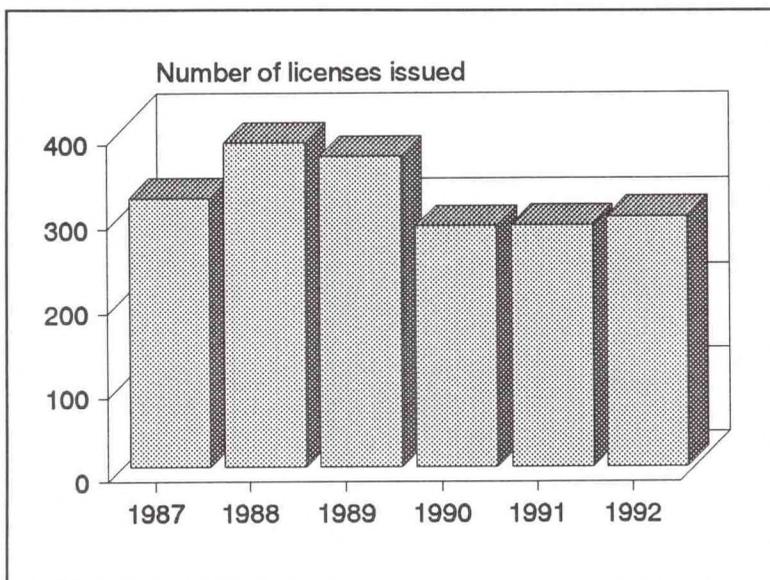


Figure 3.--Falklands officials since 1988 have gradually reduced the number of licenses issued.

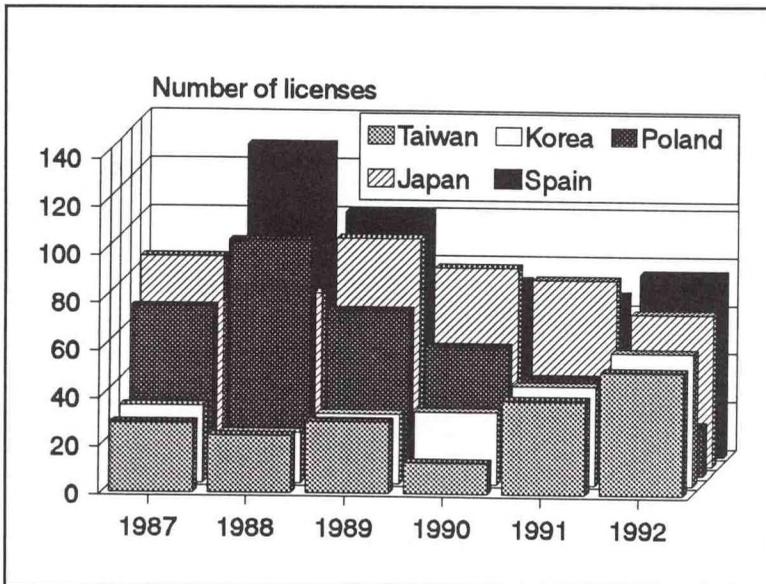


Figure 4.--Falklands officials have reduced the number of licenses issued to most countries, but have increased the number issued to Taiwan and Korea.

The British decided in October 1986 to convert their 150-mile FIPZ to a 150-mile Falklands Islands Interim Fisheries and Conservation Zone (FICZ) and introduce a new fisheries management regime. The FICZ was formally implemented in February 1987.¹⁷ The British decision was based on the rapidly escalating foreign fishing in the area and concern with overfishing as well as Argentine efforts to sign bilateral fishery access agreements.¹⁸ Despite Argentine objection, almost all of the companies operating in the southwestern Atlantic declined the Argentine offer to negotiate bilateral access agreements and instead opted to apply for FIG licenses.¹⁹ FIG received applications for more than 450 vessels during the first 1987 season and issued licenses for 220 vessels. FIG issued a total of 319 for both 1987 seasons and increased the number of licenses issued to a peak of 384 in 1988 (appendix B1a).²⁰ FIG has since reduced the number of licenses issued and in 1992 issued only 297 (appendix B1a).

The FIG sale of licenses has become a major source of revenue for the Islands and is making a vital contribution to the local economy.²¹ Despite the financial success, the FICZ has been less successful in accomplishing

FIG management goals. The FICZ covers only a small part of the southwestern Atlantic. The stocks involved, especially squid, cannot be effectively managed unless FIG can coordinate allocations with Argentina and control distant-water fishing on the high seas.²² An effective international fisheries management program is critical for the Falklands. The annual *Illex* squid fishery is particularly vulnerable to overfishing by unlicensed distant-water fishermen as juvenile *Illex* can be taken early in the year on the high seas before entering the FICZ and maturing. Thus some foreign fishermen target *Illex* at the beginning of the year on high-seas grounds north of the Falklands outside the FICZ and thus beyond any FIG-imposed controls. The distant-water fishermen can achieve large catches of

Illex, but the squid they take in this early northern fishery are small, less valuable individuals. Large catches on the high seas, however, impair the subsequent, more valuable catch of large adult squid within the Falklands FICZ. Argentine and Falkland officials continue to meet to discuss this and other management issues. The next meeting is scheduled for December 1993.

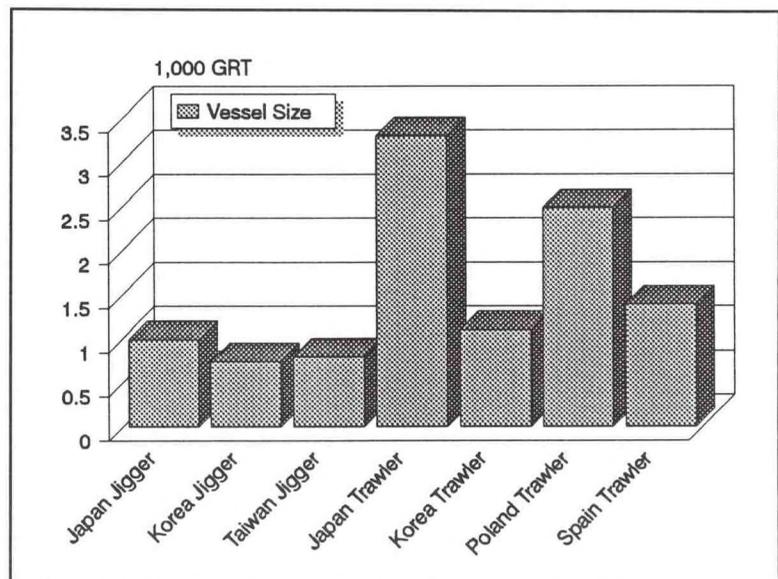


Figure 5.--Some of the largest vessels currently deployed off the Falklands are Japanese trawlers, although a much larger number of jiggers are deployed.

Fishing companies from more than 10 countries have purchased licenses to fish off the Falklands. Most of the major countries active in the southwestern Atlantic, especially Japan, Korea, Poland, Spain, and Taiwan (Latin America, appendix C4d2) have purchased FIG licenses. The only significant country that has not bought FIG licenses was the former Soviet Union. The Russians have so far continued the Soviet policy, but are reportedly studying the possible purchase of FIG licenses.

Argentina: Argentine fishermen fished extensively off the Falklands until 1982 when after retaking the Islands, the British implemented the 150-mile FIPZ. British enforcement patrols discouraged Argentine fishing.²³ Argentine fishing ended completely after the British implemented the FICZ in 1987. Argentine fishing off the Falklands is still theoretically possible because Argentine companies could apply for FIG licenses. This would, however, imply Argentine recognition of British jurisdiction over the Falklands. No Argentine company has applied and it is unlikely that their Government would permit them to do so.

Bulgaria: Bulgarian fishermen initiated operations in the southwest Atlantic along with the Soviet fleet in 1984 (Latin America, appendix C4d1). Details are not available on precisely where the Bulgarians operated in the area, but they conducted substantial southwestern Atlantic operations (10,000-21,000 t) during 1984-86, including significant effort off the Falklands (Latin America, appendix C4d1). Bulgaria followed the Soviet lead and signed a bilateral fisheries agreement with Argentina in 1986.²⁴ After the British implemented the Falklands 150-mile FICZ in 1987, the Bulgarians declined to purchase FIG licenses and withdrew from the FICZ. The Bulgarians deployed vessels in Argentine waters and the country's southwestern Atlantic catch reached a record 42,000 t in 1988. The Argentines, however, were dissatisfied with the Bulgarian performance and abrogated the agreement, forcing the Bulgarians to withdraw from Argentine waters.²⁵ The Bulgarians began purchasing FIG licenses during the

second 1989 season. Since then the Bulgarian fleet in the southwestern Atlantic has been primarily deployed off the Falklands (Latin America, appendices C4d3-4). Catches have gradually declined and totaled only 22,000 t in 1991. The Bulgarians deploy large trawlers in their Falklands fishery, averaging about 2,500GRT (appendix B1b). Current press reports indicate that the Bulgarian Okeanski Ribolov (OR) company signed a preliminary contract with the British Abbotswell company to establish a joint venture. Abbotswell has invested \$2.5 million in the project and will provide 10 large stern trawlers for operations off both the Falklands and Scotland.²⁶

Japan: Japan is one of the principal distant-water countries operating off the Falklands. Catch data off the Falklands is not available, but Japanese fishing in the southwestern Atlantic was conducted almost entirely off Argentina (outside 200-miles) and the Falklands.²⁷ Japanese fishing was limited until the late 1970s (Latin America, appendix C4d1), varying from only 20,000-40,000 tons. The 1982 Falklands conflict caused the Japanese to reassess their fleet deployment. The Japanese began increasing effort significantly in 1984 and by 1987 caught a record 297,000 t in the area as a whole. FIG biologists were stunned by this massive increase in fishing effort. Japanese officials reportedly agreed in 1986, before FIG implemented its FICZ, to voluntarily restrict effort off the

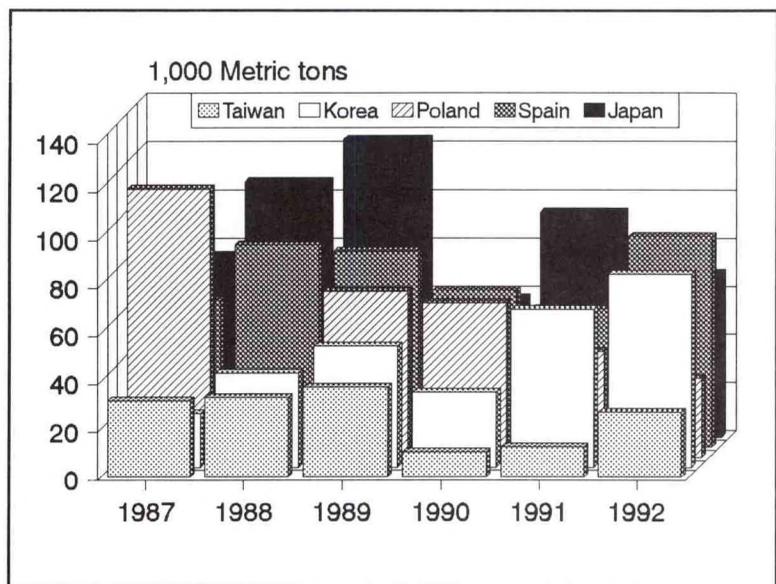


Figure 6.--Three countries (Spain, Korea, and Japan) reported the largest catches off the Falklands during 1992.

Falklands.²⁸ Japanese effort off the Falklands has been conducted in both FIG northern and southern zones. Several Japanese companies and associations have deployed vessels, often under nominal charter to British-Falklands joint ventures. Such arrangements include the CTC Fisheries, Japan Deep Sea Trawlers Association (Fortuna), KSJ (JBG Falklands and Marr [Falklands]), OSA (Witte Boyd), and Taiyo.²⁹ During several years (1987, 1990, and 1991) a larger number of FIG licenses were issued to Japanese companies than companies from any other single country (appendix B1a).³⁰ The Japanese have deployed both jiggers and trawlers for *Illex* and *Loligo* squid. The Japanese jiggers are up to 60-m long and operate in large fleets working from 1-2 km from each other. Each has 100-200 twin and single line, fully automatic jigging units--depending on vessel size. Each line has 15-25 double-hook lures and is set to fish at predetermined depths. The catch is frozen aboard. Most vessels have 500-600-t holds and average about 1,000 GRT (appendix B1b).

The frozen blocks are periodically transferred to reefers.³¹ The Japanese also deploy a few trawlers. The trawlers deployed in 1993 were quite large vessels, averaging about 3,500 GRT (appendix B1b). Japanese companies sharply reduced fishing effort off the Falklands in 1993 and applied for fewer than normal numbers of FIG licenses (appendices B1a and B3a-b).³² Unconfirmed reports suggest that the Japanese companies instead opted to deploy 32 vessels off Argentina under the terms of new Argentine chartering regulations.³³

Korea (ROK): Korean catch data off the Falklands is not available, but Korean fishing in the southwestern Atlantic as a whole indicates only minor amounts were caught until 1985 and 1986 when larger numbers of vessels were deployed (Latin America, appendix C4d1). Korean fishermen exceeded 100,000 t in 1987 and reached a record high of over 140,000 t in 1989, about one-third of which was taken off the Falklands (Latin America, appendix C4d3). The Koreans primarily targeted *Illex* squid. A substantial part of their effort in the southwestern Atlantic was off the Falklands.³⁴ One 1986 report suggested that 25 Korean companies participated in the southwestern Atlantic fishery.³⁵

Much of the Korean operations off the Falklands has been conducted under contract with British-Falklands joint ventures. Korean companies have been contracted by various companies: Daewang (Marr [Falklands]), Dong Bang (Southern Cross), FIKO (BSS), KAJC, and KOSAC (JBG Falklands).³⁶ The Koreans primarily deploy jiggers which average about 750 GRT (appendix B1b).

Some of the jiggers appear to be converted tuna longliners.³⁷ The Koreans also deploy several trawlers which average over 1,000 GRT (appendix B1b).

Poland: Poland initiated a major fishery in the southwestern Atlantic in 1979. Most of this effort was concentrated outside the Argentine 200-mile zone. The Poles at the time probably did not fish extensively off the Falklands. While the British did not restrict foreign fishing off the Falklands during the 1970s, Argentine Naval patrols would seize foreign vessels operating off the Falklands because

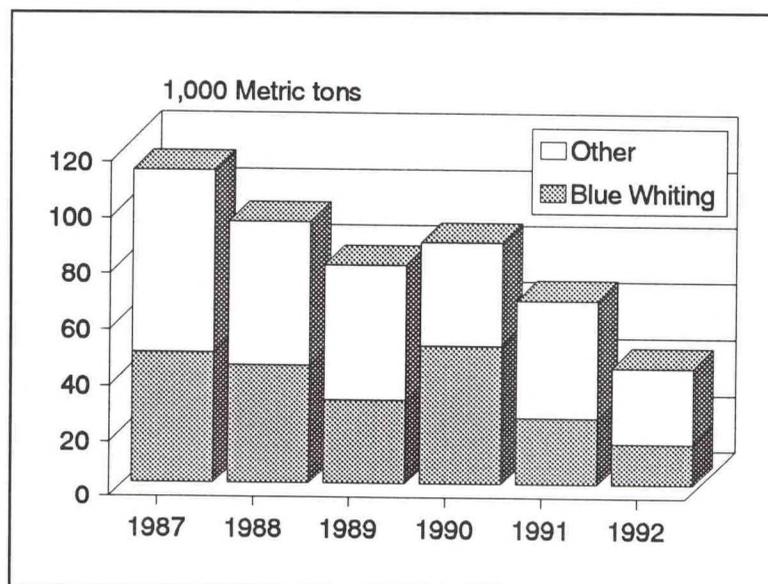


Figure 7.--Polish catches off the Falklands have declined steadily in recent years as the Poles withdraw from distant-water fisheries.

of the Argentine claim to the Islands. The Polish catch from 1979-81 thus never exceeded 100,000 t (Latin America, appendix C4d1). This situation changed dramatically in 1982 for two reasons. First, Poland redeployed vessels to the southwestern Atlantic in 1982 after the United States eliminated catch allocations in the northeastern Pacific.³⁸ Second, the 1982 Falklands conflict created an opportunity for Polish fishermen. On one hand, the British declaration of a 150-mile FIPZ around the Falklands prevented Argentina from conducting enforcement patrols. On the other hand, the British did not restrict foreign fishing.³⁹ Poland quickly took advantage of the opportunity and escalated fishing operations off the Falklands. Polish vessels operated throughout the 1982 hostilities even after some vessels were damaged. The Poles caught nearly 250,000t in 1982 and 350,000t in 1983 (Latin America, appendix C4d1). While Poland reported this catch for the southwestern Atlantic as a whole, the authors believe that most of it was taken off the Falklands. Polish catches have since declined, especially after the British declared the FICZ and began licensing foreign fishing in 1987. Unlike the Soviets and other communist countries operating in the southwestern Atlantic (Bulgaria, Cuba and Germany [GDR]), the Poles did apply for FIG licenses.⁴⁰ Polish fishermen continued to catch over 100,000 t in the southwestern Atlantic annually during 1987-89, but reported that catches declined to only 60,000 t in 1991. Catches reportedly declined further to only 43,000t in 1992. Reduced purchases of Falklands licenses and lower catches in the FICZ suggest another major decline in the Polish southwestern Atlantic catch during 1993 (appendix B1b and Latin America, appendix C4d4). Despite the decline, Poland remains one of the principal distant-water countries currently fishing off the Falklands. The large Polish fishing companies (Dalmor, Gryf, and Odra) have all deployed vessels there, targeting both squid and demersal finfish. The declining catch after 1989 may in part be related to the changed economic relationship with the USSR/Russia and the steps being taken to privatize the Polish fishing industry. The Polish fishing companies can no longer rely on cheap Soviet oil deliveries and state subsidies to finance unprofitable operations.⁴¹ The Poles deployed primarily large trawlers averaging about 2,500GRT occasionally supported by fishery baseships and transports, some of which exceed 8,000 GRT. The most current information suggests that the Poles no

longer operate such baseships⁴² and now mostly use Montevideo as a supply and transport point. They have also studied Port Stanley as a possible alternative for transshipping their catch.⁴³ Transshipping activity has been reported at Berkeley Sound.⁴⁴

Russia: The Russian Government in 1992-93 has so far followed the Soviet Falklands policy and did not apply for Falklands licenses. The Russian Government is currently reassessing this policy. FIG officials indicate that they have had inquiries from Russian companies in 1993 which may apply for FIG licenses in the future, especially as Argentina allowed the Soviet bilateral agreement to expire in 1993 and did not renew it with the Russians.⁴⁵

Spain: Spain has been the major EC country operating in the southwestern Atlantic. Spanish catches in the southwestern Atlantic were minor until 1986 when they nearly reached 60,000t (Latin America, appendix C4d1). Since then Spanish fishermen have reported annual catches of from 60,000-85,000 tons. Most of the Spanish effort is conducted off the Falklands under FIG licenses.⁴⁶ Spain is regularly one of the major countries purchasing FIG licenses. The primary Spanish participants in the fishery have been ANAMAR, Asociación de Buques Congeladores de Merluza (ANAMER), ANAVAR, and the Asociación de Sociedades Pesqueras Españoles (ASPE). About 30 individual Spanish and foreign companies, including Argos, Beauchene, Capricorn, Fortuna, Goodwin Offshore, JBG Eurofishing, Petrel, Polar, Southern Cross, Southern Fisheries, SFS, and Sullivan Fishing have deployed Spanish-flag vessels. The fishermen target squid (*Illex* and *Loligo*) and demersal finfish. Spanish fishermen have at times expressed concern over the cost of FIG licenses, especially when faced with falling squid prices.⁴⁷ Spanish industry representatives in 1991 discussed stocks, licenses, and the possibility of joint ventures with Falklands officials and apparently plan to continue the fishery with little change in effort.⁴⁸ The Spanish vessels deployed off the Falklands are primarily freezer trawlers averaging about 1,300 GRT (appendix B1b). Most are equipped for bottom and midwater (pelagic) trawls, and have carrying capacities exceeding 1,000 t (appendices B3a-b). Some were vessels that were previously deployed off Namibia,

but others have been specifically built for Falklands operations.⁴⁹ The fishermen reportedly have used Berkeley Sound to refuel and buy supplies.⁵⁰ Emergency calls have also been made at Port Stanley.⁵¹ Spain will reportedly be one of the main beneficiaries of the 1992 Argentine-EC bilateral fisheries agreement. Some of the Spanish fishermen that have fished off the Falklands may participate in the new options available with Argentina.⁵²

Taiwan: Taiwan fishing in the southwestern Atlantic, including the Falklands area, has reportedly been minor through 1985 (Latin America, appendix C4d1). Taiwan fishermen began increasing catches in 1986 and caught a record 137,000 t in that year. Much of this catch was apparently taken off the high seas as catches off the Falklands ranged from only 32,000-38,000 t between 1987-89, almost entirely composed of *Illex* squid (Latin America, appendix C4d3-4 and Falklands appendix C1c). Taiwan catches declined off the Falklands to only 11,000 t in 1990 (Latin America, appendix C4d4). Taiwan officials reportedly met with Falklands officials to discuss improved access terms. Apparently, as a result, the Falklands increased the number of licenses issued to Taiwan which increased catches to 27,000 t in 1992.⁵³ Taiwan fishermen have fished extensively both off Argentina and the Falklands, but often outside coastal zones in international waters. Taiwan vessels occasionally enter the Falklands FICZ without valid licenses.⁵⁴ Much of the licensed Taiwan operations off the Falklands has been conducted under contract with British-Falklands joint ventures. Taiwan associations have been contracted by various companies: FCF (Southern Cross and Witte Boyd) and Taiwan Squid Fishing Association-TSFA (Fortuna, Marr [Falklands], and Stanley Trawlers). Taiwan has deployed jiggers off the Falklands targeting *Illex* squid (appendix B3a-b). The vessels average about 800 GRT (appendix B1b). Argentine and Falklands officials are hopeful that now Taiwan fishermen are purchasing licenses from both Governments that they will limit their high-seas fishery.

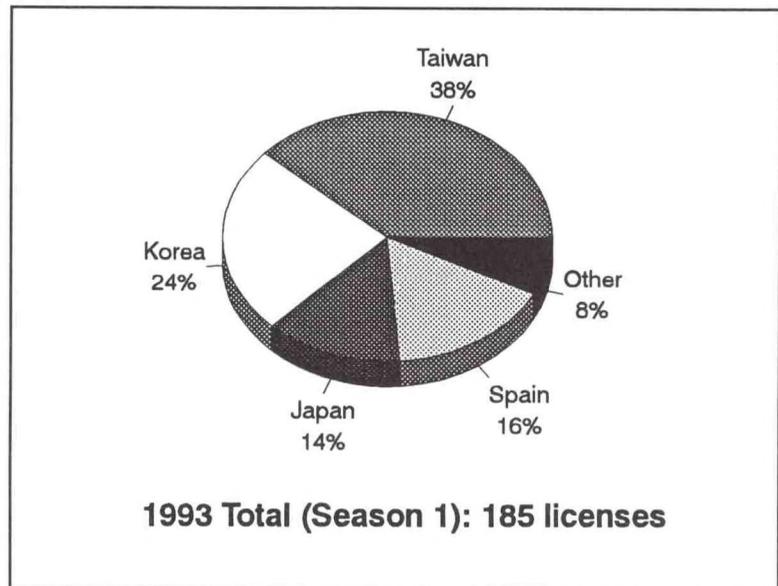


Figure 8.--More than a third of the 1993 (first season) licenses were issued to Taiwan fishermen.

USSR: The former Soviet Union was the most important distant-water fishing country operating in the southwestern Atlantic. The Soviets have also operated extensively off the Falklands. The Soviet catch reportedly expanded significantly in 1982 after the British declared their 150-mile FIPZ and excluded Argentine patrol vessels. Soviet fishing in the southwestern Atlantic increased from only 19,000 t in 1982 to 66,000 t in 1986 (Latin America, appendix C4d4). Much of this catch was taken off the Falklands where Soviet fishing continued until the British implemented the FICZ in 1987. The Soviets did not recognize the British claim to the Falklands and refused to apply for FIG licenses.⁵⁵ This was a political decision related to the Soviet overall foreign policy of supporting third world countries in disputes with European colonial powers. While the Soviets refused to recognize the FIG 150-mile FICZ, they refrained from deploying fishing vessels in it.⁵⁶ Their southwestern Atlantic fishery was conducted outside the Falklands FICZ, facilitated by the 1986 bilateral access agreement with Argentina.⁵⁷

Ukraine: The authors have no information on possible Ukrainian operations off the Falklands. Ukrainian companies have inquired about FIG licenses, but have not yet applied for them.

Other countries: Several other countries purchased small numbers of FIG licenses, including Chile,

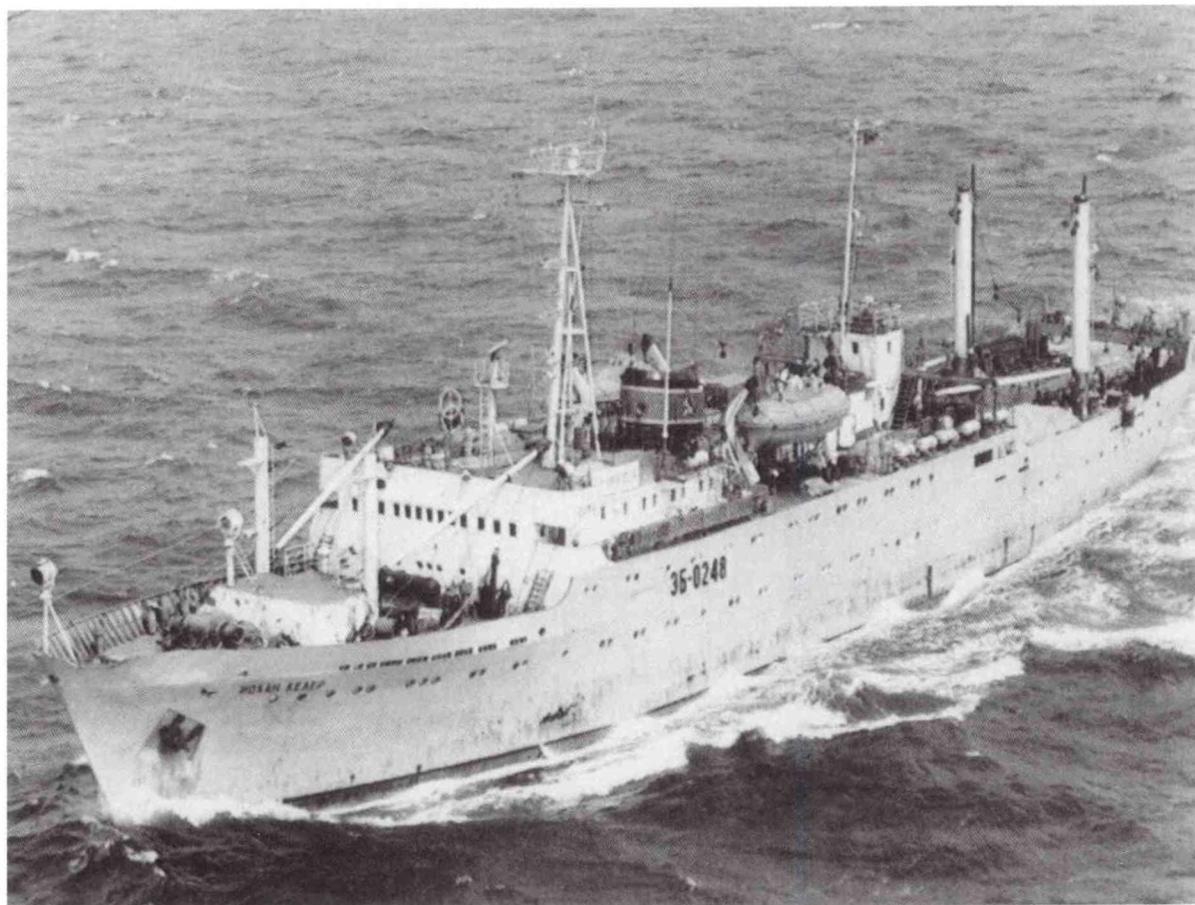


Photo 1.--Soviet vessels like this Mayalovskiy class stern factory trawler were extensively deployed off the Falklands until the British implemented a management regime in 1987.

Denmark, France, Greece, Italy, the Netherlands, Norway, Portugal, and the United Kingdom. FIG officials indicate that the former successor states to the Soviet Union, not only Russia, but also Latvia, Lithuania, and the Ukraine, have inquired about FIG licenses and may apply for them in the future.⁵⁸ FIG officials also report issuing a small number of licenses for vessels flying flag-of-convenience flags (Honduras, Panama, and Sierra Leone). FIG is considering whether it should continue to issue such licenses. FIG officials currently see no indication that the vessels involved have been flagged in those countries to avoid compliance with regional fishery organizations or conservation measures.⁵⁹

The British declared an additional zone, the Falklands Outer Conservation Zone (FOCZ), in 1990. The FOCZ is a 50-mile zone extending beyond the limits of the 150-mile FICZ, creating in

effect a 200-mile zone for the Falklands. All fishing by foreign vessels is prohibited in the FOCZ as a temporary conservation measure.⁶⁰

Falklands officials are concerned that the Argentine decision in 1992 to "charter" foreign vessels⁶¹ will sharply reduce the purchase of FIG licenses. Initial applications for 1993 FIG licenses were well below 1992 levels, but at the last minute many Taiwan vessels applied because of poor *Illex* squid catches outside the FICZ (appendix B1a). Japanese companies, however, decided to deploy more than 30 vessels off Argentina and reduce their requests for FIG licenses (appendices B1a). In the end, Falklands Fisheries Director John Barton described the first half of the 1993 Falklands season a "reasonably healthy" one.⁶² Applications for the second 1993 season also declined somewhat. FIG received only 80 second season applications

compared to 108 applications for the 1992 second season.⁶³

Falklands officials have been concerned for some time about the status of stocks in the southwestern Atlantic and are even more concerned now that Argentine officials have begun licensing foreign charters. British and Argentine officials meet periodically to discuss stocks and to explain each other's management regime, but there is no formal coordination of management programs. Southwestern Atlantic stocks are currently heavily fished by the distant-water fishermen. It seems unlikely that any significantly increased number of vessels could be profitably deployed on a sustainable basis off the Falklands. The new 1992 Argentine "chartering" system and the Argentine-EC agreement, however, means, in effect, that both Argentina and the Falklands are now licensing foreign fishermen in competition with each other.⁶⁴ This competition for foreign "clients" may make it even more difficult to coordinate fisheries management. Argentina in 1993 did limit the number of charters that they planned to approve to only 45 at FIG request.

Foreign vessels operating off the Falklands and in international waters use various South Atlantic ports. Facilities are limited in Port Stanley, although some of the foreign fishermen transship their catch there. Many foreign fishermen use other South Atlantic ports. Montevideo (Uruguay) is used for port services, supplies, repairs, and to transship the catch. Punta Arenas (Chile) is used for vessel repairs.⁶⁵ Argentine ports, however, have been largely closed to foreign fishing vessels, because of that country's effort to limit foreign fishing and opposition to the Falklands licensing program.

British officials announced in 1993 that they plan to introduce a management system for the South Georgia and South Sandwich islands. The system will be similar to the Falklands system. The British intend to extend the current 12-mile limit to 200 miles to prevent overfishing.⁶⁶ The British have discussed their plans with the Argentines in an effort to coordinate fisheries management in the southwestern Atlantic.

V. JOINT VENTURES

The principal Falklands fishing company is Stanley Fisheries which was established by the government-owned Falklands Islands Development Corporation (FIDC). Stanley Fisheries negotiated joint ventures with several different foreign companies in an effort to develop a domestic fishing industry. FIG gave preference to license applicants which formed joint ventures with Falkland companies. Stanley Fisheries formed more than 15 joint ventures with various companies from New Zealand, Spain, Taiwan, and the United Kingdom. The foreign partners were charged only half the normal rate for squid licenses, but were to make equity investments. Major shore-based construction projects were planned for Port Stanley.⁶⁷ The ventures proved financially disastrous and resulted in losses of \$50-60 million in public funds.⁶⁸ Most of the investments were made in purchasing and refitting vessels for southwestern Atlantic operations.⁶⁹ Many of the joint ventures were perfectly sound, but a couple--one in particular--went badly wrong. This resulted in significant losses of FIG revenue. As a result, the entire joint venture system was abandoned in 1989.⁷⁰ Few of the foreign partners invested in shore-based facilities, thus little improvement was made to the Stanley fisheries infrastructure. FIG continues to use mostly Falkland companies to broker the sale of licenses. These are not, however, real joint ventures with equity participation.

Available information on the Falklands effort to form joint ventures is as follows:

Caley International (Falklands)/Stancal: The British company, Associated Fisheries (Hughes Food Group of Hull), formed a joint venture with a Taiwan company operating squid jiggers.⁷¹ Another report suggested that in 1988 they chartered European vessels, three Portuguese and one Dutch freezer trawler.⁷² The catch was reportedly marketed in Taiwan. One report suggests that the Spanish company, Aliko of La Couna, was also associated with the venture.⁷³

Stanmarr: Stanmarr Ltd. and the Hull-based Marr company (Falklands) contracted Dutch and German vessel operators.⁷⁴ The venture was dissolved in

1989 when FIG ended joint venture premium payments and Stanmarr was unable to proceed with plans to build an on-shore processing plant.⁷⁵ Marr was one of the principal U.K. companies involved in the Falklands fishery and continues to charter Japanese and Taiwan squid jiggers and transshipping operations.⁷⁶ Most of the Taiwan jiggers were associated with the Taiwan Squid Fishery Development Group.⁷⁷

Seamount: The Seamount joint venture with Seaboard Offshore, a Scottish company, resulted in losses of about \$18 million. The venture operated two trawlers off the Falklands. The *Mount Kent* operated for only 2 weeks before withdrawing from the fishery because of the need to repair the vessel at Puna Arenas. The other trawler, *Mount Challenger*, eventually returned to the U.K., but was probably transferred to Spain.⁷⁸

SWB Fishing Ltd.: Another British company involved in the Falklands is Witte Boyd Holdings, based in Hull.⁷⁹ SWB deployed the 1,500-ton stern trawler *Lord Shackleton* for squid and finfish in 1987.⁸⁰ Witte Boyd also deployed a crab vessel, but it is unclear if it was to be operated as a separate joint venture or simply as a distant-water vessel.⁸¹

Others: Two other joint ventures are Castor and Malabar, but few details are available on these and other Falklands joint ventures.

The only other Falklands company known to the authors is Fortuna Ltd., established in 1987. Fortuna charts Taiwan and Japanese squid jiggers.⁸²

VI. DISTANT-WATER OPERATIONS

The Falklands has no high-seas fleet and thus does not conduct distant-water operations.

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ENDNOTES

SECTION I. (General Background)

1. John Barton, Director of Fisheries, personal communications, August 13, 1993.
2. "Rising catch off the Falklands," *Fishing News International*, April, 1989.
3. FIG licenses are usually valid for about 6 months, thus only 3-4 vessels may have received the licenses.

SECTION II. (High-Seas Fleet)

4. Barton, *op. cit.*, personal communications, November 1, 1993. FIG also granted 7 licenses to SCOFISH, a Falklands joint venture company, which arranged for the deployment of seven Bulgarian vessels. "Late Falklands license rush," *Fishing News International*, June, 1993, p. 41.

SECTION III. (Vessel Sources)

5. Ian Strutt, "Fleets taking advantage of repair slip in far south of Chile," *Fishing News International*, August, 1988, p. 53.
6. Barton, *op. cit.*, August 13, 1993.
7. Barton, *op. cit.*, August 13, 1993.
8. "Falklands report-FIG review of fishing activity," *World Fishing*, April, 1988, p. 56.
9. Barton, *op. cit.*, August 13, 1993.
10. "Falklands fuel deal signed," *Fishing News International*, September, 1987, p.7. One press report suggests extensive fuel purchases and transshipments taking place at Port Stanley. Andrew Marshall, "Boundary row stymies Falklands fishery plan," *Financial Times*, March 10, 1989.
11. "Falklands arrests," *Fishing News International*, May, 1988.
12. John Barton, Fisheries Director, personal communications, July 30, 1993.

SECTION IV. (Foreign Fishing)

13. A good overview of the Falklands squid fishery is available in Mike Urch, "Development of a fishery," *Seafood International*, August, 1993, pp. 31,33.
14. The trawlers average over 1,000 GRT and one was as large as 3,700 GRT in 1993. The jiggers are smaller vessels, most of which range from 600-900 GRT (appendices B1b).

15. As Argentina claimed the Falklands, the country's 200-mile zone included a 200-mile zone around the Falklands. The Argentine Navy had previously seized vessels operating off the Falklands, even though the vessels were more than 200 miles off the Argentine coast.
16. Marshall, *op. cit.*
17. "The Falklands--action at last," *World Fishing*, November, 1986, p. 3.
18. "British Government declares 200-mile zone for Falklands," *Suisan Keizai*, October 31, 1986. For details see the Argentine chapter of this report and Don Jacobson and Dennis Weidner, "Argentine-Soviet fishery relations, 1966-88," *International Fishery Reports*, (IFR-88/108), December 16, 1988.
19. Only the Soviets and their allies (Bulgaria, Cuba, and Germany [GDR]) refused to apply for the FIG licenses. Even Poland broke ranks with the Soviets and applied for FIG licenses. "Poland breaks ranks with USSR and applies for Falkland licenses," *Eurofish Report*, December 10, 1987.
20. FIG issues licenses for two annual seasons (January 1 to June 30 and July 1 to December 31). Within each season several license types are offered for various periods. Loligo licenses, for example, are generally offered for February 1 to May 31 and August 1 to October 31. Illex licenses are valid from March 1 to May 31. Finfish licenses are offered in monthly units.
21. FIG has been able, for example, to cut local taxes by 50 percent because of the earnings from the fishing licenses. "Fisheries transform Falklands economy," *Fishing News International*, June 8, 1989.
22. Alasdair Cameron, Falklands Fisheries Director as cited in "Spain maintains strong presence in the Falklands," *World Fishing*, April, 1989, pp. 26-27.
23. "British military plane overflies trawler," TELAM Buenos Aires radio broadcast, 2355 GMT, October 1, 1986.
24. For details see the Argentine chapter of this report.
25. For details see the Argentine chapter of this report.
26. "UK/Bulgarian joint fishing venture," *Eurofish Report*, July 15, 1993. The article did not indicate how many of the vessels would be deployed off the Falklands. The Bulgarians did apply for two first season 1993 FIG licenses (appendix B2m).
27. Much of the Japanese effort was north of the Falklands, at about 44-46° South. See the Argentine chapter of this report.
28. "Japan to voluntarily limit Falklands fishing," *Japan Times*, February 5, 1986, p. 8.
29. "75 Japanese fishing vessels permitted to enter Falklands waters," *Suisan Keizai*, January 8, 1987.
30. In 1987, for example, nearly a third of all FIG first season licenses were issued to Japanese companies. "78 Japanese vessels licensed for fishing in Falklands zone," *Minato Shinbun*, February 4, 1987.
31. "Marr cuts back Falklands venture ...," *Fishing News International*, date unavailable.
32. FIG issued 63 first season licenses to the Japanese in 1992, but only 25 in 1993.

33. "Late Falklands license rush," *Fishing News International*, June, 1993; and Barton, personal communications, *op. cit.*, November 1, 1993. For details, see the Argentine chapter of this report.
34. "ROK vessels also undergo hardships in Falklands waters," *Suisan Keizai*, February 3, 1987.
35. "ROK fishery circles suspend fishing operations in Falkland waters," *Suisan Keizai*, November 21, 1986.
36. Korean companies sometimes apply directly for FIG licenses. Sometimes foreign companies (indicated in parenthesis) apply for the licenses and charter the Korean vessels. These charter arrangements vary over time with companies chartering from various Korean companies and often switching associations.
37. "First far eastern conversion contract for SAEM," *World Fishing*, June, 1993, p. 69.
38. "Poles switch to South Atlantic squid grounds," *Eurofish Report*, October 6, 1982, SP16.
39. Jeremy Cherfas, "The last great free-for-all at sea," *New Scientist*, November 7, 1985, pp. 18-19.
40. "Poland breaks ranks," *op. cit.*
41. For background on the Polish fishing industry see Milan Kravanja and Ellen Shapiro, "Russia and Eastern Europe," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 5, (NMFS: Silver Spring, MD., 1993).
42. Milan Kravanja and Ellen Shapiro, "Russia and Eastern Europe," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 5, (NMFS: Silver Spring, MD., 1993).
43. "Falkland hostility to Argentina still strong," *Daily Yomiuri*, February 20, 1986.
44. "Falklands arrests," *Fishing News International*, May, 1988.
45. See the Argentine chapter of this report.
46. Enrique López Veiga (interview), "Ni Falklands ni Malvinas: Caladeros del Atlantico Sur," *Industrias Pesqueras*, March 15, 1987, pp. 15-18.
47. "Cada año resulta más caro pescar en las Malvinas", *Industrias Pesqueras*, October 15, 1988, and "Los armadores podrian rechazar las licencias de pesca en Malvinas, *Industrias Pesqueras*, December 10, 1990, p. 17.
48. "'Noaumentara el numero de licencias en Malvinas,' aseguró en Vigo Ronald Sampson," *Industrias Pesqueras*, October 15, 1991, p. 57.
49. "Why the ships go south..." *Fishing News*, March, 1987; "Spanish fish off Falklands," *Fishing News International*, July, 1987; "For Falkland fisher," *World Fishing*, October, 1986, p. 26; and "Filleter for the South Atlantic," *Fishing News International*, April, 1989, p. 39.
50. "Discussion over fishing in Falklands," *Fish Trader*, February 7, 1987.
51. "Vigo owners 'well satisfied' with Falklands fishery," *World Fishing*, April, 1987, p.7.
52. The EC finally approved the agreement in September 1993. "Ministers approve EC-Argentine Agreement," *Eurofish Report*, September 23, 1993, p. BB/3.

53. "Sino British squid pact," *The Free China Journal*, October 4, 1991.
54. One 1991 press report suggests that Falkland officials are attempting to strictly enforce the 150-mile FICZ. Officials detected the Taiwan squid vessel *Chen Te* fishing within the FICZ without a license. The Falklands patrol boat *Southella* initiated one of the most extensive marine enforcement operations ever recorded. The *Southella* pursued the Taiwan vessel for 19 days over a distance of 4,000 miles and through Force-11 storms with 14-meter high waves. Falkland enforcement officials only called off the pursuit when they approached the southern coast of Madagascar and had no nautical charts. A Falkland enforcement officer told reporters that they felt that they had "made their point." "Last bites," *Seafood International*, September, 1991.
55. "Pescará la URSS en torno de las Malvinas sin permiso Británico," *Excelsior*, November 22, 1986, p. 2A.
56. "Soviet Ambassador denies Falklands zone fishing," Noticias Argentinas, Buenos Aires radio broadcast, 1155 GMT, May 10, 1989.
57. For details see the Argentine chapter of this report.
58. Barton, *op. cit.*
59. Barton, *op. cit.*, August 13, 1993. The authors cannot determine the ownership of the vessels, but FIG officials report that they appear to be Korean and have been approved by the Korean Government for southwestern Atlantic operations.
60. The FOCZ boundary is 200 miles from coastal baselines, whereas the FICZ is 150 miles from a central point. Consequently the distance that the FOCZ extends beyond the FICZ varies from about 74-130 miles. Barton, *op. cit.*, August 13 and November 1, 1993.
61. While the Argentine regulations provide for chartering, the charters are for all practical purposes thinly veiled licenses for distant-water fishermen, similar to the Falklands approach.
62. "Late Falklands license rush," *Fishing News International*, June 1993, p. 41.
63. "Applications down," *Fishing News International*, June 1993, p. 41.
64. For details see the Argentine chapter of this report.
65. "Fears for Falkland fishing venture," *Fishing News International*, August 8, 1988.
66. "UK to extend fishing zones in South Atlantic," *Eurofish Report*, May 20, 1993, p. FS/3.

SECTION V. (Joint Ventures)

67. "Falklands set to start shore expansion," *Fishing News International*, September, 1987, p. 92.
68. One journalist writes that the Stanley Fisheries experience is "a cautionary tale of what can happen when civil servants run businesses with taxpayers' money." Andrew McEwen, "Falklands' fishing strategy labelled a financial disaster," *Times* (London), June 14, 1989, p. 4; "U.K. lost £25m in fishing venture," *Irish Skipper*, January, 1990; and "'Gold rush mentality' led to Falklands fiasco," *Fishing News International*, January, 1990, p.58.
69. Andrew McEwen, "Port Stanley soon free of need for British cash aid," *Times* (London), September 29, 1988.

70. Barton, *op. cit.*, August 13, 1993.
71. "Now AF goes for Falklands," *Fishing News International*, January 9, 1987.
72. "Falklands-more EEC ships," *Fishing News International*, February, 1988, p.1.
73. "Venture firm deciding plans," *Fishing News International*, September, 1987.
74. "Marr in Falklands Euro link venture," *Fishing News International*, August 25, 1989, p. 48.
75. "Stanley-Marr joint venture dissolved," *World Fishing*, July, 1989, p. 21.
76. "Marr looks to future in Falklands," *Fishing News International*, date not noted, 1987.
77. "Falklands joint venture success," *Fishing News International*, July, 1987.
78. "Fears for Falkland fishing venture," *op. cit.*
79. "Fears for Falkland fishing ventures," *Fishing News International*, August, 1988.
80. "Falklands invest in UK trawler," *Fishing News International*, July 10, 1987.
81. The crab vessel was to be operated by a subsidiary, Falklands Seafood. The vessel will be based at Choiseul, about 30 miles from Port Stanley. "Devon crabber Falklands-bound," *Fishing News International*, June 26, 1987, p. 8.
82. "Falklands firm hunts jiggers," *Fishing News International*, November, 1987. This may be a reference to the Fortuna Unity company which is incorporated in Thailand.

 APPENDICES

A series: Species

B series: Licenses

C series: Fisheries Catch

Appendix A.--Falklands Islands. Species glossary

English	Spanish	Scientific
Fish		
Blue whiting	Polaca	Micromesistius australis
Hake	Merluza	Merluccius hubbsi*
Hoki	Merluza de cola	Macruronus magellanicus
Kingclip	Abadejo	Genypterus blacodes
Rays	Raya	Ray spp.
Red cod	Bacalao austral	Salilota australis
Toothfish	Merluza negra	Dissostichus eleginoides
Anchovy	Anchoveta	Anchoita engraulis
Squid		
Black**	Pota festoneada	Martialia hyadesi
Loligo	Calamar patagon	Loligo gahi
Illex	Pota argentina	Illex argentinus

 * Catches of *M. polylepis/australis* have composed about 10 percent

** FAO identifies this species as sevenstar flying squid of the hake catch from 1987-91.

FAO identifies this species as *austromerluza negra*Source: Falkland Islands Fisheries Department, Argentine publications, and FAO, Yearbook of Fishery Statistics.

Appendix B1a.--Falkland Islands. Fishing licenses issued, 1987-93

Country	Year*						
	1987	1988	1989	1990	1991	1992	1993**
				Number			
Bulgaria	-	-	9	14	8	7	(2)
Chile	1	1	1	1	-	6	(1)
Denmark	1	-	-	-	-	-	(-)
Falkland Is.	-	2	7	4	2	2	(1)
France	1	-	-	-	-	-	(-)
Greece	3	4	5	3	-	-	(-)
Honduras	-	-	-	-	2	4	(-)#
Italy	11	7	7	3	2	5	(3)
Japan	86	71	94	82	77	63	(25)
Korea (ROK)	32	21	29	30	41	55	(45)
Netherlands	-	1	1	1	-	-	(-)
Norway	-	-	-	2	-	-	(-)
Panama	1	1	-	-	5	3	(1)
Poland	69	97	68	53	40	21	(4)
Portugal	2	6	7	7	4	4	(2)
Sierra Leone	-	-	-	-	-	1	(-)
Spain	75	128	100	72	66	75	(30)
Taiwan	29	24	30	13	39	51	(71)
U.K.	8	20	10	1	1	-	(-)
Total	319	384	368	286	287	297	(185)

* Licenses are issued for two seasons. (See note.) The annual numbers in this table are the total issued for the two seasons.

Detailed license data by season and type are available in appendices ????.

** Data only available for the first season.

Falklands officials reported issuing four licenses to Honduran-flag vessels in 1993 (appendices ?? and ??). This discrepancy is unexplained. Officials may have included the Honduran licenses under the owner of the vessel rather than the flag of registry.

Note: The Falkland Islands Government (FIG) issues licenses for two annual seasons (January 1 to June 30 and July 1 to December 31). Within each season several license types are offered for various periods. Loligo licenses, for example, are generally offered for February 1 to May 31 and August 1 to October 31. Illex licenses are valid from March 1 to May 31. Finfish licenses are offered in monthly units.

Source: Falkland Islands Fisheries Department.

Appendix B1b--Falkland Islands. Fishing licenses and vessel size, by country, 1993

Country/Vessel type	Year/Season	Fleet		Average size
		Vessels Number	Total GRT	GRT
Bulgaria				
Trawler	1991:1	2	4,934	2,467
Trawler	1993:2	5	12,629	2,526
Chile				
Trawler	1993:1	1	1,438	1,438
Trawler	1993:2	1	1,438	1,438
Falkland Islands				
Trawler	1993:1	1	1,507	1,507
Trawler	1993:2	1	1,507	1,507
Honduras				
Jigger	1993:1	1	817	817
Trawler	1993:2	3	2,028	674
Italy				
Trawler	1993:1	1	1,245	1,245
Trawler	1993:2	2	2,560	1,280
Japan				
Jigger	1993:1	22	21,584	989
Trawler	1993:1	2	6,606	3,303
Trawler	1993:2	4	14,255	3,564
Korea (ROK)				
Jigger	1993:1	49	36,500	745
Trawler	1993:1	1	380	380
Trawler	1993:2	11	11,823	1,075
Panama				
Trawler	1993:1	1	1,082	1,082
Trawler	1993:2	3	2,056	684
Poland				
Combo	1993:1	1	2,691	2,691
Trawler	1993:1	4	9,934	2,484
Trawler	1993:2	4	9,934	2,484
Portugal				
Trawler	1993:1	2	2,213	1,107
Trawler	1993:2	1	1,106	1,106
Sierra Leone				
Trawler	1993:2	1	796	796
Spain				
Trawler	1993:1	21	29,119	1,387
Trawler	1993:2	33	39,704	1,203
Taiwan				
Jigger	1993:1	78	62,017	795
United Kingdom				
Trawler	1993:2	1	621	621

Source: Falkland Islands Fisheries Department.

Appendix B2a.--Falkland Islands.
Fishing license summary,
season 1, 1987

Nationality/ type	Licenses issued
	Number
Chile	
B	1
France	
X	1
Greece	
B	1
Italy	
B	2
X	4
Japan	
A	59
B	6
X	7
Korea	
A	27
Poland	
A	14
B	12
X	14
Portugal	
B	2
Spain	
A	2
B	31
X	4
Taiwan	
A	29
United Kingdom	
B	4
Grand Total	220

A - All species (North) mainly *Illex*
B - All species (South) mainly *Loligo*
X - All species North and South
Source: Falkland Islands Fisheries Department

Appendix B2b.--Falkland Islands.
Fishing license summary,
season 2, 1987

Nationality/ type	Licenses issued
	Number
Denmark	
B	1
Spain	
A	15
B	23
Greece	
A	1
B	1
Italy	
A	2
B	3
Japan	
A	6
B	8
Korea	
B	5
Panama	
B	1
Poland	
C	29
United Kingdom	
A	1
B	3
Grand Total	99

A-All Species
B-Finfish only
C-Finfish only-no surimi permitted
Source: Falkland Islands Fisheries Department

Appendix B2c.--Falkland Islands.
Fishing license summary,
season 1, 1988

Nationality/ type	Licenses issued
	Number
Chile	
B	1
Greece	
C	2
Spain	
A	25
B	7
C	24
Italy	
C	4
Poland	
A	24
B	24
C	9
E	6
Korea	
B	20
E	1
Japan	
B	63
E	1
Netherlands	
C	1
Panama	
B	1
Portugal	
A	1
C	3
Taiwan	
B	24
United Kingdom	
A	2
B	3
C	5
Grand Total	251

A - Finfish
B - Illex
C - Loligo
E - Experiment

Source: Falklands Islands Fisheries Department

Appendix B2d.--Falkland Islands.
Fishing license summary,
season 2, 1988

Nationality/ type	Licenses issued
	Number
Falkland Islands	
X	1
Y	1
Spain	
E	3
X	17
Y	30
Z	22
Greece	
X	2
Italy	
X	3
Japan	
E	1
X	3
Y	2
Z	1
Poland	
E	1
X	3
Z	30
Portugal	
X	1
Y	1
United Kingdom	
X	5
Y	5
Grand Total	132

E-Experimental

X-All species

Y-Finfish

Z-Finfish-west area only

Source: Falkland Islands Fisheries Department

Appendix B2e.--Falkland Islands.
Fishing license summary,
for season 1, 1989

Nationality/ type	Licenses issued
Chile	
C	1
Falkland Islands	
A	1
C	1
E	1
Greece	
C	2
Spain	
A	15
B	2
C	22
Italy	
C	5
Poland	
A	16
B	24
C	3
E	1
Korea	
B	26
Japan	
A	4
B	76
C	1
Netherlands	
C	1
Portugal	
A	3
C	4
Taiwan	
B	30
United Kingdom	
A	1
C	4
E	1
Grand Total	245

A - Finfish
B - Illex
C - Loligo
E - Experimental

Source: Falkland Islands Fisheries Department

Appendix B2f.--Falkland Islands.
Fishing license summary,
season 2, 1989

Nationality/ type	Licenses issued Number
Falkland Islands	
E	1
X	2
Y	1
Bulgaria	
E	3
Y	6
Spain	
X	11
Y	50
Greece	
X	2
Y	1
Italy	
X	2
Japan	
X	5
Y	8
Korea	
Y	3
Poland	
Z	24
United Kingdom	
X	1
Y	3
Grand Total	123

E - Experiment

X - All Species

Y - Finfish

Z - Finfish restricted species

Source: Falklands Islands Fisheries Department

Appendix B2g.--Falkland Islands.
Fishing license summary,
season 1, 1990

Nationality/ type	Licenses issued Number
Bulgaria	
A	2
B	1
E	2
Chile	
C	1
Falkland Islands	
A	1
C	2
Greece	
C	2
Spain	
A	11
B	2
C	21
Italy	
C	2
Poland	
A	15
B	14
C	3
Korea	
B	29
Japan	
B	79
C	1
Netherlands	
C	1
Norway	
A	1
C	1
Portugal	
A	3
C	3
Taiwan	
B	13
United Kingdom	
C	1
Grand Total	211

A - Finfish
B - Illex
C - Loligo
E - Experimental

Source: Falkland Islands Fisheries Department

Appendix B2h.--Falkland Islands.
Fishing license summary,
season 2, 1990

Nationality/ type	Licenses issued Number
Falkland Islands	
X	1
Bulgaria	
E	2
Y	2
Z	5
Spain	
X	15
Y	13
Z	10
Greece	
X	1
Italy	
X	1
Japan	
X	2
Korea	
Y	1
Poland	
E	1
Z	20
Portugal	
Y	1
Grand Total	75

E - Experimental

X - All species

Y - Finfish

Z - Finfish restricted species

Source: Falklands Fisheries Department

Appendix B2i.--Falkland Islands.
Fishing license summary,
season 1, 1991

Nationality/ type	Licenses issued Number
Falkland Islands	
B	1
Spain	
A	12
C	8
W	1
Italy	
C	1
Poland	
A	3
B	17
C	3
W	10
Korea	
B	36
Japan	
B	76
C	1
Portugal	
A	2
C	2
Taiwan	
B	39
United Kingdom	
C	1
Grand Total	213

A - Finfish
B - Illex
C - Loligo
E - Experimental
W - Restricted Finfish

Source: Falklands Islands Fisheries Department

Appendix B2j.--Falkland Islands.
Fishing license summary,
season 2, 1991

Nationality/ type	Licenses issued Number
Falkland Islands	
X	1
Bulgaria	
Y	2
Z	6
Spain	
X	17
Y	12
Z	16
Italy	
X	1
Poland	
Z	7
Korea	
Z	5
Panama	
Y	1
Z	4
Honduras	
Z	2
Grand Total	74

X - Squid

Y - Finfish

Z - Finfish restricted species

Source: Falkland Islands Fisheries Department

Appendix B2k.--Falkland Islands.
Fishing license summary,
season 1, 1992

Nationality/ type	Licenses issued Number
Chile	
C	1
E	2
Spain	
A	11
B	1
C	11
W	11
Italy	
A	1
B	1
C	1
Poland	
B	10
C	3
W	5
Korea	
B	43
Japan	
B	61
C	2
Portugal	
A	1
C	1
Taiwan	
B	51
Grand Total	217

A - Finfish
B - Illex
C - Loligo
E - Experimental
W - Restricted Finfish

Source: Falkland Islands Fisheries Department

Appendix B2l.--Falkland Islands.
Fishing license summary,
season 2, 1992

Nationality/ type	Licenses issued Number
Chile	
E	3
Falkland Islands	
X	1
Y	1
Bulgaria	
Z	6
E	1
Spain	
X	20
Y	4
Z	17
Italy	
X	1
Y	1
Portugal	
X	1
Y	1
Poland	
Z	3
Korea	
Z	12
Panama	
Z	3
Honduras	
Z	4
Sierra Leone	
Z	1
Grand Total	80

E - Experimental
X - Squid
Y - Finfish
Z - Finfish Restricted Species

Source: Falkland Islands Fisheries Department

Appendix B2m.--Falkland Islands.
Fishing license summary,
season 1, 1993

Nationality/ type	Licenses issued Number
Bulgaria	
W	2
Chile	
C	1
Spain	
A	3
B	3
C	13
W	11
Falkland Islands	
C	1
Italy	
A	1
B	1
C	1
Japan	
B	23
C	2
Korea	
B	45
Panama	
W	1
Poland	
B	1
C	3
Portugal	
B	1
C	1
Taiwan	
B	71
Grand Total	185

A - Finfish

B - Illex

C - Loligo

E - Experimental

W - Restricted Finfish

Source: Falkland Islands Fisheries Department

Appendix B3a.--Falkland Islands. Licensed foreign fishery vessels,
first season, 1993

Country/Vessel name	Vessel	
	Type	Size GRT
Bulgaria		
AKTINIA	Trawler*	2,467
ARGONAVT	Trawler*	2,467
Chile		
BETANZOS	Trawler	1,438
Falkland Islands		
SAO RAFAEL	Trawler	1,507
Honduras		
OCEAN 77	Jigger	817
Italy		
DE GIOSA T	Trawler	1,245
Japan		
YUKO MARU 11	Jigger	1,096
HOKKO MARU 177	Jigger	1,095
SUMIYOSHI MARU 35	Jigger	1,094
YUKO MARU 88	Jigger	969
CHOKO MARU 38	Jigger	463
CHOKO MARU 88	Jigger	979
SEIJU MARU 85	Jigger	1,079
KANNON MARU 35	Jigger	982
RYOUN MARU 23	Jigger	1,095
FUJI MARU 63	Jigger	1,092
YURYO MARU 58	Jigger	1,094
HOSEI MARU 23	Jigger	1,095
HEISEI MARU 1	Jigger	1,096
FUKI MARU 61	Jigger	1,096
SEIJU MARU 51	Jigger	1,095
SOHO MARU 58	Jigger	1,029
SHOICHI MARU 88	Jigger	762
SHOUN MARU 51	Jigger	404
SANKICHI MARU 8	Jigger	693
CHIYO MARU 3	Trawler	3,292
CHIYO MARU 5	Trawler	3,314
RYOUN MARU 15	Jigger	1,096
RYOUN MARU 16	Jigger	1,090
RYOUN MARU 17	Jigger	1,090
Korea (ROK)		
DONG WON 601	Jigger	677
JINYONG 301	Jigger	977
DONG WON 602	Jigger	735
YOUNG HEUNG 33	Jigger	719
DAE WANG 12	Jigger	670
DAE WANG 11	Jigger	682
JAI WON 22	Jigger	880
POONG WON 703	Jigger	539
SEYANG 52	Jigger	949
POONG WON 707	Jigger	794
JIN YANG 102	Jigger	1,137
NEW KWANG HAE 90	Jigger	644
CHIL SUNG 707	Jigger	764
DAE WANG 15	Jigger	607
TAE BAEK 72	Jigger	665
O DAE YANG 201	Jigger	566
CHUNG YONG 3	Jigger	579
POONG WON 705	Jigger	600
DONG WON 312	Jigger	951
DAE WANG 16	Jigger	605
DAEWANG 17	Jigger	605
DU SUNG 1	Jigger	1,103

DU SUNG 3	Jigger	1,103
DONGWON 67	Jigger	511
KWANG YANG 108	Jigger	688
DUK SOO 103	Jigger	604
OYANG 51	Jigger	650
DAE YANG 108	Jigger	674
DONG WON 311	Jigger	1,000
AN YANG 71	Jigger	610
DOO YANG 101	Jigger	576
AN YANG 72	Jigger	610
JIN YANG 109	Jigger	1,020
JIN YANG 111	Jigger	1,020
CHANG JIN 601	Jigger	747
JAI WON 11	Jigger	880
DUK CHANG 1	Jigger	1,146
NAMKYUNG 58	Jigger	336
JIN YANG 101	Jigger	762
TAE WON 201	Jigger	764
JIN YANG 107	Jigger	733
DONG BANG 101	Jigger	733
TAE BAEK 75	Jigger	807
PETERO 301	Jigger	722
PETERO 303	Jigger	722
PETERO 302	Jigger	722
O DAE YANG 727	Jigger	736
DONG WON 308	Jigger	631
DONG BANG 39	Jigger	545
IHN SUNG 66	Trawler	380
Panama		
HORIZON	Trawler	1,082
Poland		
LACERTA	Combo	2,691
GARNELA	Trawler	2,501
RYBAK MORSKI	Trawler	2,598
MANTA	Trawler	2,395
BONITO	Trawler	2,440
Portugal		
MURTOSA	Trawler	1,107
PARDELHAS	Trawler	1,106
Spain		
PLAYA DE GALICIA	Trawler	1,021
NUEVO ALCOCERO	Trawler	2,849
ARPON	Trawler	856
PUENTE PEREIRAS	Trawler	1,093
EGUZKI	Trawler	1,665
PESCAPUERTA CUARTO	Trawler	1,627
TELLEIRO	Trawler	2,074
JUGAMAR	Trawler	1,127
LA PENUCA	Trawler	1,272
FERRALEMES	Trawler	1,072
PRINCIPADO DE ASTURIAS	Trawler	1,527
FARPESCA CUARTO	Trawler	789
PESCAVIGO DOS	Trawler	1,632
SIL	Trawler	2,156
TEUCRO	Trawler	760
ESPERANZA MENDUINA	Trawler	1,866
PESCAVIGO UNO	Trawler	2,511
PLAYA DE PESMAR	Trawler	688
HERMANOS TOUZA	Trawler	1,140
FIASCO	Trawler	865
CODESIDE	Trawler	529
Taiwan		
HSIN YU FA	Jigger	736
CHEN FA 606	Jigger	734
YEOU DAR 101	Jigger	890
LIEN DAR	Jigger	798
MING CHICH	Jigger	798
CHIEH HSIANG 6	Jigger	798

FU TSAI CHUN	Jigger	737
FU CHANG CHUN	Jigger	709
YANG YANG 1	Jigger	992
JUI YING 1	Jigger	772
CHEIH MAN 103	Jigger	783
CHIEH HSIANG 3	Jigger	875
CHIA DER 1	Jigger	792
PAO HSIANG 1	Jigger	1,120
JIN YUH HORNG 16	Jigger	834
WING HENG 2	Jigger	834
BAE FU 6	Jigger	801
CHII FU 6	Jigger	738
KIN CHUAN HSING	Jigger	922
SHYONG CHUEN 1	Jigger	760
FENG CHUN 101	Jigger	712
FA CHUN 6	Jigger	841
CHUN YING 6	Jigger	756
HWA JAAN 16	Jigger	713
HER CHING 101	Jigger	726
WIN YING FAR	Jigger	965
WIN FAR TSAIR 66	Jigger	861
CHUAN FU 1	Jigger	707
HOU CHUN 101	Jigger	736
HOU CHUN 102	Jigger	736
WIN TEI FAR	Jigger	885
YU FA CHUN	Jigger	709
YU FA CHUN	Jigger	709
LONG WEI 866	Jigger	792
HSAING MAN CHING	Jigger	894
SHIH YING 1	Jigger	734
HSIN YU MAN	Jigger	723
PING CHEIH 101	Jigger	711
CHANG YU 1	Jigger	726
WIN FENG LI	Jigger	891
HER HUNG 1	Jigger	869
HER YANG 1	Jigger	869
SHUN YING 1	Jigger	768
YUNG KAI	Jigger	796
YUNG HSUANG	Jigger	796
HUA I 616	Jigger	811
CHENG I 1	Jigger	790
CHI NAN 36	Jigger	790
FU YUAN 7	Jigger	888
HSIN HO CHUN 201	Jigger	736
MENG FENG 66	Jigger	748
CHIN MAN	Jigger	747
CHIN SHING	Jigger	747
CHIN YUAN HSING	Jigger	875
PING CHUN 101	Jigger	711
I MAN HUNG	Jigger	772
MAN WEI 111	Jigger	790
YUNG CHUN 66	Jigger	772
CHENG HUI 1	Jigger	784
CHUAN FU 11	Jigger	784
MENG WEN 666	Jigger	996
YUNG YU 66	Jigger	798
SAN I 23	Jigger	863
CHANG CHU 1	Jigger	798
HSIANG MAN CHUEN 17	Jigger	778
WIN HENG	Jigger	877
ZHENFA 808	Jigger	790
SHINN DAR	Jigger	801
BAE FU 1	Jigger	801
CHII JYH 66	Jigger	734
TAI YING 1	Jigger	743
HSIN HARNG	Jigger	747
HER YOW 3	Jigger	478
HSIEH YU 62	Jigger	712
CHEIH MAN 1	Jigger	758
CHEIH HSIANG 661	Jigger	870
TE I 1	Jigger	869
SHUN YING 3	Jigger	811

* These are all Kalmar class (B-418) stern factory trawlers built Poland during 1974-75.

Source: Falkland Islands Fisheries Department

Appendix B3b.-- Falkland Islands. Licensed foreign fishing vessels,
second season, 1993

Vessel name/country	Vessel	
	Type	Size GRT
Bulgaria		
AFALA	Trawler*	2,468
AKTINI	Trawler*	2,467
OFELIA	Trawler*	2,468
KAPRELA	Trawler*	2,758
ROTALIA	Trawler*	2,468
Subtotal		12,629
Chile		
BETANZOS	Trawler	1,438
Falkland Islands		
SAO RAFAEL	Trawler	1,507
Honduras		
ALEGRIA	Trawler	349
ARCO	Trawler	696
AURORA 2	Trawler	978
Subtotal		2,028
Italy		
GABRIELLA C	Trawler	1,315
DE GIOSA T	Trawler	1,245
Subtotal		2,560
Japan		
CHIYO MARU	Trawler	3,739
CHIYO MARU 3	Trawler	3,292
CHIYO MARU 5	Trawler	3,314
NIITAKA MARU	Trawler	3,910
Subtotal		14,255
Korea (ROK)		
DAE JIN 7	Trawler	879
DONG WON 517	Trawler	859
DONGWON 519	Trawler	859
GOLDEN VENTURE	Trawler	2,873
PETERO 601	Trawler	809
TAE CHANG 85	Trawler	912
DONG YUNG 510	Trawler	351
PETERO 607	Trawler	504
DONG EUN 520	Trawler	377
PUK YANG 11	Trawler	2,511
DOO YANG 535	Trawler	889
Subtotal		11,823
Panama		
HORIZON	Trawler	1,082
PUK YANG 7	Trawler	599
SUR ESTE 705	Trawler	371
Subtotal		2,052
Poland		
BONITO	Trawler	2,440
GARNELA	Trawler	2,501
MANTA	Trawler	2,395
RYBAK MORSKI	Trawler	2,598
Subtotal		9,934
Portugal		
PARDELHAS	Trawler	1,106
Sierra Leone		
GLORY	Trawler	796

Spain		
PLAYA DE GALICIA	Trawler	1,021
NUEVO ALCOCERO	Trawler	2,849
PLAYA DE MOGOR	Trawler	750
ARPON	Trawler	856
ARNELES	Trawler	1,344
PUENTE PEREIRAS	Trawler	1,093
EGUZKI	Trawler	1,665
PESCAPUERTA CUARTO	Trawler	1,627
PATRICIA NORES	Trawler	1,070
HEROYA PRIMERO	Trawler	1,612
TELLEIRO	Trawler	2,074
LOITADOR	Trawler	1,267
JUGAMAR	Trawler	1,127
LA PENUCA	Trawler	1,272
FERRALEMES	Trawler	1,072
PRINCIPADO DE ASTURIAS	Trawler	1,527
ISLA ALEGRANZA	Trawler	655
ISLA MONTANA CLARA	Trawler	633
PUENTA LADEIRA	Trawler	868
FARPESCA CUARTO	Trawler	789
CONBAROYA TERCERO	Trawler	554
PESCAVIGO DOS	Trawler	1,632
SIL	Trawler	2,156
ESPERANZA MENDUINA	Trawler	1,866
FRAGANA	Trawler	554
CHICHA TOUZA	Trawler	644
PESCAVIGO UNO	Trawler	2,511
PLAYA DE PESMAR	Trawler	688
HERMANOS TOUZA	Trawler	1,140
BEATRIZ NORES	Trawler	1,024
CODESIDE	Trawler	529
TASARTE	Trawler	475
TEUCRO	Trawler	760
Subtotal		<u>39,704</u>
United Kingdom		
GRAMPIAN FURY	Trawler	621

* These are all Kalmar class (B-418) stern factory trawlers built Poland during 1974-75.

Source: Falkland Island Fisheries Department

Appendix C1a.--Falkland Islands. West European catch in the 150-mile
Falkland Islands Protection Zone (FIPZ) by country and species, 1987-91.

Country/Species	Year					
	1987	1988	1989	1990	1991	1992
	Metric tons					
France						
Loligo squid	65	-	-	-	-	-
Illex squid	1,361	-	-	-	-	-
Martialia	1	-	-	-	-	-
Hakes	208	-	-	-	-	-
Blue whiting	-	-	-	-	-	-
Hoki	-	-	-	-	-	-
Kingclip	-	-	-	-	-	-
Toothfish	5	-	-	-	-	-
Red cod	-	-	-	-	-	-
Rays	-	-	-	-	-	-
Other	14	-	-	-	-	-
Total	1,654	-	-	-	-	-
Greece						
Loligo squid	9	103	-	-	-	-
Illex squid	1,690	2,603	4,482	3,112	-	-
Martialia	-	4	0	-	-	-
Hakes	234	95	174	-	-	-
Blue whiting	107	6	44	-	-	-
Hoki	-	1	73	-	-	-
Kingclip	9	-	23	-	-	-
Toothfish	-	-	3	-	-	-
Red cod	-	-	-	-	-	-
Rays	20	-	4	1	-	-
Other	103	10	57	10	-	-
Total	2,172	2,822	4,860	3,123	-	-
Italy						
Loligo squid	476	67	5	-	2,335	2,167
Illex squid	4,056	3,320	10,274	4,407	56	179
Martialia	1	1	-	-	-	-
Hakes	444	179	84	-	4	186
Blue whiting	-	-	-	-	-	149
Hoki	-	-	-	-	-	54
Kingclip	10	12	2	-	1	14
Toothfish	1	-	-	-	-	21
Red cod	-	-	-	-	14	80
Rays	54	55	-	2	-	40
Other	119	22	5	8	-	35
Total	5,161	3,656	10,370	4,417	2,410	2,925
Netherlands						
Loligo squid	-	66	-	-	-	-
Illex squid	-	1,406	4,581	3,342	-	-
Martialia	-	-	-	-	-	-
Hakes	-	-	-	3	-	-
Blue whiting	-	-	-	-	-	-
Hoki	-	3	-	-	-	-
Kingclip	-	-	-	1	-	-
Toothfish	-	-	-	-	-	-
Red cod	-	-	-	-	-	-
Rays	-	-	-	-	-	-
Other	-	-	-	-	-	-
Total	-	1,475	4,581	3,346	-	-
Norway						
Loligo squid	-	-	-	2	-	-
Illex squid	-	-	-	1,324	-	-
Martialia	-	-	-	-	-	-
Hakes	-	-	-	26	-	-
Blue whiting	-	-	-	-	-	-
Hoki	-	3	-	28	-	-
Kingclip	-	-	-	2	-	-
Toothfish	-	-	-	2	-	-

Red cod	-	-	-	-	-	-
Rays	-	-	-	3	-	-
Other	-	-	-	3	-	-
Total	-	-	-	1,390	-	-
Portugal						
Loligo squid	71	383	14	24	3,054	1,395
Illex squid	327	1,322	8,693	5,276	132	24
Martialia	-	9	-	-	-	-
Hakes	134	6,588	385	509	49	23
Blue whiting	-	73	-	72	4	1
Hoki	-	64	1	233	10	48
Kingclip	2	227	9	39	3	6
Toothfish	-	27	-	1	1	3
Red cod	-	-	-	-	22	36
Rays	4	468	23	26	13	13
Other	5	687	20	199	-	-
Total	543	9,848	9,145	6,379	3,288	1,549
Spain						
Loligo squid	1,330	6,278	2,109	1,214	35,509	60,843
Illex squid	44,871	30,653	63,033	45,270	1,167	947
Martialia	-	37	-	1	-	1
Hakes	9,874	39,129	11,906	10,373	6,027	3,092
Blue whiting	58	707	328	2,624	5,980	9,862
Hoki	98	1,383	399	1,756	2,990	5,087
Kingclip	370	1,392	752	712	843	870
Toothfish	15	36	1	184	975	626
Red cod	-	-	-	-	2,297	4,169
Rays	203	724	670	764	1,076	1,227
Other	4,290	4,121	2,491	2,487	819	1,053
Total	61,109	84,460	81,689	65,385	57,683	87,777
United Kingdom						
Loligo squid	137	136	3	19	1,921	-
Illex squid	2,146	5,080	12,033	1,525	58	-
Martialia	5	1	-	-	-	-
Hakes	678	2,578	299	10	7	-
Blue whiting	45	68	8	1	-	-
Hoki	9	196	33	4	-	-
Kingclip	32	130	23	-	1	-
Toothfish	-	21	3	-	1	-
Red cod	-	-	-	-	3	-
Rays	29	180	53	-	1	-
Other	456	475	86	3	-	-
Total	3,537	8,865	12,541	1,562	1,992	-
Total	74,176	111,126	123,186	85,602	65,373	92,251

Source: Falkland Islands Fisheries Development, various years.

Appendix C1b.--Falkland Islands. East European catch in the 150-mile
Falkland Islands Protection Zone (FIPZ) by country and species, 1987-91.

Country/Species	Year					
	1987	1988	1989	1990	1991	1992
	Metric tons					
Bulgaria						
Loligo squid	-	-	-	5	-	-
Illex squid	-	-	-	328	-	-
Martialia	-	-	-	35	-	-
Hakes	-	-	122	85	59	-
Blue whiting	-	-	5,820	18,998	20,311	8,938
Hoki	-	-	796	878	40	44
Kingclip	-	-	-	-	1	-
Toothfish	-	-	80	2	-	-
Red cod	-	-	4	-	-	-
Rays	-	-	-	-	-	-
Other	-	-	2,247	1,768	1,478	-
Total	-	-	9,069	22,099	21,888	8,981
Poland						
Loligo squid	24,280	7,569	10,134	6,579	11,234	9,275
Illex squid	19,618	32,852	19,753	3,382	7,234	7,250
Martialia	3	5	-	7	2	-
Hakes	1,396	543	1,613	457	218	49
Blue whiting	46,908	42,486	30,073	49,649	23,920	14,901
Hoki	18,603	8,925	7,331	4,130	1,281	1,500
Kingclip	45	6	-	4	.4	-
Toothfish	-	1	-	-	-	-
Red cod	-	613	34	-	1	1
Rays	37	468	-	1	14	6
Other	867	74	208	71	5	5
Total	111,757	93,542	69,146	64,279	43,908	32,987
Total	111,757	9,848	78,215	86,378	65,796	41,968

Source: Falkland Islands Fisheries Development, various years.

Appendix C1c.--Falkland Islands. Asian catch in the 150-mile
Falkland Islands Protection Zone (FIPZ) by country and species, 1987-91.

Country/Species	Year					
	1987	1988	1989	1990	1991	1992
	Metric tons					
Korea						
Loligo squid	-	2	4	13	158	23
Illex squid	22,363	39,150	49,296	30,173	58,454	61,348
Martialia	-	-	-	1	41	-
Hakes	-	-	59	136	451	663
Blue whiting	-	-	1	8	91	218
Hoki	-	-	112	79	189	7,405
Kingclip	-	-	59	19	89	1,057
Toothfish	-	-	-	-	7	142
Red cod	-	-	86	45	496	2,713
Rays	-	-	923	670	5,835	6,795
Other	-	-	1	58	19	71
Total	22,363	39,152	50,541	31,201	65,830	80,436
Japan						
Loligo squid	3,816	816	4,280	4,439	2,534	5,034
Illex squid	66,454	97,117	113,161	52,913	91,057	63,268
Martialia	2	-	-	-	81	-
Hakes	3,530	1,719	1,253	220	1	5
Blue whiting	867	4,244	3,545	42	-	-
Hoki	426	1,637	1,168	262	6	14
Kingclip	271	177	97	50	1	1
Toothfish	10	33	38	2	-	-
Red cod	11	190	80	53	6	11
Rays	37	38	6	4	-	-
Other	399	351	223	4	-	-
Total	75,823	106,322	123,851	57,990	93,686	68,334
Taiwan						
Loligo squid	-	5	-	-	-	-
Illex squid	31,978	33,224	37,553	10,455	12,586	27,004
Martialia	-	-	-	-	17	-
Hakes	-	-	-	-	-	-
Blue whiting	-	-	-	-	-	-
Hoki	-	-	-	-	-	-
Kingclip	-	-	-	-	-	-
Toothfish	-	-	-	-	-	-
Red cod	-	-	-	-	-	-
Rays	-	-	-	-	-	-
Other	-	-	-	-	-	-
Total	31,978	33,229	37,553	10,455	12,603	27,004
Total	130,164	178,703	211,945	99,646	172,119	175,774

Source: Falkland Islands Fisheries Development, various years.

4.7

GUYANA

Guyanese fishermen are unlikely to initiate distant-water operations in the 1990s. The country's small commercial fleet is not capable of distant-water operations. Neither commercial nor artisanal fishermen are fully utilizing available coastal resources. The commercial fishermen have neither the financing nor the technical capability to launch distant-water operations.

There are only limited prospects for expanded foreign fishing in the Guyanese 200-mile exclusive economic zone (EEZ). Guyana is only a small country with a relatively limited EEZ. The Government through various bilateral access and joint venture arrangements has allowed modest numbers of foreign fishermen to fish in Guyanese waters. The Government has allowed some of these bilateral arrangements (Barbados and Cuba) to expire. Some additional licenses could be granted, especially as some observers believe that substantial unlicensed fishing currently occurs. As a result of the Guyanese and illegal foreign fishing, many important commercial stocks like shrimp are heavily fished. It is thus unlikely that any large number of additional vessels could be deployed on a sustained basis off Guyana.

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I. GENERAL BACKGROUND

Guyana's small fishing industry is composed of both commercial and artisanal sectors. The overall fisheries catch totaled only about 40,000 metric tons (t) in 1991, but this represented a substantial increase over the 24,000 taken in 1980 (Latin

America, appendix C2a1). The commercial fleet primarily targets *Penaeid* shrimp, but there is also a significant catch of small shrimp (seabobs) and a substantial finfish bycatch. The commercial shrimp companies caught 4,400 t of *Penaeid* shrimp and 1,500 t of seabobs with an export value of \$13.6 million in 1992. The companies also landed a

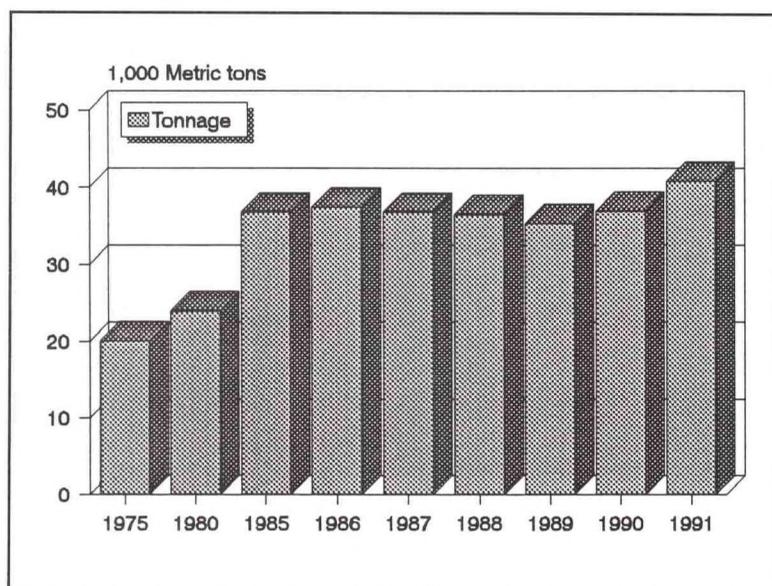


Figure 1.--The small Guyanese fisheries catch is little changed since 1985.

2,300 t finfish bycatch, including sea trout, red snapper, and marine catfish. The artisanal fleet produced about 34,100 t of finfish, including red snapper and sea trout.

The fishing industry is important to the small Guyanese economy. Fishery products (mainly shrimp) are one of the country's major export commodities. The fishing industry also provides about 8,000 jobs (fishermen and workers) and makes an important contribution to overall protein food production. While most of the high-quality product produced by the commercial fishermen is exported, much of the finfish bycatch and the artisanal catch is marketed domestically.

Local officials are concerned with the shrimp fishery as reported catches have declined in recent years. The cause of the catch declines are unclear, but are probably due primarily to resource problems caused by overfishing, illegal foreign fishing, and local artisanal fishermen taking juveniles in coastal estuaries. Restrictions imposed by neighboring countries have limited trawling to Guyana's own Exclusive Economic Zone (EEZ).¹ Other activities may be adversely affecting reported landings in Guyana, even though fishermen are actually catching the shrimp--giving the appearance of poor catches.² Licensed foreign fishermen may be transferring some of their catch at sea or landing it in foreign ports to avoid Guyanese landing taxes.

Guyanese fishermen are reportedly selling some of their catch at sea to Caribbean schooners which provide spare parts and other supplies in exchange for shrimp.³ The Government does not permit new entries into the fishery.

Guyana's coastal fishing fleet in 1993 is composed of 106 commercial trawlers and approximately 1,300 small artisanal fishing boats.

Commercial: The commercial fleet is composed entirely of shrimp trawlers using active gear (trawls) and includes 47 Guyanese-owned vessels and 59 foreign-owned vessels. The fleet has declined due to falling yields in the shrimp fishery and high Government taxes on fuel. The Government charges a 50-percent tax on the diesel fuel used by shrimp trawlers. As fuel is the

single-most important cost in shrimp trawling, often as much as 50 percent of total operating costs, this tax has had a debilitating impact on the companies involved.⁴

Artisanal: The artisanal boats, operated by private Guyanese fishermen, range from 7-19 m in length and use mostly passive gears such as beach seines, Chinese seines, and gill nets.

Guyana exports most of the export-grade fisheries production. The major species exported is shrimp. Fishery exports peaked at \$27 million in 1987 and have since fluctuated irregularly (Latin America, appendix E1). Shipments totaled an estimated \$18 million in 1991. While this amount is relatively modest, it is one of Guyana's most important export commodities.

II. HIGH-SEAS FLEET

Guyana has no high-seas fleet.

III. VESSEL SOURCES

Domestic shipyards have only a limited capacity to build fishing vessels. Most of the fishing vessels constructed in Guyana are artisanal fishing boats. The country has built a few shrimp trawlers as large as 16 m long. Guyana's national shipyard, Guyana National Engineering Corporation, built its first shrimp vessel in March 1981. The vessel was a 15-m wooden hulled trawler.⁵

Most commercial fishing vessels such as shrimp trawlers are imported. Fishing companies are allowed to import vessels, as well as gear and equipment, duty free. Only limited information on such imports is available:

Japan: The state fishing company, Guyana Fisheries Limited (GFL), acquired two shrimp trawlers in 1989 from Nichimo, a Japanese shipyard. The vessels had a theoretical fishing capacity of 4 t per week per vessel.⁶

United States: GFL ordered a new trawler from Bender Shipbuilding in 1982.⁷ Guyana America Seafoods Corporation ordered five shrimp trawlers from U.S. shipyards in 1983.⁸

IV. FOREIGN FISHING

Guyana licenses locally-based vessels, both domestic and foreign. The Government has a domestic licensing system. This affects both domestic and foreign-owned vessels based in Guyana. Artisanal fishermen annually pay a \$4.00 (G\$500) registration fee per boat and \$0.80 per vessel foot licensing fee. Commercial fishermen annually pay a one-time \$4.00 registration fee per boat and two annual licensing fees. The license to operate a fishing boat under the Fisheries Act is \$60. The license to fish in Guyanese waters under the Maritime Boundaries Act is \$1,200. The number of licenses issued by the Government has been declining in recent years (appendix A).

Guyana has conducted bilateral fishery relations with several countries. Guyana attempted to pursue both fisheries access agreements and joint ventures with several communist countries, but with limited success and most of the ventures involved have been terminated.

Barbados: Guyana and Barbados signed an access agreement in 1978 that provided for 20 Barbadian vessels to conduct shrimping and fishing operations within Guyana's 200-mile zone during unspecified periods. In exchange, the Barbadian fishermen were required to land and process 50 percent of their catch in Guyana.⁹ The two governments signed another agreement in 1989 granting access to Barbadian fishermen in exchange for technical assistance in tourism development.¹⁰ Under the terms of the 1989 agreement, the Barbadian fishermen were granted access for 6 months and were allowed a total catch of 1,840 tons.¹¹

Cuba: Cuba and Guyana concluded a bilateral fisheries agreement in 1973. Cuba agreed to provide the Guyanese a portion of their catch in Guyanese waters in lieu of a licensing fee. The arrangement continued for several years, but Guyana canceled it in 1979, apparently dissatisfied with the Cuban performance.¹² For details see the Cuban chapter of this report.

French Guiana: French authorities no longer permit Guyanese fishermen to fish off French Guiana.

Germany (GDR): Research vessels from the former GDR assisted Guyanese authorities with studies on the country's marine resources in 1980.

Jamaica: Guyana and Jamaica signed a 3-year access agreement in 1984. The agreement allowed 10 Jamaican vessels to fish within Guyanese territorial limits using trawls, gillnets, and longlines. An unspecified percentage of the Jamaican catch had to be landed and processed in Guyana.¹³

Japan: The Japanese Government provided loans and grants to Guyana in 1979 in exchange for access for about 20 trawlers to Guyanese waters.¹⁴

Norway: Although no bilateral agreement exists between Norway and Guyana, the Norwegian Ambassador, Elmar Thore Nielsen, discussed

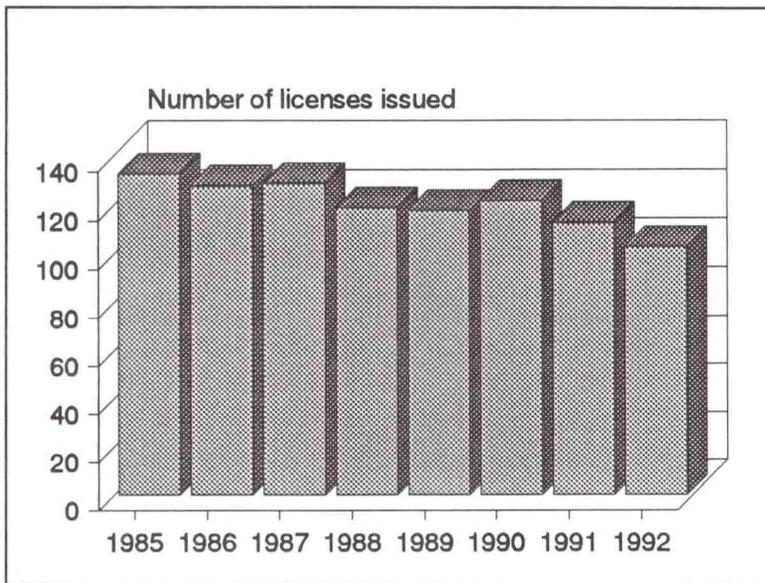


Figure 2.--The Guyanese Government has steadily been reducing the number of licenses issued to foreign fishermen.

possible fisheries cooperation with the Guyanese Prime Minister in 1984.¹⁵ Norway has helped finance a 1988 FAO/UNDP trawl survey conducted from French Guiana to Colombia.¹⁶

Suriname: Guyana and Suriname signed a reciprocal fisheries agreement in 1979.¹⁷ For details on the agreement see the Surinamese chapter of this report. The authors have no current information on the status of the agreement, but believe that it is no longer in force. Guyanese seizures of Surinamese vessels have been reported in the local press.

Trinidad-Tobago: Trinidad and Guyana signed a bilateral agreement in 1981 permitting 25 trawlers to operate off Guyana.¹⁸ No current details on Trinidadian-Guyanese relations are available.

USSR: The Soviet Union and the Government of Guyana signed their first fisheries Agreement in 1977. The terms of this agreement provided for joint fisheries research and training of Guyanese fishermen. A protocol signed by the two countries in 1978 called for the deployment of two Soviet trawlers in Guyanese waters, with the possibility of augmenting the number of vessels deployed to six. The protocol also provided for a Soviet-Guyanese joint fisheries venture. Relations between the two countries broke down in 1981 as Guyana became

disenchanted with prospects of continuing relations with the Soviets. Some observers believe that Guyana's experiences with the Cubans may have tainted their opinion of potential economic benefits from cooperation with communist countries.¹⁹

Venezuela: Some illegal Venezuelan fishing off Guyana probably takes place. Enforcement actions pose a problem for Guyana beyond the limited enforcement potential of the country's Coast Guard. Venezuela has a territorial claim to a substantial area of Guyana.

Guyanese fishery officials believe that foreign fishermen conduct substantial illegal fishing in Guyanese waters. FAO estimates that as many as 500 foreign trawlers are fishing off Guyana and may be endangering the shrimp resource.²⁰ The UNDP Regional Office for Latin America has appointed a senior consultant to assist the Guyanese Government assess this problem. Government efforts to limit this illegal fishing are hampered by almost non-existent enforcement resources. The Guyanese Coast Guard consists of two trawlers and two smaller boats, none of which are fully operational. The Coast Guard did seize two foreign boats in 1992 for illegal shrimping. The boats were held until the owners paid unspecified fines.²¹ The Coast Guard has also seized at least two Surinamese shrimp trawlers in 1993 using a trawler provided by a Guyanese company, Georgetown Seafoods.

No foreign vessels are known to use Guyanese ports to transship their fisheries catch.

V. JOINT VENTURES

The state-owned fishing company (GFL) has entered into joint ventures with companies from China, Japan, Libya, and the United States. GFL is one of the few remaining state-owned fishing companies in Latin America. Most countries determined that such companies were costly to operate and were of little use to either promote development or expand production. Guyanese officials stated in 1986 that GFL will remain a Government operation.²²

China: Guyana and China entered into a fisheries joint venture in 1984.²³ The venture involved the expansion of the operations of Guyana Fisheries Limited to include fish trawling, and fish processing and canning. China was to provide eight modern trawlers as well as processing facilities.²⁴ The venture is not believed to be currently active.

Japan: Guyana granted a 5-year lease with renewal rights to a Japanese-Guyanese joint venture, Marine Food Products Ltd. (MFPL), to operate part of GFL.²⁵ The Guyanese firm E.C. Vieira Investment Ltd. has a 70 percent equity interest in MFPL and the Japanese firm Nisshan Suissan KK 30 percent. A Nisshan Suissan official was appointed General Manager of MFPL, and it appears that the Japanese are responsible for much of the joint venture's management.²⁶ The company operated six shrimp trawlers in 1993.

Korea (DPRK): The DPRK (North Korea) signed an agreement with Guyana in 1978 calling for a joint venture in the exploitation of Guyanese maritime resources.²⁷ No further details are available, but the agreement is not believed to be active.

Libya: The Guyana-Libya Fishing Company (GLF) is a joint venture, 51 percent owned by the Guyanese Government and 49 percent owned by the Libyan Government.²⁸ The Libyan Arab Bank financed the purchase of trawlers and equipment from Brazil and the U.S. in 1984. GFL exports shrimp to the U.S. in boxes marked "Product of Guyana," and "Guyana-Libya Fishing Company." The shrimp itself is a wholly Guyanese product, and

thus U.S. Embassy sources indicated that the 1986 U.S. Executive Order banning all Libyan imports did not bar their importation. The venture is not believed to be currently active.

USSR: A 1978 protocol between Guyana and the Soviet Union provided for the formation of a joint venture that was to catch, process, and market shellfish. The authors have no information confirming that any such venture was actually formed.

United States: GFL signed a 5-year agreement on November 4, 1982, with the U.S. company Guyana America Seafood Corp. (GASCORP).²⁹ Under the agreement GASCORP will deploy five shrimp trawlers off Guyana. The shrimp will be processed at GFL's processing plant and exported. Under the agreement GASCORP was required to sell 1.8 t of fish each month to GFL. Georgetown Seafoods is a local subsidiary of Florida-based Sahlman Seafoods. The company operated 53 shrimp trawlers off Guyana in 1993.³⁰

VI. DISTANT-WATER OPERATIONS

Guyana conducts no distant-water operations. All Guyanese vessels are deployed exclusively in fisheries within the Guyanese 200-mile EEZ. Some of the foreign-owned vessels, however, may fish outside the EEZ.

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- _____. Paramaribo, April 4, 1979.

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2. W.H.L. Allsopp, UNDP Consultant, personal communications, October 10, 1993.
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27. U.S. Embassy, Georgetown, May 16, 1978.

28. U.S. Embassy, Georgetown, February 13, 1986.

29. U.S. Embassy, Georgetown, November 22, 1982.

30. U.S. Embassy, Georgetown, July 15, 1993.

APPENDICES

Appendix A.--Guyana. Fishing licenses
issued, 1985-92

Year	Licenses
	<u>Number</u>
1985	133
1986	128
1987	129
1988	119
1989	118
1990	122
1991	113
1992	103

Source: U.S. Embassy, Georegetown,
July 15, 1993.

4.8

PERU

Peru does not currently conduct high-seas fisheries and is unlikely to initiate such fisheries in the foreseeable future. The Peruvian fleet is primarily composed of coastal seiners and a small number of trawlers. Fishermen have begun to acquire longliners and hope to eventually enter the new oceanic squid fishery now conducted by foreign fishermen.

Seiners: Small coastal purse seiners with limited range currently dominate the fleet. The overall lack of investment in the fishing fleet during the 1970s and 80s has left the country with a fleet of aging vessels. Not only do these vessels have relatively high operating costs, but most are not capable of delivering sufficiently fresh product to processing plants to produce high-quality commodities. This significantly affects the quality of fishmeal produced in Peru and, as a result, prices obtained on world markets. It will be increasingly difficult for Peru to maintain current catches, let alone initiate new fisheries for other species, such as off shore jack mackerel, without substantial investments to add more modern vessels to the fleet. The current Fujimori Administration reports that some progress is being made in modernizing the fleet.

Trawlers: Peru acquired several distant-water trawlers from foreign countries during the 1980s. Many of these vessels are theoretically capable of high-seas operations. Most are, however, not in working order for even Peruvian coastal operations. Several have been scrapped and others have been abandoned in various ports. At least one is being used as a floating cold store.

Other vessels: Peruvian fishermen are acquiring longliners to enter the billfish and swordfish fishery in the southeastern Pacific, but credit problems have delayed construction orders. Companies also hope to eventually acquire jiggers and enter the oceanic fishery for giant squid.

The southeastern Pacific off Peru and Chile has been a major fishing ground for distant-water fishing. The Soviets and other foreign countries conducted one of the world's largest high-seas fisheries off Peru and Chile during the 1980s, focusing primarily on off-shore stocks of jack mackerel. Peru made little effort to restrict distant-water effort and even allowed the foreign fishermen access to Peruvian ports. Distant-water catches reached 1.5 million metric tons in 1990. The high-seas fishery for jack mackerel, however, has been largely abandoned by Soviet/Russian and other state-owned distant-water fishing fleets (Bulgaria, Cuba, and Poland) and a resumption of the fishery appears highly unlikely during the 1990s. The Russians and Cubans terminated the fishery in 1991-92 because it was unprofitable and will not to renew it. The limited value of the jack mackerel and other low-value species taken in the high-seas fishery and the high cost of distant-water operations suggest that such operations are not sustainable without the massive government subsidies that the former communist governments were providing.

Peru has also permitted significant distant-water fishing within its 200-mile zone. The granting of allocations to foreign fishermen and the formation of joint ventures has proven highly controversial in Peru. Many of the foreign companies involved had assets nationalized and vessels seized and found themselves facing

heavy fines and court judgements. Foreign companies, with the exception of state-owned fishing fleets from communist countries (Cuba, Poland, and the USSR), decided in the 1970s and 80s that Peruvian hostility to private industry and foreign investment made the country an unprofitable place to pursue joint venture associations. The current Fujimori Administration is now actively promoting investment. The new joint venture approach of the Fujimori Administration is attracting the interest of foreign fishing companies and apparently creating opportunities to deploy vessels off Peru. The number of vessels involved has so far been limited. The full impact of these policies has yet to be determined. It is unclear if this new approach to foreign companies represents a real shift in Peruvian attitudes toward foreign investment and is thus a permanent change of Peruvian policy or just the latest chapter of a constantly alternating Peruvian foreign fishing policy.

State-owned fleets: Arrangements were negotiated with communist countries during the 1970s and 80s which resulted in serious disputes involving protracted litigation. The unpopularity of these ventures and the collapse of the communist governments involved and along with them the massive state subsidies that sustained distant-water operations, means that such arrangements will not be renegotiated in the 1990s.

Private fishing companies: The current Fujimori Government has radically changed economic policy and is pursuing new policies much more supportive of private industry. The Administration is licensing private foreign companies for operations within Peruvian waters. The foreign fishermen during the 1980s primarily took tuna and billfish, but beginning in 1990 squid has emerged as the primary target species. The Fujimori Administration is granting licenses for foreign fishermen (mostly Japanese and Korean). The Total Allowable Catches permitted in 1991 and 1992 were 200,000-250,000 tons of squid respectively. Actual catches totaled about 120,000t in 1991 and 150,000 tons in 1992. This is a highly variable resource, however, and allocations at that level may not be possible every year. New joint venture and vessel leasing regulations approved in late 1992 are attracting the interest of several foreign companies. As a result there does appear to be some opportunities for distant-water fishermen off Peru during the 1990s. The Fujimori Administration's new joint venture/vessel leasing program is attracting considerable interest from several different countries. Ventures with Russian and French companies have already commenced and several more are likely to follow. It is unclear how these ventures will fare. The Fujimori Administration does appear to be much more committed to attracting foreign investment than were past Peruvian administrations, some of which were essentially hostile to foreign companies. (Peruvian businessmen charge that some administrations were even hostile to private domestic companies.) Successive Peruvian administrations, however, have found themselves pilloried in the media for granting such access rights and approving prior joint ventures.

Peruvian officials are concerned about foreign fishing on the high-seas in the southeastern Pacific. Peru is participating in the on-going multilateral negotiations on high-seas fisheries. If successful, any resulting convention will almost certainly strengthen the authority of coastal countries to regulate fishing of straddling stocks on the high seas. Some press reports suggest that agreement on a convention might be achieved by 1994,¹ but this appears to be an optimistic assessment. Peru has, however, taken a less strict position on the subject than neighboring Chile. Peru negotiated joint venture arrangements and provided port access to the distant-water countries operating on the high seas during the 1970s and 80s, while Chile pursued a much more restrictive policy. Peru currently permits foreign fishermen catching swordfish, tunas, and other species on the high-seas to tranship their catch through Peruvian ports. Few have chosen to do so, in part because the cholera problem in Peru adversely affects the price of product shipped from a Peruvian port.

Errata: The name of Peru's President (1968-75) was inadvertently misspelled. The correct spelling is Velasco.

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I. GENERAL BACKGROUND

Peru is a major fishing country and a leading world producer of fishmeal and oil. The country's fishermen annually land one of the largest catches reported by individual countries, but most of it is anchovy, sardine, and other low-value species which are reduced to fishmeal and oil. The country's fishermen also conduct smaller fisheries for hake, scallop, shrimp, and a variety of other species. Peru has for years been the leading Latin American fishing country, although in some years such as 1992, Chile has reported a slightly larger catch. Peruvian fishermen caught 6.4 million metric tons (t) in 1992, slightly less than in 1991 (Latin America, appendix C2a1). The Peruvian catch is highly variable as a result of the vulnerability of anchovy and other small pelagic species to climatic changes, especially periodic El Niño events. The 1992 catch was, for example, adversely affected by an El Niño event.²

The industry makes a significant contribution to the national economy, ranking as a leading export sector and providing an important source of food and employment. Fishery exports in recent years constitute about 13-15 percent of the country's overall export earnings (appendices M1-2).

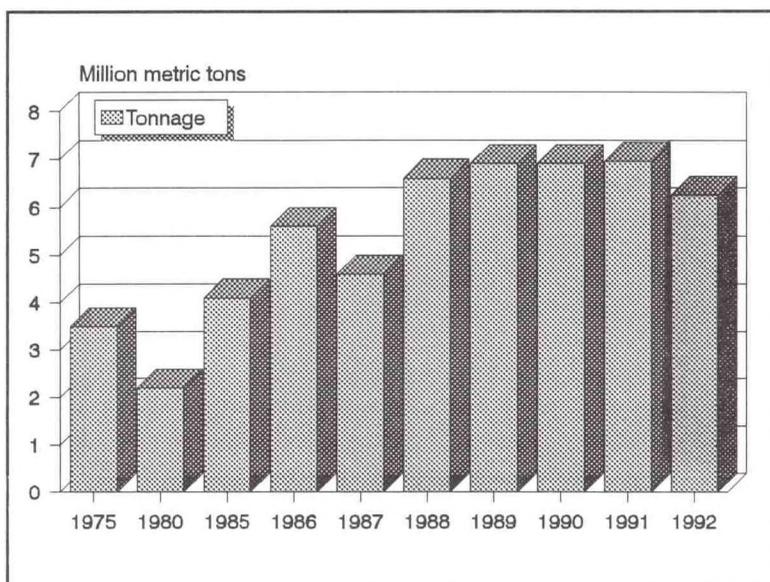


Figure 1.--Peruvian catches are subject to sharp annual fluctuations because of the reliance on small pelagic species.

The Peruvian fishing industry faces many serious problems, including obsolete vessels and processing plants, dated technology, inadequate quality control, insufficient capital, inefficient state corporations, and constantly changing Government regulations. The country's overall economic problems, especially difficulties in obtaining credit have also adversely affected the industry. The continued focus of the industry on the reduction industry (fishmeal and oil) has meant that the fishermen made limited progress in diversifying to smaller, but potentially more lucrative "non-traditional" activities. The quality control problems, especially the country's cholera outbreaks have adversely affected prices fishing companies developing "non-traditional" exports can command on world markets. These and other problems have prevented the industry from developing Peru's enormous potential as a leading world fishing country.³ Some observers are hopeful that the new pro-business economic policies of the Fujimori Administration will assist the fishing industry. The steps taken by the Administration in April 1993 to reenter international credit markets may be of great benefit to the fishing industry and other important economic sectors.⁴

One of the most serious problems facing the industry is the country's antiquated fishing fleet. Peru in 1992 reporting a fishing fleet of 565 medium- and large-sized vessels (100 GRT and larger) with a capacity approaching 0.15 million gross registered tons (GRT), one of the larger world fleets (Latin America, appendix B1). The actual Peruvian fleet is even larger as it consists of some smaller vessels. One 1990 report estimated a fleet of nearly 750 commercial vessels and a much larger fleet of artisanal vessels (appendix A1). Many of the Peruvian vessels, however, are inoperable and others, while they could be deployed, are in such poor condition that operating costs preclude profitable operations (appendices A1-2). The Fujimori Administration reports that it has made some progress in modernizing the fleet.⁵

The Peruvian Government has restricted the expansion of the fishing fleet at current levels. This restriction is

part of the Fujimori Administration's current effort to better manage the fishing industry. The Administration plans to ensure that fishermen targeting over-exploited species do not increase effort beyond current levels. New vessels for the reduction fishery will only be approved as replacements for older vessels that are being withdrawn from the fishery.⁶ This limitation is part of the Administration's increasing focus on "responsible" fishing which is reflected in the 1992 General Fisheries Law. Considerable discussion is currently underway in Peru concerning fisheries management.⁷ Some observers are particularly concerned that the privatization of PESCA PERU could result in another "boom" in vessel

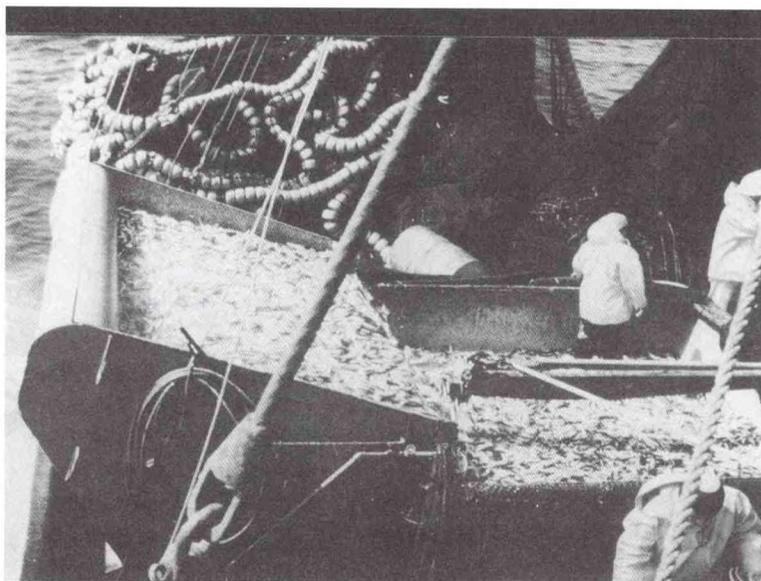


Photo 1.--Peru's small seiners take huge catches of anchovies and sardines.

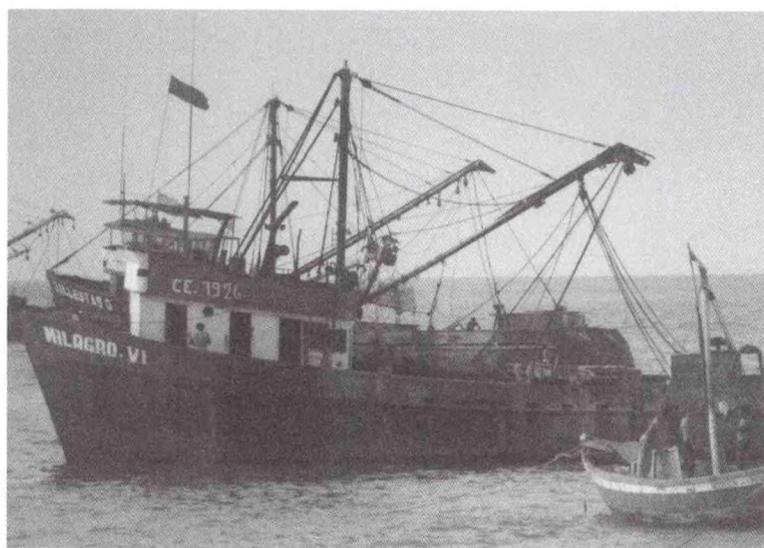


Photo 2.--Peru. The fleet is dominated by small seiners referred to locally as "bolicheras." Dennis Weidner

construction and eventual overfishing.⁸

A. Small Pelagic Seiners

Most of the Peruvian fishing fleet is small coastal purse seiners ("bolicheras"), with holds ranging from 80-350 metric tons. The fishermen target small pelagic species (anchovy, sardines, and jack mackerel). The small pelagic fishermen focus on the upper level of the water column, generally setting their nets on schools at 60-120 meters. They rarely operate more than 100 kilometers (km) off

the coast. Much of the fleet is composed of older, obsolete vessels which are no longer serviceable. One 1990 source indicated that Peru had nearly 700 small seiners, but only about 400 were operational (appendix A1-2). Another source suggests that only about 300 of the vessels may be operational.⁹

Fujimori Administration officials report that since 1990 that many modern new vessels have replaced older vessels.¹⁰

The small pelagic catch is primarily utilized for reduction to fishmeal and oil, but smaller quantities are also used for canning and direct human consumption.

Reduction: The small pelagic reduction fleet consists of about 90 percent of the fleet. The vessels are mostly deployed from the ports of Atico, Chicama, Chimbote, Callao, Huacho, Ilo, Pisco, Planchada, Supe, and Tambo de Mora.¹¹ Peru normally reduces 90 percent or more of the catch to fishmeal and oil. The vessels generally have no, or inadequate, electronic equipment to navigate and to find fish schools. Few have any system to maintain the quality of the catch in the hold.

Human consumption: Another fleet of seiners targeting small pelagic species lands its catch

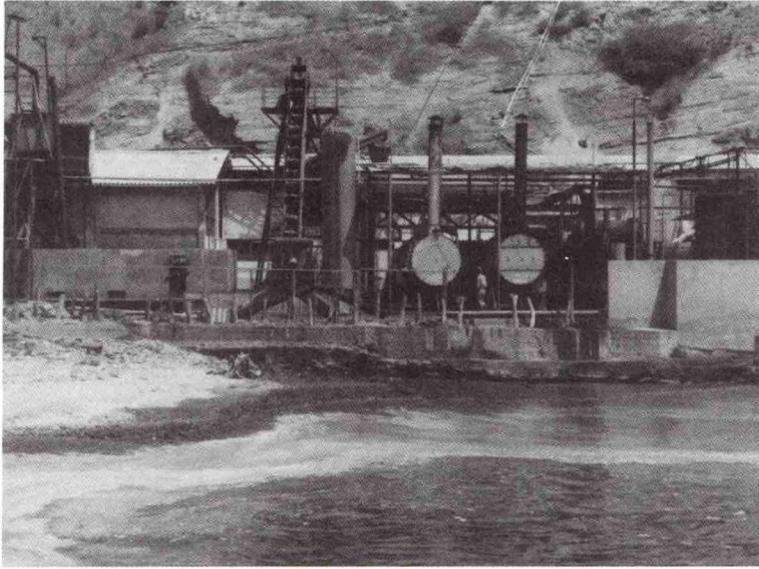


Photo 3.--Peru. The fishing industry continues to be dominated by the fishmeal industry.
Dennis Weidner.

primarily for human consumption. The vessels are some of the more modern seiners in the Peruvian fleet. Many have ice holds or refrigerated sea water systems to maintain the quality of the catch. About 100 seiners are involved in this fishery.¹² These vessels operate out of the same ports as the reduction fleet as well as Coishco and Paita. The catch is marketed fresh in domestic ports and used to supply freezing plants and canneries. Part of the

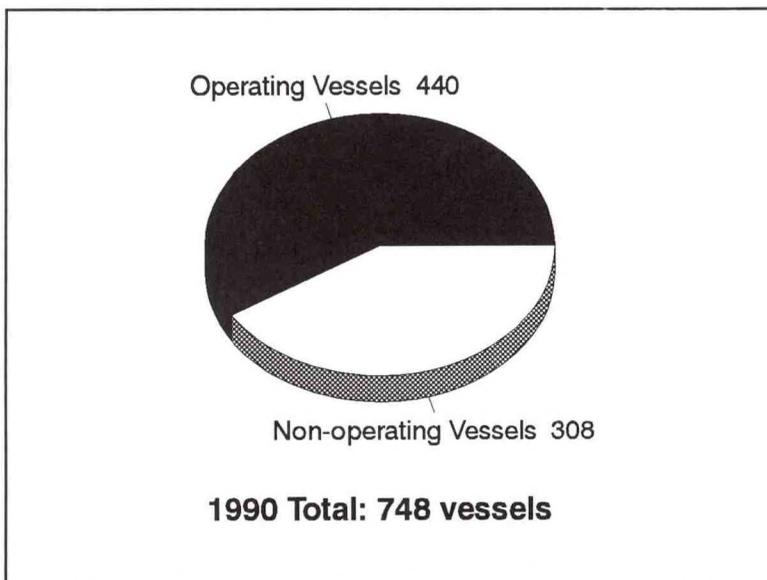


Figure 2.--A large number of Peruvian fishing vessels are more than 20 years old. Many have been idled and are no longer operable.

catch is also used for reduction, depending on market fluctuations.

The Peruvian seiner fleet is composed of many aging, expensive to operate vessels. Most of the fleet was built in the 1960s and early 1970s and the vessels average over 20 years in age (appendices B and D). Only the phenomenal fishing conditions off Peru permit the use of so many old vessels in such poor condition.¹³ The country's military Government nationalized the fishmeal industry along with the anchovy seiners in 1973 and turned the assets over to a new state fishmeal company, the Empresa Nacional Pesquera (PESCA PERU). The military Government subsequently returned the seiners to private ownership in 1976 once officials determined that they could not be profitably operated by PESCA

PERU. Many of the seiners deteriorated badly during this period because of inadequate maintenance. Government support of PESCA PERU and other state companies, as well as Peru's chaotic economic and political conditions, adversely affected the country's private fishing companies and vessel owner/operators, limiting profits and thus their ability to replace aging vessels and equipment.

The Peruvian Government's direct involvement in the industry was in sharp contrast to the situation in neighboring Chile where the Government played a much more limited role. Private fishing companies in Chile achieved highly successful results targeting the same species during an identical period of time and built an efficient, modern purse seine fleet.¹⁴ Several of the most modern vessels in the Peruvian fleet were reportedly sold to Chilean companies during the 1980s.

Many Peruvian vessel owners are experiencing serious problems due to the increasing age of the vessels, including obsolescent gear and technology, declining productivity, increasing fuel consumption, and high maintenance costs.¹⁵ Several Peruvian companies are attempting to modernize operations and have ordered new vessels

in recent years. (See section III. Vessel Sources.) Processing companies have reported the same problem with increasingly dated machinery. Declining fishmeal prices in late 1992-early 1993, however, may impair company plans to modernize



Photo 4.--Peru. Artisanal fishermen operate a variety of small boats.

both vessels and processing plants.¹⁶

B. Trawlers

Peruvian fishermen also operate trawlers. Various estimates suggest Peru has a fleet of 50-100 trawlers.

Coastal: Most of the active Peruvian trawlers are relatively small vessels deployed in coastal fisheries. Many have been reconditioned from old seiners.

Hake: Fishermen operate about 30 finfish trawlers for hake off the northern coast from Paita. Most of the hake trawlers are small vessels with holds of less than 100 tons; only about 10 of these trawlers have holds exceeding 100 tons.

Shrimp: The fishermen also operate about 30 shrimp trawlers in a small

shrimp fishery, along the northern coast. Most of these vessels are based in Caleta La Cruz. The shrimp trawlers are small vessels with holds averaging about 20 tons.

Offshore: Peru reports about 25 larger trawlers with onboard freezing capacity. Only a few of these vessels, however, are operational. (See II. High-seas Fleet.)

II. HIGH-SEAS FLEET

Various estimates exist concerning the Peruvian fleet of large (500 GRT or over) fishing vessels. Peru reported a high-seas fleet of 26 fishing vessels totaling 36,000 GRT to Lloyd's of London in 1992 (Latin America, appendices B2a1-2). Peruvian Government data submitted to FAO indicated a smaller fleet, as of 1989, of only 11 large vessels (appendices C1-2). Another source also listed 11 vessels in 1990, but

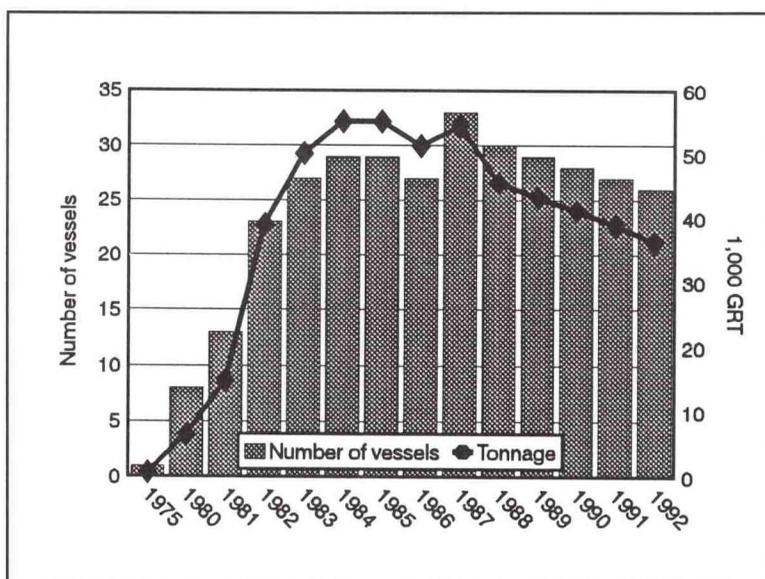


Figure 3.--Much of Peru's fleet of large vessels is composed of used trawlers, many of which did not prove profitable to operate.

only five were operational (appendix B). The U.S. Navy Office of Naval Intelligence (ONI) reports a fleet of 19 large fishing vessels and 8 support vessels in 1993 (appendices D and E). All of these large Peruvian vessels are relatively old, some exceed 30 years, and all were built in the 1960s and 70s (appendices B and D).

Most of these large vessels are believed to be trawlers and factory trawlers intended for deployment in the northern hake fishery or in the mid-water pelagic fishery. It is unclear how many of these vessels are actually active. Several of the larger vessels were obtained from Poland in 1979. These were older vessels when acquired in 1980 and have apparently not received even minimal maintenance. All but two have been scrapped or are rusting away idled in Peruvian ports. One is being used as a floating cold store and the other is being cannibalized for spare parts to keep the other running.¹⁷ Additional vessels were purchased in the Netherlands and other countries for the now defunct Peruvian state fishing fleet (FLOPESCA) in the mid-1980s (appendix B), but are currently inoperable. Peruvian fishermen also had difficulty deploying tuna vessels built in the United Kingdom, some imported in "kit" form.

III. VESSEL SOURCES

A. Domestic construction

Peru has a significant capacity to build fishing vessels. Peruvian shipyards build fishing vessels up to about 600 GRT (appendix D). The country's shipyards have built a few medium-sized tuna purse seiners. Most yards, however, primarily construct smaller seiners for anchovy and other small pelagics. The country's shipyards have built huge numbers of small purse seiners ("bolicheras"), mostly in the 180-350 GRT range. Peruvian yards have also built a variety of other small vessels, including shrimp trawlers.

The Peruvian ship-building industry expanded significantly during the 1960s to accommodate the demand for anchovy seiners, but encountered severe economic problems after 1972 when the anchovy stock collapsed and, as a result, few new vessels were ordered. Significant vessel construction for the domestic fleet was not resumed until 1990 with the onset of the new Fujimori Administration.

1960s: Almost all of Peru's small seiners have been built in domestic shipyards. Peruvian yards built hundreds of small seiners during the "Anchovy Boom" of the 1960s. Many existing shipyards expanded facilities and new yards opened to meet the escalating number of orders.

1970s-80s: Orders for new vessels virtually dried up in 1972 when the anchovy stocks collapsed and fishermen found they had many more vessels than required. Peruvian yards which had significantly expanded their facilities during the 1960s were unable to fill new orders because of the overcapacity of the fleet. Constantly changing Government policies and support for state companies during the 1970s-80s further discouraged private companies and individual operators from investing in new vessels. In addition, financing for fishing vessels was very difficult to obtain. Some yards turned to export markets with varying success.

1990: Peruvian observers report that building activity has revived in the 1990s with the more free market policies of the Fujimori Administration.

Private shipyards reported working on 27 new purse seiners in 1990 and expected to receive many additional orders, the largest number of new orders for domestic owners since the early 1970s.¹⁸ Several companies would have reportedly placed additional orders, but were discouraged by disputes with both union leaders and the state-oriented García A P R A Administration.¹⁹

1991: Peruvian yards in 1991 built 11 fishing vessels with a total tonnage of 3,500 GRT, ranking as the world's tenth most important builders of fishing vessels in 1991.²⁰ The median size of the vessels constructed was about 315 GRT (Latin America, appendix A1).

1992: Peru reported even greater building activity in 1992. The country's seven main shipyards were reportedly building 42 purse seiners.²¹ This abundance of orders followed the Fujimori Administration's announcement that the state-owned fishmeal company, PESCA PERU, was to be privatized,²² thereby creating expanded opportunities for private companies. Some companies are investing large sums in upgrading the Peruvian fishing fleet. The Gerencia y Desarrollo group, for example, has reportedly invested \$40 million in new vessels over the past few years.²³ One innovative company, Agropesca, has been buying old hulls and converting them into rebuilt trawlers, a process which is proving less expensive than buying entirely new vessels.²⁴ Vessel owners are concerned, however, that new Peruvian fishing regulations²⁵ are impairing their ability to finance vessel construction by only calculating 30 percent of a vessel's value as collateral.²⁶

The Fujimori Administration has given great attention to the fishing fleet. Administration officials have, in particular, addressed the credit shortage which has made investment capital difficult to obtain, impairing the ability of fishermen to modernize their vessels. MIPE officials report that they have helped to draw about \$200 million in new investments to the industry during 1991-92, much of which has gone into the fishing fleet.²⁷ As a result, officials report that many Peruvian fishermen can now conduct fisheries beyond 80 km of the coast.²⁸



Photo 5.--Peruvian shipyards, like this one in Paita, specialize in small seiners ("bolicheras").

Peruvian shipyards have also exported vessels. A few yards survived during the 1970s and 80s by obtaining foreign orders. Peruvian yards sold to companies in Chile, Cuba, Ecuador, Mexico, Venezuela, and other foreign countries.²⁹ The authors have little information on the export sales. Some of the sales, such as the ones to Cuba, were apparently arranged as part of barter arrangements. No details are available on the commercial arrangements and or the profitability of such sales.

Only limited information is available on individual Peruvian shipyards.

Andina de Desarrollo (ANDESA): This yard builds 350-450 ton seiners. ANDESA builds for both domestic and foreign companies and was working on four vessels for Ecuador in 1990.³⁰

Astilleros Gutierrez: This yard builds 350-ton seiners for the domestic market.³¹

Factoria Naval: This yard builds for only the domestic market and reported six vessels under construction in 1990.

Inversiones Navales (INSA): INSA builds seiners of up to 520 tons. The company builds for both the domestic and export market. Nine vessels were under construction in 1990, one of which was for a

Chilean company. This state-owned company was privatized in 1992.³²

Naves Industriales S.A. Astilleros (NAVINSA): NAVINSA at Callao builds anchovy seiners of up to 550 tons.³³

SIMA: SIMA, the Peruvian Naval shipyard located in Chimbote, was building a floating dry dock with a lifting capacity of 4,500 tons in 1990.³⁴ The company built four purse seiners in 1990, the largest was about 350 tons. SIMA also built a 580-ton high vessel in 1991.³⁵ SIMA also completed two 1,000 ton tuna purse seiners previously owned by PEPESCA.³⁶

B. Imports

Peru's larger vessels have mostly been imported, primarily from the Netherlands, Panama, Poland, Spain, and the United Kingdom (appendices B and D). Only a few larger vessels have been built domestically (appendix D). Almost all the large Peruvian trawlers, for example, have been imported. Companies have imported both used and new vessels. Two primary factors have limited imports. First, the country's economic problems have made it difficult for Peruvian companies to finance hard currency foreign purchases. Second, the Peruvian shipbuilding industry is extremely hostile to foreign competition, and tries to delay all government approvals of foreign vessel imports. Peruvian companies have, however, imported fishing vessels from:

Argentina: Peruvian fishermen considered purchasing 14 fishing vessels from Argentine shipyards in 1989.³⁷ Armadores Pesqueros de Peru applied to import 20 vessels from Argentina, and another Peruvian consortium of vessel owners applied to import 14 additional vessels, all in 1990.³⁸ No actual sales, however, were actually consummated with Argentine companies.

China: Peruvian companies ordered eight vessels from the Mawei shipyard of the Fujian province in Eastern China during 1990.³⁹ The vessels are each 350 GRT, but different sources identify them

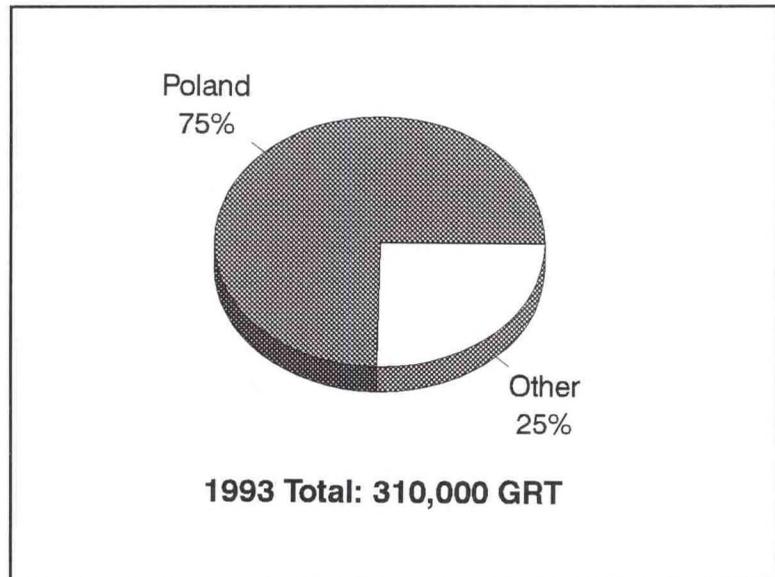


Figure 4.--Most of Peru's large fishing vessels were obtained in Poland. Almost all are now inoperable and are being scrapped.

variously as either trawlers or purse seiners.⁴⁰

Japan: A Peruvian-Japanese joint venture purchased an 800-GRT factory vessel from Japan in 1981.⁴¹ The *Challwa V* was Peru's, and one of Latin America's, first factory mother ships. Currently there are no large Japanese fishing vessels in the Peruvian fleet, but one Japanese-built oil tanker is deployed to service fishing vessels (appendix E).

Mexico: PESCA PERU, the state fishmeal company, ordered 50 fishing vessels from the Imensa yard in Mexico during 1989. The Peruvian Government in 1990, however, approved the purchase of only 27 of these vessels. Peruvian shipbuilders sharply criticized the Government's decision to permit the purchases and objected to any further imports.⁴² Unconfirmed reports indicate that no vessels were ever actually delivered.

The Netherlands: Peru purchased seven fishing vessels from the Netherlands in 1988, at a cost of nearly \$16 million.⁴³ Some observers criticized the vessels and the financial arrangements involved, but at least one observer was particularly impressed with their performance.⁴⁴ Only two large Dutch vessels (appendix B) and one smaller vessel remains active in the Peruvian fleet.

Norway: Del Mar was reportedly trying to purchase used Norwegian trawlers in 1985.⁴⁵ ONI reports one small Norwegian-built trawler currently in the Peruvian fleet.

Poland: Peruvian-Polish joint venture companies acquired 14 large Polish stern factory trawlers in 1979-80. The vessels were to be deployed in demersal fisheries, primarily for hake. The trawlers were the contribution of Rybni Eksport (RYBEX), the Polish partner, to a joint venture with the Empresa Publica de Servicios Pesqueros (EPSEP). (See section V. Joint Ventures.) Subsequently the vessels were transferred to joint ventures with private Peruvian companies. The vessels were factory vessels (2,000-2,500 GRT) which in 1979

unavailable.⁴⁸ The Peruvian companies purchasing the vessels had difficulty activating them and some were never actually deployed.⁴⁹ They were older vessels to begin with (appendix D) and most were not properly maintained by the Peruvian companies which purchased them. Several were eventually abandoned and heavily vandalized. ONI reports that 10 of the Polish vessels were still in Peru as of 1993 (appendix D), but the authors cannot confirm this. Involved legal actions complicated the operation and maintenance of the vessels. Eventually many were sold for scrap and proceeds used to partially reduce the losses of the Peruvian and Polish companies involved.⁵⁰ One press report indicates that a Peruvian-Polish joint venture was functioning in 1993, but provided no details.⁵¹

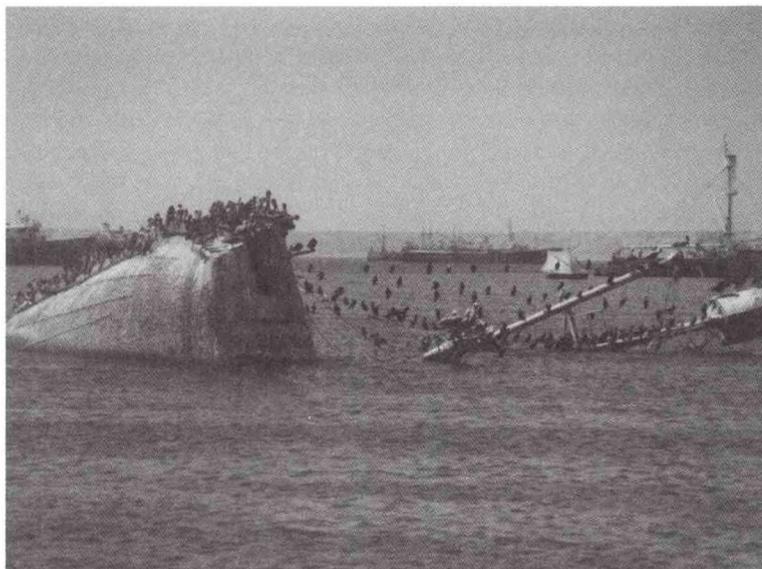


Photo 6.--An imported tuna seiner abandoned in the port of Paíta. Dennis Weidner

were aging, but still functioning vessels, ranging from 12-16 years old (appendix D).⁴⁶ They were equipped with processing lines for producing various forms of frozen fish, including fillets. Press reports indicate that the vessels were valued at substantial sums, to be paid through a share of the fish produced.⁴⁷ These joint ventures, however, failed after the Peruvian Government implemented restrictive new hake fishing regulations in 1981. (See "5. Joint Ventures.") The Polish partner withdrew and sold its vessels to Peruvian companies (Bahía, Conservas San Andres, and Pesquera Mochica, and Industrial Pesquera Piscis). Information on the terms of these sales is

Spain: Pesquera Orión and Sur Pacífico Empresa Pesquera acquired two 1,480-GRT stern factory trawlers (*Cernello* and *Brincador*), through a joint venture relationship with a Spanish company in 1978.⁵² (See V. Joint Ventures.) These vessels are still part of the Peruvian fleet (appendix D). Anepesca, a Peruvian consortium of vessel owners, ordered 60 purse seiners from Polyships, a Spanish shipyard, in 1990. Polyships built some of the vessels, but it is unclear how many were actually delivered to Peru. Press reports indicate that a few of the vessels have been delivered.⁵³ Presumably the difficult credit and foreign exchange situation in Peru has complicated payments to foreign companies.

C. Government controls

The Peruvian government is concerned about over capitalization of the fishing fleet. Ministerio de Pesqueria (MIPE) biologists believe several important stocks, especially the key anchovy and sardine stocks, are currently fished at levels exceeding maximum-sustainable yields.⁵⁴ The Government acted in 1991 to regulate any further expansion of the country's fishing fleet.⁵⁵ The terms of the law permit fishermen to replace existing vessels with new vessels of similar characteristics. Thus fishing companies can order new and used vessels as long as they are to replace

existing vessels. The Government at the same time canceled all previously issued permits authorizing vessel construction or imports.⁵⁶ Companies desiring to purchase vessels have had to reapply for permission under the revised management system.

Officials are convinced that an upgraded fleet could increase Peruvian catches. Much of the current fleet is composed of older vessels with high operating costs and inadequate systems to properly maintain the catch. This significantly impairs the quality of landings. Peruvian fishermen primarily target inshore coastal waters, rarely more than 80-160 km from the coast. Several important species available in the southeastern Pacific (horse mackerel, jack mackerel, Spanish mackerel, yellowfintuna, skipjack, squid, and other species) are only lightly exploited by domestic fishermen. MIPE officials, such as Vice Fisheries Minister Alfredo García, points out that the development of these fisheries requires replacing Peru's aging anchovy seiners by more modern, better equipped vessels with greater range.⁵⁷ MIPE officials report making some progress in acquiring such vessels.⁵⁸ The authors have noted considerable activity in Peruvian shipyards, but have no recent fleet statistics, to assess the current status of the fleet.



Photo 7.--Peru. The country has made only limited progress in expanding exports of high-quality seafood products. Dennis Weidner

taken by the coastal countries, but during the late 1970s, distant-water fishermen initiated a major fishery and steadily increased catches during the 1980s before peaking in 1990.

A. Historical development

Most foreign fishing in the southeastern Pacific has taken place on the high seas outside the 200-mile zones of Peru and Chile, but both countries have permitted limited coastal fishing by foreign-owned vessels.⁵⁹

1960s: Foreign distant-water fishermen took only small quantities in the southeastern Pacific during the 1960s. Coastal fishermen harvested almost the entire catch. While Peruvian and Chilean fishermen rapidly increased anchovy catches during the 1960s, they only lightly targeted most other species.

1970s: Distant-water fishermen during the early and mid-1970s increased catches, primarily as a result of joint ventures which provided access to Peruvian coastal waters. The overall distant-water effort, however, continued at relatively low levels. The primary countries involved were: Cuba, Japan, and Poland (appendix C4g1). The Cubans and Poles had joint ventures with the Peruvians targeting hake. The Japanese were conducting

IV. FOREIGN FISHING

The southeastern Pacific off the coasts of Peru and Chile is the second most productive fishing ground in the world (Latin America, appendix C3a2). Strong nutrient-rich upwelling combined with the cold northerly flowing Humboldt current creates a fantastically productive ecosystem sustaining a huge marine population based primarily on three key small pelagic species (anchovy, sardines, and jack mackerel). Most of the catch is

longline fisheries for tunas and billfish. The level of distant-water fishing increased sharply during the late 1970s when the Soviets initiated a major high-seas fishery for jack mackerel and other species (Latin America, appendix C4g1). The distant-water fishermen during the 1970s turned to the high seas in the southeastern Pacific because several countries, especially the United States and other important coastal countries, increasingly restricted foreign fishing on major grounds in the North Pacific and North Atlantic. The Peruvian Government, unlike neighboring Chile, made no effort to limit the expanding foreign fishery on the high seas outside its 200-mile Exclusive Economic Zone (EEZ), (Mar de Grau). Foreign fishermen increased catches from only 0.1 million t in 1977 to 0.6 million t in 1979 (Latin America, appendix C4g1). The Peruvian Government did, however, strictly control fishing within their EEZ. The Government limited foreign access in its EEZ to a few surplus species, including jack mackerel, hake, and tunas and after 1977 terminated or scaled back its commitments to the joint ventures. Korea initiated a small longline fishery for tunas and billfish at the end of the decade.

1980s: Distant-water fishermen significantly expanded their operations on the high seas in the southeastern Pacific during the 1980s. Peru terminated some joint ventures in 1987-81, but negotiated a major new joint venture with the Soviets in 1983. The foreign fishermen steadily escalated effort in the southeastern Pacific, harvesting 0.7 million t in 1985 and steadily increasing catches to 1.3 million t in 1989. The foreign fishermen set a record 1.5 million t in 1990 (Latin America, appendix C4g1). The Soviet and other foreign fishermen were harvesting from 6-8 percent of the overall catch in the southeastern Pacific (Latin America, appendix C4g2). Almost all of this was low-valued species such as jack mackerel taken in mid-water trawls.

1990s: The distant-water fishery peaked in 1990 when fishermen reported catching 1.5 million t, over 10 percent of the total catch in the area. Peru terminated the Soviet joint venture in 1991. The Soviets/Russians, the major distant-water fishing country, also sharply scaled back high-seas operations during 1991 (appendix C4g1) and reportedly terminated them altogether in 1992, although data is not yet available. As a result,

distant-water fishing is currently a very small part of the overall southeastern Pacific catch. A Korean tuna fisherman in 1989 discovered commercial squid stocks and a Korean-Peruvian joint venture, PERUKO, launched an experimental fishery in 1990.⁶⁰ The Japanese and Koreans rapidly initiated commercial operations⁶¹ and catches probably totaled about 125,000t in 1991 and 150,000 t in 1992. Almost all of the squid fishing is conducted within 200-miles under Peruvian licenses. While the quantities involved appear small in comparison to the enormous quantities of jack mackerel the Soviets were taking, the squid is of much greater value per ton.

B. Peruvian policy

The role of foreign fishermen and investors has been vigorously debated in Peru by Government and industry groups for years. Important elements of the Peruvian fishing industry have been highly critical of Government officials for their lack of action against high-seas fishing in the southeastern Pacific and for allowing foreign fishermen access to Peruvian waters. One long-time industry observer echoes the belief of many Peruvians when he insists, "Peru does not need joint ventures with foreign companies in order to catch or process its fishing riches. The reason is that Peru is not an underdeveloped country in fishing ..."⁶² Others Peruvians express a minority view and question the impact of laws and regulations discouraging foreign participation in the country's fishing industry. Two Peruvian legislators serving on the Congressional Fisheries Committee, Victoria and Victor Paredes, believe Peruvian fishermen cannot at this time fully utilize available resources. They believe that the limited role of foreign companies, especially companies from countries with market economies, has impaired Peru's ability to modernize the fishing industry. The two legislators estimate that the country's failure to implement rigorous quality standards, for example, has meant the loss of \$1 billion in export revenue.⁶³ Increasing number of Peruvians are beginning to reevaluate the potential impact of foreign participation in the fishing industry. The Fujimori Administration (1990-to date) has given special attention to both foreign fishing and investment.

1. 1972 Anchovy crisis

Much of current Peruvian fisheries policy can only be understood in the context of overall industry developments. The most significant event, and one which continues to impact the industry, was the collapse of the anchovy fishery in 1972. The Peruvian fishing industry was based almost entirely on catching anchovy for reduction to fishmeal. Private companies had rapidly expanded the country's fishing industry during the 1960s, building a major economic sector. Peru in 1970 had become the world's leading fishing country, harvesting 12.5 million t, mostly anchovy. Fishermen reported, however, a lower 1971 catch. The escalating fishing effort combined with an especially severe El Niño event caused the country's anchovy fishery to collapse in 1972-73. The result was an ecological and financial disaster.

Peruvian fishery officials in the early 1970s, as a result of the anchovy crisis, were confronted with a major crisis in what had been one of the country's most productive industries. Peruvian fishermen and fishing companies had built a fishmeal industry capable of catching and processing more than 13 million t of anchovy annually. By 1973 the catch had declined to less than 2 million tons. This disastrous decline decimated the industry, causing huge financial losses and widespread layoffs. Fishermen, workers, and business leaders appealed to the Government for assistance.

Peru's left-wing military Government's response to the crisis was massive state intervention in the industry, the consequences of which are still being felt by the Peruvian fishing industry. The Government's intervention proved to be a financial disaster. The nationalized fishing companies turned what had been a major industry providing tax revenue to a sector requiring years of massive state subsidies.⁶⁴ The Government during the 1970s and 1980s funded hundreds of millions of dollars in losses from inefficient, over-staffed state corporations. Even after massive expenditures of appropriated funds for more than 2 decades, Peru finds itself in the 1990s with an aging, increasingly inefficient fleet and antiquated fish processing plants.

Fishmeal: The military Government nationalized both the anchovy fleet and private fishmeal

processing plants in 1973 and formed a large new state company (PESCA PERU) to administer the seized assets. PESCA PERU found it politically difficult to lay off workers and close idled plants. Attempts to lay off workers resulted in highly publicized strikes and demonstrations and even seizures by the workers of the MIPE building. Available funds were thus used to keep unneeded plants open and idled workers on the payroll for years, instead of to modernize operations and acquire new technology. While many jobs were at least temporarily saved, the Government made little progress in restoring the industry to profitability or in introducing new equipment and technology needed to improve yields and produce better quality product. Peru was thus left with increasingly outdated vessels and plants. One 1993 assessment indicated that PESCA PERU's plants are 25-30 years old and that little investment or technological improvement has taken place since the 1973 nationalization. As a result, Peruvian plants have relatively low yields. The failure to improve handling procedures and processing methods has meant that PESCA PERU has been unable to compete effectively in the lucrative new market for high-quality fishmeal needed by the expanding world aquaculture industry.⁶⁵ Fujimori Administration officials insist that this has finally begun to change as a result of new investments in the industry.⁶⁶

Edible products: The Government also decided to create a state company to market edible fish in the domestic market, the Empresa Publica de Servicios Pesqueros (EPSEP). EPSEP proceeded to negotiate joint venture arrangements in 1972 with two communist countries, Cuba and Poland to supply fish for both the domestic market and export. (See 5. Joint Ventures.)

2. Foreign fishermen target southeastern Pacific

Foreign distant-water fishing in the southeastern Pacific during the early 1970s was limited. The area was of only minor importance to distant-water fishermen and reported catches were substantially under 0.1 million t until 1977 (Latin America, appendices C4g1-2). Even if the Polish joint venture catch was added to the total, distant-water fishing may have been only about 0.2 million t in some years. Much of the catch during the 1970s

was hake until the Peruvian Government terminated the Cuban and Polish joint ventures (1978-81) and those countries shifted effort grounds beyond the 200-mile limit where stocks of jack mackerel were available. The most profitable foreign fishery was probably the tuna longline fishery conducted by the Japanese.

Developments in other ocean areas during the late 1970s had a major impact on foreign fishing in the southeastern Pacific, radically changing the situation. Foreign distant-water fishermen mounted massive fisheries in the northern Pacific and north Atlantic during the 1960s. Coastal country efforts to control the foreign fishing through multilateral commissions proved only marginally successful and many important stocks were being badly depleted by the 1970s. The foreign catch off the United States alone in the northern Atlantic and northern Pacific was about 2 million t in the mid-1970s, causing immense damage to important commercial stocks and adversely affecting coastal fishermen. The United States and several other important coastal countries declared 200-mile zones in 1976-77 and began to strictly regulate foreign fishing off their coasts. As the United States and other countries began to effectively curtail foreign fishing, hard pressed foreign distant-water fleets desperately sought alternative new fishing areas.

One of the new areas the Soviets and other communist countries focused on was the southeastern Pacific off Chile and Peru. The Soviets targeted enormous schools of jack mackerel and other pelagic species that could be harvested by mid-water trawls on the high seas outside of Peruvian and Chilean control. While jack mackerel had little export value, it could be harvested in huge quantities and used to supply domestic markets in communist countries where consumers had few alternatives. The Soviets thus initiated limited southeastern Pacific operations in 1978 and launched a full-scale distant-water operation in 1979, harvesting nearly 0.6 million tons (Latin America, appendix C4g1). Other communist countries (Bulgaria, Cuba, and Poland) followed the Soviet lead and also launched high-seas fisheries in the area. Distant-water catches escalated steadily during the 1980s until peaking at 1.5 million t in 1990 (Latin America, appendix C4g2). Such estimates, however, are based on reports submitted by distant-water fishermen themselves to FAO. Some respected Peruvian experts are convinced that actual distant-water catches in the southeastern Pacific were much greater.⁶⁷

3. Peruvian government response

Peru itself benefitted little from this expanding high-seas fishery in the southeastern Pacific, but made no effort to limit it. The Peruvian Government even permitted the Soviets and other distant-water countries deploying high-seas fisheries to use Peruvian ports for supplies, crew exchanges, and vessel maintenance. While these activities generated some earnings, many Peruvians were convinced that port fees and support charges, and supply sales were minimal, given the massive catches the foreign fleets were reporting. In addition, the primary partner selected was the Soviet Union whose world-wide distant-water fishing effort was organized in such a way that significant local purchases (which would have to be paid in hard currencies) were insignificant.⁶⁸ Successive Peruvian Governments have tried various approaches to obtaining some economic

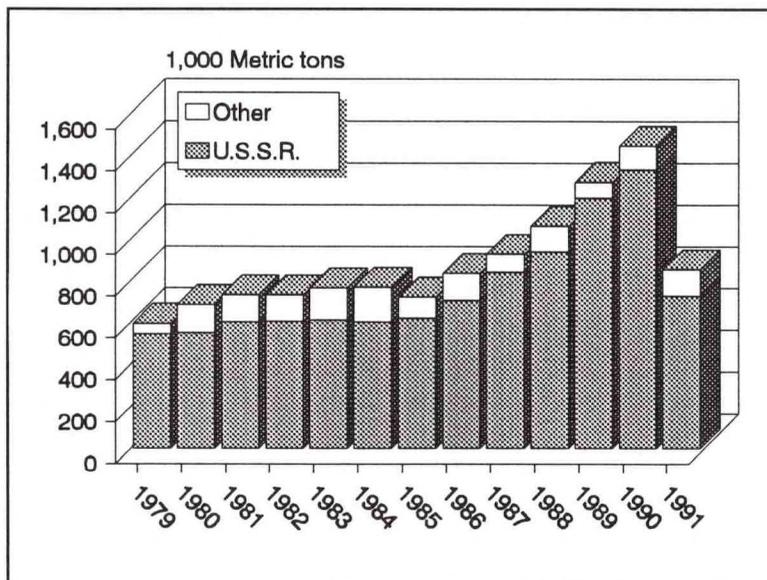


Figure 5.--Distant-water fisheries in the southeastern Pacific increased dramatically during the 1980s, primarily because of Soviet effort. The Russians/Soviets terminated operations in 1991-92.

returns from the expanding foreign fishery on the high-seas outside the country's 200-mile zone. Many of the arrangements they negotiated with foreign fishermen, however, have proven highly controversial in Peru.

Successive military and civilian Peruvian Governments decided that the best way of benefitting from high-seas foreign fishing off Peru was to offer the distant-water fishermen some access to Peruvian coastal waters. The foreign fishermen were attracted to Peruvian waters by higher catch rates as well as the right to catch more valuable demersal species like hake that were not available in their mid-water fisheries outside the 200-mile limit.⁶⁹ Peruvian officials reasoned that because the Soviets and other foreign fishermen were going to fish jack mackerel stocks on the high seas anyway they might as well give them some access to Peruvian waters in exchange for obtaining at least limited economic return from the fishery. Peruvian officials also negotiated arrangements allowing the foreign fishermen limited access to demersal stocks as well.

Peruvian Government attempts to offer foreign fishermen access to coastal waters through joint ventures and other access arrangements have proven to be a highly contentious domestic political issue.⁷⁰ Nationalistic elements, initially left-wing parties and subsequently conservative parties, as well as fishing industry groups, have sharply criticized virtually every contract negotiated by successive administrations to obtain financial and technical benefits from the foreign fishermen. The critics have been particularly harsh when the arrangements involved allocations of demersal finfish like hake which domestic fishermen also targeted. The first agreements with foreign state-owned companies were signed with Cuba and Poland in 1972-73 and involved joint venture partnerships. Subsequently during the 1980s access arrangements were negotiated with the Soviets. The same debate raged in other Latin American countries over access to natural resources, but it was generally left-wing groups criticizing United States and European companies. In Peru the issue was complicated when both left-wing (Velazco and García) and conservative (Belaúnde) administrations granted access to distant-water fishermen from communist countries instead of from the western countries that left-wing politicians routinely

criticized.

Peruvian fisheries policy over the past few decades has changed markedly as a result of both military coups and democratic elections. The various administrations have had sharply differing views on the role of the government and the participation of foreign groups.⁷¹ Programs and regulations implemented by one administration were invalidated by the next and in some cases reinstated by the following administration which in turn modified other regulations. The lack of a coherent, consistent policy has adversely affected both domestic fishermen and companies as well as foreign fishermen and investors interested in participating in the country's fishing industry. Such policy changes have invalidated contractual relationships negotiated by foreign and domestic companies as well as contracts negotiated with previous administrations. In some cases the changes have resulted in substantial losses by foreign and domestic investors. Investors complain that successive administrations were constantly "changing the rules of the game." The uncertainty over Government regulations has discouraged both foreign and domestic investors and significantly impaired the development of a modern fishing industry in Peru.⁷² The country's failure to fully utilize its enormous potential has proven disconcerting to government and industry groups in Peru. One economist writes in frustration that Peru is "a country that is dying of hunger while sitting on a bank of fish."⁷³

a. General Velazco/General Morales,
1968-80

The left-wing Military Government of General Juan Velazco Alvarado (1968-75) took several steps in 1970 to expand the state role in the fishing industry. The Government established the Ministerio de Pesquería as well as created state fishery corporations such as the Empresa Publica de Servicios Pesqueros (EPSEP), a state fish marketing company. The Velazco Government decided to expand the state sector much more significantly in 1973 and nationalized the fishmeal sector as part of its attempt to deal with the collapsing fishing industry.⁷⁴ (See "1972 anchovy crisis" above.) The Velazco Government at the same time (1972-73) negotiated joint ventures between EPSEP and

Cuban and Polish state fishing fleets. (For details see "Cuba" and "Poland" below.) Both ventures involved substantial allocations of fish. These ventures with communist countries followed the Velasco Government's overall left-wing policies, and as a result, only limited public criticism was permitted in the country's tightly controlled press.

The Government of General Francisco Morales Bermúdez (1975-80) made no attempt at limiting foreign fishing when distant-water fishermen first initiated large-scale operations on the high seas in 1978-79. The Morales Government even allowed the Soviets and other countries conducting the fishery to use Callao as a supply and crew exchange center for their high-seas operations. The Government did take a decidedly less favorable view to the close relations General Velasco had developed with the Cubans. The press was permitted to more openly criticize the Cuban joint venture and reported several unsavory incidents with Cuban fishermen in Callao. Subsequently two Cuban trawlers were sunk at Callao under mysterious conditions during 1977 and the perpetrators were never identified. The Morales Government finally decided to cancel the Cuban joint venture in 1978 and insisted on renegotiating the Polish joint venture. The Government replaced the EPSEP Polish joint venture with two ventures negotiated by private Peruvian companies.

b. President Belaúnde, 1980-85

President Belaúnde's first Fisheries Minister, René Deustua, addressed the foreign fishing question immediately after his appointment. He did not find the new private joint ventures with Poland any more acceptable than the prior Polish arrangements with EPSEP. Responding to complaints from domestic companies about Polish fishing, he executed "Operation Surprise" on September 18, 1980, to collect information on foreign vessels operating off Peru.⁷⁵ Based on the information generated Minister Deustua ordered 13 or 14 Polish trawlers seized on September 20-21, 1980, for allegedly fishing in a prohibited zone within 16 km of the coast.⁷⁶ The Belaúnde Administration subsequently issued new fishing regulations which affected the profitability of the Polish joint ventures. As a result, the ventures were subsequently liquidated at some loss to both the

Polish and Peruvian partners.

Peru's joint ventures with state-owned distant-water fleets from communist countries have significantly increased the supply of frozen fish on the domestic market. EPSEP began receiving frozen fish from joint ventures associations beginning in 1973. Since that time, EPSEP has generally supplied about 80 percent of the domestic supply of frozen fish. Supplies declined in 1981 after the Polish joint ventures were terminated (appendix J). The Belaúnde Administration was left with the same problem faced by previous military governments; i.e., how to obtain some economic benefit for Peru from the foreign distant-water fishing in the southeastern Pacific.

Peruvian officials turned to the Soviets to form the next important joint venture,⁷⁷ negotiating a fisheries access agreement in 1983. The agreement with the Soviets proved especially contentious and caused a major political controversy. The Peruvian press, no longer constrained by military-imposed press censorship, carried highly critical articles. Opposition parties, especially the Alianza Popular Revolucionaria Americana (APRA), seized upon the agreement and turned it into an issue in the 1985 election campaign. The new Fisheries Minister, Ismael Benavides, in the Belaúnde Administration, reacting to the APRA criticisms, decided to take a tougher stance and ordered several Soviet trawlers seized in 1985, charging that the Soviet state fishing company had not been paying the appropriate Peruvian taxes. The Soviets adamantly refused to pay such taxes, insisting that the Peruvian joint venture company, Empresa Pacifico, not the Soviet company, was liable. Former Fisheries Minister Benavides later told reporters in 1987 that he had concluded by late 1985 that the arrangements with the Soviets should be terminated unless the Government could obtain a substantially increased share of the their catch; Benavides suggested a sum of at least \$225 million, which would mean a fee of about \$320 for every ton of fish caught.⁷⁸ Benavides recommended that unless such a fee was paid the arrangements with the Soviets should be terminated, due to the difficulty of adequately controlling foreign activity. Some Peruvian officials have charged that the joint ventures with the Soviets have cost the Peruvian economy huge sums.⁷⁹

c. President García, 1985-90

The Alianza Popular Revolucionaria Americana (APRA) Administration of President Alan García decided to expand the state-owned sector of the fishing industry.⁸⁰ President García upon assuming office in 1985, ignored the past performance of Peruvian state companies and with much fanfare proceeded to expand existing state-owned fishing companies, reopen closed plants, and create a new state fishing fleet, the Flota Pesquera Peruana (FLOPESCA). The Administration also attempted to negotiate new bilateral government-to-government fishery joint venture agreements with the Soviet Union and other countries operating distant-water fleets in the southeastern Pacific. Candidate García had sharply criticized the foreign fisheries policy of the previous administration during his election campaign.

García's APRA Administration was determined to exact a greater share of the catch and profits from the foreign fishermen operating off Peru. President García personally announced in his inaugural address that "the days of foreign fishing companies enriching themselves in Peruvian waters have ended." The Administration demanded a substantially higher share of the catch than the distant-water countries had previously delivered. The foreign fishermen (except for the Cubans), however, balked at the Peruvian demands and the negotiations were unsuccessful. The Soviets were forced to withdraw from Peruvian waters when their remaining joint venture expired in 1986. After the failure of its initial 1985 attempts, the APRA officials did not immediately pursue further fishery negotiations. The Administration apparently decided in late 1985 that an interim agreement concluded in December 1985 with Cuba could provide adequate quantities of fish for domestic consumption until Peru's new state fishing fleet, FLOPESCA, could become fully operational. As a result, the Peruvian Administration refused to moderate its demands for a greater share of the foreign catch and rejected the terms offered by the Soviet Union and other countries. Both the Cuban joint venture and FLOPESCA, however, failed meet catch projections.

The Administration was eventually forced to reduce its demands and renew fishery discussions with the Soviets. The Soviets were also pushing for

a new joint venture agreement as part of overall bilateral debt restructuring talks. As a result, a new agreement was reached in 1988 with the Soviets. Separate talks also produced a new agreement with Poland. The García Government did obtain a slightly higher proportion of the catch, but in exchange, had to assume responsibility for a variety of fees (licenses, navigation permits, wages for Peruvian workers, landing rights, etc.) which the Soviets had previously paid (appendix F).⁸¹ Many observers believe that overall the new agreements were much less favorable to Peru than the previous Soviet joint venture which Candidate García had so sharply criticized.

The García Administration wanted interested countries desiring access to Peruvian waters to sign a government-to-government umbrella agreement and form joint ventures with local companies. The Administration especially encouraged the Japanese and Korean Governments to negotiate access agreements and form joint ventures for their tuna longline fishermen. The Administration's efforts, however, were largely unsuccessful. No bilateral access agreements were signed. While some joint venture companies were established, these appear to have been merely *pro forma* companies established to handle licensing and other legal matters for the Japanese and Korean vessels. While the authors have only limited information, none of these ventures appear to have involved significant investments in the Peruvian fishing industry.

d. President Fujimori, 1990 to date

The Fujimori Administration sharply criticized the preceding García APRA Administration for the fisheries agreements it negotiated with foreign countries, especially communist countries including Cuba, Poland, and the USSR. Fisheries Minister Raúl Sanchez Sotomayor was especially critical of the 1988 Soviet agreement which permitted access to Peruvian waters.⁸² Sanchez formed a special commission on August 13, 1990, chaired by Vice-Minister Jorge Muniz Ziches to study the agreements with communist countries.⁸³ As a result of the commission report, Sanchez determined that the access agreement with the Soviets would have to be renegotiated. When the Soviets refused to accept the Peruvian terms, the

Fujimori Administration canceled the joint venture in 1991.

The Fujimori Administration has instituted a strikingly new foreign fisheries policy. The Administration's fishery policies are heavily influenced by the overall desire to reduce the role of state companies and introduce competition into the Peruvian economy. The fishing industry is one of the economic sectors most affected by the Fujimori reforms because so much of it was owned and operated through state companies. The Fujimori Administration has reversed the statist-orientation of the preceding APRA Administration. Fisheries Minister Ing. Jaime Sobero Taira reports that Peru has changed the orientation of the Government and other state agencies to promote private industry rather than to compete with it.⁸⁴ The Administration is opening all sectors of the economy and allowing the private sector, rather than the Government, to allocate resources. The Administration is aggressively divesting state fishery corporations which have produced the enormous budget deficits that the Government has had to fund through appropriated funds. Many of these changes have been institutionalized in the new 1992 fisheries law (appendix L).

The Fujimori Administration is convinced that it is not in Peru's best interest to negotiate bilateral government-to-government fisheries access agreements.⁸⁵ The Administration has shown little interest in future joint ventures with the large foreign state-owned distant-water fleets because they returned little income to Peru.

The Fujimori Administration's approach has been to open fishing rights for surplus stocks to competitive bidding. (The Administration has to date designated only giant squid as a surplus stock.) The Administration has reported considerable success in license sales to two Asian countries (especially Japan and Korea). Very substantial allocations are involved (up to 200,000-250,000t annually).⁸⁶ This has become an important source of income. The fees earned from the sale of licenses have increased sharply; \$1.5 million in 1990-91, \$20 million in 1992, and \$23 million through June 1993.⁸⁷

The Administration is somewhat concerned about the status of stocks. Vice-Minister García,

for example, wants a detailed assessment of the stock completed before expanding the fishery further.⁸⁸ The Administration has on occasion reduced allocations, for example, canceling squid license issued in June 1991, and banning fishing from May 23-October 4, 1991. An Instituto de Mar (IMARPE) inspector is assigned to each vessel to ensure that the fishermen abide by the terms of their license and to collect biological data. Since 1992 Peru has required that the entire catch be landed in Peruvian ports.

The Administration has been steadily increasing the licensing fees. Fisheries Minister Canal estimated in 1991 that about 50 Japanese and Korean vessels were participating in the squid fishery.⁸⁹ The Peruvian Government reportedly raised the squid licensing fee sharply in 1991 from \$80 per vessel dead-weight tons (DWT) to \$200 per DWT, part of which was to be set aside in a special fund to help fight cholera and to provide food to low income consumers.⁹⁰ Unlike the joint ventures with the communist countries, the license fees are paid in hard currency. The Administration decided to change the licensing system in 1992. Initially the license fees had been based on vessel tonnage, but the Administration in 1992 began charging fees based on the quantities allocated. The foreign fishermen have to pay for the licenses, which are valid for 3-4 months, before they actually begin fishing. There is no refund if they do not take their entire quota. MIPE reports that has set the base price for various licitations at about \$165 per t of squid.⁹¹

Industry groups, while generally applauding the decision to terminate the joint ventures with the former communist countries, have criticized the Administration's new bidding system.⁹² As part of the commitment to opening the economy and letting market forces allocate resources, bidding for access to surplus species is open to both foreign and domestic fishermen.⁹³ Some Peruvian industry groups would like to enter the lucrative squid fishery, but are unable to compete in the bidding at this time with the established Japanese and Korean squid fleets. Thus they find it difficult to obtain needed investment capital to acquire the vessels to enter the fishery. Some Peruvian industry groups are demanding that the Administration revise the bidding system to provide some priority access for Peruvian fishermen interested in entering the

lucrative new squid fishery. The Administration does require that the foreign fishermen hire Peruvians to make up at least 20 percent of the crew. Officials believe that not will this provide jobs, but it will help transfer fisheries technology.⁹⁴

The Fujimori Government has made sweeping changes in Peruvian fisheries law. The most significant step was the passage of a new General Fisheries Law in 1992.⁹⁵ The principal goals of the law was to promote investment, standardize regulations, promote sustainable development to expand food production, increase employment and revenue, assure the responsible use of resources, and limit the state role. Several provisions of the law affect foreign fishermen. The Administration has since issued a series of implementing regulations affecting foreign investors and vessels, including licensing arrangements, charters, and joint ventures.

C. Peruvian licensing regulations

Peruvian law during the 1980s allowed the Government to authorize foreign fishing.⁹⁶ Temporary licenses for foreign fishermen did not require the negotiation of bilateral government-to-government agreements. Vessel owners had to submit license applications directly and allocations could only be made for stocks not fully utilized by Peruvian fishermen. The García Administration tried to force countries desiring to fish off Peru to sign government-to-government agreements, but reported little success. They also attempted to require foreign fishermen interested in access to Peruvian waters to form joint ventures with Peruvian companies, but again achieved little success. The García Administration passed a new Peruvian General Fisheries Law in 1988 (appendix L).⁹⁷ A variety of subsequent implementing regulations affected foreign fishermen. The law allows the Government to authorize the deployment of foreign factory trawlers under the principal of optimal utilization.⁹⁸ The regulations prohibited fishing in inshore waters, depending on the size of the vessels. Vessels over 150 net registered tons (NRT) are excluded from a 50-km coastal zone and demersal trawlers of that size must operate in waters deeper than 200 meters.

The Fujimori Administration initiated a major review of Peruvian fisheries legislation. The Administration's major goal was to introduce competition in the industry and took a variety of steps to remove Government restrictions on the marketing of fishery products.⁹⁹ The foreign fishermen were required to land at least 30 percent of their catch in Peru for distribution in the local market through a state food distribution system.¹⁰⁰ The Administration also decided to change the licensing system to charge on the basis of the quantities allocated rather than the vessel tonnage. The Fujimori Administration issued a new overall fisheries law in 1992, the *Ley General de Pesca* (appendix L).¹⁰¹ The law gives the Administration the authority to authorize foreign-flag fishing on surplus stocks, providing that the operation is: 1) part of a research study, 2) under contract with a Peruvian company, 3) a fishery for highly migratory species, 4) under the auspices of a bilateral government-to-government agreement, or 5) under the authority of a contract between the Peruvian Government and private entities. The necessary implementing regulations have not yet been issued for most of the provisions covered by the new law. The Administration has, however, already issued some new regulations such as the new vessel chartering regulations.¹⁰²

D. Bilateral relations

Successive Peruvian Administrations have conducted extensive bilateral fishery negotiations achieving varying levels of success. Many of the agreements negotiated have proven highly controversial and have emerged as important issues in several electoral campaigns. The basic pattern has been that after the governing party negotiates an agreement with distant-water fishing countries, opposition parties then criticize it for giving away too much to foreign interests. In some instances newly elected officials from former opposition parties subsequently find themselves criticized for negotiating agreements by the same opposition politicians they had previously criticized for negotiating unfavorable access arrangements.

Foreign countries operating off Peru have included:

Bulgaria: Bulgaria followed the Soviet lead and initiated a distant-water fishery off the western coast of South America in 1979. The fishery was primarily conducted beyond 200-miles in the southeastern Pacific off Peru and Chile. Catches peaked in 1983 at over 25,000 t (Latin America, appendix C4g1). Little information is available on the Bulgarian fishery. Their operations were often closely coordinated with Soviet fleet operations, but unlike the Soviets they never used Peruvian ports.¹⁰³ The Bulgarians withdrew from the fishery in 1986, but resumed limited fishing in 1990.

Chile: Chilean and Peruvian fishermen occasionally cross the marine border without authorization. The two countries have no reciprocal fishing agreement or understanding on joint management of shared stocks. Fishery officials have, however, recently begun a dialogue to address this problem and some informal arrangements have been discussed.¹⁰⁴

Cuba: Peru and Cuba have an extensive history of fishery contacts dating back to the early 1970s.¹⁰⁵ The Cuban

Government succeeded in obtaining access to Peruvian coastal waters for the expanding fleet of its distant-water fishing company (FLOCUBA).¹⁰⁶ Initial Cuban-Peruvian cooperation during the 1970s was through a joint venture. (See V. Joint Venture.) The joint venture enabled Cuba to increase catches in the southeastern Pacific from zero in 1972 to 55,000t in 1978. Catches under the joint venture within Peruvian waters were normally 20,000-40,000 t annually, primarily hake, but the Cubans also operated outside of the Peruvian 200-mile limit. A new military Government headed by General Morales assumed office in 1975 and was less favorably disposed toward Cuba. After the 1977 attacks on Cuban trawlers and street incidents in Callao, the Peruvian Government canceled the Cuban joint venture in 1978. Cuban-Peruvian fishery relations then languished for several years. FLOCUBA continued fishing in the southeastern Pacific, but on grounds outside the Peruvian and Chilean 200-mile zones. The Cuban catch declined in 1979 to only 19,000 t, but recovered as FLOCUBA, with Soviet assistance, gradually improved their offshore mid-water fishing techniques. While Cuban catches by 1980 actually exceeded those under the joint venture, they had been forced to shift this fishery from hake to less desirable jack mackerel, almost certainly impairing their economic returns. The Cuban catches during the 1980s fluctuated sharply, but the authors have no information explaining these fluctuations. They

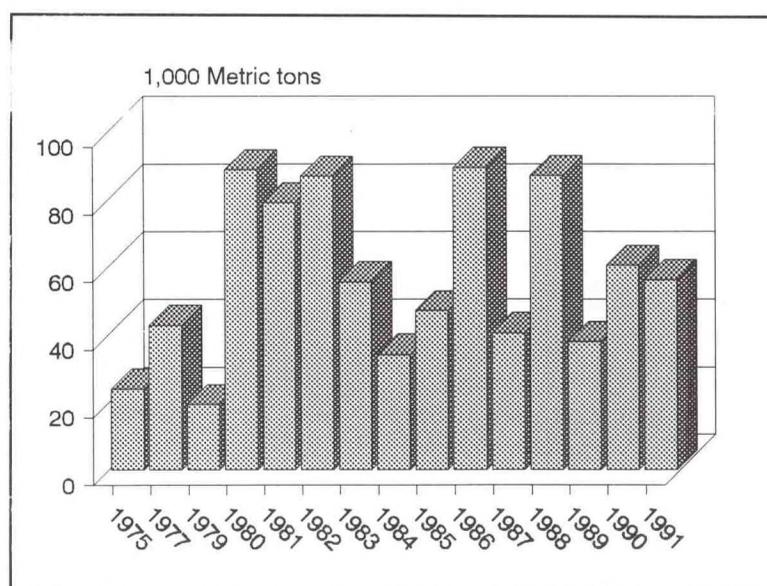


Figure 6.--Cuban catches off Chile and Peru have fluctuated significantly. Cuban sources indicate the fishery was terminated in 1992-93.

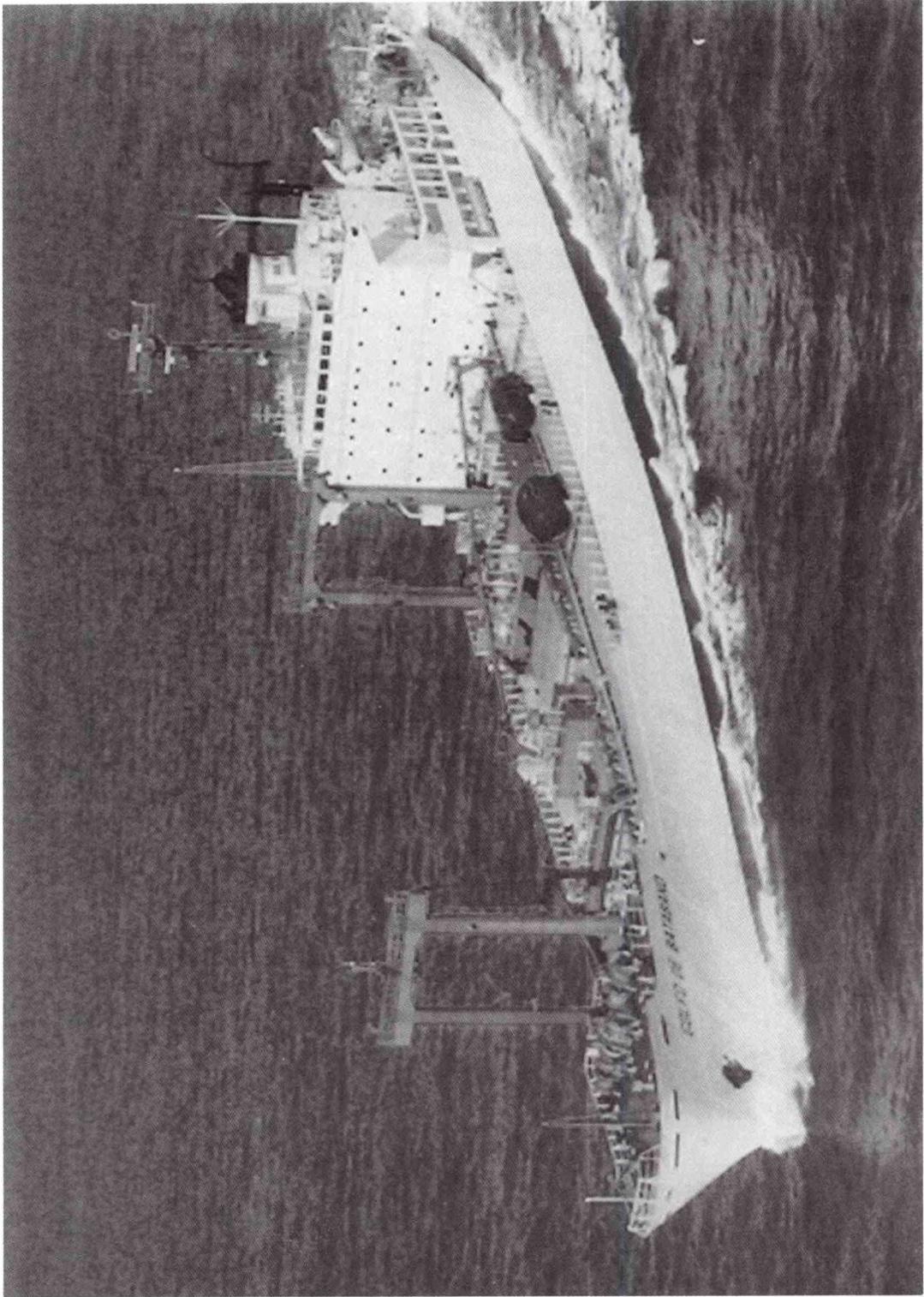


Photo 8.--Cuba has a fleet of refrigerated cargo vessels to service its distant-water fleet operations off Peru and other countries.

do not seem to be due to FLOCUBA decisions to redirect fishing effort to other grounds (Cuba, appendix E). Cuban catches in 1980-82 varied from 79,000-89,000 tons. The catch declined in 1983 and 1984, but began increasing again in 1985. The election of President García in 1985 led to a reassessment by Peru of the fisheries relationship with Cuba. The García Administration with its economic nationalist, statist approach was initially favorably disposed toward expanding ties with Cuba. Cuban and Peruvian officials, after a series of meetings in 1985, decided to renew fishery exchanges and agreed to various cooperative projects. The two countries negotiated a new joint venture/access agreement in 1985. Another agreement was signed in 1987. (See section V. Joint Ventures.) Cuban catches declined in 1989 after the joint venture was canceled, but recovered partially in 1990 to 60,000 tons. The 1991 catch dropped slightly to 56,000 tons. Cuban officials have recently contacted Peruvian officials concerning the possibility of a bilateral access agreement, but Fujimori Administration officials concluded that the terms offered were not adequate.¹⁰⁰ Precise 1992 Cuban catch data is not yet available, but the increasing domestic shortage of fuel apparently forced FLOCUBA to terminate or sharply curtail distant-water operations in the southeastern Pacific during 1992.¹⁰¹

Ecuador: Ecuadorean and Peruvian fishermen regularly cross their common marine border without authorization, resulting in occasional seizures.¹⁰² The two countries have no reciprocal fishing agreement or understanding on joint management of shared stocks. Fishery officials have initiated bilateral cooperation talks and have drafted a possible fisheries agreement.¹⁰³ The draft agreement proved highly controversial and the authors have no further information indicating that the agreement was eventually signed and ratified by the two governments.¹⁰⁴

European Community (EC): EC fishermen have not fished in the southeastern Pacific since the mid-1970s when German fishermen reported small catches (Latin America, appendix C4g1). Peruvian Fisheries Minister Labarthe in

September 1986 visited Spain and other countries in an effort to promote interest in Peruvian fisheries.¹⁰⁵ EC fishermen, especially Spanish fishermen, have expressed some interest in access to Peruvian waters. Peruvian officials have reportedly discussed the EC interest in detail with Peruvian industry leaders.¹⁰⁶ Despite some EC fisheries assistance to Peru, the EC did not manage to obtain access to Peruvian grounds during the 1980s.¹⁰⁷ EC fishermen could theoretically operate beyond Peru's 200-mile limit, but have little interest in the jack mackerel and other low-valued species available on the off-shore grounds. EC fishermen would be primarily interested in access to coastal grounds where they could fish hake and other more valuable demersal species. EC officials have contacted Peruvian officials, but serious discussions have not yet taken place. Press reports suggest, however, that Peruvian officials are interested in a possible agreement similar to the agreement the EC signed with the EC in 1992.¹⁰⁸ A few joint ventures have reportedly already been formed by individual EC companies (French and Spanish), but available details are sketchy. (See V. Joint Ventures.)

Georgia: Some of the former Soviet vessels which were deployed off Chile and Peru have been transferred to a new Georgian fleet. Unconfirmed reports indicate that these vessels have been withdrawn from the southeastern Pacific. The



Photo 9.--The Japanese have promoted good relations with Peruvian officials through various fishery assistance projects, including donations to this fishery training center at Paíta. D. Weidner

vessels have been redeployed to various grounds (West Africa, New Zealand, and in the Black Sea).

Japan: Japan has for years deployed substantial numbers of vessels in the southeastern Pacific. The Japanese catches since 1980 have fluctuated from a low of 12,600 t in 1980 to a high of 36,200 t in 1985 (Latin America, appendix C4g1). The authors do not have data revealing the precise location of Japanese fishing in the southeastern Pacific, but believe much of the effort was deployed off Peru, often with vessels licensed by the Peruvian Government.¹⁰⁹ The Japanese mostly deployed small longliners, but beginning in 1991 began expanding operations and shifting the focus of their distant-water fishery in the area to squid.¹¹⁰ The Japanese catch in 1992 probably exceeded 200,000 tons. The Japanese Government

has assisted their fishing companies in their dealings with Peruvian officials by promoting several fisheries assistance projects, including aid to research institutes, construction of a research vessel and port, and help in developing a squid fishery.¹¹¹ The fishery relationship with Japan has not been as controversial as that of the Soviet Union and other communist countries which fished off Peru. This is probably due to three basic factors: the Japanese 1) did not interfere with established Peruvian fisheries, 2) paid fishing fees in hard currencies rather than a share of the catch, and 3) maintained a long-term fisheries assistance program. The license sales to Japan and Korea netted the Peruvian Government about \$20 million in 1992.¹¹² The access arrangements for Japan, however, may prove more controversial in the future as Peruvian industry groups demand that they be given some priority access to squid licenses which the Japanese and Koreans are now purchasing.

Tuna longline operations: The Japanese tuna fishermen focus primarily on bigeye, other tunas, and billfish.¹¹³ The deployment of vessels is highly seasonal and peaks during the 3-4 months when bigeye have the highest fat content. A substantial number of Japanese vessels have been deployed in this fishery. The Japanese, for example, purchased over 100 Peruvian licenses in 1979.¹¹⁴ Additional Japanese vessels apparently operated without

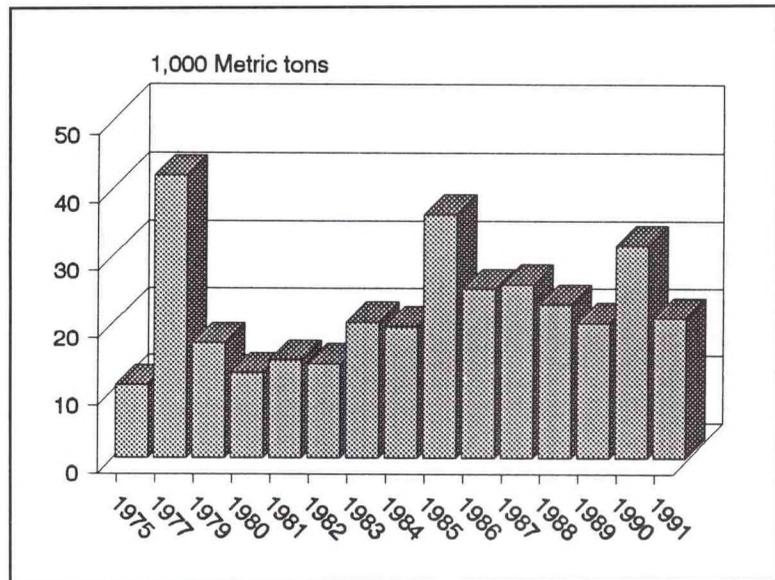


Figure 7.--Japanese catches in the southeastern Pacific were less than 40,000t, mostly tunas, during the 1980s, but have been much larger beginning in 1992 because of the new squid fishery.

licenses under a provision exempting foreign vessels landing 20 percent of their catch in Peru from the requirement to buy licenses.¹¹⁵ Peru sharply increased tuna licensing fees in 1982, but subsequently decided to reduce them in exchange for Japanese assistance in developing a squid fishery.¹¹⁶ Perhaps as a result, Japanese catches increased sharply in 1983 (Latin America, appendix C4g1). Many of the Japanese vessels operating off Peru are associated with the Japanese Federation of Tuna Cooperatives (Nikkatsuren). García APRA Administration officials encouraged the Japanese to form joint ventures, but the Japanese have generally declined to do so, in spite of certain advantages under Peruvian law.¹¹⁷ The Administration held talks with Japanese Government officials in 1988 and succeeded in negotiating fees of about \$120 per ton. Details on the negotiations, however, are limited. While the 1988 talks did not lead to an access agreement as envisioned by Labarthe, the contacts did lead to an extended discussion of tuna and billfish access conditions. Nikkatsuren had longlined tuna under Peruvian licenses for several years. Their catch of tuna and billfish totaled about 15,000 t in 1986. Nikkatsuren wanted to continue purchasing licenses to fish off Peru, but the new Peruvian General Fisheries Law in 1988 reportedly required a government-to-government access agreement. The new law made it almost impossible for Japanese fishermen to continue their fishery

without the Japanese Government first negotiating an access agreement. The provisions of the 1988 General Fisheries Law made it impossible for the Nikkatsuren to negotiate independently. Some preliminary talks were conducted through the Japanese Embassy in Lima, but no actual agreement was ever signed. García Administration officials wanted the Japanese fishermen to also form joint ventures with Peruvian partners, but the requirement for a government-to-government agreement was reportedly the greatest obstacle to continued Japanese operations off Peru. The Fujimori Administration's new foreign fisheries policy had a significant impact on the Japanese. Administration officials decided not to insist on a government-to-government agreement. Instead they placed increased emphasis on revenue from the sale of licenses and have steadily increased fees. The Japanese significantly modified their operations, changing the focus of operations off Peru from tuna to squid. Unconfirmed reports from Peru suggest only limited Japanese tuna fishing occurred in 1992. Press reports in 1992 indicated that 15 Japanese vessels were to be transferred to Chile and based in Arica, possibly vessels that were to be moved from either Peru or Ecuador.¹²⁵

Squid operations: Japanese fishermen are developing an important new squid fishery in the southeastern Pacific. They initiated squid fishing in 1991 and reportedly deployed 20-30 squid vessels in 1992.¹²⁶ This new fishery targets giant squid (*Dosidicus gigas*), a species not taken by the Peruvians in significant quantities.¹²⁷ The Peruvian squid fishery reportedly begins in May and lasts about 10 months. The Fujimori Administration as part of its competitive philosophy has opened squid allocations to public bidding. As a result, the Administration has substantially increased revenue from the sale of licenses. The Japanese companies involved have decided to continue fishing off Peru despite sizeable increases in licensing costs, especially during 1992. The Fujimori Administration let bids for 100,000t of squid on March 20, 1992 at a minimum license fee of \$120 per ton. Two Peruvian companies (All Fish and Santa Magdalena) contracting Japanese

fishermen were awarded 80,000 t and another company contracting Korean fishermen the remainder. The final fee was \$141 per ton.¹²⁸ A second licitation for bids was canceled due to lack of interest. The Peruvian Administration was planning a third licitation for 90,000t of giant squid in June 1992 for a minimum licensing fee of \$185 per ton and Japanese, Korean, and Peruvian companies expressed interest.¹²⁹ Press reports suggest that Peru raised minimum licensing fees again in 1993 by about one-third.¹³⁰ Japanese companies announced the 1993 deployment of 30 squid jiggers off Peru. The Japanese reported having secured a 67,000 t allocation for fees totaling \$10.8 million, \$160 per ton.¹³¹ The participating Japanese groups are: the Hokkaido Highseas Fisheries Association, KSJ Group, Peru Squid Fishing Development Association, and Zengyoren Group.

Korea (ROK): Korean fishermen since the mid-1970s have deployed a few fishing vessels in the southeastern Pacific. Korean fishermen through 1990 generally reported catches of less than 1,000t in the area, although they caught 4,600 t in 1980 (Latin America, appendix C4g1). The authors believe that most of this Korean effort in the southeastern Pacific has centered off Peru. The Koreans at first deployed mostly tuna longliners but in 1990 a Korean tuna fishermen encountered substantial squid stocks.¹³² The Koreans

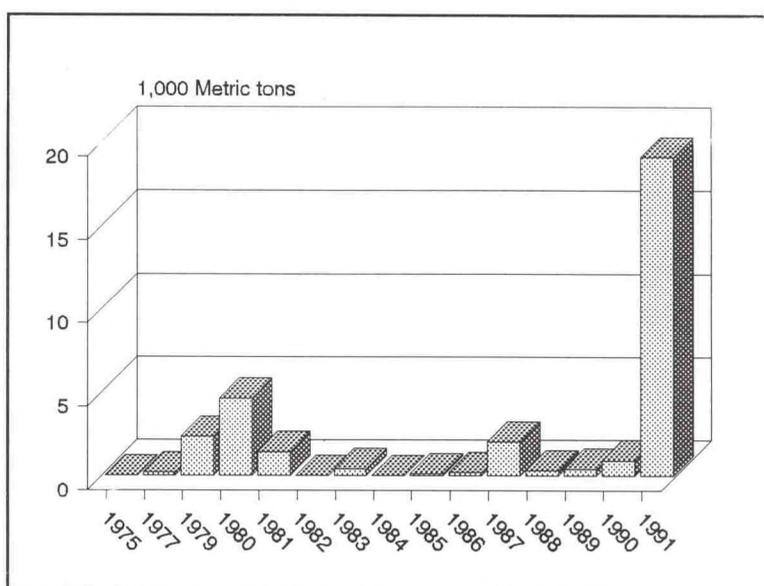


Figure 8.--Korean catches in the southeastern Pacific have been negligible until 1991 when they developed the new squid fishery.



Photo 10.—Many of the foreign fishermen operating off Peru were especially interested in access to coastal waters so they could fish for hake. Dennis Weidner

subsequently deployed squid jiggers to initiate a new commercial fishery. The Korean fishermen call at Callao for bait and other supplies.¹³³ Korean companies since 1991 have successfully bid on squid allocations.¹³⁴ They are expanding southeastern Pacific operations and reported a major catch increase in 1991 when they caught 19,000 tons. Peruvian officials reported some difficulties with the Koreans and even excluded one company from participating in licensing program for falsifying documents.¹³⁵ The Koreans continued to bid on licenses despite a major increase in the minimum fee during 1991.¹³⁶ The Korean fishermen, like the Japanese, were also affected by the Peruvian Government decision to shift its licensing fee system from a vessel tonnage system to a fee calculated on the quantity of squid allocated. The Government approved during October 1991, another 20,000 t allocation for Pesca Peko, a joint venture company. Pesca Peko¹³⁷ is leasing jiggers from several Korean companies (Dong Won Industries, Doug Non Fisheries, Inn Sung Fisheries, Poong Sam Fisheries, and Seyang Fisheries) for operations in Peruvian waters.¹³⁸ Some observers have criticized Administration officials for favoritism to specific companies.¹³⁹ The Government on March 20, 1992, authorized six Korean jiggers to catch 20,000 t of squid and set license fees at \$60 per ton of squid landed.¹⁴⁰ Another report indicated that the Government in 1992 allocated 20,000 t of squid to the Korean-Peruvian joint venture company

Koramer and set licensing fees at \$141 per ton.¹⁴¹ Peruvian and Korean fishery officials met in 1993 to discuss bilateral fishery issues. The Korean officials reportedly asked for improved access to Peruvian grounds, including access for trawlers, and an installment payment plan for fishing fees. Peruvian officials agreed to study the Korean proposals.¹⁴²

Mexico: Mexico and Peru signed a bilateral fisheries agreement in 1985 establishing a variety of cooperative programs.¹⁴³ One provision of the agreement provided for Peru facilitating the operation of Mexican tuna vessels in Peruvian waters.¹⁴⁴ The authors have no information indicating that Mexican seiners were ever actually deployed in Peruvian waters, although the Mexican

tuna fleet is capable of such distant-water operations.¹⁴⁵

Poland: Polish fishing off Peru began in 1973 through a joint venture arranged by the Polish Fish-Exporting Company (RYBEX) in 1972.¹⁴⁶ The Poles were permitted to deploy vessels within Peru's 200-mile zone. The catch, however, was reported as part of the Peruvian catch because the vessels were reflagged in Peru. Polish-flag vessels, as a result, reported only a small catch in the southeastern Pacific during 1979, even though actual catches may have been nearly 200,000 tons.¹⁴⁷ Polish scientists conducted a major study in cooperation with the Peruvian Instituto del Mar (IMARPE) assessing resources in Peruvian waters.¹⁴⁸ The Polish distant-water fleet experienced severe problems in the late 1970s as the United States and other coastal countries increasingly reduced their northern Atlantic and northern Pacific allocations.¹⁴⁹ At the same time, the hard-pressed Polish fishery officials also had difficulty maintaining access to Peruvian grounds. The Peruvian Military Government terminated the Polish joint venture with EPSEP in March, 1980. This would have required the Poles to shift operations beyond Peru's 200-mile limit, but they instead negotiated joint venture arrangements during 1980-81 with private Peruvian companies permitting continued operations in Peruvian waters. After the incoming Belaúnde Administration

changed numerous regulations in 1980, these private joint ventures collapsed. (For details see V. Joint Ventures.) The Polish fleet was forced to withdraw their vessels. The Poles did not report significant catches in the southeastern Pacific again until 1983 when they caught 40,000t (Latin America, appendix C4g1). The authors believe that most of the Polish catches in the area were taken off Peru. The Polish catch in the area peaked at 80,000 t in 1984 after which Poland terminated its southeastern Pacific fishery. Interestingly, the Poles also sharply reduced their Falklands fishery in the southwestern Atlantic during 1984 (Latin America, appendix C4d2).¹⁴³ Polish fishery officials, however, continued to express some interest in Peruvian grounds and negotiated a new joint venture agreement with Peruvian officials in 1988. (See V. Joint Ventures.) The new joint venture agreement was sharply criticized in the press and apparently actual fishing operations were never initiated.

Russia: The Russian Federation has assumed responsibility for the Soviet commitments to Peru as the successor state to the Soviet Union. Russian officials indicate that the former Soviet-Peruvian fisheries assistance program is currently inactive. In addition, the Russians have terminated the large southeastern Pacific offshore fishery the Soviets began reducing in 1991. (See USSR below.) This was one of the largest distant-water fisheries conducted by the former Soviet Union and catches totaled 1.3 million t in 1990 (Latin America, appendix C4g1). The Russians claim to have terminated it entirely. There does, however, appear to be some continuing Russian interest in the area. Russian officials have recently contacted Peruvian officials concerning the possibility of a bilateral access agreement, but Fujimori Administration officials concluded that the terms offered were not adequate.¹⁴⁴ Available data on transshipments through Vacamonte in Panama indicate that there were no Soviet/Russian fishery transshipments in 1991 and 1992, suggesting that fishing effort in the southeastern Pacific off Peru and Chile was declining (Panama, appendices C, G, and H).¹⁴⁵ Peruvian officials believe, however, that some unauthorized Russian fishing continues off Peru.¹⁴⁶ The Russian State Committee on Fisheries continues to maintain a fisheries attache office in Lima. The previous incumbent, Mikhail Ivanovich Kargin, was formerly the Director General of the Soviet Northern Fisheries Administration, suggesting

that the Russians continued to view Peru as an important potential base for future operations. He is now working as a private consultant in Peru, presumably promoting joint ventures between Russian groups and private Peruvian companies. Three Peruvian-Russian joint ventures have reportedly been formed, but few details are available. An unidentified Russian group has reportedly reflagged about 11 small seiners and trawlers in Panama and contracted with a Peruvian company to deploy them off Peru, but few details are available.¹⁴⁷

Taiwan: Taiwan fishermen have not operated in the southeastern Pacific (Latin America, appendix C4g1).¹⁴⁸ Unconfirmed reports suggest, however, that one Taiwan company has bid for Peruvian squid fishing rights in 1993. No details on the Peruvian Administration response are available.

United States: The U.S. tuna purse seine fleet occasionally deployed some seiners off Peru. Peruvian waters, however, are roughly the southern limit of the range for tropical tunas normally targeted by the U.S. fleet and, as a result, there has been only sporadic U.S. fishing off Peru. Climatic events, however, affect migratory patterns and tropical tunas have occasionally appeared off Peru in commercial quantities attracting U.S. and other foreign tuna fishermen. One 1985 report, for example, suggested that 37 U.S. seiners were operating in Peruvian waters,¹⁴⁹ but this effort is not confirmed by available catch data which indicates that U.S. catches in the southeastern Pacific (including the waters of neighboring Ecuador and Colombia as well as Chile) peaked at 12,000-13,000t in 1980 and 1981 (Latin America, appendix C4g1). U.S. fishing effort in the eastern Pacific off Peru declined during the 1980s as the U.S. purse seine fleet shifted operations to the western Pacific primarily because of access difficulties in the eastern tropical Pacific and efforts to protect dolphins. Some U.S. longliners during the 1990s are reportedly fishing swordfish on the high seas in the southeastern Pacific.



Photo 11.--The Soviets helped build the fishing port at Paita, one of the few important shore installations they have built in Latin America. Dennis Weidner

USSR: The fishery relationship with Peru was one of the Soviet Union's principal fishery undertakings in Latin America. The fishery developed, at least in part, as a result of Soviet efforts to support the left-wing Velazco military Government in Peru during the 1960s.¹⁵⁰ It evolved into an opportunity for the Soviets to open what was to become in the 1980s one of their most important distant-water fisheries.¹⁵¹ The Soviets began significant operations in the southeastern Pacific during the late 1970s and by 1979 were catching over 0.5 million tons off Peru and Chile (Latin America, appendix C4g1), but outside the 200-mile zones. The Soviets steadily expanded their catch during the 1980s and achieved a record 1.3 million t catch in 1990, nearly 10 percent of their total catch worldwide.¹⁵² Since 1990 the Soviet/Russian catch in the area has declined sharply. The fishery must have been enormously expensive to conduct and the economic changes underway in the Soviet Union/Russia have made it impossible to continue the subsidies needed to sustain such costly operations. Soviet state enterprises even before the collapse of the Soviet Union were being increasingly held accountable for operating deficits, especially when allocations of increasingly scarce, exportable commodities such as diesel fuel were required. Thus at least some minimal cost calculations were becoming a factor in Soviet deployment decisions by 1991. This probably explains the sharp reduction of Soviet effort in the southeastern Pacific during 1991

(Latin America, appendix C4g1). The Russians, who assumed control of much of the Soviet distant-water fleet in 1992, decided to terminate the southwestern Pacific fishery. (See Russia above.) The Soviet fisheries relationship was highly controversial in Peru from the onset during the late 1960s. Initial contacts between the two countries were not debated publicly as they were instituted by the left-wing Velazco military Government which prevented public criticism of its policies. The fisheries relationship became one of the key elements in broader Soviet-Peruvian relations.¹⁵³ The Soviet-Peruvian fisheries cooperation relationship had two major elements: 1) a cooperation agreement under which the Soviets helped construct a fishing port at Paita and in return were permitted to service

their vessels in Peruvian ports, and 2) various joint venture access arrangements.

Cooperation agreement: The most significant element of the Soviet-Peruvian fisheries relationship has been a cooperation agreement signed in 1971. The Soviets helped build a fisheries port at Paita and provided other fisheries development assistance. More significantly, the agreement granted the Soviet fishing fleet access to Peruvian ports. Soviet catches in the southeastern Pacific at the time were minimal, but the information collected through various cooperative research programs with IMARPE enabled the Soviets to subsequently launch a major fishery outside Peru and Chile's 200-mile zone. Soviet trials in 1978 were quickly followed with the deployment of a substantial fleet in 1979 which caught 0.5 million tons (Latin America, appendix C4g1). The Soviets would have had serious logistical difficulty conducting this fishery had they not secured local support bases in Peruvian ports.¹⁵⁴ The Soviets were able to use Callao to exchange crews, provide some recreation for the crews, purchase fresh food, obtain emergency repairs, etc. The Soviets steadily expanded operations during the 1980s and reported a record 1.3 million t catch in 1990 (Latin America, appendix C4g1). Most of this catch was harvested outside the Peruvian 200-mile zone.¹⁵⁵ Some Peruvian observers believe that actual Soviet catches were much greater than reported and that they significantly understated their catch.¹⁵⁶ The Soviet

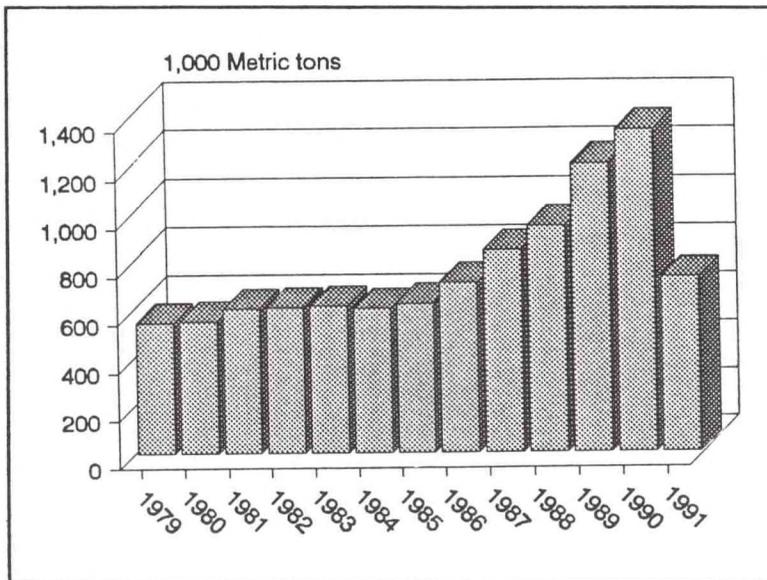


Figure 9.—Soviet catches peaked at 1.3 million tons in 1990. The Soviets curtailed operations in 1991 and the new Russian officials decided to terminate the fishery in 1992.

fishery outside the 200-mile limit was a costly mid-water trawl fishery. This fishery was made possible by the Soviet willingness to provide low-cost fuel to its fishing fleet.¹⁶⁴ The provision of fuel was critical as the fishery entailed energy-intensive mid-water trawling by vessels with very low fuel efficiency. The Soviet Northern Regional Fisheries Administration (SEVRYBA) did not have the same fixed cost base as a private company but, nevertheless, the operating costs (even ignoring the initial capital costs) of fishing outside the 200-mile zones must have been considerable. Mid-water operations require enormous amounts of fuel to drag trawls at the depths involved for a relatively fast-moving fish.¹⁶⁵ The fuel costs alone were probably about \$4,000 per vessel per day, given the size of the vessels, the depth of the fish schools, the net opening size, and the speed required for fishing jack mackerel. Profitability was not a major Soviet concern as officials placed great emphasis on fulfilling production quotas. Despite the high operating costs, Soviet catches were mostly jack mackerel, a species of little value on export markets.¹⁶⁶ The Soviets were unable to sell the catch to generate the hard currency, but instead used it to meet domestic needs. Thus,

once subsidized fuel was no longer available, the Russians and other Soviet successor countries could no longer afford to continue the fishery. The Soviets are known to have obtained some hard currency by selling marketable species in Panama and other ports (Panama, appendix K),¹⁶⁷ but this probably generated only small sums. The Soviets were eventually forced to restrict fleet operations in the southeastern Pacific once domestic Soviet oil prices began to rise toward international levels and shortages developed. The 1991 Soviet catch in the southeastern Pacific fell by half to only 0.7 million t and the Soviet successor states reportedly terminated the fishery entirely in 1992. (See Georgia, Russia, and the Ukraine.)

Access arrangements: The Soviets, despite their extensive fisheries cooperation with Peru, never obtained direct access to Peruvian waters during the 1970s. The Soviets finally obtained access to Peruvian coastal waters in the 1980s, but the arrangements proved highly controversial.

- Military Governments (1968-80): The authors do not know why the Soviets failed to obtain access, or even if they requested such access during the Velazco/Morales military

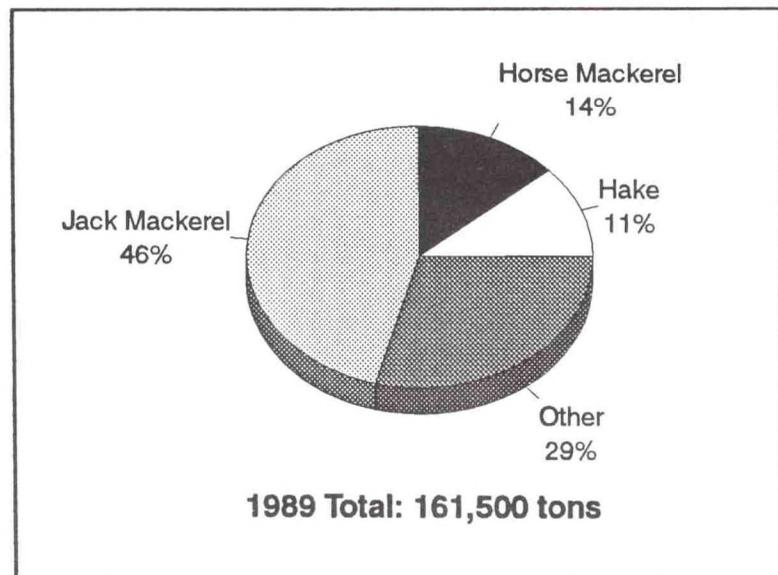


Figure 10—Soviet officials were interested in access to Peruvian coastal waters so they could catch higher-value species like hake which were not available in their mid-water fishery beyond 200-miles.

governments. The Cuban and Polish joint ventures negotiated in the 1970s did provide access and were not initially subjected to intensive public debate in the tightly controlled press.

- Belaúnde Administration (1980-85): The Belaúnde Administration negotiated the first access agreement with the Soviets in 1983. (The agreement was supposedly a joint venture contract, but for all practical purposes was an access agreement.) Soviet officials soon found their joint venture was more sharply criticized by the uncensored Peruvian press than the Cuban and Polish joint ventures had been. The Soviets to their displeasure found themselves in the middle of a free-wheeling press debate and an acrimonious electoral campaign. The tightly regimented Soviet system had not prepared Soviet fishery officials for either of these experiences. The arrangements with the Soviets were so sharply criticized by APRA and other opposition parties that the Belaúnde Administration refused to renew the joint venture contract that came up for renewal in 1985 and demanded substantial tax and other additional payments from the Soviets.¹⁶¹

- García Administration (1985-90): The new García APRA Administration attempted to negotiate another access agreement with the Soviets in 1985, but their offer was rejected by the Soviets as too costly. The García Administration then allowed a second Soviet joint venture to lapse, planning on supplying the domestic market with the new state fishing fleet (FLOPESCA) and a joint venture with Cuba. When FLOPESCA failed to produce as expected, the García Administration was forced to turn to the Soviets once more. Peruvian and Soviet officials finally reached agreement on a bilateral protocol providing renewed access in 1988 as part of the larger effort to renegotiate Peru's enormous debt to the Soviet Union. The García Administration modified its demands and was finally able to reach agreement with the Soviets. While the García Administration did succeed in gaining a slight increase in the share of the catch, it agreed to waive a variety of fees (licenses, navigation permits, wages for Peruvian workers, landing rights, etc.) that the Soviets had previously paid in hard currency (appendix F).¹⁶² The Administration permitted Soviet vessels to fish

in Peruvian waters under a joint venture arrangement between EPSEP and SEVRYBA. (See V. Joint Ventures.) The Soviets were able under various access and joint venture agreements to deploy as many as 20 trawlers in Peruvian coastal waters.¹⁶³ Many observers believe that overall, the 1988 agreements with the Soviets were much less favorable to Peru than the previous 1983 joint venture. As a result, the new agreement also proved especially controversial. Not only did opposition parties criticize the agreement, but APRA Administration officials themselves were disappointed with the Soviet performance. The García Administration eventually charged the participating joint venture companies with tax evasion and other violations, involving the Soviets with years of complicated litigation in Peruvian courts. The 1988 joint venture contracts negotiated by the APRA Administration were designed, in part, to support the Administration's food program for low income consumers, "Pescado Barato para la Alimentación Popular." Some Peruvian observers contend, however, that the Soviets did not live up to the terms of the EPSEP-SEVRYBA contract, delivering much smaller quantities than provided for in the contract.¹⁶⁴

- Fujimori Administration (1990 to date): The Fujimori Administration upon taking office launched an assessment of the Soviet joint venture. Peruvian Fisheries Minister Raúl Sanchez Sotomayor announced on August 13, 1990, that a high-level Commission would study the fishery agreement with the Soviet Union and other communist countries.¹⁶⁵ Sanchez was especially critical of lower than expected fish deliveries by the Soviets and provisions of a contract between EPSEP and SOVRYBFLOT/SEVRYBA requiring EPSEP to make payments covering the cost of handling the Soviet deliveries.¹⁶⁶ The contracts with the Soviets were adversely affected by two developments in late 1990. First, the Peruvian Supreme Court ruled that the Administration decrees used as the legal basis for the Soviet contracts were null and void.¹⁶⁷ Second, as a result of the Commission's findings, Sanchez announced in November 1990, that the access agreement with the Soviets would have to be renegotiated because "some clauses are detrimental to the national interest."¹⁶⁸ Talks

with the Soviets were held and continued for some time with little progress reported.¹⁶⁹ New Fisheries Minister Felix Canal Torres, citing "continued breeches of contract," and mounting losses finally decided to cancel the contracts in April, 1991 when Soviet officials refused to make the changes to the 1988 contracts requested by EPSEP.¹⁷⁰ The Administration's decision to cancel the contracts was supported by the Sociedad Nacional de Pesca and other industry groups.¹⁷¹ The dispute with the Soviets dragged on for several more months. The Fujimori Administration seized Soviet trawlers, assessed a \$0.25 million fine, and demanded a \$22 million indemnity.¹⁷² Soviet officials have sharply criticized MYPE and Peruvian court actions, blaming many of the problems on Peruvian administrative delays and unilateral changes in the contract affecting Soviet fleet operations.¹⁷³ Talks between Soviet and Peruvian officials continued,¹⁷⁴ but no agreement was ever reached on revising the EPSEP contracts. Congressman and former Fisheries Minister Ismael Benavides insists that the Government should not renew the agreement with the Soviet Union because after 20 years of fisheries cooperation Peru has received no benefits.¹⁷⁵

Venezuela: Venezuelan tuna fishermen have reported some catches in the southeastern Pacific, ranging from 9,000 t in 1988 to 16,000 t in 1987 (Latin America, appendix C4g1).¹⁷⁶ Venezuelan fishermen, however, probably take most of their catch north of Peruvian waters, primarily off Colombia (Colombia, appendix E).

Foreign fishermen transship some of their catch through Peruvian ports. Little hard data exists on such operations. Some observers believe that the quantities involved are substantial. Other local observers downplay the quantities involved, pointing out that vessel traffic through Peruvian ports is limited. New Peruvian regulations have required foreign fishermen operating within Peruvian waters to land a portion of their catch in Peruvian ports. The foreign fishermen often landed their incidental catch for distribution in the local market. New regulations issued in 1992 now require that the entire catch taken in Peruvian waters be landed and exported through a Peruvian port. This has had the

greatest impact on the foreign fishermen (Japanese and Koreans) who have initiated a new squid fishery off Peru since 1990.

Bulgaria: The Bulgarians shipped almost all of their southeastern Pacific catch back to Bulgaria. The authors have few details on transshipping patterns, but believe that most of the catch was transferred at sea to refrigerated cargo vessels for transport back to Bulgaria. Local sources tell the authors that the Bulgarians never transshipped fish through Peruvian ports. Unlike the Soviets, the Bulgarians never even called at Peruvian ports to exchange crews, permit recreation, or buy supplies.¹⁷⁷ The Bulgarians are believed to have worked closely with the Soviet fishing fleets and may have transshipped some of their catch on Soviet refrigerated transports.¹⁷⁸

Cuba: The Cubans harvested an important part of their overall fisheries catch in the southeastern Pacific, some of it within Peruvian waters under various joint venture agreements. Once the Peruvian share of the joint venture catch was delivered to EPSEP, almost all of the remaining catch was shipped back to Cuba. The authors, however, have few details on Cuban transshipping patterns. Most of the catch taken on the high seas was transferred to refrigerated transport vessels at sea. The Cubans acquired large freezer transport vessels (the *Oceano* and *Golfo* vessels) for FLOCUBA's extensive distant-water operations (Cuba, appendix C).¹⁷⁹

Japan: The Japanese tuna longline fishermen ship most of their catch back to Japan. It is not known if this was done primarily through Peruvian ports or through at-sea transfers to refrigerated transports. At least some product is exported through Peruvian ports.¹⁸⁰ The Japanese established local companies and there may have been such transshipments through these companies. The Japanese also sell some of their catch locally. The Japanese tuna longline fishermen during 1993, for example, are selling mahi-mahi in Peruvian ports. Few details are available on the transshipment patterns in the new squid fishery, but theoretically since 1992 virtually all of it is being transshipped through Peruvian ports as required by new regulations.



Photo 12.--The Soviets supplied fuel to their distant-water fishing fleets with tankers. It was thus rarely necessary to buy fuel in local ports.

Korea: No details are available on the Korean transshipments, but they probably follow the same pattern as described under Japan above.

Spain: Spanish longline fishermen operating on the high seas in the southern Pacific for swordfish would like to transship their catch through Chilean ports, but the Chileans refuse to permit transshipments of species which Chilean fishermen target.¹⁸¹ Peru permits such transshipments, but shipment through Peruvian ports impair the value of the product because of the cholera problem.¹⁸²

Taiwan: Taiwan does not report a fishery in the southeastern Pacific and Government officials know of no actual Taiwan fishing. Taiwan fishermen, however, appear to be transshipping through Peruvian ports, but details are not available.¹⁸³

United States: U.S. fishermen, like Spanish fishermen, are longlining swordfish on the high seas in the South Pacific. They would like to occasionally transship their catch through Chilean ports, but the Chileans have denied them permission to do so because Chilean fishermen also target swordfish. The U.S. fishermen claim, however, that the Chileans are allowing Taiwan fishermen to transship some fish.¹⁸⁴ Chilean officials explain that the Taiwan fishermen are transshipping tuna, a species Chilean regulations allow to be transshipped.¹⁸⁵ Peru permits the fishermen to transship through Peruvian ports. Chilean officials inform the authors that after transshipping swordfish in Peru, foreign vessels (registered in Japan, Panama, and Taiwan) do call at the Chilean port of Arica to purchase supplies.¹⁸⁶ U.S. fishermen have generally avoided transshipments through Peru because of the cholera problem. A Peruvian port-of-origin reportedly has an adverse affect on the price the shipment can command.

USSR: The Soviets have shipped large quantities of fishery products taken within and outside Peruvian waters back to the Soviet Union. Most of the catch was transshipped at sea to refrigerated cargo vessels for transport back to the Soviet Union. The transshipping pattern may have been different for the vessels permitted to fish within Peruvian waters. Some transshipments have also been reported at Vacamonte in Panama. Very limited quantities were probably transshipped through Peruvian

ports.¹⁸⁷

V. JOINT VENTURES

Peru has had extensive experience with foreign fishery joint ventures. Both state and private fishing companies have participated in these ventures. Some private companies formed joint ventures in the 1960s, but the major Peruvian joint ventures were initiated in the 1970-80s, primarily with the state-owned distant-water fleets of three communist countries (Cuba, Poland, and the USSR). These ventures, however, entailed little or no equity investment in Peru. They were primarily access arrangements in which the participating country delivered a share of the catch in return for the right to fish in Peruvian waters. The countries involved received substantial allocations within Peru's 200-mile zone. The ventures, however, proved highly controversial and were eventually terminated by the Peruvians amidst protracted litigation and recriminations on both sides. The García APRA Administration attempted to require all foreign fishermen desiring to fish in Peruvian waters to form joint ventures, but achieved only minimal success. This primarily affects private companies from two Asian countries (Japan and Korea). Fishermen from these countries have created *pro forma* joint companies to handle business arrangements, but the authors know of no important venture involvingsignificant investments in Peruvian fisheries. The Fujimori Administration dropped the requirement that foreign countries negotiate bilateral agreements and form joint ventures and has pursued a policy of attempting to maximize income through the sale of fishing licenses with considerable success. The Fujimori Administration, however, is interested in encouraging joint ventures and has revised joint venture regulations. Officials hope that the new regulations will attract foreign joint venture partners who could provide equity investments and modern technology. The results of this new policy are not yet available, but a few companies have formed joint ventures and several more foreign companies have expressed an interest

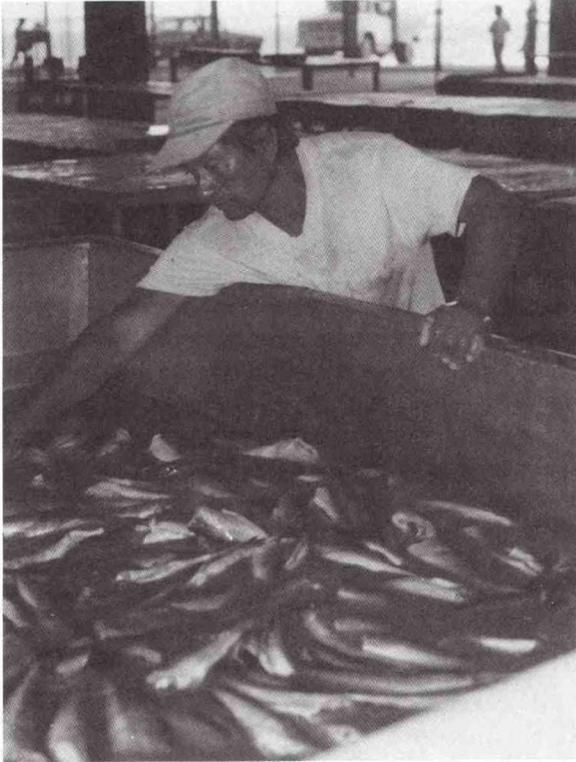


Photo 13.—Restrictive investment regulations have discouraged many foreign groups from participating in fishery projects, inhibiting Peru's access to modern fishing and processing technology.

in Peruvian opportunities.

A. Changing joint venture policy

The various Peruvian administrations since the early 1970s have had sharply contrasting joint venture policies.

Military Governments (1968-80): The left-wing Velasco Government authorized the Peruvian state fish marketing company (EPSEP) to form two joint ventures in 1972, with state-owned fishing fleets from communist countries (Cuba and Poland). Little information is available on industry reaction to the ventures, because military control limited press debate. Public criticism of regime policy, especially during the Velasco period, was unwise. General Morales, General Velasco's replacement, was less favorably disposed toward the Cubans and Poles. EPSEP officials increasingly complained of the contractual arrangement. The Peruvian Government terminated EPSEP's Cuban venture in

1978 and the Polish venture in 1980. Private Peruvian companies were allowed to form joint ventures with the Poles. The 1980 presidential election brought intense public scrutiny of many policies of the Military Governments, including their foreign fishery policies. Several candidates criticized the military for negotiating what were widely perceived as inequitable arrangements.

Belaúnde Administration (1980-85): The new democratically elected Belaúnde Administration in 1980 was highly critical of the private joint ventures with the Poles and issued new regulations which essentially made the ventures unprofitable. As a result, they were dissolved in 1981 amid great controversy, leading to fines, criminal investigations, and protracted legal disputes. The Belaúnde Administration proceeded to sign a new joint venture with the Soviets in 1983 that proved even more controversial than the Cuban and Polish joint ventures had been. This time the issues were widely discussed in the Peruvian press, unrestrained by military press censorship. Nationalistic political parties, especially APRA as well as important sectors of the fishing industry, sharply criticized the Soviet arrangements. Critics charged the Administration obtained inadequate compensation and too small a share of the catch in exchange for granting access to Peruvian fishing grounds. The Administration, perhaps reacting to the rising press criticism, decided to make a show at strictly enforcing the terms of the agreement and seized Soviet vessels for contractual irregularities. The seizures led to more fines, criminal investigations, tax, assessments, and protracted legal disputes. One of the Soviet joint ventures was allowed to lapse.

García Administration (1985-90): The new García APRA Administration, assuming office in 1985, was committed to statist solutions to Peru's growing economic problems. APRA officials therefore decided to create the Flota Pesquera Peruana (FLOPESCA), a new Peruvian state fishing fleet. The Administration also demanded a greater share of the catch from foreign fishermen desiring to operate in Peruvian waters, focusing their attention primarily on the Soviets. The Soviets rejected the terms demanded by the García Administration out of hand and, as a result, had to withdraw their fleet beyond the 200-mile limit when the remaining agreement lapsed in 1986. FLOPESCA proved to be a financial disaster for Peru and produced much

less fish than expected; however, it sustained very substantial cost overruns. The Administration, anxious to obtain greater quantities of fish for its low-cost food distribution program, reluctantly decided to resume talks with the Soviets. Discussions of a new fisheries joint venture were held as part of the overall debt restructuring talks with the Soviets. The Administration agreed to authorize a new Soviet joint venture in 1988, but with less favorable conditions than they had initially hoped. This new Soviet joint venture also proved highly controversial. Some observers charged that despite their criticism of the former Administration, the APRA Administration had negotiated an even less equitable arrangement with the Soviets.

Fujimori Administration (1990 to date): Few of the private foreign companies which formed joint ventures during the 1970s were still active when President Fujimori assumed office in 1990. The Fujimori Administration, after studying the Soviet joint venture, decided to cancel it in 1991. Some observers speculated that the termination of the Soviet joint venture would sharply reduce the supply of fish on the domestic market. MYPE officials report, however, that under the terms of a contract (Convenio de Suministro de Pescado) signed with the Asociación de Armadores Pesqueros de Consumo Humano Directo, MYPE will purchase about 90,000 t of fresh fish annually.¹⁸⁸ This is more than twice the amount (42,000 t) supplied by the Soviets during 1990, the peak year of the joint venture.¹⁸⁹ The Fujimori Administration is interested in promoting joint ventures and has focused its policy primarily on efforts to develop associations with private fishing companies in non-communist countries. The Administration sees such associations as necessary to obtain investment capital and modern technology for Peruvian fishing companies. The Administration to accomplish this goal has implemented new joint venture regulations under the 1992 General Fisheries Law. Under the authority of regulations issued in late 1992, foreign companies will be allowed to form a joint venture and fish in Peruvian waters. The vessels will be allowed to retain their original flag for 5 years during which they will have the same rights as Peruvian-flag vessels. After the 5-year period the vessels must be transferred to Peruvian ownership.¹⁹⁰ The 1992 joint venture regulations appear to be the most attractive terms ever offered foreign fishermen. Few details are available on the

foreign reaction to this new program, but unconfirmed reports indicate that French, Russian, and Spanish firms have already formed joint ventures in Peru.

B. Joint venture partners

Peru's major fishery relations have been primarily with communist countries, especially Cuba, Poland, and the Soviet Union. Several factors have influenced government decisions to deal primarily with communist countries:

Left-wing foreign policy: The foreign policy orientation of the left-wing military government of General Velazco encouraged exchanges with communist countries. Peru already had close ties to the Soviets as a result of a fisheries assistance program initiated in 1971. Peru's left wing military Government may have looked favorably on expanding relations with communist countries. At the same time, the Government was nationalizing assets of U.S. and other foreign corporations.

Statist orientation: The statist policies of the García APRA Administration also led principally to arrangements with the state-owned fishing companies of communist governments. APRA officials, predisposed toward state companies, may have found it preferable to deal with foreign state-owned companies.

Economic factors: Private companies in non-communist countries were constrained by market economics for several reasons. The communist state companies were probably able to make better offers to Peru than private companies for several reasons: First, The distant-water fishing fleets of communist countries were subsidized by cheap Soviet oil and they could thus conduct costly distant-water operations even for low-value species such as jack mackerel. One observer estimates that the Soviet fishing industry by 1989 had an annual operating deficit of \$5-8 billion.¹⁹¹ Second, there was no market for jack mackerel in countries with market economies. The possibility of access to hake and other demersal stocks was not sufficiently attractive as the Peruvians were not prepared to allow the joint venture companies to exclusively target hake. Third, the communist countries were able to combine joint venture operations with their

already extensive operations outside 200-miles and thus did not have the substantial start-up costs of launching an entirely new fishery.

Peruvian officials have expressed interest in attracting Western European, United States, and Asian joint venture partners, despite the ventures with the communist countries.¹⁹² Executives of foreign companies, however, have observed the tendency of constantly changing Peruvian Administrations to modify regulations affecting contractual relations and, as a result, have been generally reluctant to make equity investments in Peru. European countries have generally avoided Peru. Asian fishermen conducted tuna and squid operations off Peru, but generally buy licenses or participate in *pro forma* joint ventures with little or no equity investment in the Peruvian fishing industry. None of the potential European and Asian partners responded favorably to the attempts by the García Administration require the formation of joint ventures. The new Fujimori Administration appears to be having more success with its efforts to promote joint ventures. At least some European companies have expressed an interest in the new Fujimori joint venture program announced during late 1992.

C. Evaluation

The Peruvian joint ventures are impossible to evaluate without much more detailed financial information than is available to the authors. Foreign fishing companies from countries with market economies (Japan, Korea, Spain, the United States, etc.) during the 1970s-80s have generally avoided investment opportunities in Peru. This is partly because of the nationalization of some assets in the early 1970s, but also because of other factors, including: a general Peruvian hostility to foreign investment, Peruvian legislation, and the deteriorating economic and political situation in the country.¹⁹³ This has affected the Peruvian industry and limited its access to needed investment capital as well as modern technology.

Various Peruvian Governments pursued so-called joint ventures with state-owned fishing fleets in communist countries (Cuba, Poland, and the USSR). Some benefits accrued to Peru from these

ventures. EPSEP received substantial quantities of fish. Some of the ventures paid various fees as well as contracted services in Peruvian ports. Many Peruvians appear, however, to have been dissatisfied with the returns. Peruvian officials appear to have placed a much higher estimate on the value of Peruvian fishing rights than foreign fishermen. In addition, the joint ventures with state companies built virtually no shore-based installations and made only minimal efforts to transfer technology.

The foreign fishermen from communist countries benefitted from access to Peruvian grounds through better catch rates and improved species distribution (more valuable species) than were available in the high-seas fishery beyond Peruvian waters. The Peruvian dissatisfaction with the terms of the various agreements, however, caused continuing changes in Government regulations, contract cancellations, and vessel seizures as well as prolonged litigation in Peruvian courts. The foreign companies thus had many negative experiences. The fact that the foreign fishermen continued to pursue joint ventures with Peru, however, despite the problems faced, for nearly 20 years suggests that either there were some economic benefits to the association or underscores their increasing difficulties securing access to fishing grounds.

1. Peru

Peruvian joint venture policy has varied substantially since the early 1970s. Many Peruvians believe that foreign companies in the past have exploited Peruvian resources and returned little benefit to the country. Various administrations, as a result, enacted very strict foreign investment laws controlling ownership and repatriation of profits. Nationalizations of foreign assets in the late 1960s and early 1970s further discouraged foreign investment.

Few foreign fishing companies in countries with market economies have been willing to make equity investments in Peru. The few that did during the 1960s and 70s (Japanese, Spanish, and U.S. companies), reported generally negative experiences. The severe economic problems during the 1980s further discouraged investment. As a result, the Peruvian fishing industry has been able to obtain little overseas investment capital. Perhaps even

more harmful has been the limited access to foreign technology. The lack of association with foreign fishing companies through joint ventures also circumscribed business contacts and personal ties which in other countries have helped to facilitate technological innovation. These two factors partially explain why Peru has made little progress in developing resources other than small pelagic species. Much of the Peruvian fleet and industrial plant was built in the 1960s-70s. Fishing technology has changed little. Peru, despite its significant fishery resources, has not benefitted as much as other Latin American countries from the expansion of world fisheries trade during the 1980s (Latin America, appendix E1).

Several communist countries (Cuba, Poland, and the USSR) did form joint ventures with Peru during the 1970s and 1980s. Peru benefitted from the provision of substantial quantities of low-cost fish to the Peruvian market. Peru also received some fee payments as well as some product which could be exported through some of the contracts.¹⁹⁴ In addition, Peru received some earnings from servicing the foreign fleets operating in the southeastern Pacific. The countries involved, however, as far as possible, avoided all cash payments, insisting on payments in kind (a share of the catch). The ventures involved little or no investment in Peru and have had a minimal long-term impact in helping Peru to develop a modern fishing industry. The Peruvians complain that many of these companies did not live up to their contracts and expected preferential treatment under Peruvian law.

2. Free market countries

Companies in countries with market economies (Japan, Spain, and the United States) established joint ventures in Peru during the 1960s and 70s. These companies did invest in processing facilities and vessels bringing both investment capital and modern technology to Peru. The ventures, however, proved generally unsatisfactory for the foreign companies involved. Some assets were nationalized by the Government. The Government, for example, partially nationalized the U.S.-

owned COPES company in 1973. Other foreign companies found operating in Peru unprofitable because a host of government regulations (both macro economic regulations and fishery regulations) impaired their operations. As a result, most foreign companies liquidated or essentially abandoned their Peruvian operations during the 1980s.

3. Communist countries

State-owned fishing fleets in communist countries (Cuba, Poland, and the USSR) formed several joint ventures during the 1970s-80s. These ventures were more charter or access agreements than joint ventures, because they did not involve significant investment in the Peruvian fishing industry.¹⁹⁵ In most instances the communist state fleet maintained ownership of the vessels. Peruvian owners did acquire ownership of the vessels involved in the 1980 private joint ventures with Poland, but changes in Government regulations doomed these ventures and the Poles only received minimal compensation for the vessels. The countries involved must have benefitted, otherwise the three countries would not have pursued such ventures for nearly 20 years. The earnings from most of the ventures probably did not justify the cost of conducting a distant-water fishery in market terms, but apparently did make some success in the command economies of the former communist countries.¹⁹⁶ The ventures clearly did supply large

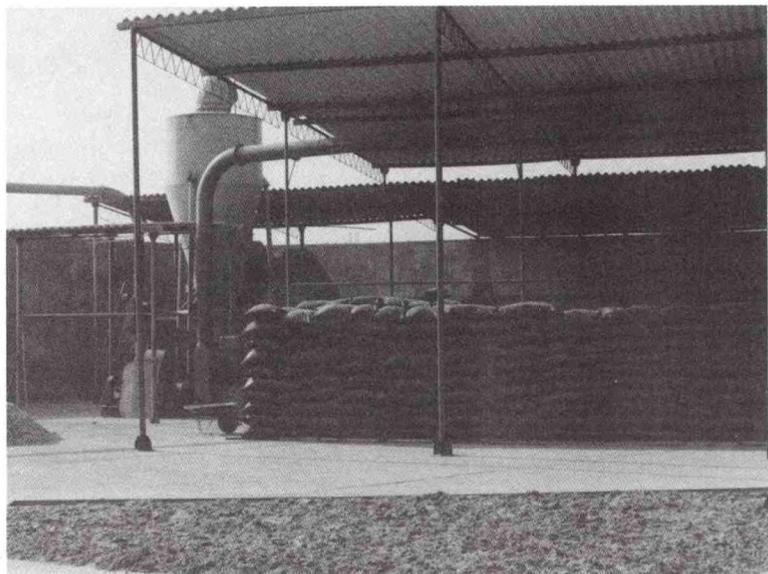


Photo 14.--China's failure to purchase expected quantities of fishmeal during late 1992 and early 1993 caused serious problems at several Peruvian companies.

quantities of fish for domestic consumption. Notably as soon as the Soviet/Russian economy started moving toward market economics, their fishery in the southeastern Pacific was quickly suspended.

D. Individual countries

Information on Peruvian fishery joint venture companies and other commercial associations with individual countries is limited. Much of the information available to the authors is dated as there currently appear to be few active joint ventures. Most foreign companies have avoided Peruvian investments during the 1970s-80s. Some joint ventures may have been formed during the 1980s, but these appear to be largely *pro forma* companies set up to handle business matters for the foreign fishermen or in other cases securing chartering arrangements for the foreign companies. The new joint venture policy announced by the Fujimori Administration appears to be attracting some foreign interest, but it is too early to tell if the Fujimori reforms represent a permanent change in the Peruvian attitude toward foreign investment.

Available information on companies in individual countries is as follows:

Chile: Unconfirmed reports suggest that Chilean and Peruvian companies (Indupes and Florentina) have formed a \$6 million joint venture in the Iquique free port to process fish.²⁰⁴

China: China has expressed an interest in purchasing the state fishmeal company PESCA PERU which still accounted for over 40 percent of Peru's fishmeal production in 1993. China has the world's largest aquaculture industry and is importing increasing quantities of fishmeal to produce fish feed. The Peruvian Government is concerned, however, that it would not be in Peru's best interest for a major importer of Peruvian fishmeal to control PESCA PERU.²⁰⁵

Cuba: Peru has negotiated three joint fishery ventures with Cuba. While these arrangements have been generally referred to as joint ventures by both the Peruvians and Cubans they are probably better described as vessel access/leasing arrangements under which the Cubans spilt a share of their catch rather than purchase licenses. A variety of conditions included in the different agreements also detailed other Cuban obligations such as training Peruvian workers and purchasing vessels from Peruvian shipyards. The authors know of no actual investment to assist the Peruvian partner (EPSEP) modernize or expand its facilities.

Military governments (1968-80): Peruvian and Cuban fishery ministers signed a joint venture agreement on June 14, 1973, permitting the Cuban distant-water fleet (FLOCUBA) to fish in Peruvian waters. The agreement required the Cubans to purchase shrimp trawlers and tuna seiners from Peruvian shipyards and to train Peruvian workers aboard the Cuban trawlers. The fishing agreement was between FLOCUBA and EPSEP. FLOCUBA initiated fishing operations in July, 1973, which were at first limited to two or three trawlers, but were later expanded. The original agreement was subsequently renewed in 1974, 1975, 1976, and 1977. As a result of the joint ventures, the Cuban catch off the Pacific coast of South America increased sharply during the mid-1970s. (See IV. Foreign Fishing.) The primary species targeted was hake. The incidental catch of other species was delivered to EPSEP

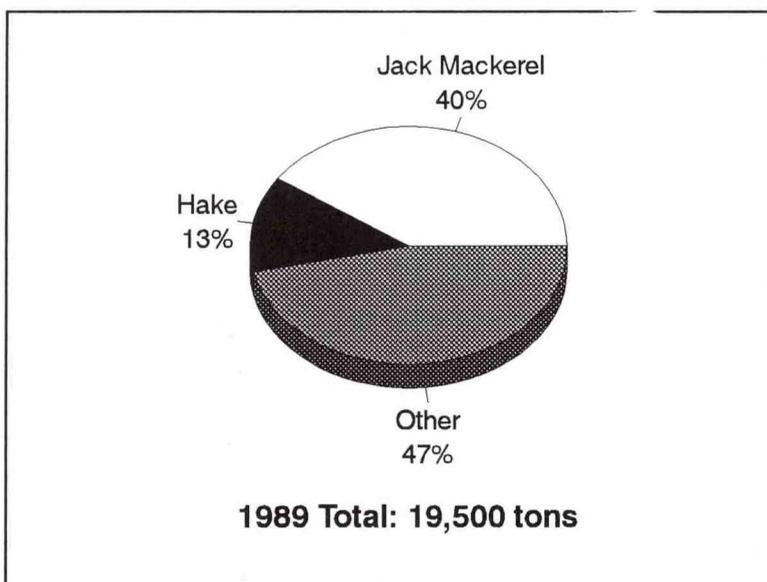


Figure 11.--Cuban access through joint ventures enabled them to catch some hake which was much more valuable than the species taken beyond the 200-mile limit.

for local distribution. The Cubans agreed in 1976 to increase the number of Peruvians aboard their vessels to at least half of the crew. Many problems were reported with the training program and there was a highly publicized confrontation between Cuban fishermen and local citizens in Callao.¹⁹⁹ Cuban officials were shocked in 1977 when still-unexplained explosions sunk two of their new Río Damuji class trawlers in the harbor at Callao: the Río Jobabo was sunk on July 22, 1977; the Río Damuji in October 1977. The Cubans questioned the Peruvian investigation into the causes of the incidents,²⁰⁰ and the perpetrators were never identified. Some criticism of the agreement was allowed in the usually tightly controlled Peruvian press, but Peruvian fishery officials continue to defend the joint ventures. Fisheries Minister Francisco Mariategui, for example, stated on November 22, 1977, that the joint ventures with Cuba and Poland earned Peru more than \$10 million annually. As a result of continuing public criticism, however, the Peruvian military Government eventually decided to terminate the Cuban joint venture.²⁰¹ EPSEP announced without warning on September 16, 1978, that it would not renew the joint venture with FLOCUBA, but allowed the Cubans to continue fishing until the end of the year. Both the widely publicized incidents with Cuban fishermen and the more important security concerns among elements in the Peruvian Navy opposed to the agreement were responsible for the decision. As a result, Cuban catches in the southeastern Pacific temporarily declined in 1979. (See section IV. Foreign Fishing.)

Belaúnde Administration (1980-85): Cuban-Peruvian relations deteriorated quickly with the election of President Belaúnde.²⁰² The authors know of no joint ventures with the Cubans operating during the Belaúnde Administration.

García Administration (1985-90): The APRA Administration of President García looked more favorably on the Cubans as possible joint venture partners. APRA had a long-standing tradition of criticizing foreign investors and a preference for state companies rather than free market solutions. as a result, it was at least initially much more disposed to working with Cuba than the previous Administration.

- 1985-87: Peruvian and Cuban officials agreed in 1985 to a variety of fishery projects. The two countries agreed that Peru would lease two Cuban trawlers which would be allowed to

operate in Peruvian waters.²⁰³ Officials agreed to many other exchanges, including exploratory fishing, fishery purchases, aquaculture cooperation, and technical exchanges. The cooperation program proceeded without incident. The two leased stern factory trawlers (the repaired Río Damuji and the Río de las Casas) landed their catch at the northern port of Paita. The exploratory fishing program lapsed in mid-1987.

- 1988-90: Cuba and Peru finalized a new joint venture agreement on April 7, 1988. The terms of the agreement appeared highly advantageous to Peru. The Cubans agreed to deliver 30 percent of their catch to EPSEP. Cuba also agreed to provide training to the Peruvians as part of their ongoing scientific-technical collaboration agreement. The Cubans were not charged tax payments or duties and were permitted to operate five to eight trawlers and catch up to 250,000 tons of fish annually, primarily jack mackerel, but only limited catch data is available. Six Cuban trawlers were deployed off Peru. Unconfirmed reports suggest that Peru agreed to make some payments to compensate Cuba for the operating costs, especially the fuel costs, of the Cuban vessels. At least some Cuban fishing was conducted in Peruvian waters during 1989 (appendices G and H1). The venture was probably terminated in mid-1989 because of Peruvian press criticism and industry opposition as well as a decline in fishmeal prices making the operation unprofitable for the Cubans.²⁰⁴ Some Cuban presence was, still reported in Callao as late as 1990,²⁰⁵ but this may have been simply crews from Cuban vessels operating outside the 200-mile limit and calling at Callao for supplies.

Fujimori Administration (1990-to date): Cuban-Peruvian joint ventures have not been renegotiated during the Fujimori Administration.²⁰⁶

Ecuador: The authors know of no Ecuadorean-Peruvian joint ventures.

European Community: The EC has indicated an interest in obtaining access for fishermen in EC-member countries to Latin American waters, including Peru. The EC has not, however, negotiated any joint venture understanding with Peru, although some reports indicate that the

current Fujimori Administration has expressed some interest. Individual companies in some EC countries (France and Spain) have succeeded in negotiating new joint venture contracts since 1991.

France: Peruvian Fisheries Minister Felix Canal Torres announced in 1991 that a joint venture contracting Soviet and French vessels would be authorized to fish in Peruvian waters.²⁰⁷ (For details see the USSR joint venture section below.) Another 1991 press report indicated that a French investor, René Leporc, had formed a joint venture to deploy four 100-ton French fishing vessels and a 1,000 ton mother ship under the Peruvian flag off Peru. The venture was to be 60 percent Peruvian owned and 40 percent French.²⁰⁸ Another joint venture between a French company and the important Peruvian Del Mar company apparently never materialized. The authors have recently received a report about another French joint venture. The French Grupo Adrian (Adrigel) has reportedly formed a joint venture with a unidentified local company in 1993 to deploy a vessel off Peru under the new joint venture/vessel leasing regulations. The venture has reportedly deployed a small factory vessel for hake. Part of the catch is being used to produce blocks aboard the vessel and part is landed for processing at shore plants in Paita.

Japan: Various Japanese companies (including Taiyo and Nichiro) have participated in joint fishery ventures in Peru.²⁰⁹ Japanese tuna fishermen operating longliners have generally avoided forming joint ventures despite Peruvian Government efforts encouraging them to do so.²¹⁰ Some companies have been formed, but they appear to be primarily *pro forma* companies created to handle license applications and other matters concerning the operation of Japanese vessels in Peruvian waters and involved little or no investment in Peru. Only limited information is available on individual joint ventures, but the authors do not know of any active venture involving Japanese equity investment in Peru.

All Fisch: This company appears to be handling licensing arrangements in 1993 for the Japanese squid jiggers operating off Peru.²¹¹

Ballenera de Kinkai: This now inactive company conducted whaling off Peru.

Challwa del Peru (Challpesa): Mitsubishi, Taiyo,

and Nihon Hogeï formed this company in 1973 as a joint venture with EPSEP. It was the largest Japanese venture in Peru and primarily intended to target the hake stocks off the northern coast. The company installed processing facilities in Paita and Callao. The Paita plant processed frozen hake blocks and the Callao plant canned various pelagic species.²¹² The company experienced technical problems processing hake and was liquidated in 1978.²¹³

Victoria del Mar: The New Nippo company formed the Victoria del Mar joint venture in 1968 which has operated vessels (trawlers and whale catchers) and processing plants. A 1985 report indicated that the Japanese partner was Nihon-Hohei and the venture was operating two trawlers for hake along the northern coast.²¹⁴ The venture is currently inactive.²¹⁵

Korea (ROK): Korean companies probably formed *pro forma* joint ventures in the 1970s and 1980s to operate tuna longliners off Peru. Korean companies also formed joint ventures to operate squid jiggers in the early 1990s. Few details are available on these ventures. Press reports have mentioned various joint venture companies (Peruko, Peska Peko, and Koramer). They also appear to be merely *pro forma* companies established to meet Peruvian legal requirements with little or no Peruvian equity participation or actual investments in Peru. Several Korean companies (Dong Won Industries, Doug Non Fisheries, Inn Sung Fisheries, Poong Sam Fisheries, and Seyang Fisheries) operate vessels in the fishery.

Poland: Polish-Peruvian fishery relations began in 1972 with the Poles negotiated a joint venture with the Peruvian state fish marketing company EPSEP. The venture received relatively little media attention in the tightly controlled Peruvian press until the late 1970s when press censorship was relaxed and the arrangements with foreign fishing companies emerged as contentious political issues. Candidates charged that foreign companies were exploiting Peruvian resources and returning little benefit to Peru. Polish efforts to modify the arrangements by forming new ventures working with private Peruvian companies in 1980 proved disastrous to both Peruvian investors and the Polish state fishing company. The new joint ventures were just as controversial as the previous EPSEP joint venture

and ultimately unsuccessful. Constant disputes between MIPPE, EPSEP, and private industry groups over the ventures were widely reported in the media. The new Belaúnde Administration issued regulations that made it impossible for the Polish joint venture companies to operate profitably. As a result the Poles liquidated the ventures and sold the vessels to Peruvian companies. The Peruvian companies, however, were unable to successfully deploy the vessels and many were eventually sold for scrap. The Poles withdrew to fisheries outside Peru's 200-mile zone in 1981. This fishery proved unprofitable and eventually the Polish fleet withdrew from the southeastern Pacific entirely. (See section IV. Foreign Fishing.)

RYBEX/EPSEP (1973-80): The Polish Fish-Exporting Company (RYBEX) signed a joint venture with EPSEP in 1972.²¹⁶ Actual fishing operations were initiated in 1973. The RYBEX-EPSEP joint venture was subsequently revised several times.²¹⁷ Peru allocated very substantial quantities of fish to the joint venture which targeted demersal species, especially hake. The Polish DALMOR shipyard provided factory vessels. RYBEX provided technicians which were to train Peruvians to eventually take over operations. The Poles were reimbursed for their costs through fish exported to Poland by the Peruvian companies. The joint venture contract provided that Peru was to receive 51 percent of the profits, but actually calculating profits proved to be a highly controversial issue between the partners. Other difficulties developed with Peruvian workers.²¹⁸ As a result of these and other problems, EPSEP Director Juan Lavaggi became increasingly disenchanted with the joint venture. Rising fixed costs and stable fish prices meant that by 1979, EPSEP's profits from the venture were effectively nil. At the same time, RYBEX was benefitting from several provisions of the agreement, especially the right to buy fuel from PETROPERU at subsidized prices. These difficulties were exacerbated by personal differences between Polish and Peruvian officials.²¹⁹ Additionally, fishing industry groups which wanted to initiate a domestic trawl fishery increasingly criticized the Government for permitting continued foreign fishing. Poland reported catches approaching 200,000 t in 1979. The Peruvians finally decided to allow the contract to expire in 1980.²²⁰ MIPPE fined the Poles for not delivering the bycatch as stipulated in the agreement, but the Poles denied the allegations and



Photo 15.--Joint venture companies have attempted to develop new non-traditional fisheries.

complicated legal actions dragged on for months in Peruvian courts.²²¹ Peruvian observers were convinced that Peru was not receiving a fair share of the profits and that RYBEX was not fulfilling its contractual obligations.²²²

RYBEX/Private Companies (1980-81): RYBEX succeeded in maintaining access to Peruvian waters by forming new joint ventures with private Peruvian companies in 1980.²²³ This allowed the Poles to continue fishing in Peruvian coastal waters where they were taking hake and other desirable species that were not available off shore. Under the terms of the joint venture agreements, RYBEX provided vessels and technicians. Peru required RYBEX to transfer the registration of participating vessels to the Peruvian flag and over time the Peruvian investors would pay for the vessels through fish exports to Poland. RYBEX was to be reimbursed through the export of fish to Poland by the Peruvian partners. Available information suggests that 18 Polish factory ships were transferred to Peruvian companies (Bahía, Pisces, Conserva San Andres, and Pesquera Mochica). The vessels were class B-15s, 16s, and 18s averaging from 10-15 years of age. The Poles agreed to provide replacement parts for

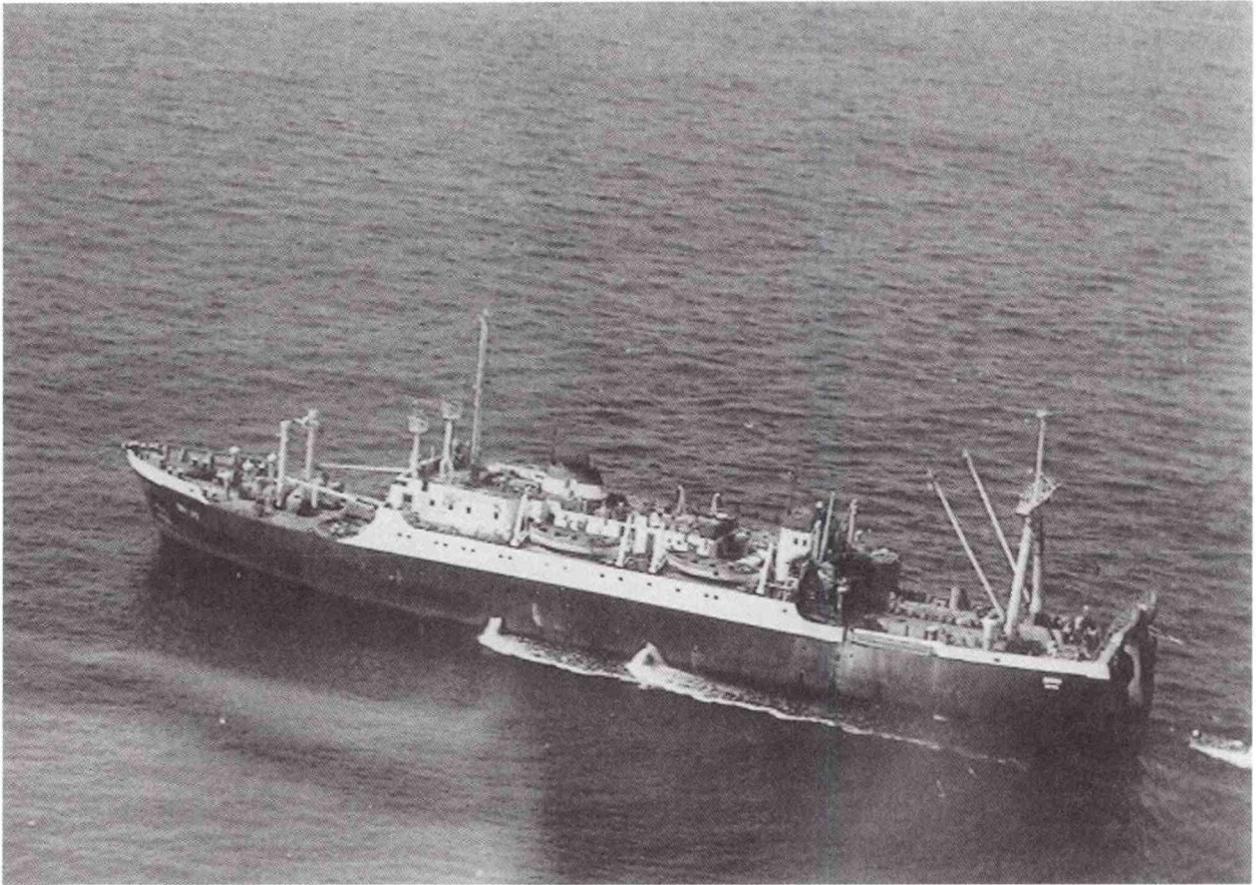


Photo 16.--Peru acquired a fleet of Polish stern factory trawlers in 1979-80 through joint ventures which eventually failed. Few of the vessels were ever deployed profitably in the fishery.

up to 10 years. Only limited information is available on the precise provisions of the individual contracts.²²⁴ These 18 vessels, however, represented a three-fold increase in the number of Peruvian factory vessels in the Peruvian fishing fleet at the time.²²⁵ The joint venture arrangements were sharply criticized by the fishing industry and in the local press. Fisheries Minister René Deustua, appointed by the incoming Belaúnde Administration, ordered a study of the foreign fishery situation upon assuming office. He then executed "Operation Surprise" on September 18, 1980, to collect actual surveillance data on the foreign vessels operating off Peru. Based on the data collected, Deustua ordered the seizure of 13 or 14 Polish trawlers on September 20-21, 1980, for reportedly fishing in a prohibited zone within 10 miles of the coast.²²⁶ Various Peruvian observers sharply criticized the previous military Government for giving what they called "Polish front groups" and "Trojan horses" access to Peruvian waters.²²⁷

Peruvian industry groups charged that the joint ventures provided access for Polish vessels that, while flagged in Peru, were Polish-built, had mostly Polish crews, and exported to Peru. These private joint ventures became even more controversial after it was learned that MYPE officials had personal financial involvements.²²⁸ Miguel Reina, head of the important Chimbote-based Reina Group participating in the joint ventures (Bahia and Pices) strongly defended them claiming that they were helping Peru acquire modern fishing vessels needed to harvest under-utilized stocks which could increase domestic food supplies and generate badly needed export earnings.²²⁹ MYPE issued new regulations in 1981 which restricted hake fishing (the major species the Poles were targeting), required greater Peruvian ownership, reduced export subsidies, prohibited at-sea transshipments, and introduced other requirements adversely affecting the profitability of the joint ventures.²³⁰ The Ministry of Labor issued additional new regulations which

establishing costly wage and working condition requirements for crew members.²³¹ The Belaúnde Administration (Minister Deustua) initiated legal actions that continued for years in Peruvian courts. The Poles complained that the Peruvian Government had changed fishing and labor regulations, after the joint venture contracts were finalized, and the newly-constituted companies could not possibly operate profitably under such regulations. The Poles complained that the Belaúnde Administration had unfairly changed the rules of the game. The Peruvian Government refused, however, to modify the regulations, dooming the joint ventures which were finally dissolved in 1981. The Poles sold 19 of the trawlers they had deployed off Peru to Peruvian companies, but few details are available on the financial outcome, except that the Poles claim that the Peruvian companies still owe them \$12 million.²³² The new Peruvian owners were unable to immediately deploy the vessels, at least in part because of unpaid fines and taxes.²³³ One report indicates that at least one owner managed to begin limited operations in 1984, but most of the Polish vessels were never activated and have been stripped by looters and deteriorated from lack of maintenance.²³⁴ The decaying hulks of abandoned Polish vessels could be seen in Peruvian ports for several years. The Poles eventually received only small sums from the Peruvians, mostly the result of court decisions dividing payments for scrapping the vessels. At least one of the vessels is still in service as a floating cold store.

New agreement (1988): Fisheries Minister Labarthe and Polish Under-secretary for Transportation, Navigation and Communication, Adam Nowotnik, signed a "letter of intent" on February 2, 1988, to form a joint venture.²³⁵ The "letter of intent" stated that past problems were a result of misunderstandings and that Peru has no claims against the Polish Government regarding any past cooperation. Peru also proposed that any new agreement, unlike the Cuban and Soviet agreements, be for a 2-to-3-year period. Poland has suggested a duration of over 5 years.²³⁶ Peruvian industry sources report that his replacement, Rómulo León, secretly signed the agreement November 25, 1988.²³⁷ The new 2-year agreement reportedly provided Poland a 250,000t allocation in Peruvian waters.²³⁸ The agreement and the secrecy surrounding its signing, however, caused a furor in the media and among industry groups

already estranged by the García administration's alleged anti-business policies.²³⁹ The authors have no information indicating that any new Polish joint venture firm was actually formed or initiated operations.

Russia: The authors have little information on active Russian-Peruvian joint ventures. The former Soviet joint venture was terminated by the Peruvians in 1991. Soviet officials were in 1991 negotiating smaller joint ventures which may have been taken over by the Russians.²⁴⁰ Three such ventures have been mentioned by Peruvian officials, who provided no details.²⁴¹ One arrangement including French participation appears to be active.²⁴² The status of other ventures is unknown. Another report suggests that an unknown Russian group in 1993 has negotiated a new joint venture, CULIMAR, with Peruvian companies. The venture has deployed about 11 small, newly built seiners and trawlers (about 600-700 tons) with ice holds. Most of the vessels have been reflagged in Panama and have Russian crews.²⁴³ They will be fishing under contract to Peruvian companies. One report indicates that the venture has obtained excellent vessels which were built in Russia (Petrozavodsk). Most of the vessels are to be deployed in the surface fishery for breams ("cojinobas"), bonito, and mullet ("lisa").²⁴⁴ The Peruvian partner, however, has had trouble obtaining the necessary permits and the vessels have been idled in Pisco since March 1993, when they arrived in Peru. The operation plans to land the catch fresh for local marketing and to supply shore-based freezing plants where the finished product will be both marketed domestically and exported.

Spain: The Spanish company Alvarez Entrena of Huelva in 1978 formed a joint venture in Peru involving four small boats (273-300 GRT).²⁴⁵ The Peruvian companies Pesquera Orión and Sur Pacífico Empresa Pesquera formed joint ventures with a Spanish partner, Pesquerías Españolas de Bacalao in 1978 to trawl for hake off northern Peru.²⁴⁶ The Peruvian companies were the majority partners (55 percent).²⁴⁷ Peruvian officials were hopeful that such private joint ventures would end Peru's reliance on fleets operated by communist countries.²⁴⁸ These Spanish joint ventures operated for several years, but were apparently terminated in 1985.²⁴⁹ Peruvian companies held discussions with Spanish companies during the mid-

1980s, but the authors have few details on any actual joint ventures resulting from these discussions.²⁵⁰ Unconfirmed reports suggest Spanish companies in 1991 were considering joint ventures with Peruvian companies (Grupo Sotomayor, Inversiones Carolina, and Sindicato Pesquero) to operate trawlers out of Chimbote and Paita.²⁵¹ Another unconfirmed report indicates that a Spanish and Peruvian company formed a joint venture to export swordfish, but failed when the cholera problem in 1992 adversely affected the price of Peruvian exports.

Ukraine: One unconfirmed report indicated that a Ukrainian-Peruvian joint venture is fishing for lobster on the Nazca Ridge, presumably beyond the 200-mile limit, but no details are available.

USSR: The Soviet Union, despite pursuing a major fisheries relationship with Peru beginning in the 1960s, did not negotiate a joint venture agreement during the 1970s as did Cuba and Poland to gain access to Peruvian coastal waters. The Soviets instead initiated a massive fishery outside Peru's 200-mile limit, supported by calls at Peruvian ports. (See section IV. Foreign Fishing.) Successive Peruvian governments desired to obtain greater benefit from this huge Soviet fishery conducted off Peru outside the 200-mile limit than just earnings from occasional port calls for crew exchanges, repairs, and supplies. The complementary Soviet desire for access to more productive coastal grounds led to talks and the eventual formation of joint ventures during the 1980s. The Soviets were probably motivated from a desire to find alternative grounds for SEVRYBA's huge fleet after it was excluded from North Pacific and North Atlantic grounds by coastal countries. The Soviets were also anxious to gain access to fishery stocks (especially hake) that would be both more in demand by Soviet consumers and less expensive to catch than the jack mackerel they were taking outside the Chilean and Peruvian 200-mile limits.²⁵² The joint ventures beginning in 1983 allowed the Soviets access to Peruvian coastal fishing grounds in exchange for a share of the catch. Despite a Peruvian desire for hard currency payments, the Soviets insisted on payments in kind (a share of the catch) rather than hard currency access fees. The resulting Soviet fish deliveries made an important contribution to the Peruvian domestic market, significantly increasing supplies of frozen fish in 1984 (appendix J). The

decision by APRA leaders to criticize the Soviet joint venture agreement and make it an issue in the 1985 Presidential election effectively politicized the arrangement. As a result, successive joint venture arrangements, including ones subsequently negotiated by APRA ministers, became highly charged political issues.²⁵³ Disputes concerning the ventures led to protracted litigation, fines, claims of unpaid taxes, vessel seizures, charges of corruption, Congressional investigations, prolonged renegotiations, and finally the termination of these arrangements in 1991. Each of the last three Presidential administrations (Belaúnde, García, and Fujimori) has become embroiled in the controversy surrounding the Soviet joint ventures. Each Administration found it exceedingly difficult to handle, as reflected, at least in part, by a long list of fishery ministers serving only short periods.

Military Governments (1968-80): The Soviets developed close ties with the Peruvian military government of General Velazco (1968-75), including important fishery programs. (See IV. Foreign Fishing.) Despite these close ties, the Soviets never negotiated a joint venture with Peru to gain access to coastal grounds. It is unclear if this was because the Soviets were not at the time interested in access or because the Peruvians objected.

Belaúnde Administration (1980-85): Peruvian and Soviet officials began negotiations in 1982 to permit a small number of Soviet vessels to fish within the Peruvian 200-mile limit as part of a joint venture between the Soviet Joint Fishery Venture Enterprise (SOVRYBFLOT) and Peruvian companies.²⁵⁴ The Soviets refused to consider any payment of access fees in hard currency, but instead insisted on delivering a share of the catch as payment in kind. The two countries reached agreement in 1983 on a joint venture contract giving Soviet vessels access to Peruvian coastal waters for the first time in exchange for a share of the catch. The Soviets did agree to some limited payments, such as wages for Peruvian workers and port and other fees (appendix F). The initial agreement was between the Peruvian state fish marketing company, Empresa Publica de Servicios Pesqueros (EPSEP)²⁵⁵ and Empresa Pacifico, a company acting as an intermediary for SOVRYBFLOT. The Peruvian Government allowed five Soviet BMRT class trawlers to catch up to 50,000t of mackerel annually, but disputes arose concerning the contractual relations. The Soviets negotiated arrangements to operate trawlers with two Peruvian companies (Pesquera Pacifico and

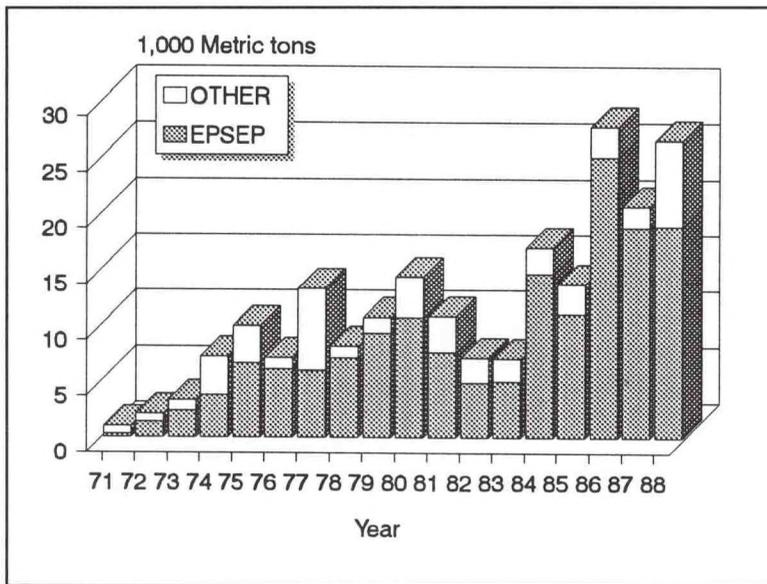


Figure 12.--Most of Peru's frozen fish is distributed by EPSEP and the foreign joint ventures were the primary source of the fish during the 1980s.

Mercurio). These joint ventures, however, proved highly controversial. It is unclear why the Soviets believed they could successfully form joint ventures and avoid the problems the Cubans and Poles had previously experienced. Notably the Soviet joint venture did not involve transferring vessels to Peruvian ownership as did the Polish joint ventures. The Soviets were undoubtedly enticed by access to the trawl grounds off northern Peru where hake and other demersal species could be taken. The Soviet joint venture, however, proved even more controversial than the Polish and Cuban ventures. Peruvian industry groups as well as APRA and other opposition political parties sharply criticized the Government for authorizing these joint ventures. APRA objected to the terms under which access was given to Soviet fishermen and to the approval for ventures with private Peruvian companies. Previous joint ventures with FLOCUBA (Cuba) and RYBEX (Poland) were with state-owned EPSEP directly.²⁵⁶ The initial 1983 agreement was later expanded to allow 20 large Soviet BMRT class stern factory freezer trawlers to fish in Peruvian waters. The two joint venture companies (Empresa Pacifico and Mercurio) delivered about 15 percent of the catch and all species other than jack and horse mackerel to EPSEP in exchange for fishing rights. Each company could catch up to 200,000 t of fish annually but could not fish within 30 miles (about 50 km) of the Peruvian coast (the area most heavily fished by Peruvian fishermen). The two agreements

also included provisions committing the Soviets to train Peruvian fishermen in trawler operations. Some Peruvians were employed by the joint venture, but the training program seems to have been largely unsuccessful. The Soviet share of the fish was shipped to the Soviet Union. The fishmeal and oil were sold through Empresa Pacifico and EPSEP on the Peruvian market. The joint venture partners reported that the Soviets delivered what they promised and on time. The two joint ventures, however, were severely criticized in the Peruvian press. The issue received extensive media coverage in 1984. The deaths of two Peruvian fishermen onboard the Soviet trawlers in 1984 was widely reported. Peruvian and Soviet officials said the deaths were accidental, but the local press and public called for

further investigation into the matter. The widow of one of the fishermen initiated legal action.²⁵⁷ During the 1985 presidential campaign, the foreign fishing issue was politicized by the major parties. The opposition, led by APRA, charged that the Government had failed to receive adequate compensation for the fishing rights granted to the Soviets. APRA Presidential candidate Alan García himself, charged that the Belaúnde Government had negotiated an inequitable arrangement. Government officials pointed out that substantial quantities of fish were being delivered to EPSEP for distribution to low-income consumers. Fueled by the APRA charges, the joint ventures emerged as an important issue in the 1985 presidential election campaign. The Government, perhaps attempting to co-opt the issue, decided to seize 12 of the Soviet trawlers in April 1985, charging that the Soviet Union had not paid applicable customs duties and failed to deliver 3,000 t of fish valued at about \$1 million. The Empresa Nacional de Puertos also demanded payment of fees totalling another \$0.2 million. The actions were primarily directed at the Empresa Pacifico joint venture. The Soviets adamantly refused to pay the taxes and fees and insisted that the Peruvian joint venture company, Empresa Pacifico--not the Soviet company--was liable. One of the joint ventures was allowed to lapse when it came up for renewal.

García Administration (1985-90): The García APRA Government upon assuming office wanted to

revise the joint venture agreements to increase fish deliveries. This goal met two long-established APRA priorities, expanding domestic food supplies and increasing taxes and fees on foreign companies operating in Peru. Achieving these goals with the Soviets, however, proved a daunting negotiating task for successive APRA fishery ministers. APRA's desire to secure higher returns and the Soviet conviction that the Peruvians were over-estimating the value of fishing rights and making unrealistic demands resulted in a stalemate. Although agreement on a revised joint venture was eventually reached in 1988, the APRA Government was sharply criticized for getting too small a share of the catch and losing the cash payments that the Soviets had made under the previous agreement (appendix F). These criticisms came from some of the same politicians against who APRA had previously leveled the exact same criticism.

- 1985-86: The APRA Government, following-up on its campaign promises, insisted on revising the joint venture agreements and demanded a larger share of the catch than the Soviets had provided under the 1983 joint venture agreements. The Soviets insisted that the Peruvians were over-estimating the value of the fish being harvested and the terms demanded were not economically feasible. The two sides could not reach agreement on revised terms. The APRA Government thus allowed the remaining Soviet joint venture to expire in 1986, forcing the Soviet fleet to cease operations within Peru's 200-mile zone. Peruvian officials were convinced that the Soviets were simply using tough negotiating tactics and would in the end accept their offer. Protracted talks to negotiate a new joint venture agreement occurred in 1985 and 1986. The two sides, however, were unable to agree on revised terms under which the joint ventures could be reestablished. APRA officials were especially interested in arranging for continued Soviet deliveries of low-cost fish to the domestic market, but were not willing to lower their demands and accept the terms offered by the Soviets. The termination of the agreements in 1986 sharply reduced the supply of low-cost fish to Peru's domestic markets (appendix J). The Government seems to have concluded that the new state fishing company (FLOPESCA) and an interim agreement concluded in December 1985, with Cuba could provide

adequate quantities of fish for domestic consumption.²⁵⁸ The APRA Government, despite operating under severe financial constraints, invested \$30 million in a new state fishing fleet (FLOPESCA) which they were convinced would adequately supply the domestic market. As a result, APRA Government officials refused to lower their demands and accept the terms offered by the Soviets.

- 1987-88: APRA officials soon found that EPSEP's domestic supplies of frozen fish declined after the termination of the Soviet joint venture. APRA officials were disappointed that fish deliveries by both the Cuban joint venture and FLOPESCA did not prove adequate to replace the fish formerly delivered by the Soviets. APRA officials reluctantly decided to lower their demands in an effort to reach agreement with the Soviets. Peru resumed fishery negotiations with the Soviets in early 1988 following the broader \$1 billion bilateral debt restructuring talks.²⁵⁹ The Soviets were also anxious to resume talks and reportedly linked the debt negotiations to the successful conclusion of a fisheries access agreement. Officials held protracted negotiations, complicated by Peruvian insistence on payments of back taxes and fines resulting from the previous joint ventures.²⁶⁰ The two countries finally announced on December 6, 1988, the signing of two new fishery agreements: a bilateral 3-year protocol authorizing Soviet fishing and actual joint venture contracts.²⁶¹ The first was signed by EPSEP and the Soviet Northern Regional Fisheries Administration (SEVRYBA).²⁶² A second joint venture contract was signed by SEVRYBA and the Peruvian privately-owned Plutón company on December 7, 1988. The provisions of the protocol and joint ventures were exceedingly complex with various restrictions and requirements. The agreements in essence provided for the Soviets to deploy about 20 trawlers and catch about 400,000t of fish annually in Peruvian waters, delivering 17.5 percent of the catch to Peruvian companies. Peru agreed to cover the cost of port calls, licensing fees, and any taxes associated with delivering the fish, fees previously paid by Soviets (appendix F). The Soviets also agreed to finance a \$50 million fisheries development

program.²⁷⁰ The December 1988 agreements were heatedly criticized in Peru, primarily because they allowed Soviet-flag vessels to fish within Peru's 200-mile zone and because of the size of the catch allocation and number of vessels involved. Critics also charged, with varying levels of accuracy, that the agreements were inequitable, provided excessive allocations, contained no zonal limits, placed too great an emphasis on cooperating with communist countries, adversely affected artisanal fishermen, exceeded total allowable catches (TACs), discriminated against domestic fishermen, unfairly favored foreign fishermen, violated the constitution, required Peru to pay fees and salaries, included no firm commitment of Soviet aid, and exceeded EPSEP's ability to handle the projected fish deliveries. Former Fisheries Minister Benevides, for example, charged that the terms of the new agreement was much less beneficial to Peru than was the 1983 joint venture that APRA had criticized (appendix F). Benevides claims, for example, that the Soviets formerly made payments totaling 23.7 percent of production compared to only 17.5 percent paid under the APRA negotiated contract.²⁷¹ Government proponents insisted that whatever Peru received would be a net gain. They explained that Peru obtained many benefits under the agreement, including a substantial part of the Soviet catch, \$50 million in assistance,²⁷² and new jobs. Administration officials added that the fish delivered by the Soviets was fish Peruvian fishermen could not fully harvest and species in which Western countries were uninterested. In addition, the Administration insisted that artisanal fishermen were protected and major stocks managed for optimal yield.

● 1989-90: Important industry groups remained unconvinced by the Government's case for its 1988 joint venture agreement. Some critics charged that the Soviets were not delivering the quantities of fish promised.²⁷³ An industry trade group (CONAPEZ) took the García Administration to court, leading to protracted legal proceedings which continued for years. Soviet officials in Peru complained bitterly about the delays, denying charges that their vessels were operating illegally and claiming that the delays were causing massive losses. The García Administration, frustrated

by the criticism and delays caused as a result of the litigation began a barrage of legal retaliation in January 1989. Fisheries Minister León expressed his frustration to the press, reiterating the Government's commitment to the agreement and the benefits accruing to Peru. According to León:

Peru is rich; it has natural resources. Unfortunately, we have turned it into a poor country, because we have been unable to reach agreements and to impartially preserve the national interest. We have been unable to use our national resources for promoting development, as in the case of gas, or for increasing food production through the use of our fishery resources. When the Shell Corporation, which is a capitalist company, was engaged in negotiations over the development of gas, some opposition sectors made a lot of noise. In the end, no contract was signed because some prejudiced people do not like capitalist companies. The gas is still underground and the country has no energy. Now we are dealing with a socialist company, and some prejudiced people do not like to deal with socialists. As in the Shell case, the Soviet company, which does not have to tolerate insults and distrust, may well decide to cancel the contract, and they will have every right to do so. Peru will thus miss the chance of feeding our people with its own fishery resources.

In another interview, León lamented, "Our fish die of old age because no one catches them while at the same time in our country, children die of hunger." The irony of the debate over the Soviet fishery agreement is that it is the APRA party which has criticized previous governments over more than 40 years for permitting foreign investors to exploit Peru's natural resources. APRA has consistently represented itself as the guardian of the country's "natural patrimony." It was APRA which had politicized the joint venture issue by criticizing the Belaúnde Administration for negotiating inequitable fishing agreements with foreign countries. APRA found itself in the uncomfortable position of being criticized by those very same parties for attempting to sign

agreements with foreign companies in an effort to develop the country's natural resources. The renegotiation of the joint venture in 1988 did not defuse the political controversy. The debate over the joint ventures included corruption charges, fines, prosecutions, vessel seizures, diplomatic interventions, Congressional hearings, and interminable legal disputes. Another industry trade group, the Sociedad Nacional de Pesca (SNP) brought suit against the García Administration in 1989, challenging its authority to negotiate the SEVRYBA joint venture.

Fujimori Administration (1990-date): After APRA lost the presidential election in 1990, the new Fujimori Administration reassessed the terms of the Soviet joint venture. The new Administration launched a major assessment of the joint ventures with state companies. The Peruvian Supreme Court ruled to invalidate the contracts on October 13, 1990.²⁷⁴ Fisheries Minister Raúl Sanchez Sotomayor subsequently announced that he concluded that the joint venture with SEVRYBA "harm national interests" and that the Government opposed the provisions of the joint venture agreement.²⁷⁵ EPSEP claimed that the SEVRYBA did not deliver the quantities of fish that they had contracted. EPSEP officials in 1991 demanded \$20 million in payment for the delivery shortfalls.²⁷⁶ The Peruvian Government finally terminated the joint venture on April 30, 1991, because the Soviets failed to deliver the quantities of fish contracted. The dispute escalated when MIPE announced on June 5, additional fines on 12 Soviet vessels for false reporting, using prohibited methods, unauthorized discards, delivering low-quality fishmeal and frozen fish, pollution, obstructing inspectors, unacceptable sanitary conditions (rats), and for exceeding catch quotas.²⁷⁷ Fisheries Minister Felix Canal Torres announced the seizure of a Soviet mother ship on June 8, 1991, and indicated that the Government would hold the vessel until SEVRYBA paid arrears to EPSEP.²⁷⁸ SEVRYBA officials threatened a \$72 million counter suit.²⁷⁹ Interestingly, through the midst of the controversy over the EPSEP-SEVRYBA joint venture, Fisheries Minister Canal approved other ventures involving Soviet vessels. Reportedly three Peruvian-Soviet joint ventures were formed, but few details are available.²⁸⁰ Minister Canal announced on May 27, 1991, that the Soviet SEVRYBA-EPSEP joint venture would

be replaced by another unidentified joint venture. The new joint venture has contracted for seven Soviet and 1 French vessel.²⁸¹ Canal apparently approved another venture in June 1991 allowing the Soviet Murmanribprom company to form a joint company with Cooperativa Pesquera Humboldt. The company planned experimental fishing on anchovy and sardines.²⁸² Few details on this and other ventures, however, are available.

United States: The U.S. tuna company Star-Kist formed Pesquera Estrella del Perú (COPES), a canning joint venture in Peru during the 1960s. When the Government partially nationalized the fishing industry in 1973, Star-Kist was required to sell a 51-percent share of COPES to EPSEP.²⁸³ Star-Kist finally sold its remaining share of COPES to the Sotomayor Group in 1991.²⁸⁴ Few U.S. companies have subsequently invested in Peruvian fisheries. One U.S. company, (American Seafood International) is currently reporting some success with providing technology and marketing assistance to Corporación Backus and other companies.

VI. DISTANT-WATER OPERATIONS

Peruvian fishermen conduct virtually no distant-water operations. The only Peruvian distant-water operations known to the authors are limited operations off the Falklands. The Peruvian company Bahía reportedly deployed three of its Polish-built trawlers off the Falklands during the mid-1980s.²⁸⁵ Peru does not currently conduct any such operations and is unlikely to initiate them during the 1990s.

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ENDNOTES

INTRODUCTION

1. "UN High-Seas Conference paves way for agreement next year," Eurofish Report, August, 1993, p. BB/3

SECTION I. (General Background)

2. U.S. Embassy, Lima, October 18, 1993.

3. A good short review of the current situation is available in "Peruvian fishing industry review," *World Fishing*, August, 1992, p. 21. A more detailed review covering the industry up until the Fujimori Administration is available in Ludwig Meier Cornejo, "El Futuro de la Pesquería: Corrigiendolo los Errores del Pasado (Instituto de Estudios Pesqueros: Lima, 1990), 222p. More current statistics are available in the U.S. Embassy's annual fisheries report. U.S. Embassy, Lima, October 18, 1993.

4. U.S. Embassy, Lima, October 18, 1993.

5. Ing. CEP Henry Hartley y Soto, Director General, Oficina de Economía Pesquera, Ministerio de Pesquería, "Pesquería en el Peru: Re-estructurando el sector y fomentando las inversiones nacionales y extranjeras," unpublished report, August 23, 1993.

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8. "La privatización de PESCA PERU puede originar una sobrepesca," *Ojo*, July 23, 1993, p.7.

9. The Government listed over 650 registered fishing vessels in the Peruvian fleet in 1990. About 380 vessels were categorized as operational. Industry sources report that only about 70 of those vessels were capable of efficient operations. "Yards launch seiners to revive 20-year-old fleet," *Andean Report*, August 1990. Another source provides somewhat different, but roughly equivalent numbers (appendix A1).

10. The Fujimori Administration has given special attention to increasing the availability of credit to both fishermen and processing companies. Hartley y Soto, "Pesquería en el Peru," *op. cit.*

11. For detailed landings data by port see Meier, *El Futuro*, *op. cit.*, p. 37 and U.S. Embassy, Lima, October 18, 1993.

12. A good discussion of the fleet targeting edible species is available in Genaro Huamanchumo, "Entrevista a Genaro Huamanchumo," *Pesca*, January-February, 1990, pp. 7-8.

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18. Prices average about \$1.6-1.8million for a 350-ton seiner. "Yards launch seiners to revive 20-year-old fleet," *The Andean Report*, August, 1990.
19. "Union protests beach new fishing boats," *Andean Report*, January, 1990.
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21. "U.S. to fund new fleets: Peru close to \$160m boat credit," *Fishing News International*, October, 1992.
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23. "Investments come through in Peru," *Fishing News International*, June 1993, pp. 24-25.
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25. Superintendencia de Banca y Seguros SBF Circular N° B-1928-92, December 29, 1992.
26. "Nueva ley de pesqueria," *El Armador*, May-June, 1993, p. 3.
27. Hartley y Soto, "Pesqueria en el Perú," *op. cit.*
28. Hartley y Soto, "Pesqueria en el Perú," *op. cit.*
29. "Owners import fittings to build ships," *Fishing News International*, August, 1990, p. 34. Alejandro Bermejo, "Volvemos a la madera con tecnologia moderna," *Pesca*, September-October, 1987, pp. 6-8. The Peruvian vessel exports to Cuba were mostly shrimp trawlers.
30. "Yard launches seiners," *op. cit.*
31. "El 'boom' de la construcción de flota ha empezado," *Pesca*, January-February, 1989.
32. Hartley y Soto, "Pesqueria en el Perú," *op. cit.*
33. Alejandro Bermejo, "Se reactivan astilleros," *Pesca*, October, 1991, p. 5.
34. "Drydock left high and dry," *Fishing News International*, February 1990.
35. "Pesquero de altura," *Pesca*, July-August, 1991, p. 13.
36. "Yard launches seiners," *op. cit.*
37. "Armadores apoyan compra de barcos pesqueros en Argentina," *El Peruano*, January 1989.
38. "Shipbuilding in Peru: holdups on overseas contracts," *Fishing News International*, August 1990, p. 34.

39. "China builds fishing vessels for Peru," *World Fishing*, February 1990, p. 38.
40. "Ocho bolicheras Chinas," *Pesca*, November 12, 1990, p. 15.
41. "The cannery goes to sea," *Fishing News International*, January 1981, p. 40.
42. "Shipbuilding in Peru: holdups on overseas contracts," *Fishing News International*, August 1990, p. 34.
43. "Perú," *Chile Pesquero*, March-April 1988, p. 51.
44. Alejandro Bermejo, "Barcos 'Holandeses' son buenos," *Pesca*, June-July 1988.
45. "Peru looks to trawlers," *op. cit.*
46. Peruvian and Polish sources disagree on the state of the vessels.
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50. Anonymous source, September 17, 1993.
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52. "Barcos peruanos reemplazaran a los cubanos," *Pesca*, September-October, 1978, p. 13. The two Spanish trawlers were auctioned off in 1985 to meet debts owed the Banco Nacional. "BN cobrará deuda con remate de 2 gigantes buques-factoría españoles," *Diario Comercial*, February 14, 1985.
53. "Palangrero Perla de Cariño," *Pesca*, April 12, 1990, pp. 28-30. "Shipbuilding in Peru: holdups on overseas contracts," *Fishing News International*, August, 1990, p. 34.
54. "Peruvian fishery can yield more," *Fishing News International*, September, 1993, p. 25.
55. Resolución Ministerial N° 329-91-PE, in *Pesca*, October 10, 1991, p. 23 and Decreto Ley N° 750, November 13, 1991.
56. Resolución Ministerial N° 333-91-PE in *Pesca*, October 10, 1991, pp. 23-24.
57. "Peruvian fishery can yield more," *op. cit.*, p. 25.
58. Hartley y Soto, "Pesquería en el Perú," *op. cit.*
59. For historical details see Dennis Weidner, "Foreign fishing off Peru, 1978-80" *International Fishery Reports*, (IFR-81/11), January 30, 1981.

60. "El boom de la pota," *Caretas*, June 3, 1993, pp. 6-7.
61. Giant squid stocks off Peru are a highly variable resource. They have never been targeted to any appreciable extent by Peruvian fishermen. They appear to run in cycles of 2-4 years. The fishery is conducted from 7-200 miles off the coast, in an area running from Callao north to Paita. One observer indicates that the resource is particularly abundant about 50 miles off the coast in the Paita area.
62. Alejandro Bermejo, *Pesca*, May-June, 1977, p. 2.
63. "Peru: Brazos abiertos a la inversión extranjera," *Industrias Pesqueras*, October 15, 1991.
64. In fairness to the state companies, the private companies in 1972 were pleading for Government assistance as a result of the plummeting catches. What is less easily explained in economic terms is the continued Government support for state companies for two decades and the decision of the García Administration to create a new state company in 1985.
65. "Harina de alta calidad," *Pesca*, January-February, 1990, p. 18. Details on the rapidly expanding world aquaculture industry are available in *World Salmon Culture* (PB93-134617/GBA) and *World Shrimp Culture* (PB93-134617/GBA) from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161. One observer informs the authors that two new fishmeal plants producing high-quality fishmeal have been built and should be operating by the end of 1993.
66. MYPE officials reports invests totaling about \$200 million during 1991-92. Among those investments are projects five plants capable of producing high-quality fishmeal. The plants will have the capacity to process 228 t of raw material every hour. Hartley y Soto, "Pesqueria en el Peru," *op. cit.*
67. César Awapara, "Peru: Un país que se muere de hambre sobre un banco de Pesca," *Pesca*, January-February, 1990, pp. 10-11 and Ismael Benavides, "Barcos Sovieticos en Chile y Peru," *Chile Pesquero*, September, 1990, p.5.
68. The Soviets deployed tankers and other fishery support vessels to provide most of the fuel, provisions, spare parts, maintenance, and repairs needed by the fishermen. The fishery commodities (frozen, canned, and cured products and fishmeal and oil) produced on factory vessels were usually transshipped at sea to save lost fishing time and port charges and other fees required for port calls. Milan Kravanja, NMFS, personal communications, September 21, 1993.
69. The continental shelf falls off steeply along the western coast of South America, thus limiting the area of shelf habitat where demersal species occur.
70. For details see Francisco Quintanilla and Dennis Weidner, "Peruvian bilateral fishery relations," *International Fishery Reports*, (IFR-88/88), September 2, 1988.
71. A good brief review of the policies of various administrations is available in Alejandro Bermejo, "Del Diario Expreso," *Pesca*, January-February, 1990, pp. 19-21. The article is composed of a series of editorials written by Bermejo for *Expreso*, one of Peru's major newspapers.
72. For one example of changes in Government policy and the impact on the industry see Dennis Weidner, "Peruvian government promotes domestic fish marketing," *International Fishery Reports*, (IFR-80/127), July 30, 1980.
73. Awapara, "Peru: Un pais," *op. cit.*, p. 10.
74. For details see Meier, *El Futuro*, *op. cit.*, pp. 20-22.

75. For details see Dennis Weidner, "Peruvian trawl fishery," *International Fishery Reports*, (IFR-81/86), May 13, 1981.
76. U.S. Embassy, Lima, September 30, 1980.
77. The term joint venture is applied loosely here. The Soviets did not commit equity participation or transfer vessel ownership. The arrangement was simply a granting of access in exchange for a share of the catch and fee payment.
78. It is unclear how the Peruvians arrived at this figure. The jack mackerel and other species taken by the Soviets are mostly low-value species and \$320 per ton would seem to be an expensive fee.
79. Senator Luis Bedoya de Vivanco, Chairman of the Senate Fisheries Committee, charges that the fisheries contract with the Soviets has cost Peru \$0.6 billion. Bedoya criticizes Administration officials who were demanding that the Soviets pay fines and back taxes of \$22 million, claiming that the economic losses suffered by Peru are much larger. His estimate is based on fish he charges the Soviets should have delivered to EPSEP, but instead sold for their own account. "Contrato pesquero con URSS causó perjuicio económico a Perú por \$600 millones," *El Comercio*, May 2, 1991.
80. One industry observer referred to the APRA fisheries policies as "the second expropriation." César Awapara, "La segunda expropiación," *Pesca*, January-February, 1990, pp. 15-16. A good overview of APRA's statist policies is available in Meier, *El Futuro, op. cit.*, pp. 27-33.
81. Meier, *El Futuro, op. cit.*, p.28.
82. U.S. Embassy, Lima, September 12, 1990.
83. *El Comercio*, August 13, 1990.
84. Ing. Jaime Sobero Taira, "Entrevista al Ministro de Pesquería," *El Armador*, May-June, 1993, pp. 17-20.
85. Sobero Taira, "Entrevista," *op. cit.*
86. The authors do not have precise data on allocations, but Peru conducts two or three licitations annually. Approximately 250,000t was allocated in 1991, 200,000t in 1992, and 150,000t in the first half of 1993.
87. "El boom de la pota," *Caretas*, June 3, 1993, pp. 6-7; and Hartley y Soto, "Pesquería en el Perú," *op. cit.*
88. "Peruvian fishery can yield more," *op. cit.*, p. 25.
89. Nuevas reglas de juego en campo pesquero," *El Comercio*, April 28, 1991, A5.
90. "Peru starts on special meals," *Fishing News International*, May 1991 and "Peru licenses for Korean ships," *Fishing News International*, December, 1991, p. 7..
91. Hartley y Soto, "Pesquería en el Perú," *op. cit.*
92. "Escandalo en pesca," *Pesca*, March-April, 1991, p. 17.
93. Presumably under Peruvian law, domestic fishermen would have priority access, but as there is no Peruvian squid fishery, the species is considered a surplus stock.

94. "El boom de lat pota," *op. cit.*, p. 7.
95. U.S. Embassy, Lima, October 18, 1993.
96. Ley General de Pesquería N° 24790 (especially Articles 63 and 64) and D.S. N° 005-89-PE.
97. Ley N° 24790, Ley General de Pesca, January 1988.
98. Decreto Supremo, N° 012-84-PE, modified by Decreto Supremo N° 005-88-PE.
99. Those steps were ratified by Decreto Ley N° 750, November 13, 1991.
100. Oswaldo Hundkopf, "Reglamentar operación temporal de embarcaciones extranjeras," *Pesca*, March-April, 1991, pp. 6-7; "Fishing," *Andean Report*, December, 1991; and Decreto Ley N° 750, November 13, 1991.
101. Decreto Ley N° 25977, December 21, 1992.
102. Decreto Supremo N° 026-92-PE, December 22, 1992. The new regulations are designed to interest foreign fishermen in Peruvian fisheries. They allow foreign vessel owners to operate off Peru for up to 5 years while retaining a foreign flag. During this period the vessel has all the rights of a Peruvian-flag vessel. The charter contract must include provisions for transferring ownership to Peruvian owners. Presumably the foreign vessel owner will receive a share of the catch in payment for the vessel. As such arrangements involve contracts with Peruvian companies, they are addressed in section V. Joint Ventures.
103. Anonymous source, September 24, 1993.
104. Dr. Juan Rusque, Director Nacional de Pesca (Chile), personal communications, October 13, 1993. For details see the Chilean chapter of this report.
105. For a more detailed account of Cuban-Peruvian relations see Tracey Thomas and Dennis Weidner, "Cuban Fishery Relations in the Americas," *International Fishery Reports*, (IFR-88/59), June 29, 1988.
106. Details on FLOCUBA are available in the Cuban chapter of this report.
107. Sobero Taira, "Entrevista," *op. cit.*, p. 20.
108. At least one report from Cuba indicates that as of September 1993 virtually the entire Cuban distant-water fleet was idled in Cuban ports. Anonymous FLOCUBA official, October 7, 1993. For more details see the Cuban section of this report.
109. See for example "Embarcaciones de Ecuador pescan en aguas peruanas," *El Comercio*, April 12, 1986 and "Conflicto pesquero entre Ecuador and Perú," *Diario las Americas*, February 8, 1990.
110. "Proyecto inconveniente," *Pesca*, July-August, 1990; "Segunda reunion binacional," *Pesca*, September-October, 1990, pp. 6-8; and "Pesqueria dice no," *Pesca*, November-December, 1990, p. 13.
111. "Ecuatorianos nos toman por tantos," *Pesca*, September-October, 1990.
112. "Peru's Minister visits Europe," *Fishing News International*, October, 1986.
113. "El mar nuestro," *Pesca*, September-October, 1991, pp. 20-21.

114. The EC has provided technical assistance to the Instituto Tecnológico Pesquero. The EC also has a fisheries assistance program for the Andean countries Colombia, Ecuador and Peru (CEE-PEC-ALA/87/21). Hartley y Soto, "Pesqueria en el Perú," *op. cit.*
115. "Argentine deal moving closer," *Fishing News International*, October, 1993.
116. Japanese companies also operated off Chile, but as Chile required the vessels to change the flag of registry, most of the catch was reported as part of the Chilean catch. For details see the Chilean chapter of this report.
117. Japanese fishermen reported a large southwestern Pacific squid catch in 1985 but virtually no catch during 1986-89.
118. Dennis Weidner, "Japanese-Peruvian fishery relations," *International Fishery Reports*, (IFR-76/112), July 29, 1976 and U.S. Embassy, Lima, August 12, 1982.
119. Hartley y Soto, "Pesqueria en el Perú," *op. cit.* The authors do not have separate data for individual countries.
120. The Japanese take primarily bigeye, and in 1991, for example, the bigeye catch was 11,700t, over half their overall catch in the southeastern Pacific.
121. Weidner, "Foreign fishing off Peru," *op. cit.*
122. U.S. Embassy, Lima, August 12, 1982.
123. "Japanese vessels to return to Peruvian waters," *The Fishing and Food Industry Weekly*, July 5, 1982.
124. Alejandro Bermejo, "Ismael Benavides y los palangreros japoneses," *Pesca*, September-October, 1988, pp. 12-13.
125. "Aumenta presencia de pesqueros japoneses en puerto de Arica," *Boletín Informativo SIM*, August 1992, p. 38. The authors note that Ecuador closed the squid fishery in 1992. See the Ecuadorean chapter of this report for details.
126. The Japanese reported a large catch of 15,500t of squid in the southeastern Pacific (presumably off Peru) in 1985, but virtually no catch in either 1984 or 1986-89. They have, however, conducted a much larger squid fishery in the eastern central Pacific and have harvested as much as 41,100t (1987). The 1991 squid catch was 20,900t, an important part of their overall effort in the eastern central Pacific (Latin America, appendix C4f). No details are available to the authors on precisely where they fish or the arrangements, if any, with coastal countries.
127. For details on the squid fishery see "El boom de la Pota," *op. cit.*
128. U.S. Embassy, Lima, June 16, 1992.
129. U.S. Embassy, Lima, June 16, 1992. The authors have no details on the outcome of the bidding.
130. "Japan will send 30 squid vessels to Peru," *Suisan Keizai Shinbun*, April 13, 1993.
131. "Japan will send 30 squid vessels to Peru," *Suisan Keizai Shinbun*, April 13, 1993.
132. "El boom de la pota," *op. cit.*

133. "Peru," *Noticias Comerciales*, November 16, 1991.
134. "Peru licenses for Korean squid ships," *Fishing News International*, December, 1991, p. 7 and U.S. Embassy, Lima, June 16, 1992.
135. Nuevas reglas de juego," *op. cit.*
136. "Peru licenses for Korean ships," *Fishing News International*, December, 1991, p. 7.
137. Some Peruvian publications refer to the principal Peruvian joint venture company developing the fishery and licensing Korean fishermen as Peruko. "El boom de la pota," *op. cit.* It is unclear to the authors what the relation is with Peska Peko and Koramer.
138. "Peru licenses for Korean ships," *op. cit.*
139. Minister Canal, for example, accepted an invitation from one of the Korean companies participating in the squid fishery to visit Korea. Resolución Suprema, N° 137-01-PCM, April 3, 1991. The press complained that the proposed trip was being organized by one company (Seyang Fisheries Co.), rather than an association of Korean companies. "Cólera pesquera," *La Republica*, May 5, 1991.
140. "Peru: Six Korean vessels for squid cuttlefish fishing," *Noticias Comerciales*, February 15, 1992.
141. U.S. Embassy, Lima, June 16, 1992.
142. "ROK and Peru have reached an agreement to strengthen fisheries cooperation," *Suisan Keizai Shinbun*, April 1, 1993.
143. "Mexico y Peru subscriben acuerdo de cooperación," *Aquarius*, March, 1985.
144. U.S. Embassy, Lima, March 22, 1985.
145. For details see the Mexican chapter of this report.
146. See section "V. Joint Ventures" below. Also see Quintanilla and Weidner, *op. cit.* For details on Poland's overall distant-water fishery see Milan Kravanja and Ellen Shapiro, "Russia and Eastern Europe," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations, Past-Present-Future*, Vol. 5, (NMFS: Silver Spring, MD., 1993).
147. *Technika i Gospodarka Morska*, October, 1980.
148. The Poles concentrated primarily on coastal waters from Banco de Mancora to Chimbote. The results were published in *Technika i Gospodarka Morska*. "Peru: Cooperation in fishery research," PAP, 1432 GMT, December 16, 1980.
149. U.S. Embassy, Warsaw, December 10, 1982.
150. For details see the Falklands chapter of this report. The Polish decision to reduce both distant-water fisheries at approximately the same time suggests that it may have been based on the high cost of such operations rather than resource or access difficulties.
151. Sobero Taira, "Entrevista," *op. cit.*, p. 20.

152. U.S. Embassy, Panama, June 15 and September 10, 1993. The Embassy also reports that Soviet lobster sales in Panama for hard currency have declined (Panama, appendix K).
153. Linda Recht, U.S. Embassy, Lima, personal communications, September 15, 1993.
154. See section V. Joint Ventures for more details.
155. Cheng-Fei Huang, Fisheries Specialist, Taiwan Coordinating Council for North America, personal communications, October 21, 1993.
156. Robert C. Felder, ADCM, U.S. Embassy, Lima, July 12, 1985.
157. An overview of Soviet-Peruvian relations is available in Ruben Berrios and Cole Blasier, "Peru and the Soviet Union (1969-1989): distant partners," *Journal of Latin American Studies*, 1991, pp. 1-20.
158. For an overview of Soviet distant-water operations see Milan Kravanja and Ellen Shapiro, "Russia and Eastern Europe," *World Fishing Fleets: An Analysis of Distant-water Fleet Operations: Past-Present-Future*, Vol. 5 (NMFS: Silver Spring, MD., 1993).
159. Some Peruvian fishery experts are convinced that the Soviets were catching much more than they actually reported. One economist, for example, estimates that the Soviets actually caught as much as 7 million tons. Awapara, "Peru: Un país," *op. cit.*, p. 10.
160. Historical information on Peruvian-Soviet fishery relations is available in Donald Jacobson and Dennis Weidner, "Soviet-Latin American fishery relations," *International Fishery Reports*, (IFR-89-39), May 5, 1989 and Quintanilla and Weidner, "Peruvian bilateral fishery relations, 1988," *op. cit.*
161. The Soviets had no chance of obtaining access to Chilean ports from the right-wing Chilean military government.
162. The Soviet joint venture catch during 1989 was about 0.2 million t (appendix H2). The Soviet 1989 catch in the southeastern Pacific totaled 1.2 million t (Latin America, appendix C4g1). Thus the catch in Peruvian waters was only about 15 percent of the overall total taken in the southeastern Pacific.
163. Former Fisheries Minister Ismael Benavides, for example, believes that the Soviets took as much as 5 million t annually in the southeastern Pacific. Benavides, "Barcos Sovieticos en Chile y Peru," *op. cit.*, p. 5.
164. The cost in Soviet economic terms was minimal because it was produced domestically. The lost opportunity cost of what the Soviets could have earned by exporting the fuel must have been considerable.
165. Much of the fleet's expenses are in rubles, which are of less concern to the Soviets than expenses which must be paid in foreign currency. Nevertheless, the Soviets have to calculate the lost opportunity cost of ruble expenses as well as that of commodities needed by the fleet (such as fuel) which could be exported.
166. Nearly half of the Soviet catch within Peruvian waters was jack mackerel (appendix H2). A much larger portion of the catch outside 200 miles was jack mackerel. In 1990, for example, the Soviet jack mackerel catch in the southeastern Pacific was 1.1 million t, or 85 percent of the overall Soviet catch of 1.3 million tons.
167. The transshipments were a lobster species harvested in "deep waters" off the coast of Ecuador and Peru.
168. "Soviet trawlers expelled from territorial waters," *The Andean Report*, June, 1991, p. 87.

169. Meier, *El Futuro*, *op. cit.*, p.28.
170. U.S. Embassy, Lima, September 12, 1990.
171. Juan Manuel Merino Nicol, "El cuento del pescado barato," *Pesca*, September-October, 1989, pp. 8-10.
172. *El Comercio*, August 14, 1990.
173. SOVRYBFLOT officials explained that they only caught 150,000t of their 400,000t quota in 1989. They also claimed that the 20 trawlers permitted to operate in Peruvian waters are not permanently deployed. Only about 15 are operating at any one time because about 5 trawlers are normally in port for maintenance, repairs, supplies, etc. "Fisheries minister discusses Soviet agreement," Television Peruana, Lima, 1100 GMT, September 6, 1990.
174. The Sociedad Nacional de Pesqueria in July 1989 had challenged the legal basis of the Soviet contracts. The court decision meant that, among other matters, that the Soviet Joint Fishery Ventures Enterprise (SOVRYBFLOT) was liable for back taxes. "Court declares Soviet fishing contracts illegal," Television Peruana, Lima, 0100 GMT, October 13, 1990.
175. USSR fishing contract to be renegotiated," Television Peruana, Lima, 0100 GMT, November 8, 1990.
176. "Minister on review of fishing deal with USSR," RTP Television Network, Lima, 1800 GMT, March 27, 1991.
177. Canal not only ordered EPSEP to cancel the contract, but also charged it had cost Peru losses totaling \$18 million. "Fishing contract with Soviet company to be canceled," RTP Television, Lima, 11 GMT, April 29, 1991 and "Peru cancels Soviet fishing contract," *World Fishing*, June, 1991, p. 41.
178. "Armadores pesqueros e industriales respaldan la rescisión del contrato con los soviéticos," *El Comercio*, April 30, 1991.
179. "Minister on fishing dispute with Soviet company; possibility of other contracts," RTP Television, Lima, 1800 GMT, May 24, 1991; "Fisheries Minister on sale of PESCA PERU plants; impounded Soviet trawler," Radio Nacional, Lima, 1200 GMT, June 11, 1991; and "Peru axes fishing deal with Soviet SEVRIBA fleet," *Quick Frozen Foods International*, July, 1991.
180. The Soviets were particularly disturbed by the Peruvian Government detaining their vessels until the dispute over back taxes and other financial obligations were resolved. Andrey Zagorskiy, "Dispute with Peru over fisheries contract," *Pravda*, May 27, 1991.
181. "Fishing agreements with Soviets being studied," *La Republica*, July 14, 1991, p. 10.
182. "Gobierno no debe renovar al contrato pesquero con soviéticos," *El Comercio*, April 30, 1991.
183. For details on Venezuelan distant-water operations, see the Venezuelan chapter of this report.
184. Anonymous source, September 24, 1993.
185. Milan Kravanja, NMFS, personal communications, September 21, 1993.
186. For an overview of Cuban distant-water operations, see the Cuban chapter of this report.
187. U.S. Embassy, Santiago, January 14, 1993.

188. Rusque, personal communications, *op. cit.*, October 13, 1993.
189. For more details see the Chilean chapter of this report.
190. U.S. Embassy, Santiago, January 14, 1993.
191. Presumably swordfish and other billfish, but details are not available.
192. Rusque, personal communications, *op. cit.*, October 13, 1993.
193. U.S. Embassy, Santiago, January 14, 1993.
194. Milan Kravanja, NMFS, personal communications, September 21, 1993.
195. The fish will be distributed by the Programa de Apoyo Alimentario (PRONAA) at prices below prevailing market prices in low-income communities, both in Lima and various other cities. It is not clear to the authors, however, if the distribution program has actually been initiated.
196. Hartley y Soto, "Pesqueria en el Perú," *op. cit.*

SECTION VI. (Joint Ventures)

197. Decreto Supremo 026-92-PE, December 22, 1992.
198. FAO, "The likely decline of the former USSR fleet," in "Marine fisheries and the law of the sea: A decade of change," *FAO Fisheries Circular*, FID/C853, 1992, pp. 11-12.
199. See for example "Peru: Ofrece posibilidades a terceros," *Industrias Pesqueras*, October, 1983.
200. Peru has very strict regulations which generally discourage foreign investment. Direct foreign investment is subject to the provisions of Decision 24 to the Andean Pact (Cartagena Treaty) which restricts profit repatriation, requires the devolution of ownership to citizens of Pact member countries, and establish terms for dispute arbitration. While the terms were applied loosely in Peru, other constraints including political and economic instability, economic recession, a deteriorating security situation, rampant inflation, Peruvian labor law (making layoffs and firings virtually impossible), and foreign exchange risks, provided a substantial barrier to attracting foreign investment capital.
201. Not all Peruvian observers are impressed with the fish delivered by the joint ventures. One Peruvian legislator believes that the deliveries have actually cost Peru huge sums. Senator Luis Bedoyade Vivanco, Chairman of the Senate Fisheries Committee charges that the 1983 Soviet joint venture have cost Peru \$600 million. "Contract pesquero con URSS," *op. cit.*
202. The various ventures contained a variety of different provisions. May were renegotiated several times. As a result, they are very difficult to compare and to assess the various claims made by both different Peruvian administrations and the different foreign state-owned fleets. One excellent summary of the various ventures is available in Meier, *El Futuro*, pp. 211-214.
203. See section IV. Foreign Fishing for details on the economics of distant-water fishing.

204. "Chile: Compañía conjunta con factoría en Iquique," *Industrias Pesqueras*, March 1, 1987; "Six-million-dollar venture in N. Chile," *Fishing News International*, March, 1979; and "Integración peruano-chilena a través de la pesca," *Pesca*, May, 1979, p. 9.
205. China had been active in various Peruvian economic sectors and previously purchased a state-owned iron producer. FAO/GLOBEFISH, "Sale of Pesca Peru," *Globefish Highlights*, 2/93, p. 19. China is a key market for Peruvian fishmeal and officials were particularly concerned when China sharply reduced purchases. The Peruvian Minister of Fisheries and an industry spokesman traveled to China in April, 1993, to discuss fishmeal purchases. FAO/GLOBEFISH, "Fishmeal crisis over," *Globefish Highlights*, 2/93, p. 18 and "Misión en Pekín," *Caretas*, June 3, 1993. Some Peruvian observers believe that the Chinese were manipulating the fishmeal market to lower prices so they could offer less for PESCA PERU. U.S. Embassy, Lima, April 30, 1993.
206. For details see Thomas and Weidner, *op. cit.*
207. Cuban press reports claimed, for example, that the explosion sinking the *Río Jobabo* came from the exterior of the vessel, presumably a mine. The Peruvian Navy, however, categorically rejected the Cuban press reports. "Niega Perú informe de Cuba sobre hundimiento de un barco," *Diario las Americas*, August 21, 1977.
208. General Morales who replaced General Velasco in 1975 was much less favorably disposed toward the Cubans.
209. The relationship deteriorated with much public invisibility as a result of an incident at the Peruvian Embassy in Havana. The Peruvian Government granted asylum to a few Cubans who managed to slip by Cuban security guards. In retaliation the Cubans removed their security personnel from the Peruvian Embassy which was overwhelmed by a flood of Cubans seeing an opportunity to leave the country.
210. Details on the leasing arrangement are available in Thomas and Weidner, *op. cit.*
211. "Fisheries minister on Cuban contract suspension," Lima, Television Peruana, 0100 GMT, April 29, 1989 and "Cuban trawlers are leaving," *Fishing News International*, May, 1989.
212. Cuban fishermen are known to be still active off Peru in 1990 as fights between Cuban and Soviet fishermen were reported in Callao by the press during August 1990. "Marineros cubanos y soviéticos se van a las manos en el Perú," *Diario las Americas*, August 26, 1990.
213. Hartley y Soto, "Pesquería en el Perú," *op. cit.*
214. "Soviet, French to fish waters," *Expreso*, May 28, 1991, p. 4.
215. Alejandro Bermejo, "Un nuevo modelo peruano," *Expreso*, April 11, 1991.
216. "Nissui sends a trawler to Chilean waters," *Minato Shimbun*, December 10, 1976, p. 1.
217. Bermejo, "Ismael Benavides y los palangreros japoneses," *op. cit.*
218. "El boom de la pota," *op. cit.*
219. Weidner, "Japanese-Peruvian," *op. cit.*
220. "Peru seeks fish company buyers," *Fishing News International*, June, 1978 and Meier, *El Futuro*, *op. cit.*, p. 22.

221. "Peru looks to trawlers," *op. cit.*
222. Siusan Sha, *Suisan Nemkan, 1992*, (Suisan Sha: Tokyo, 1992), pp. 194-195.
223. Weidner, "Foreign fishing off Peru," *op. cit.*
224. For details see "'Pesca' pregunta a EPSEP," *Pesca*, May-June, 1977.
225. The Peruvian workers reportedly resented the higher salaries received by the Poles and the often open contempt the Poles expressed toward them. The Peruvians also resented Polish efforts to limit rest periods and preach the virtues of the communist system. The Peruvians staged at least two short strikes.
226. One Peruvian official charged that the Polish fishery officials behaved like "conquistadores" and during negotiations aimed at renewing the contracts pursued an "unyielding" and at times "insolent" attitude.
227. *Technika i Gospodarka Morska*, October, 1980 and U.S. Embassy, Lima, September 2, 1980.
228. "Ratifican multa," *Actualidad Pesquera*, February-March, 1980, p. 22.
229. One EPSEP official, for example, complained that the Poles were calculating the amortization of the vessel, a practice that sharply reduced profits and thus Peru's share. Ljubomir Mrdjenovich, Director, EPSEP, personal communications, July 25, 1980.
230. For details see U.S. Embassy, Lima, September 2, 1980.
231. The RYBEX San Andres contract included the following provisions: 1) Poland provided two class B-18 factory ships, 2) each vessel would have a Polish captain and crew of 53 individuals who would train Peruvians, 3) the Poles would select and train a Peruvian captain who would eventually assume command, 4) Poles would be appointed directors of finance, marketing, and production, 5) the purchase price for the vessels would be \$3 million each, 6) the vessels and Polish crew salaries would be paid for by fish exports to Poland, 7) prices in US dollars could be renegotiated semi-annually, 8) Polish crews would work under Polish labor laws and salaries and be rotated every 5-6 months. U.S. Embassy, Lima, September 2, 1980.
232. With the addition of the Polish vessels the Peruvian factory vessel fleet totaled 24 vessels. U.S. Embassy, Lima, September 2, 1980.
233. "Nuevas naves pesqueras capturan en mar peruano," *Universal*, September 22, 1980.
234. U.S. Embassy, Lima, September 30, 1980; "Fears for Peru fish!," *Fishing News International*, January, 1980, p. 22; "Perú debe tener su propia flota pesquera de arrastre," *El Comercio*, June 3, 1985.
235. A local newspaper carried an exposé, but decided against running a follow-up article with names and details. Mrdjenovich, *op. cit.*
236. Reina also tried to deflect public attention to the much larger Soviet activity off Peru. *El Tiempo*, September 24, 1980.
237. U.S. Embassy, Lima, March 31, 1981 and "Peru looks to trawlers for catch boost," *Fishing News International*, April, 1985, p. 48.
238. "Peru looks to trawlers," *op. cit.*

239. "Peru looks to trawlers," *op. cit.* Various sources provide sharply varying estimates.
240. Ismael Benavides, Fisheries Minister, personal communications, November 8, 1984 and "Peru looks to trawlers," *op. cit.*
241. Javier Ascue Sarmiento, "Son nueve los barcos polacos que están saqueados," *El Comercio*, July 5, 1985.
242. According to the "letter of intent," the Poles would provide up to 30 percent of their catch to EPSEP, but press reports allege that the Poles only offered to deliver 20-25 percent. Labarthe said that the Poles would also donate several fishing vessels, but that Peru would have to obtain financing for motors and other equipment. The text of the "letter of intent" published on March 29, 1988, stressed Peru's interest in obtaining fisheries assistance from Poland. The proposal, however, provided no firm Polish commitment, leaving it up to the Poles to make a proposal. The "letter of intent" did provide for an unspecified number of Polish vessels to fish in Peruvian waters but no specific catch allocation was mentioned. Quintanilla and Weidner, *op. cit.*
243. Quintanilla and Weidner, *op. cit.*
244. "Pesquería guards hermetismo sobre convenio con Polonia," *El Comercio*, June 16, 1989.
245. "Peru: Agreement on cooperation in fishing," PAP, 1932 GMT, November 30, 1988.
246. "Polacos en salmuera," *Oiga*, April 10, 1989.
247. See for example "Soviets, French to fish waters," *Expreso*, May 28, 1991, p. 4 and Alejandro Bermejo, "Barcos rusos pescando sardina," *Expreso*, June 19, 1991.
248. "Nuevas reglas de juego en campo pesquero," *El Comercio*, April 28, 1991, p. A5.
249. See USSR below.
250. The authors do not know why the Estonians reflagged their vessels in Peru before deploying them in Chile.
251. Anonymous Peruvian source, September 21, 1993.
252. "Perou," *Pêche Maritime*, September 20, 1978, p. 531.
253. *El Comercio*, September 25, 1978 and "Intentan lograr recuperación del sector pesquero en Peru," *Diario las Americas*, September 27, 1978.
254. "Barcos peruanos reemplazarán a los cubanos," *Pesca*, September-October, 1978, p. 13.
255. "Barcos factoria de arrastre peruanos," *Pesca*, July-August, 1978, p. 18.
256. Two Spanish trawlers were auctioned off in 1985 to meet the debts Pesquera Orión owed the Banco Nacional. "BN cobrará deuda con remate de 2 gigantes buques-factoría españoles," *Diario Comercial*, February 14, 1985.
257. "Peru looks to trawlers," *op. cit.*
258. "EC to reshape deals," *Fishing News International*, October, 1991, p. 3.
259. For details see section IV. Foreign Fishing.

260. A good discussion of the complicated issues involved with the Soviet joint ventures is available in Eduardo Ferrero Costa, Editor, *Los Convenios Pesqueros entre el Perú y la Union Sovietica en Debate* (Centro Peruano de Estudios Internacionales (CEPI): Lima, 1989), 178 p.
261. Details on the joint venture are available in Jacobson and Weidner, "Soviet-Latin American fishery relations," *op. cit.*
262. EPSEP is a state-owned company which was created to promote domestic sales of fishery products.
263. "Piden que convenios pesqueros se hagan de gobierno a gobierno," *El Comercio*, June 6, 1985.
264. The Soviets reportedly claimed that one of the Peruvian fishermen must have fallen overboard while inebriated. The fisherman's widow, however, maintained that her husband never touched alcohol.
265. Details on Peruvian-Cuban fishery relations can be obtained by requesting Thomas and Weidner, *op. cit.*
266. Details on Peruvian-Soviet negotiations are available in Dennis Weidner, "Peru-USSR Fishery Relations," *International Fishery Report* (IFR/88-16).
267. For details see Jacobson and Weidner, "Soviet-Latin American fishery relations," *op. cit.*
268. Proponents and critiques of the Soviet joint ventures differ sharply on the provisions of the agreements. For details see Jacobson and Weidner, "Soviet-Latin American fishery relations," *op. cit.* The exemption of the Soviets from fees and taxes proved especially contentious and emerged as the main issue in litigation brought by Peruvian industry groups, challenging the Government's authority to make such exemptions.
269. SEVRYBA is one of the five Soviet regional fishery administrations (Northern, Western, Black Sea, Caspian, and Far Eastern) which, together with inland fisheries and the headquarters staff, comprise the Soviet Fisheries Ministry. It is unusual that SEVRYBA was given the task of conducting negotiations and joint ventures with Peru, as it is based in Murmansk and fishes primarily in the Barents Sea. The Soviet catch in the Barents Sea has declined sharply in recent years, however, and Fisheries Ministry officials may have decided to shift part of the fleet to the southeastern Pacific to avoid lay-offs and reduce cost overruns. SOVRYBFLOT was involved in earlier contracts with the Peruvians.
270. Information on the Soviet aid commitment were sketchy, as details were not included in either the protocol or the joint venture contracts. The protocol merely stated that the two Governments would study the possibility of technology transfers, but Fisheries Minister León claimed that the Soviets had agreed to help modernize Peru's fishing fleet, expand fishery ports and other infrastructure, and finance purchases of transportation equipment. A fund providing about \$10 million per year for the renovation of Peru's aging fishing fleet was reportedly also included in the assistance. The Soviet assistance was also to be used to improve infrastructure at the Paita and La Puntilla fishing port complexes and the construction of artisanal docks. This aid never materialized, but in fairness to the Soviets the joint venture operations did not proceed as initially envisioned.
271. "Convenios pesqueros no satisfacen intereses peruanos," *Pesca*, issue unavailable, 1989.
272. Many of the claims and counter claims are difficult to evaluate. It is clear, however, that the Soviets never provided \$50 million in fisheries development assistance.
273. Merino Nicol, "El cuento del pescado barato," *op. cit.*, pp. 8-10.
274. "Court declares Soviet fishing contracts illegal," *Television Peruana*, 0100 GMT, October 13, 1990.

275. "Fisheries Minister criticizes Soviet contract," Television Peruana, Lima, 1100 GMT, December 21, 1990.
276. "Permits for 20 Soviet trawlers canceled," EFE, Madrid, 2234 GMT, May 19, 1991.
277. "Government fines Soviet fishing company," *El Comercio*, June 13, 1991, p. 1.
278. "Soviet fishing vessel to be detained for debt," RTP Television Network, Lima, 0230 GMT, June 8, 1991. The Soviets face a \$20 million lawsuit, demands from EPSEP for additional payments, and Government fines. The Soviets were particularly upset about the detention of their vessels as such seizures over profit disputes were specifically prohibited in the agreement between SEVRIBA and EPSEP. "Minister discusses fishing dispute with USSR," RTP Television Network, Lima, 1800 GMT, May 24, 1991.
279. "Permits for 20 Soviet trawlers canceled," *op. cit.*
280. "Nuevas reglas de juego en campo pesquero," *El Comercio*, April 28, 1991, p. A5.
281. "Soviet, French to fish waters," *Expreso*, May 28, 1991, p. 4.
282. One Peruvian journalist questioned why experimental fishing was needed in a fishery that Peru had conducted for more than 30 years. Bermejo, "Barcos rusos pescando sardina," *op. cit.*.
283. U.S. Embassy, Lima, May 20, 1976.
284. "EPSEP debe vender COPES," *Pesca*, July-August, 1991, p. 12.

SECTION VI. (Distant-water Operations)

285. "Peru looks to trawlers for catch boost," *Fishing News International*, April, 1985, p. 48.

APPENDICES

Appendix A1.--Peru. Fishing fleet, 1990

Type	Vessels		Total
	Operating	Non-operating	
	Number		
Seiner	414	275	689
Trawler			
Coastal#	15	NA	NA
High seas	10*	NA	NA
Subtotal	25	29	54
Artisanal	1,774	3,438	5,212
Tuna	1	4	5
Total	2,214	3,746	5,960

NA - Not available

The numbers appear do not appear to include the approximately 30 small shrimp trawlers operating off northern Peru.

* See appendix B.

Source: SNP as cited in Ludwig Meier Cornejo, El Futuro de la Pesquería: Corrigiendo los Errores del Pasado, (Instituto de Estudios Pesqueros: Lima, July, 1990), p. 40.

Appendix A2.--Peru. Fishing fleet, 1990

Type	Vessels		Total*
	Operating	Non-operating	
	Capacity in 1,000 Metric tons		
Seiner	16,035	10,340	26,380
Trawler	791	625	1,416
Artisanal	651	1,265	1,916
Tuna	NA	NA	NA
Total	17,477	12,230	29,712

NA - Not available

* As computed by source

Source: SNP as cited in Ludwig Meier Cornejo, El Futuro de la Pesquería: Corrigiendo los Errores del Pasado, (Instituto de Estudios Pesqueros: Lima, July, 1990), p. 40.

Appendix B--Peru. High-seas trawlers, 1990

Company/vessel	Size	Built		Type	Storage system
		Country	Year		
	<u>GRT</u>				
FLOPESCA*					
Azangaro	565	Netherlands	1973	Pelagic trawler	Freezer system
Brincador#	1,480	NA	1974	Demersal trawler	Freezer system
Cernello	1,489	NA	1974	Pelagic trawler	Refrigerated sea water
Canchis	557	Netherlands	1974	Pelagic trawler	Freezer system
Combapata	523	Netherlands	1972	Pelagic trawler	Freezer system
Dorine I#	2,145	NA	1965	Demersal trawler	Freezer system
Juliaca	538	Netherlands	1975	Pelagic trawler	Freezer system
Puno#	556	Netherlands	1974	Pelagic trawler	Freezer system
Tinta#	541	Netherlands	1975	Pelagic trawler	Freezer system
Tungasuca#	556	Netherlands	1973	Pelagic trawler	Freezer system
CERMAR					
Kinka	748	NA	1973	Demersal trawler	Freezer systemn

NA - Not available

* State fishing fleet

Operational in 1990

Source: Ludwig Meier Cornejo, *El Futuro de la Pesquería: Corrigiendo Los Errores del Pasado*, (Instituto de Estudios Pesqueros: Lima, July, 1990), p. 42.

Appendix C1.--Peru. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	<u>Number of vessels</u>							
Freezer stern trawlers								
A	NA	NA	NA	-	NA	NA	11	11
Tuna long liners								
A	-	-	-	6	6	6	NA	NA
Total	NA	NA	NA	6	6	6	11	11

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," *Bulletin of Fishery Statistics*, Vol. 30.

Appendix C2.--Peru. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Freezer stern trawlers								
A	NA	NA	NA	-	NA	NA	5.9	5.9
Tuna long liners								
A	-	-	-	3.9	3.9	3.9	NA	NA
Total	NA	NA	NA	3.9	3.9	3.9	5.9	5.9

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix D.--Peru. Large* fishing vessels, 1993

Country built/ vessel name	Class	Size GRT	Year built	Type
Netherlands				
Juliaca		538	1975	510
Tungasuca		555	1973	510
Peru				
Inti		582	1974	510
Killa		582	1974	510
Poland				
Antlia	Leskov	2,303	1965	512
Auriga	Leskov	2,302	1965	512
Crater	Leskov	2,327	1967	512
Cygnus	Leskov	2,322	1967	512
Feniks	Leskov	2,303	1963	512
Homar	Foka	2,496	1965	512
Jowisz	Leskov	2,298	1963	512
Jupiter	Leskov	2,298	1963	512
Merkury	Leskov	2,303	1964	512
Virgo	Leskov	2,303	1964	512
Spain				
Brincador		1,480	1974	512
Cernello		1,480	1974	512
United Kingdom				
Miriams		876	1977	510
Nusta		876	1975	510
Sabrina		859	1976	510

ONI codes

510 - trawler

512 - fish factory trawler

* 500 GRT or larger

Source: U.S. Navy. Office of Naval Intelligence

Appendix E.--Peru. Fishery support vessels, 1993

Country built/ vessel name	Class	Size	Year built	Type
		<u>GRT</u>		
Japan				
Mollendo		12,490	1962	219
Peru				
Capahuari	Trompeteros	16,631	1980	219
Humboldt		1,731	1980	566
Ilo	Ilo	10,216	1972	119
Lobitos	Zorritos	4,297	1966	119
Talara	Trompeteros	16,634	1978	219
Trompeteros	Trompeteros	16,633	1976	219
Zorritos	Zorritos	4,297	1959	119

ONI Codes

- 119 - general cargo, fishing
- 219 - petroleum tanker, fishing
- 566 - fisheries research

* 500 GRT or larger

Source: U.S. Navy. Office of Naval Intelligence

Appendix F.--Peru. Soviet payments for joint venture vessels

Item	Administration	
	Belaunde	Garcia*
<u>US\$1,000</u>		
Fish	3,283.2	6,162.0
Incidental catch	2,400.0	420.0
Meal	824.9	1,155.0
Oil	96.3	134.8
Navigation permits	4,000.0	-
Registration	80.0	-
Port transport	260.0	-
Landing	448.9	-
ENAPU/other	130.0	-
Total	11,525.2	8,471.8

Source: Ismael Benavides, former Fisheries Minister

Appendix G.--Peru. Catch* by joint venture companies, 1989

Fleet/fishery	Quantity	
	Caught	Production
	Metric tons	
Soviet joint venture		
Edible	116,367	80,266
Reduction		
Meal	NA	14,680
Oil	NA	1,164
Subtotal	44,870	15,844
Subtotal	161,457	96,110
Cuban joint venture (FLOPESCA)		
Edible	13,363	10,273
Reduction	6,155	1,325
Subtotal	19,518	11,598
Japanese jointventure		
Edible	4,230	NA
Reduction	-	NA
Subtotal	4,230	NA
Total	183,420	NA

Source: Ministerio de Pesquería.

Appendix H1.--Peru. Catch of the Cuban (FLOCUBA) joint venture, 1989

Fishery	Species		Quantity
	English	Spanish	
			Metric tons
Edible			
Jack mackerel		Jurel	7,904
Horse mackerel		Caballa	608
Hake		Merluza	2,512
Bonito		Bonito	330
Sardine		Sardina	289
		Falso volador	850
Squid (Loligo)		Calamar	740
Squid (Illex)		Pota	130
Subtotal			13,363
Reduction			
Various species			6,155
Total			19,518

Source: Ministerio de Pesquería.

Appendix H2.--Peru. Catch of the Soviet joint venture, 1989

Fishery	Species		Quantity
	English	Spanish	
			Metric tons
Edible			
	Jack mackerel	Jurel	74,227
	Horse mackerel	Caballa	21,864
	Hake	Merluza	18,561
	Bonito	Bonito	690
	Sardine	Sardina	723
	NA	Vocador	274
	Squid (Loligo)	Calamar	248
	Subtotal		116,587
Reduction			
	Various species		44,870
Total			161,457

Source: Ministerio de Pesquería.

Appendix I.--Peru. Species glossary

	Species		Scientific
	English	Spanish	
Fish			
	Anchovy	Anchoveta	Engraulis ringens
	Bonito	Bonito	Sarda chiliensis
	Breams	Cojinoba	Seriola spp.
	Hake	Merluza	Merluccius gayi
Mackerels			
	Chub	NA	Scomber japonicus
	Horse	Caballa	Thachurus murphyi
	Jack	Jurel	Trachurus murphyi
	Spanish		Scomberomorus sierra
Mullet		Lisa	
Sardine		Sardina	Sardinops sagax
Swordfish		Pez espada	Xiphias gladius
Tuna		Atun	
	Yellowfin	Aleta amarilla	Thunnus albacares
	Skipjack	Barilete	Katsuwonus pelamis
NA		Vocador	
Moluscks			
	Squid		
	Giant	Calamar gigante	Dosidicus gigas
	Illex	Pota	
	Loligo	Calamar	

Source: Various

Appendix J.--Peru. Domestic supply of frozen fish, 1971-88

Year	Supply		Total	EPSEP share Percent
	EPSEP 1,000	Other Metric tons		
1971	0.3	0.7	1.0	23
1972	1.4	0.7	2.1	66
1973	2.4	0.9	3.3	73
1974	3.8	3.4	7.2	53
1975	6.6	3.3	9.9	67
1976	6.1	1.0	7.1	86
1977	6.0	7.3	13.3	45
1978	7.1	1.0	8.1	89
1979	9.3	1.4	10.7	87
1980	10.7	3.6	14.3	74
1981	7.6	3.2	10.8	70
1982	4.9	2.2	7.1	69
1983	5.0	2.0	7.0	72
1984	14.6	2.4	17.0	86
1985	11.0	2.7	13.7	80
1986	25.1	2.7	27.8	91
1987	18.8	1.9	20.7	91
1988	18.9	7.7	26.6	71

EPSEP - Empresa Publica de Servicios Pesqueros
Source: Ministerio de Pesquería.

Appendix K.--Peru. Licensing regulations, 1984

License	Validity	Fee
		US\$
Trawlers*		
Registration	1 year	\$2,000
Navigation permit	1 year	\$20/GRT
Fishing permit	1 year	\$250/NRT
Tuna freezer vessels**		
Registration	1 year	\$2,000
Navigation permit	1 year	\$20/GRT
Fishing permit	1 year	\$160/NRT

* Supreme Decree 012-84-PE, 1984

** Supreme Decree 008-84-PE, July 6, 1984

Source: Gerald Moore, Coastal State Requirements for foreign fishing," FAO Legislative Study, No. 21, Rev. 3, 1988, pp. 136-137.

Appendix L.--Peru. Fisheries legislation, 1988,1992

Subject	Previous law N°24790 (1988)	Current law N°25977 (1992)
Research	Companies finance through a 2 percent tax on sales.	Research groups are self financing.
Fleet expansion	Requires MIPE approval	Requires MIPE approval. In the case of the reduction fishery, MIPE will only grant approval for replacement vessels not exceeding the capacity of the vessel to be replaced.
Marketing agency	Created ICE as a single marketing group to evaluate markets and determine prices for external trade.	Companies permitted to freely conduct external marketing
Marketing	Fishermen/companies required to market part of their catch domestically.	Fishermen/companies free to determine best market for their products.
Domestic prices	EPSEP regulates domestic prices.	Domestic prices set by market forces.
Quality control	CERPER only authorized agency	CERPER monopoly ended, companies can choose where they obtain inspection services.
Foreign fishing	Foreign fishermen authorized for MIPE when IMARPE determines a surplus exists that is not being harvested by domestic fishermen. Concessions to foreigners granted under various systems.	Foreign fishermen desiring to catch surplus, stocks will be contracted by a Peruvian company under a variety of leasing, association, or joint venture arrangements. Foreign fishermen can also purchase licenses to catch surplus, opportunity, or highly migratory stocks. Fees must be paid before fishing is conducted.*
Foreign companies	Can only participate in ventures for edible products.	No limitation.
State social fees	Creates the CP which is financed through fees paid by private companies.	CP not continued.
Development	Creates FONDEPA	Creates FONDEPES

Acronyms:

CERPER - Empresa Pública de Certificaciones Pesqueras del Perú
 CP - Comunidad Pesquera
 EPSEP - Empresa Pública de Servicios Pesqueros
 FONDEPE - Fondo de Desarrollo Pesquero Artesanal in the Banco Industrial
 FONDEPES - Fondo Nacional de Desarrollo Pesquero
 IMARPE - Instituto del Mar
 MIPE - Ministerio de Pesquería

* NMFS note: The 1992 law gives the Administration the authority to authorize foreign-flag fishing on surplus stocks, providing that the operation is: 1) part of a research study, 2) under contract with a Peruvian company, 3) a fishery for highly migratory species, 4) under the auspices of a bilateral government-to-government agreement, or 5) under the authority of a contract between the Peruvian Government and private entities.
 Source: Ministerio de Pesquería, Oficina General de Economía Pesquera, FZD, July 9, 1993.

Appendix M1.--Peru. Fishery exports, 1988-92

Product	Years				
	1988	1989	1990	1991	1992
	US\$ Million				
Fisheries					
Meal	346	406	346	467	445P
Oil	1	28	6	9	4P
Canned	16	25	21	14	9P
Frozen	18	26	32	31	13P
Other	33	10	4	-	- P
Total	414	495	409	521	471P
Mining	1,205	1,548	1,446	1,474	1,649
Petroleum	166	217	258	169	196
Agriculture	167	239	175	210	115
Textiles	257	346	365	353	324
Others	482	643	578	602	729
Total	2,691	3,488	3,231	3,329	3,484

P - Preliminary

Source: Ministerio de Pesqueria, Oficina General de Economia Pesquera, FZD, August 23, 1993.

Appendix M2.--Peru. Exports, 1988-92

Product	Years				
	1988	1989	1990	1991	1992
	Percent				
Fisheries					
Meal	12.9	11.6	10.7	14.0	12.8
Oil	Negl	0.8	0.2	0.3	0.1
Canned	0.6	0.7	0.6	0.4	0.3
Frozen	0.7	0.7	1.0	0.9	0.4
Other	15.4	14.2	12.7	15.7	13.5P
Mining	44.8	44.4	44.8	44.3	47.3
Petroleum	6.2	6.2	8.0	5.1	5.6
Agriculture	6.2	6.9	5.4	6.3	3.3
Textiles	9.6	9.9	11.3	10.6	9.3
Others	17.9	18.4	17.9	18.1	20.9
Total*	100.0	100.0	100.0	100.0	100.0

P - Preliminary

* Totals may not agree due to rounding

Source: Ministerio de Pesqueria, Oficina General de Economia Pesquera, FZD, August 23, 1993.

4.9

SURINAME

Surinamese fishermen are unlikely to initiate distant-water operations during the 1990s. The country's small commercial fleet is not capable of distant water operations. Neither commercial or artisanal fishermen are fully utilizing available coastal resources and have neither the financing or technical capability to launch distant-water operations.

There are only limited prospects for expanded foreign fishing in the Surinamese 200-mile Exclusive Economic Zone. Suriname is only a small country with a relatively limited EEZ. The Government through various bilateral access and joint venture arrangements allows foreign fishermen to fish in Surinamese waters. The Government has acquired the country's principal fishing company, a former joint venture, which it operates as a state company--one of the few remaining state fishing companies in Latin America. The Government has had, however, to contract foreign (Japanese and Korean) fishermen to conduct fishing operations. It is unlikely, however, that any significant number of additional vessels could be deployed off Suriname.

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I. GENERAL BACKGROUND

Suriname has one of the smallest fisheries in South America. The country's fishermen land only about 4,000-6,000 metric tons (t) of fish and

shellfish annually (Latin America, appendix C2a1). The country's principal commercial fishery is the offshore shrimp trawl fishery, much of which is conducted by foreign fishermen. A substantial portion of the finfish landed in Suriname is the incidental catch of the trawler fishermen. Only a few commercial vessels target finfish. Artisanal

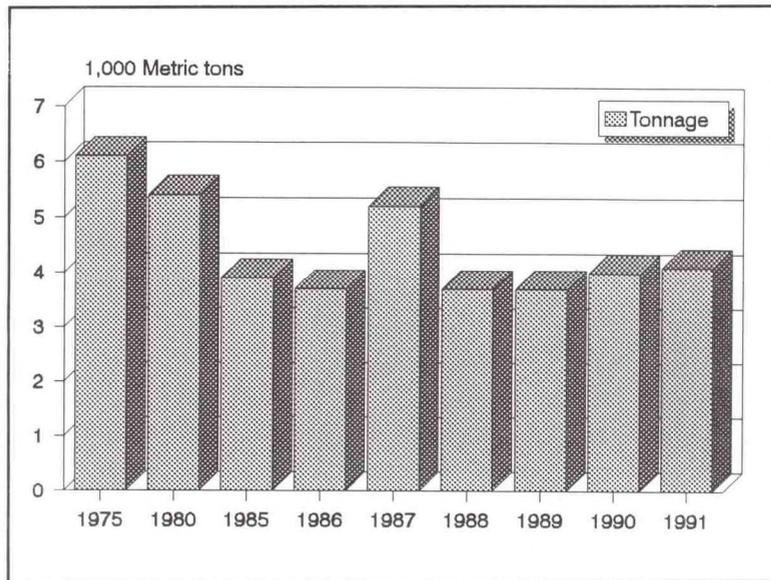


Figure 1.--Surinamese catches are substantially below the levels reported during the 1970s.

fishermen also conduct small fisheries in inshore waters and rivers and lakes. The artisanal fishery is of minor economic importance, but does provide some employment and is an important source of food in local markets. Surinamese fishery exports declined during the 1990s. Export shipments totaled less than \$3 million in 1990, compared to an estimated \$8 million in 1980, a sharp decline even without factoring in inflation (appendix E1). Exporters reported improved results in 1991 when they shipped an estimated \$4.5 million.

II. HIGH-SEAS FLEET

Suriname has no high-seas fishing vessels.

III. VESSEL SOURCES

There is currently no local shipbuilding industry in Suriname, other than small yards building artisanal craft. Many fishing vessels are imported from neighboring Guyana.

IV. FOREIGN FISHING

Suriname permits foreign fishing in its 200-mile EEZ. Foreign fishermen desiring to fish in Surinamese waters must obtain licenses from the Surinamese Fisheries Department (SFD). These licenses are issued by the SFD Director and require the approval of the Minister of Agriculture, Animal Husbandry, and Fisheries. The fees for the licenses depend on the type and range from \$3,500-7,500 (appendix B).¹ The SFD had been licensing about 150-180 foreign vessels (Japan, Korea, and Venezuela) annually, mostly through joint ventures (appendix A). The SFD reduced the number of licenses issued to about 120 in 1991 because of differences over the renewal of the bilateral fisheries agreement between the two countries. The SFD resumed licensing Venezuelan vessels in 1992 and issued more than 220 to fishermen from four countries.

Foreign fishermen are required to land their catch in local ports.² A partial exception is made for Venezuelan fishermen. Japanese and Korean vessels are licensed to fish for shrimp, using Florida-type trawlers. Venezuelans are licensed to fish snapper. The Dutch have deployed a North Sea-type trawler for demersal fish. Details on Surinamese bilateral fishery relations with individual countries are as follows:

Brazil: No current information on the status of Surinamese-Brazilian bilateral relations is available. The Surinamese fishing industry was adversely affected during the late 1970s, when the Brazilian

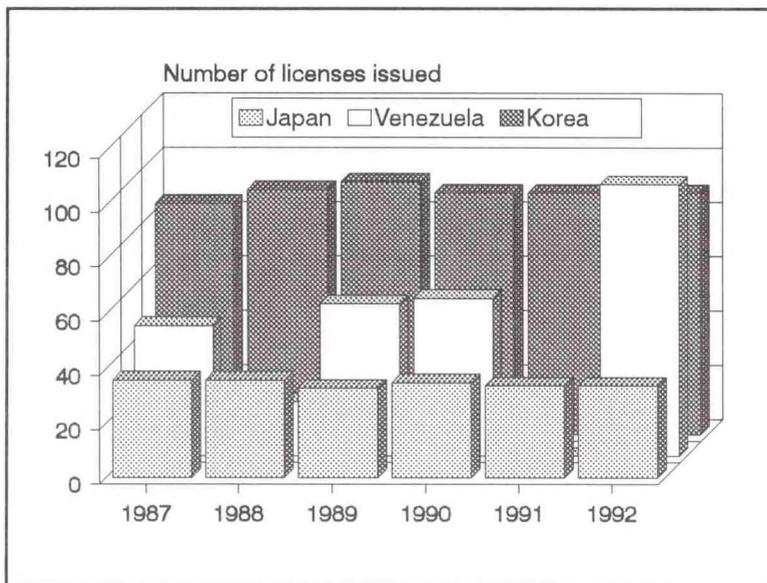


Figure 2.--Korea has been receiving most Surinamese licenses, but Venezuela obtained an unusually large allocation in 1992.

Government terminated Surinamese access to Brazilian grounds.

Guyana: Suriname and Guyana signed a reciprocal fisheries agreement on March 28, 1979. Suriname may deploy 30 trawlers and 80 small-scale fishing boats in Guyanese waters. Guyana received rights to deploy 18 shrimp trawlers and two finfish trawlers in Surinamese waters. The agreement was valid for 1 year, but it was renewed after 6 months. The agreement established a system for reporting the location and size of catches; provided for a reciprocal waiver of licensing fees; and allowed trawlers to process catches at their home ports.³ No information is available on the current status of this agreement. Press reports indicate that Guyana has seized at least two Surinamese shrimp trawlers in 1993.

Japan: Japan is one of Suriname's major fishery partners. The Japanese vessels currently operating off Suriname do so under a joint venture arrangement.⁴

Korea: Korea is Suriname's major fishery partner. The Korean vessels currently operating off Suriname do so under a joint venture arrangement.⁵

Soviet Union: Bilateral fisheries agreements between the Soviet Union and Suriname have been limited to one isolated research expedition conducted by a Soviet vessel.⁶

Venezuela: Venezuela and Suriname signed a bilateral fisheries agreement in 1977 granting Venezuelan fishermen access to Surinamese waters. Under the terms of the agreement, which was renewed in 1990, the Venezuelans may deploy up to 100 finfish vessels and 18 shrimp trawlers in Venezuelan waters. The agreement requires Venezuelan fishermen to land and process at least part of their catch in Suriname. The Surinamese Government protects the country's artisanal fishermen by prohibiting Venezuelan fishermen from entering a coastal zone (waters less than

30 meters deep). There are no reciprocal rights for Surinamese fishermen.⁷ Under this agreement, the Surinamese limit the maximum number of licenses issued to Venezuelans at 100. Besides setting the price of the licenses, the agreement limits Venezuelan finfish fishermen to using vertical lines. The agreement expires at the end of 1993, but the Venezuelans hope to renew it.

The extent of illegal fishing in Surinamese waters is unknown. Despite the agreement with Venezuela, Surinamese observers widely suspect that many Venezuelans (and also French and Guyanese) fish in Surinamese waters without licenses and land the catch in their home ports.⁸ Suriname has virtually no enforcement capability to control such illegal activities at sea. A military aircraft is occasionally deployed on surveillance flights. Seizures are rare, but no systematic data on the number of seized vessels is available. There appears to be no fixed fine imposed on seized vessels.

Foreign fishermen operating outside Surinamese waters may transship some of their catch through Suriname, but few details are available on this activity. The Government does release data on foreign landings in Surinamese ports (appendix C). Some of this product is consumed locally, but most is exported.

Only a few foreign companies have formed joint ventures in Suriname. There is no umbrella joint venture agreement for fishery joint ventures. The existing joint ventures are associations between foreign companies which formerly operated wholly-owned subsidiaries and the SFD.

V. JOINT VENTURES

There are two major fishing companies in Suriname with foreign connections. Both companies are shrimp exporters, marketing product mostly in Japan and to a lesser extent in France. Each company has negotiated an individual agreement with the SFD. Both the SFD and the foreign fishing companies seem fairly satisfied with the current agreements.⁹

Korea (ROK): The largest joint venture is Suriname American Industries Limited (SAIL), a government-owned but independently run fishing company. SAIL was established as a private company by a Korean (ROK) company in 1956 and operated the country's first shrimp processing plant. The Surinamese Government purchased SAIL in 1985. Except for a few company-owned vessels, however, SAIL has maintained its contacts with the Koreans. The company has exclusive contracts with several Korean companies to operate 70 Korean-owned and -manned vessels. SAIL provides the Koreans with needed facilities and equipment, and pays international prices for the shrimp landed.

Japan: The other major fisheries company in Suriname is Japan Fisheries Ltd. (SUJAFI), a Surinamese-Japanese joint venture formed in 1973. The Japanese partners are Nisshin Gyogyo and Hakodate Kokai which hold the controlling interests.¹⁰ SUJAFI operates a total of 54 foreign vessels, 45 Japanese and 9 Korean. The vessels are almost entirely shrimp trawlers designed for coastal operations.

VI. DISTANT-WATER OPERATIONS

Surinamese fishermen conduct no distant-water operations.

SOURCES

Jacobson, Donald, and Dennis Weidner. "Soviet-Latin American fishery relations, 1961-89," *International Fishery Reports*, (IFR-89/9), May 5, 1989.

Suisan Sha. *Suisan Nemkan*, 1992. Tokyo: Suisan Sha, 1992.

U.S. Embassy, Caracas, July 23, 1987.

_____, Paramaribo, April 4, 1979 and June 30, 1993.

ENDNOTES

SECTION IV. (Foreign Fishing)

1. U.S. Embassy, Paramaribo, June 30, 1993.
2. U.S. Embassy, Paramaribo, June 30, 1993.
3. U.S. Embassy, Paramaribo, April 4, 1979.
4. See section V. Joint Ventures.
5. See section V. Joint Ventures.
6. Donald Jacobson and Dennis Weidner, "Soviet-Latin American fishery relations, 1961-89," *International Fishery Reports*, (IFR-89/9), May 5, 1989.
7. U.S. Embassy, Caracas, July 23, 1987.
8. U.S. Embassy, Paramaribo, June 30, 1993.

SECTION V. (Joint Ventures)

9. U.S. Embassy, Paramaribo, June 30, 1993.
10. Suisan Sha, *op. cit.*, pp. 194-195 and U.S. Embassy, Paramaribo, June 30, 1993.

APPENDICES

Appendix A.--Suriname. Fishing vessel licenses, 1987-92

Year	Country				Total
	Korea	Japan	Venezuela	Netherlands	
			<u>Number</u>		
1987	85	36	48	-	169
1988	90	36	20	-	146
1989	93	33	56	-	182
1990	89	35	58	-	182
1991	89	34	-*	-	123
1992	89	34	100	1	224

* Due to a dispute over fisheries agreement in 1991, no licenses were issued to Venezuelan vessels.
 Source: Surinamese Government as cited in U.S. Embassy, Paramaribo, June 30, 1993.

Appendix B.--Suriname. Costs for fishing licenses, 1993

Type	Cost
	<u>US \$</u>
Shrimp trawler	7,500
Snapper vessels	3,500
Dutch vessel	4,500

Source: Surinamese Government as cited in U.S. Embassy, Paramaribo, June 30, 1993.

Appendix C.--Suriname. Foreign catch landed in Suriname, 1991-92

Country	Year		Species
	1991	1992	
	<u>Metric tons</u>		
Japan	1,000	NA	Shrimp
Korea (ROK)	3,500	NA	Shrimp
Venezuela	-	440	Snapper
Netherlands	-	365	Demersal fish

NA - Not available.

Source: Surinamese Government as cited in U.S. Embassy, Paramaribo, June 30, 1993.

4.10

VENEZUELA

Venezuela has an extremely active fishing industry. Fishermen appear to be fully utilizing most available resources and the Government is unlikely to permit access for any significant number of foreign vessels. A few foreign fishermen may be able to obtain access in new fisheries such as longlining for swordfish. Such permits, however, are likely to be limited in number and may be short-lived. It is likely that any lucrative new fishery will quickly attract the interest of Venezuelan fishermen.

Venezuelan fishermen currently conduct some distant-water fisheries, but are unlikely to expand these operations in the 1990s. The principal distant-water sector is the tuna purse seine fishery conducted in the eastern tropical Pacific. The tuna fishermen may have to curtail current effort due to the difficulties they are having in important export markets as a result of dolphin mortalities. The small, but important domestic market can not adsorb the fleet's entire production despite the opening of some alternative markets. Some Venezuelan vessel owners, like Mexican vessel owners, may be considering deployment on alternative distant-water grounds such as the eastern Atlantic or western Pacific. The authors have no information, however, concerning actual efforts to so deploy vessels. Other distant-water fishermen include tuna longline and purse seine fishermen operating in the Caribbean and central Atlantic and snapper/grouper fishermen operating on the Guianas Banks.

Some distant-water fishing appears to be conducted by foreign-owned vessels flagged in Venezuela. Some of these vessels transship their catch through Venezuela. Venezuelan owners have acquired the large Korean tuna longliners which once operated from local ports. One report indicated that Taiwan-owned tuna vessels operate in the Mediterranean for bluefin, but few details are available. These operations do not appear to be expanding. Venezuelan officials report, however, that there are no legitimately "licensed" Venezuelan vessels operating in the Mediterranean.

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I. GENERAL BACKGROUND

Venezuela conducts the largest fishery in the Caribbean, but the industry is a very small part of the country's overall economy. Fishermen reported a 0.3 million-metric ton (t) catch in 1991, little changed from 1990 (Latin America, appendix C2a1). Venezuela has both a commercial and artisanal fleet. European immigrants, especially Italians, have played an important role in the development of the commercial fishing industry. The single most important fishery is conducted by the shrimp fishermen off both the Western (Gulf of Venezuela) and Eastern (Orinoco delta) coasts. Catches have declined in recent years.

Artisanal and commercial fishermen differ over access to coastal grounds. The Government, in an effort to resolve the conflict, has established a 3-kilometer (km) coastal zone to protect the artisanal fishermen.¹ The country's tuna fishery has emerged as a major industry and Venezuela has become the second leading Latin American tuna fishing country. A sardine fishery in eastern Venezuela accounts for a substantial part of the overall catch. Fisheries for snapper, shark and other species are also of some importance.



Photo 1.--Venezuela. Artisanal fishermen with small boats play an important role in supplying the domestic market. Dennis Weidner

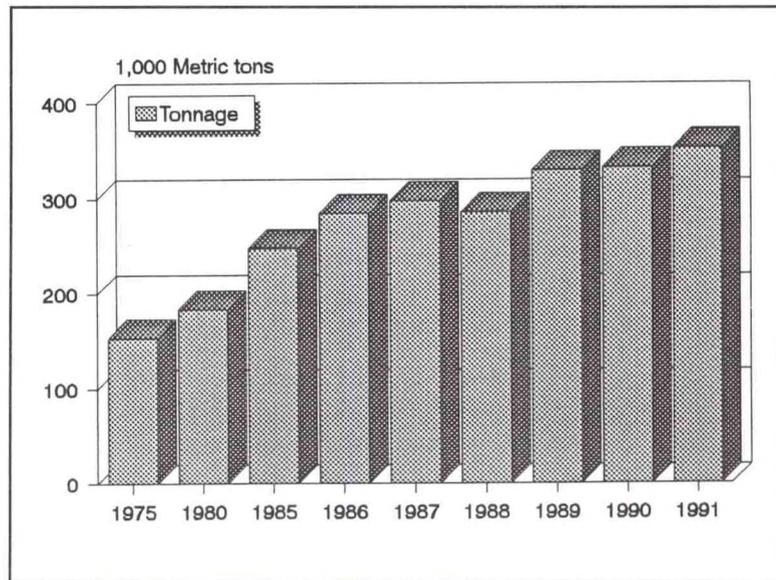


Figure 1.--Venezuela. Venezuelan fishermen have steadily increased their fisheries catch during the 1980s.

The Venezuelan fishing fleet is dominated by the shrimp, snapper, and tuna fleets. Shrimp fishermen operate about 450 trawlers.² Snapper/grouper fishermen deploy another important fleet, although estimates vary on the number of boats.³ Tuna fishermen deploy large modern purse seiners which primarily fish in the eastern tropical Pacific (ETP) and smaller baitboats and longliners which operate on both coastal grounds and in the Atlantic.⁴ Many of the shrimp and finfish trawlers are reportedly quite old, often over 15 years, and utilize the same methods and gear prevalent during the 1970s. Some of the tuna baitboats are also older vessels. The tuna purse seine fleet is the most modern sector of the Venezuelan fleet and capable of distant-water operations.

Venezuelan export trade has fluctuated sharply in recent years depending on the domestic economy and foreign trade regulations. Seafood is popular in Venezuela and substantial quantities of shrimp and other species are marketed domestically.⁵ Much of the domestic market is supplied by artisanal fishermen. The Government promoted exports to generate foreign currency earnings after the 1982 economic crisis. As a result, fishermen

increased export shipments to a record \$190 million in 1986 (Latin America, appendix E1). Domestic consumption in recent years appears to be expanding.⁶ Exports have declined to only \$90 million in 1991. Venezuelan tuna fishermen initially targeted export markets, but have had to increasingly rely on local canneries because of problems marketing non-dolphin safe tuna in major consuming countries. Venezuela has an important canning industry centered in Cumaná which packs tuna, sardines, and other species for both the domestic market and for export, mostly to other Latin American countries.

II. HIGH-SEAS FLEET

Venezuela reported a high-seas fleet of 16 large fishing vessels (500 GRT or over), totaling nearly 15,000 GRT to Lloyd's in 1992 (Latin America, appendices B2a1-2). The U.S. Office of Naval Intelligence (ONI) reports a fleet of 18 large vessels in 1993 (appendix C), roughly confirming the Lloyd's estimates. Venezuelan data submitted to FAO, however, indicates a larger fleet as of 1989 of 29 vessels (appendices A and B).

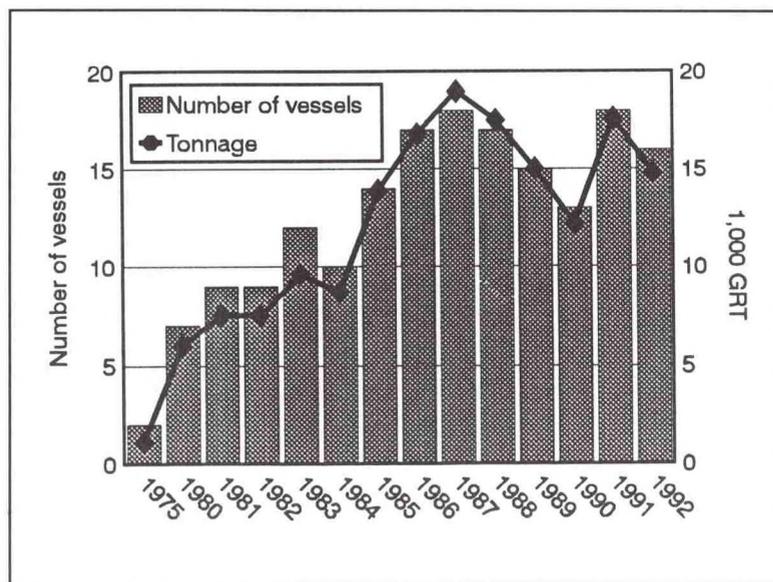


Figure 2.--Venezuela. Much of Venezuela's fleet of large vessels is composed of tuna purse seiners.

Most of the large Venezuelan fishing vessels are the country's modern fleet of high-seas tuna purse seiners.

Tuna vessels: Venezuela acquired one of Latin America's largest tuna fleets during the 1980s. Fishermen operate baitboats, longliners, and purse seiners, but most of the catch is harvested by the purse seine fleet. Private companies during the 1980s ordered new purse seiners and also imported many used ones. A decline in the value of used tuna vessels during the early 1980s permitted Venezuelan companies to acquire a substantial fleet of modern vessels at minimal cost. Venezuela entered the tuna fishery with no Government subsidies, although the inexpensive fuel available domestically was a major advantage.⁷

Other vessels: Venezuelan fishermen also deploy some medium-sized vessels for snapper and squid. The snapper/grouper vessels are mostly 15-22 meters in length with both steel and wooden hulls.⁸

III. VESSEL SOURCES

The authors have only limited information on Venezuelan shipyards. Venezuelan officials report that the country is self sufficient in building vessels up to about 35 meters. One press report indicates that the NAVIMCA yard in 1987 launched a 350-ton vessel with freezer capability, suggesting that Venezuela has the ability to build fishing vessels in the 350 ton range.⁹ The largest Venezuelan-built vessel currently in the fleet is about 200 GRT.¹⁰ Venezuelan yards build many of the small trawlers used in the shrimp fishery as well as the boats deployed in the snapper/grouper fishery.¹¹ The national shipyards are incapable of building high-seas and other large fishing vessels, all of which have to be imported.¹²

All of Venezuela's large fishing vessels capable of high-seas fishing have

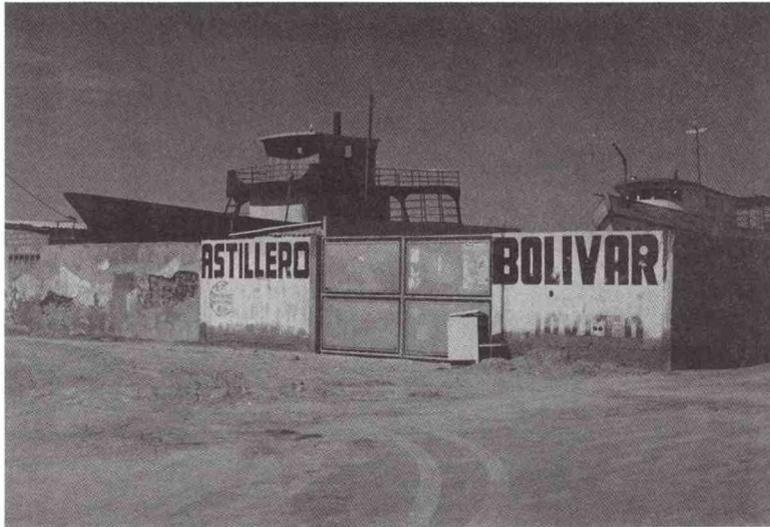


Photo 2.--Venezuela. Venezuelan shipyards build shrimp trawlers and small seiners. Larger vessels are usually imported. Dennis Weidner

been imported, primarily from the United States (appendix C).

Tuna vessels : Venezuela's entire fleet of large (1,000-1,500 GRT) tuna purse seiners were imported from other countries. Most of these vessels were acquired used in the United States at discount prices during the early 1980s when prices of used vessels dropped sharply. Unconfirmed reports suggest that the Venezuelans were able to purchase some used seiners for as little as \$1-2

million per vessel. Venezuelan investors supplemented their purchases of used seiners with orders for some new vessels at a cost of about \$12 million each. The new seiners were built primarily by U.S. shipyards, but a few vessels were also constructed in Peru, Spain, and other countries.¹³

Other vessels: All of the large fishing vessels (500 GRT or larger) deployed in other fisheries were also imported (appendix C). Vessels have been obtained in Peru, Spain, and the United States. Smaller vessels have also been imported from Belgium, Japan, and Mexico.

IV. FOREIGN FISHING

Venezuela permits little foreign fishing inside its 200-mile Exclusive Economic Zone (EEZ). Several Venezuelan laws govern the licensing of foreign fishermen.¹⁴ The Government during the

1980s distinguished between long-term and short-term licenses. License requests by foreign fishermen were handled on an *ad hoc* basis. The Government granted some long-term licenses to foreign fishermen which had a contractual arrangement with local fishing enterprises or which operated under a bilateral agreement with Venezuela. The Venezuelan Government also granted temporary licenses for foreign vessels leased to Venezuelan companies, but half of the crew has to be Venezuelan to qualify and the flag had to be transferred after 18 months to continue operating.¹⁵

The Government no longer issues licenses directly to foreign fishermen. Fishermen interested in operations in

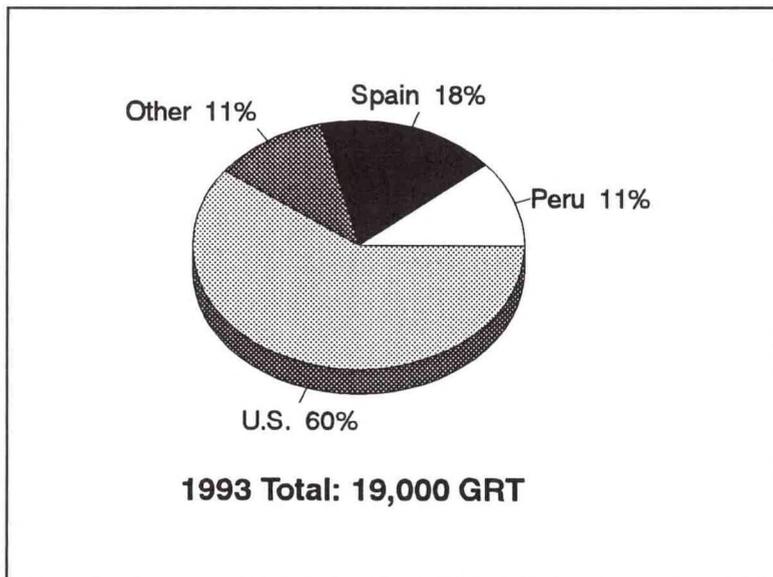


Figure 3.--Venezuela. Most of the large vessels in the Venezuelan fishing fleet were built in the United States.

the Venezuelan EEZ must lease their vessels to a Venezuelan company or form a joint venture with at least 10 percent Venezuelan participation. The Venezuelan partner must have owned at least one active fishing vessel and operated it for 1 year without violating Venezuelan fishing regulations. This effectively limits potential Venezuelan partners to *bona fide* fishing companies. The participants must post a bond for all foreign-owned vessels equal to at least 10 percent of the vessel's value.¹⁶ No information is available on the number of licenses issued, but it is very small. Venezuelan fishery officials are only aware of Spanish-owned vessels currently licensed to fish as part of a joint venture.



Photo 3.--The port of Güiria in eastern Venezuela was once an important transshipment point for foreign fishermen, but is now mostly used by Venezuelans.

Available details on foreign fishing are as follows:

European Community: European Community (EC) officials have expressed an interest in negotiating a fisheries access agreement with Venezuela.¹⁷ Few details are available on the Venezuelan response. Officials only report that such discussions are at a preliminary stage.¹⁸

France: Venezuela reached an unwritten understanding in 1987 with France allowing artisanal fishermen from the French overseas departments (Martinique and Guadeloupe) and Venezuela to operate off Martinique (France) and Aves Island (Venezuela). This informal agreement is still valid.¹⁹

Spain: An unknown number of Spanish vessels were licensed to fish off Venezuela during 1993 as part of a Spanish joint venture.²⁰

Trinidad and Tobago: A bilateral fisheries agreement between Venezuela and Trinidad and Tobago was signed in 1977 establishing reciprocal fishing rights. The agreement, which has been renewed several times, gives fishermen of both countries limited access to the each other's EEZ. It also requires that at least 50 percent of the catch be landed in the country where it was taken. While the agreement is reciprocal, it primarily deals with

the Trinidadian fishermen catching shrimp in the Venezuelan area of the Gulf of Paria.²¹ Disputes between Venezuelan and Trinidadian fishermen are handled by a joint fishing commission, although incidents continue to be an ongoing irritant to bilateral relations. The current agreement expires in December 1993, but will probably be renewed.²²

United States: Unconfirmed reports suggest that some U.S. fishermen longline swordfish off Venezuela. No details are available on these operations and Venezuelan officials report that any such operations are illegal as they have not licensed any U.S. vessels.²³

Venezuelan officials report several recent enforcement actions. Officials have seized about 20 foreign vessels in the past 3 years.²⁴ No details are available on the nationality or type of vessels. The maximum fine under Venezuelan law is about \$100 (Bs/10,000), but the confiscation of the catch and lost fishing time are much more costly.

Several foreign countries operate fishing vessels from Venezuelan ports. The vessels reportedly operate outside Venezuela's 200-mile EEZ, but use Venezuelan ports to obtain fuel and other supplies and to transship their catch. Foreign vessels have used Güiria during the 1980s. Much of the transshipment activity is currently believed to take place mostly in La Guaira because of the proximity to the Maiquitiá International Airport, thus

facilitating easy shipment of fresh product and high-value frozen product. The Venezuelan Government has no statistical data on the quantity or nationality of such shipments.²⁵ Officials speculate, however, that because Venezuela has imported substantial quantities of tuna in the past, facilities exist for sizeable transshipments.

The countries that have been most active in shipping seafood through Venezuela include:

Korea: Korean authorities reported seven tuna vessels based in Cumaná during 1981.²⁶ Varying numbers of Korean longliners also operated out of Carúpano in the 1980s. Korean vessels, some registered as Venezuelan vessels, transship yellowfin and bigeye as well as swordfish and various other species.

Taiwan: Taiwan vessels, some registered as Venezuelan vessels, also transship yellowfin and bigeye as well as swordfish and various other species. One French press report suggested that Taiwan longliners were fishing bluefin under the Venezuelan flag.²⁷ This report probably refers to fishing conducted in the Mediterranean. Venezuelan officials, however, deny such reports.²⁸ Initial reports suggested erroneously that Venezuela was importing tuna from Taiwan.²⁹ NMFS has since determined that these shipments were in fact Taiwan transshipments through Venezuela.

United States: Unconfirmed reports suggest that some U.S. fishermen have also obtained permits to fish off Venezuela and land their catch, primarily swordfish, in Venezuelan ports for export.³⁰

information is available on actual companies. The foreign companies have contributed investment capital, vessels, and technical expertise to such ventures. Venezuelan officials report that in 1993 there was only one functioning joint venture, with a Spanish company. All other joint ventures with other countries (Japan, Korea, the United States, and others) were inactive.³¹

Available information on individual countries is as follows:

Japan: Two Japanese companies (Hokoku Marine Products and Mitsui) formed a joint venture company with Venezuelan investors in 1980 to develop a white shrimp trawl fishery off the mouth of the Orinoco River in Venezuelan waters. The Japanese partners agreed to deploy three vessels, with their local partners offering onshore freezing and processing facilities located at Güiria.³²

Korea: The Korean Sam Son company through its Venezuelan joint venture, Trio Pines de Pesca, owned and operated tuna longliners during the mid-1980s. The current status of this operation is unknown. Venezuelan investors have purchased some of the vessels and others have been withdrawn. At least some Korean participation, however, continues.³³

Spain: A Spanish-Venezuelan joint venture was active in 1993, but the author has no details.

Taiwan: An unidentified Taiwanese longline company is believed to have had an arrangement with a Venezuelan investment group (Lisneros Group) to supply tuna, but no details are available.

V. JOINT VENTURES

Venezuelan fishing companies have formed a few joint ventures with foreign companies. Scattered press reports indicate that Venezuelan companies have signed joint venture contracts with Japanese, Korean, Spanish, Taiwan, and U.S. companies. Venezuela reportedly sought in the mid-1980s to establish fishery joint ventures with European Community (EC) companies, but no

VI. DISTANT-WATER OPERATIONS

Venezuelan fishermen conduct several different fisheries off other countries, both neighboring countries and on distant-water grounds.

A. Neighboring countries (Western central Atlantic)

Venezuelan fishermen conduct some operations off neighboring countries (primarily French Guiana, Guyana, Suriname, and Trinidad). Some of the arrangements negotiated with these countries allow reciprocal fishing rights in Venezuelan waters.³⁴ Some of these countries (France and Suriname) require Venezuelan fishermen to land part of their catch in the local ports. The primary species that Venezuelan fishermen target outside their own waters in the Caribbean/Atlantic are tunas and snapper/grouper. **Tunas:** Venezuelan longline fishermen take small amounts of tuna and related species on the Guianas Banks and on the highseas in the western central Atlantic. Venezuelan purse seine fishermen also report some catches in the Caribbean.³⁵

Snapper/grouper: Snapper/grouper fishermen generally conduct 1-3 month trips. Government officials report that about 10 percent of the country's snapper/grouper catch is landed abroad,³⁶ both in the local ports in the countries/departments (French Guiana, Martinique, and Suriname) off which they are operating and on other Caribbean islands (Curaçao and others) offering high prices.³⁷

The principal countries off which Venezuelan fishermen operate are:

French Guiana: The French reportedly issued 25 licenses to Venezuelan longline fishermen in 1987. The Venezuelans had to land 75 percent of the catch in French Guiana which can then be marketed as French product.³⁸

Guyana: Venezuelan fishermen almost certainly fish off Guyana, but there are no formal arrangements between the two governments.

Suriname: Suriname permits Venezuelan fishermen to deploy shrimp trawlers and finfish vessels under

a 1977 bilateral agreement.³⁹

Trinidad: The Venezuelan-Trinidadian agreement primarily deals with Trinidadian access to Venezuelan waters, but it is a reciprocal agreement providing some limited access for Venezuelan fishermen to Trinidadian waters.⁴⁰

B. Tuna purse seine fishery (eastern tropical Pacific)

Venezuelan distant-water operations are primarily conducted in the eastern tropical Pacific (ETP) for yellowfin tuna. The ETP includes some of the most productive yellowfin grounds in the world, although Venezuelan operations there are complicated because the country is not a Pacific coastal country. Venezuela primarily deploys its modern tuna purse seiners in the ETP, although the seiners also harvest substantial quantities of tuna in the Caribbean. Venezuelan fishermen, especially the longline fishermen, also conduct limited distant-water operations in the Atlantic, primarily for bigeye tuna.⁴¹

The Venezuelan tuna purse seine fleet focuses primarily on yellowfin and relies heavily on dolphins to locate the fish. Venezuelan fishermen, like Mexican tuna fishermen, followed the U.S. example and also used dolphins to locate tuna schools. As a result, Venezuelan fishermen began to report increasing dolphin mortalities as they expanded their fleet and fishing effort. These mortalities reached very significant levels in 1986 drawing the increasing attention of environmental groups. Venezuela has since made substantial progress in reducing the dolphin mortalities associated with the tuna fishery. The Government's strong legislation program and cooperation with the Inter-American Tropical Tuna Commission (IATTC) effort to protect dolphins has had a marked impact on dolphin mortalities through mid-1991.⁴² Venezuelan fishermen substantially reduced dolphin mortalities, although they do not yet fully meet U.S. standards which would permit lifting the current primary tuna embargo. The kill-per-set rate has been reduced from 13.3 dolphins in 1989 to only 8.2 in 1990 and 6.6 in the first half of 1991. Actual kills were less than 5,000 in 1990 and were probably under 4,000 in 1991.⁴³ A more current assessment of the Venezuelan dolphin protection program is

not possible because the Venezuelan Government has not yet released full-year 1991 and 1992 data on dolphin mortalities. Venezuelan officials report, however, that their tuna fishermen have continued to lower dolphin mortality rates and that the kill rate is now equal or less than the U.S. rate.⁴⁴ Officials hope to release an official report detailing the success of the Venezuelan dolphin protection program in the near future.

Various Governments, private companies, and environmental groups, despite this progress, acted during 1990-92 to close major markets to Venezuelan exporters, including the United States, Spain, Italy, and Thailand. The United States was the principal market, but exporters were also marketing important quantities in Europe as well. As a result of lost export markets, the Venezuelan tuna fleet currently markets almost all of its catch in the domestic Venezuelan market or that of other Latin American countries. Available Venezuelan data suggest that about half of the country's tuna catch was marketed domestically in 1992.⁴⁵ Venezuela does have a relatively high per-capita tuna consumption rate. The authors do not have data on the profitability of domestic sales. Government officials report some success in opening alternative tuna markets, including other countries in the Andean pact, Caribbean area, the Middle East, and Africa.⁴⁶

The problems experienced in major export markets during 1993 suggest, however, that Venezuela may have to rely increasingly on domestic markets as long as the fishermen continue to fish on dolphins.⁴⁷ Some observers in 1993 report growing inventories of unsold canned tuna and reduced purchases of raw tuna by the canneries. Some canneries have reportedly closed processing lines. Five vessel owners have reportedly sold their purse seiners to foreign companies in 1993.

The closure of Venezuela's important tuna export markets will significantly affect fleet operations. Venezuelan tuna catches were relatively stable, totaling 78,000-84,000 t between 1989-91. The 1992 catch is believed to be within this range, although precise statistics are not yet available.⁴⁸ Unconfirmed reports suggest that vessel owners have had to reduce effort in 1993 because of increasing marketing difficulties. Fishermen have apparently reduced fishing effort in early 1993 and

catches have declined. Venezuelan tuna fishermen caught 27,400 t of tuna in the ETP during January-June 1993, an 18 percent decline from the 1992 catches during the same period. Venezuela is in an even more difficult position than Mexico. While Venezuela has developed an important domestic market, it has a much smaller population than Mexico and the full utilization of the existing fleet almost certainly requires export markets. Venezuela, like Mexico, may not, be able to resume export shipments to major markets unless it ends fishing on dolphin. Venezuelan officials hope that the increasing effectiveness of their efforts to reduce dolphin mortalities may resolve the problem. Environmental groups are, however, promoting efforts to stop all fishing on dolphin. U.S. legislation which comes into effect in 1994, will ban all yellowfin imports caught in association with dolphin. Venezuelan industry sources insist that they cannot operate profitably unless they set on dolphins.

The future of Venezuela's tuna fleet is unclear. The small, but important domestic market does not appear large enough to support the current fleet. Alternative markets opened recently only account for a fraction of what had been exported to the European Community and the United States. Unless export markets can be reopened or replaced, the current fleet cannot continue to operate at 1992 levels without Government subsidies. The fleet is currently operating at much less than full capacity and vessels may have to be tied up permanently or sold. Some owners have already sold a few vessels to foreign companies. As is the case of the Mexican tuna fleet, the authors do not know of any alternative fisheries in which the vessels could be deployed, but there is some possibility of deploying the vessels on alternative grounds.

C. Foreign-owned vessels

The Venezuelan Government licensed about 15 Taiwan and Korean-owned vessels during the 1980s, but their licenses were revoked for failure to comply with Venezuelan law.

The Venezuelan Government has reportedly licensed five foreign-owned vessels for high-seas operations in 1993. The Government insists that these vessels are not registered in Venezuela and fly

flags of other countries.⁴⁹ The authors do not understand what Venezuelan officials mean when they indicate that they are "licensing" foreign-flag vessels for high-seas operations. The U.S. Embassy in Caracas is seeking clarification. Government officials expect to license three more foreign vessels in 1993. The authors have little information on where these vessels are deployed. They may be the vessels identified by some observers as Venezuelan registered that have been deployed since 1990 in the northwestern Atlantic groundfish fishery. Unidentified companies since 1990 have deployed two supposed Venezuelan trawlers for groundfish in the northwestern Atlantic (Latin America, appendix C4b4-5). The North Atlantic Fisheries Organization (NAFO) indicates that the vessels have European crews, suggesting possible Spanish ownership.⁵⁰ The vessels caught about 1,000 t of cod in 1992 (Latin America, appendix C4b1).

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ENDNOTES

SECTION I. (General Background)

1. U.S. Embassy, Caracas, December 13, 1991.
2. Ministerio de Agricultura y Cría as cited by the U.S. Embassy, Caracas, May 26, 1993. The trawler fleet increased significantly during the 1980s from 272 vessels in 1985 to 433 in 1989, about evenly dispersed between the eastern and western fisheries. An excellent review of the Venezuelan trawl fishery and fleet is available in Luis Marcano, "Análisis de la situación de la industria de la pesca de arrastre durante el periodo, 1985-1989," *Resultados de Talleres Sobre la Pesca en Venezuela*, (Ministerio de Agricultura y Cría: Caracas, 1990), pp.25-52.
3. Estimates vary widely on the number of snapper/grouper vessels. Ministerio de Agricultura y Cría (MAC) sources estimate a fleet of about 240 boats. Ministerio de Agricultura y Cría as cited by the U.S. Embassy, Caracas, May 26, 1993. Another observer estimates that about 550-600 boats participate in the fishery. Dr. Joaquín Buitrago, Director, Estación de Investigaciones de Margarita (EDIMAR), Fundación La Salle de Ciencias Naturales, personal communications, November 10, 1993.
4. For details see Dennis Weidner, "Venezuelan tuna industry," *International Fishery Reports*, (IFR-93/17R), May 7, 1993.
5. A good review of Venezuelan fisheries trade is available in U.S. Embassy, Caracas, May 26, 1993.
6. U.S. Embassy, Caracas, May 26, 1993.

SECTION II. (High-seas Fleet)

7. Details on the Venezuelan tuna fishery are available in Dennis Weidner, "Venezuelan tuna industry," *op. cit.*
8. Buitrago, personal communications, *op. cit.*, November 10, 1993.

SECTION III. (Vessel Sources)

9. "Barco polivalente 'Goya' será bautizado en Cumaná," *El Diario de Caracas*, April 8, 1987.
10. U.S. Navy. Office of Naval Intelligence.
11. Buitrago, personal communications, *op. cit.*, November 10, 1993.
12. Dr. Francisco Herrera-Terran, Director, Servicio Autónomo de los Recursos Pesqueros y Acuícolas, personal communications with U.S. Embassy, Caracas, September 1, 1993.
13. Dennis Weidner, "Venezuelan tuna industry," *op. cit.*

SECTION IV. (Foreign Fishing)

14. The laws governing foreign fishing include: the Law for the Conservation of Living Resources on the High Seas, the Law for the Exclusive Economic Zone, Presidential Decree 1236, December 9, 1990, and MAC Ministerial Resolution 222. Herrera, *op. cit.*, September 1, 1993.
15. U.S. Embassy, July 23, 1987.
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19. U.S. Embassy, Caracas, July 23, 1987; and Herrera, *op. cit.*, September 1, 1993.
20. Herrera, *op. cit.*, September 1, 1993.
21. Dennis Weidner, "Venezuela and Trinidad and Tobago sign a fisheries agreement," *International Fisheries Report*, (IFR-78/15), January 20, 1978.
22. U.S. Embassy, Caracas, May 26, 1993. Venezuelan officials are uncertain as to possible new terms to be included in a revised agreement. Herrera, *op. cit.*, September 1, 1993.
23. Herrera, *op. cit.*, September 1, 1993.
24. Herrera, *op. cit.*, September 1, 1993.
25. Officials report that because the fish is not actually imported and remains under Customs control, it is not currently noted. Herrera, *op. cit.*, September 1, 1993.
26. Korean Fisheries Administration, unpublished data, July 7, 1981.
27. Dominique Orin, "Greenpeace à l'assaut des pirates," *Le Marin*, May 25, 1990. ICCAT has not reported a Taiwan Atlantic bluefin catch since 1986. ICCAT, *Statistical Bulletin*, 1990, Vol. 21, p.93. The catch by Venezuelan-flag vessels is recorded under the "NEI" category.
28. Fisheries Director Herrera does not know of any Venezuelan-"licensed" vessels fishing in the Mediterranean. He has heard that two vessels (the *Atlantic Oji* and an unidentified vessel) had licenses about 8 years ago. Herrera referred to the vessels as "stateless pirates." Herrera, *op. cit.*, September 1, 1993.
29. This was the reason the United States imposed an intermediary embargo January 31, 1992 (Latin America, appendix E1). After the Venezuelan Government certified that the shipments were actually transshipments, the embargo was removed (April 24, 1992).
30. One U.S. company indicates that operations off Venezuela are highly seasonal and that they deploy longliners only during the winter months.

SECTION V. (Joint Ventures)

- 31. Herrera, *op. cit.*, September 1, 1993.
- 32. "Shrimp project off the Orinoco," *Fishing News International*, August, 1980.
- 33. Weidner, "Venezuelan tuna industry," *op. cit.*

SECTION VI. (Distant-water Operations)

- 34. For details on the Suriname access agreement see the Surinamese chapter of this report.
- 35. Limited information on the tuna fishery are available in Weidner, "Venezuelan tuna fishery," *op. cit.*
- 36. U.S. Embassy, Caracas, December 13, 1991.
- 37. Buitrago, personal communications, *op. cit.*, November 10, 1993.
- 38. *Le Marin*, February 20, 1987, GLOBEFISH data base, AN 007443/8705.
- 39. For details on the Suriname access agreement see the Suriname chapter of this report.
- 40. For details see the Trinidad chapter of this report.
- 41. For details see Weidner, "Venezuelan tuna industry," *op. cit.*
- 42. For details see Weidner, "Venezuelan tuna industry," *op. cit.*, pp. 36-37.
- 43. Data provided by the Venezuelan Ministerio de Agricultura y Cría.
- 44. Herrera, *op. cit.*, September 1, 1993.
- 45. See for example Daniel Navoa, "Análisis de la situación de la industria pesquera del atún en Venezuela durante el período 1988-1989," *Resultados de Talleres Sobre la Pesca en Venezuela*, (Ministerio de Agricultura y Cría Dirección General Sectorial de Pesca y Acuicultura: Caracas, 1990), p.11. Navoa's estimates include a substantial entry which MAC identifies only as "various tunas." U.K. Department of Trade and Industry, "Fishing and aquaculture in Venezuela," *World Fishing*, August 1992, p. 27. Manuel de la Iglesia, NAVISA, personal communications, February 3, 1993.
- 46. Herrera, *op. cit.*, September 1, 1993.
- 47. For details see Weidner, "Venezuelan tuna industry," *op. cit.*
- 48. The Venezuelan 1992 ETP tuna catch was 55,000 t, but as data is not yet available on the smaller Atlantic/Caribbean fishery, the total Venezuelan tuna catch cannot yet be computed.
- 49. Herrera, *op. cit.*, September 1, 1993.

50. North Atlantic Fisheries Organization, "Data on non-contracting parties activities in the NAFO regulatory area (STACFAC)," *Serial No. N2234*, NAFO/GC Doc. 93/2, April, 1993. Information prior to 1985 is not available.

APPENDICES

Appendix A.--Venezuela. Large fishing vessels (over 500 GRT), 1970-89.

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	Number of vessels							
Long liners								
A	NA	NA	NA	NA	NA	6	-	-
Other liners	NA	NA	NA	NA	NA	-	NA	1
Purse seiners								
A	NA	NA	NA	NA	NA	9	NA	14
B	NA	NA	NA	NA	NA	21	NA	12
C	NA	NA	NA	NA	NA	1	NA	1
Trawlers								
A	NA	NA	NA	NA	NA	1	NA	1
Total	NA	NA	NA	NA	NA	38	NA	29

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix B.-Venezuela. Large fishing vessels (over 500 GRT), 1970-89

Vessel type	Year							
	1970	1975	1980	1985	1986	1987	1988	1989
	1,000 GRT							
Long liners								
A	NA	NA	NA	NA	NA	3.8	-	-
Other liners	NA	NA	NA	NA	NA	-	NA	1.0
Purse seiners								
A	NA	NA	NA	NA	NA	8.2	NA	12.4
B	NA	NA	NA	NA	NA	25.2	NA	15.4
C	NA	NA	NA	NA	NA	2.2	NA	2.2
Trawlers								
A	NA	NA	NA	NA	NA	0.6	NA	0.6
Total	NA	NA	NA	NA	NA	40.0	NA	31.6

Vessel size key

A: 500 - 999.9 GRT

B: 1,000 - 1,999.9 GRT

C: 2,000 - 2,999.9 GRT

D: Over 4,000 GRT

NA - Not available

Source: FAO, "Fishery fleet statistics, 1970-89," Bulletin of Fishery Statistics, Vol. 30.

Appendix C.--Venezuela. Large* fishing vessels registered, 1993

Country/Vessel	Size	Built	Vessel type
	GRT	Year	
France			
Don Abel	855	1975	510
Peru			
Cervantes	1,287	1983	510
Rocinante	814	1984	510
Spain			
Bacanova	557	1970	510
Jenny Margot	2,202	1971	516
Pescagel	557	1970	510
United States			
Calypso	995	1972	510
Constellation	958	1974	510
El Rifle	1,054	1980	517
Falcon	958	1974	516
Geminis	775	1967	510
Jane	1,093	1980	516
La Foca	1,093	1982	516
Napoleon	1,020	1979	516
Nazare Mary	1,071	1973	516
Pacifico S	1,424	1977	516
South Seas	916	1971	510
Unidentified			
Orinoco	1,280	1980	510

* 500 GRT or larger

** ONI vessel types

510 - Trawler

511 - Refrigerated trawler

512 - Fish factory trawler

516 - Tuna seiner

517 - Seiner

566 - Fisheries research vessel

Source: U.S. Office of Naval Intelligence (ONI)