SOUTHWEST FISHERIES CENTER

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APRIL 1984

THE STRATEGIC PLAN FOR THE NATIONAL MARINE FISHERIES SERVICE'S NORTH PACIFIC ALBACORE FISHERY PROGRAM

compiled by

R. Parrish and D. Mackett

ADMINISTRATIVE REPORT LJ-84-09

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INTRODUCTION

This report documents the strategic planning for the National Marine Fisheries Service's (NMFS) North Pacific Albacore Fishery Research and Management Program.

The strategic planning effort is part of the NMFS' Southwest Fisheries Center (SWFC) and Southwest Regional Office's (SWR) move to improve the overall planning and execution of its programs. To this end, the SWFC and the SWR have joined in applying the principles of the SWFC's recently installed interactive planning and management system to the albacore planning problem. The system integrates normative, strategic and operational planning efforts involving the inputs from constituents, NMFS management, and NMFS staff, respectively.

The albacore program was selected by the SWFC and SWR Directors as the subject of an intensive review and expanded planning effort after the NMFS Tuna Research Workshop held at San Clemente, California, December 1980. The first phase of the expanded albacore program planning was completed in June 1983, when members of the U.S. albacore industry and other invited constituents participated in a workshop at the SWFC to set forth their desirable goals and objectives for the fishery. The constituents were able to say what ought to be done in the U.S. albacore fishery from their perspective (Mackett, 1983). The second phase of the planning effort, strategic planning

and the subject of this report, involved the NMFS management (having been informed of the constituents' desires), in determining what NMFS could do to meet those objectives. This report presents the results of this second step: NMFS strategic planning for the albacore program. NMFS staff and others will use these results to complete the third planning phase, that of developing operational plans and budgets for various sectors of the research and management program. This report also sets forth the options that were considered and selected for the plan and makes known the lines of responsibility within NMFS for carrying out the program. A list of persons involved with the planning effort as well as a list of NMFS offices responsible for portion of the program are given in the appendices.

I. THE STRATEGIC PLAN FOR THE NMFS PROGRAM FOR NORTH PACIFIC ALBACORE RESEARCH AND MANAGEMENT

The strategic planning for the NMFS North Pacific Albacore Research and Management Program was based on information developed during three preceding steps:

1) preliminary work of an interdisciplinary task force of Southwest Fisheries Center and Southwest Regional Office staff,

2) a workshop of constituents to consider objectives and desirable trends and events, and

3) follow-up work by the task force to organize information gained from constituents and to develop strategic options.

These steps had been completed prior to the strategic planning meeting and resulted in a body of organized information upon which the NMFS managers could base their decisions. One of the most important results of the preliminary work was the delineation of desirable goals and objectives for the fisheries by the constituents workshop (Figure 1). These objectives and their supporting relationships, which resulted from a consensus of commercial and recreational interests, guided the planning work that followed. Another important output is the Options Field which was developed to help the managers focus on the important aspects of the albacore fishery reseach, and management problem and to make decisions in an expeditious manner (Figure 2).

A full explanation of the process employed during the strategic planning meeting is given in Appendix D. However, introduction to the specifics of the Strategic Plan, the basic steps in the process, are given here.

The group of National Marine Fisheries Service (NMFS) Directors (Appendix A) met at the Southwest Fisheries Center, La Jolla, California, on January 18 and 19, 1984, to develop the strategic plan for the NMFS North Pacific Albacore Research and Management Program. During the meeting, the Directors set NMFS goals (Table 1) and chose the options for the plan from an Options Field developed by SWFC and SWR staff, specifically to expedite and facilitate their strategic planning (Figure 2).

The Directors set goals for the NMFS albacore program after considering both the constituents' desirable goals and objectives, and the current NMFS mission, goals, and objectives. After designating goals for the program, the Directors discussed the options and chose the set of options from the Options Field that they felt represented the best strategy for reaching the goals.

The Options Field was made up of 14 design categories each with several options. The participants were free to choose none, one, or any number of logically compatible options within each of the categories. The choices were made in response to the following question:

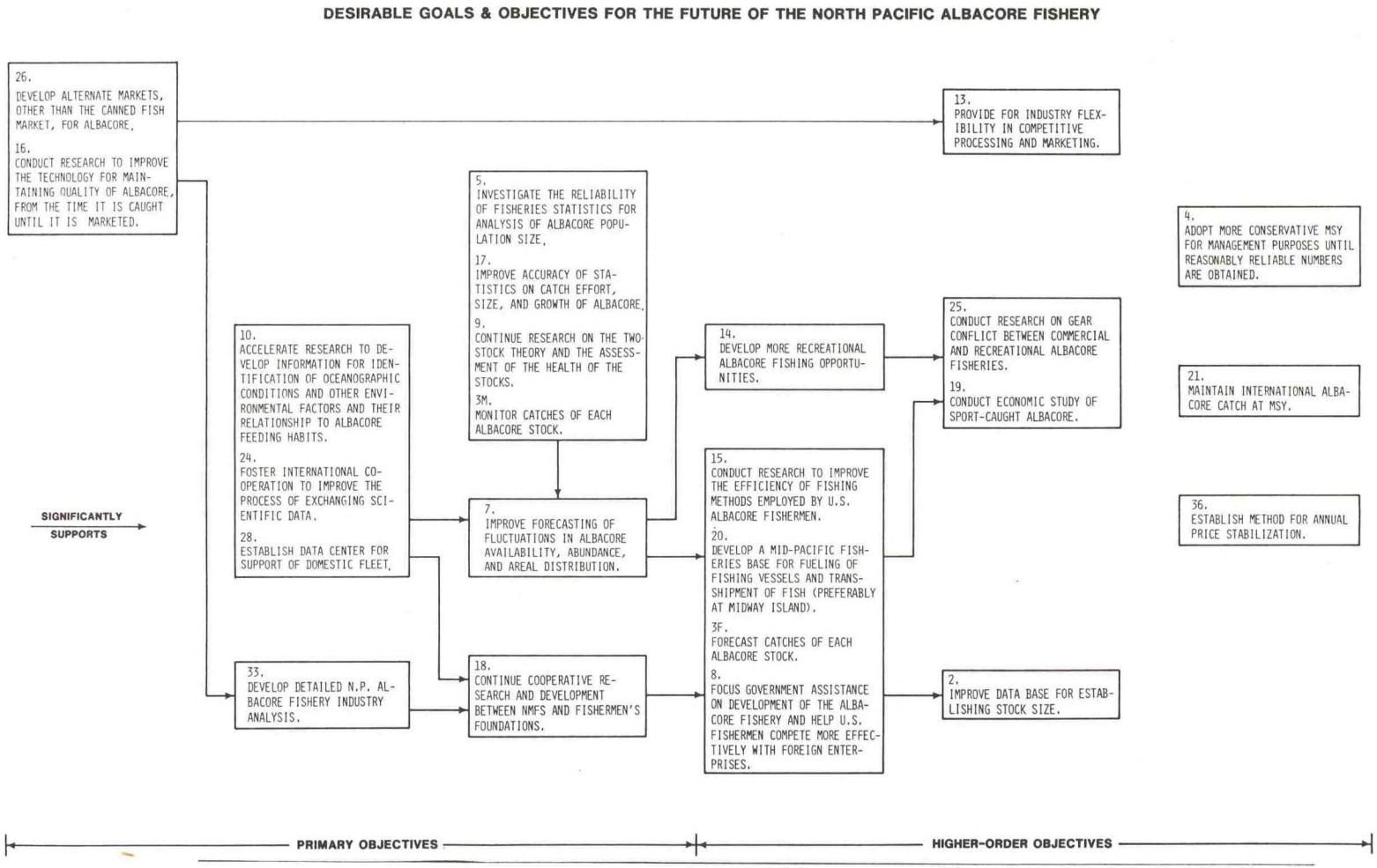


Figure 1. Objective map, final version. (From: Mackett, D. J. 1983. Report of the Workshop on long-range planning for the North Pacific albacore fishery.)

TABLE 1. GOALS FOR NMFS NORTH PACIFIC ALBACORE RESEARCH AND MANAGEMENT PROGRAM

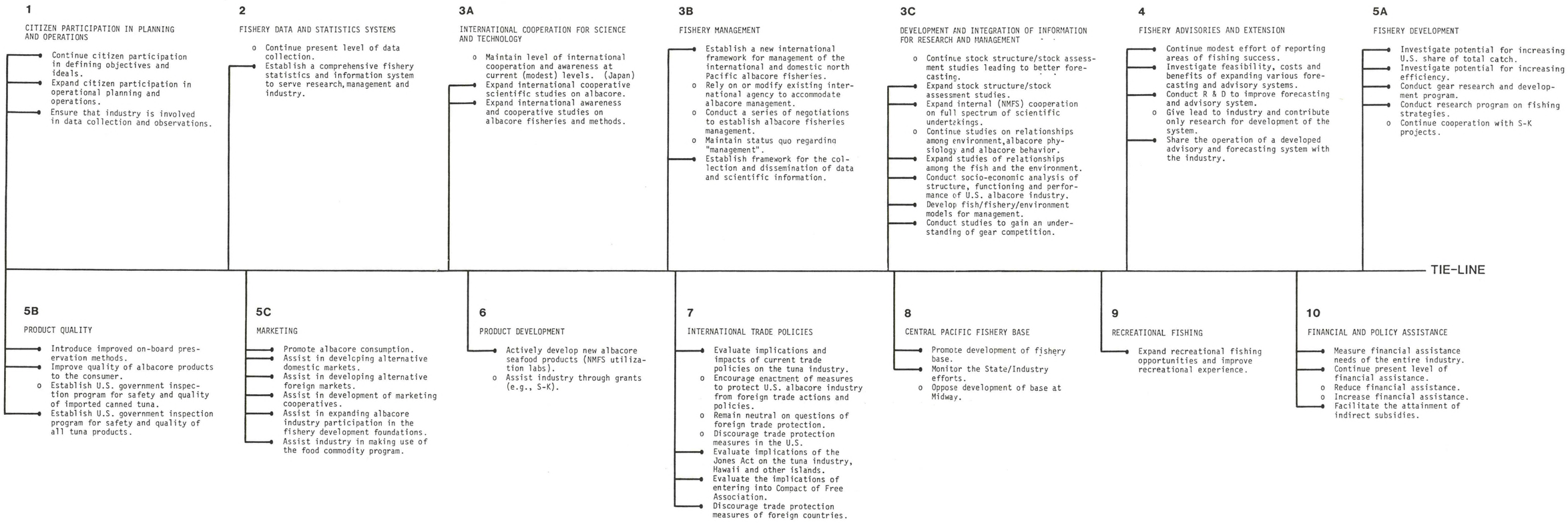
1. Increase the U.S. harvest of albacore to 35,000 metric tons annually by 1995.

2. Maintain U.S. fishermen's access to the albacore resource.

3. Achieve a management regime to assure optimum productivity of the resource.

4. Assure economic stability of the U.S. fishery.

FINAL OPTIONS FIELD/OPTIONS PROFILE FOR GUIDING THE DESIGN OF THE NMFS PROGRAM FOR ALBACORE RESEARCH & MANAGEMENT



January 1984

FIGURE 2

Should NMFS include option "X" in its strategy for carrying out the NMFS North Pacific Albacore Research and Management Program?

Each option was considered and discussed by the Directors and, on the basis of consensus, either rejected or accepted for inclusion in the overall strategy. The options that were selected for the NMFS strategy are indicated by the connection to the tie-line (Figure 2).

From an examination of Figure 2, one is able to see the profile of the NMFS strategy clearly. The options that were selected can be examined in the context of the options available and in contrast to those options that were rejected. Thus, the significance of the choices becomes more apparent. The following section, which gives more details about each of the design categories, will help in interpreting the Options Profile.

II. A SHORT DESCRIPTION OF THE OPTION FIELD CATEGORIES

The following material consists of short descriptions of the 10 major categories included in the final options field for guiding the design of the NMFS program for albacore research and management.

1. CITIZEN PARTICIPATION IN PLANNING AND OPERATIONS

Citizen participation in NMFS planning efforts can take place at two levels where citizens are uniquely qualified to help. At the normative level, citizens can help determine ideals or what ought to be done. At the operational level, citizens can participate in joint or cooperative government/constituent projects, which need to be planned and carried out.

The involvement of responsible citizens in the planning process may require additional time and resources initially, but less time and effort will be required to implement the programs, especially those programs requiring significant levels of citizen participation to be successful.

2. FISHERY DATA AND STATISTICS SYSTEMS

It is recognized that accurate, complete, and timely compilation of catch and effort statistics is necessary for rational development and management of the resource. Statistics are now being compiled from some of the fleets operating in the North Pacific, but there are many gaps in the data. Suggestions were made for an enhanced system of data collection involving cooperation between the fishing industry and government, and also cooperation among the various governments whose fleets are involved in the North Pacific albacore fishery.

3A. INTERNATIONAL COOPERATION FOR SCIENCE AND TECHNOLOGY

Currently, international cooperation exists mostly on a scientist-to-scientist level. Cooperation is generally limited to matters such as stock assessment biology, and fish and environmental relationships. An international workshop to communicate information about the stocks and to discuss implications of the information is held annually. At this time, the workshops are attended mainly by scientists from Japan and the U.S.; occasionally Canadian scientists participate. Scientists from Korea and Taiwan have also participated at some time. The industry members at the constituent workshop were eager for more information about Japanese fishing methods for possible use and application in the U.S. fleet and suggested an expansion of the agenda to include such discussions. The industry also wanted to expand the cooperative scientific program on the traditional subjects under discussion (biology, etc.). In the future, Korean, Taiwan, and Chinese scientists will be encouraged to attend because their countries contribute substantially to the international catch. There is a definite need to lay scientific and political groundwork prior to establishing any international management regime. Emphasis should be given to cooperation which is needed to provide basic data for scientific needs.

3B. FISHERY MANAGEMENT

The international North Pacific albacore fishery has had a long-term trend of increasing catches. The increased level of fishing, reduction in

stock size, and the resultant projected increase in fishing costs, suggests that it will become desirable at some stage to manage the resource to ensure the long-term viability of the U.S. fishery. The question at issue is: When should the U.S. begin such an effort, and what strategies should be employed with regard to international management issues?

3C. DEVELOPMENT AND INTEGRATION OF INFORMATION FOR RESEARCH AND MANAGEMENT

Stock Structure and Stock Assessment

There may be more than one stock of albacore in the North Pacific. If so, the stocks may need to be managed separately. Current research efforts to delineate stock structure and to forecast better recruitment, age structure, MSY, etc., are rather modest and therefore will produce limited results. This limitation is significant because work done under this sector provides the population dynamics information that is necessary to evaluate opposing management proposals.

Environmental Relationships

Variations in ocean conditions play key roles in causing fluctuations in the availability of albacore and in their vulnerability to harvesting. If modeling efforts, which are believed to be required for the proper management of the resource are to continue, it will be necessary to develop an understanding of the interactions between the albacore resource, the

environment and the fishery. Fisheries advisories, if they are to be a feature of the NMFS program, require similar information. Therefore R and D efforts to investigate environmental relationships are a prerequisite for both management purposes and for improving the efficiency of the U.S. fleet.

Socio-economic Statistics and Analysis

The structure, function, and performance of the U.S. albacore industry and its relationship to other fisheries needs to be better understood to ensure that research and management decisions are made in light of their economic impact on all segments of the industry and on the consumers.

Integration of Information to Address Development and Management Concerns

Information about albacore biology and albacore fisheries needs to be integrated into a form that is useful for predicting the outcomes of various management proposals. Given the complex and interconnected nature of the fish-fishery system, the development of simulation models is an appropriate way to carry out such integration. Efforts in this direction should be undertaken early in order to help identify gaps in the available information and thereby suggest areas for emphasis in further research.

4. FISHERY ADVISORIES AND EXTENSION

It seems possible that fishery advisory systems, which integrate oceanographic and fisheries data and broadcast information to fishermen, will

reduce the costs in searching for fish. Increasing the efficiency of catching fish could be a cost-effective system. The industry members, both recreational and commercial, expressed interest in obtaining more information about albacore availability and distribution on a real-time basis. Government research and development would be required to develop such a system.

5A. FISHERY DEVELOPMENT

Constituents were interested in developing new gear and fishing strategies, improving the efficiency of existing methods and the expansion of the U.S. fishery to broader areas in the Pacific. It appears that the cost of fishing albacore with present gear and methods may increase. These costs, however, may be reduced by the use of gill nets and longlines. The expansion of the areal extent of the U.S. fishery is desired to establish historic presence in the areas with various gear types. This presence will improve the likelihood of a larger U.S. share of the take of albacore from the North Pacific should international regulatory management measures be adopted.

5B. PRODUCT QUALITY

Industry members were concerned about the quality of imported canned tuna. They felt that foreign processing standards were considerably below current U.S. quality standards, and suggested that quality standards on canned imports should be set and an inspection program should be established to enforce those standards. The industry also expressed concern over the efficacy of on-board preservation methods and recognized the desirability of

reducing the salt content of frozen albacore. While it is recognized that on-board handling and preservation of albacore destined for canning could be improved, the development of new albacore products may require entirely new procedures for the on-board handling of the catch.

5C. MARKETING

It is apparent that west coast fishermen will have more difficulty disposing of their fish if present domestic processing trends continue, i.e., shift in processing to non-continental sites. In response to this difficulty, the fishermen made several suggestions for developing alternative markets and products and for promotion of albacore as a quality seafood. Under current conditions, opportunities for export of U.S. albacore and albacore products are limited.

6. PRODUCT DEVELOPMENT

Almost all of the domestic catch of albacore is canned at present. In 1982, small fishing boats on the west coast were only able to sell their catch directly to southern California or Hawaiian canners because no buying stations were established elsewhere during that year. Attempts to sell fresh fish by individual fishermen were somewhat successful but the fishermen were painfully aware of the desirability of developing alternative markets for their fish. Since the landings of such desirable food fish as halibut appear to be declining, albacore, if properly marketed, could take up the slack in the supply of quality fishery products.

7. INTERNATIONAL TRADE POLICIES

Some industry members were concerned about competition from lower-priced foreign products, both fresh/frozen and canned albacore, in the U.S. market. Several suggestions were made on how the government could provide relief to the domestic industry.

8. CENTRAL PACIFIC FISHERY BASE

The state of Hawaii is investigating the feasibility of establishing a system to reduce operating costs and increase the range of fishing time for U.S. albacore vessels operating in the central Pacific north of Midway. Options being considered range from fixed facilities on Navy-controlled Midway Island for refueling, offloading and storage of catch, to mobile barge or mothership-type operations. Studies so far have identified various facilities/infrastructure options, but have not adequately addressed other important concerns, such as investment risks or levels, participation or cooperation between the State government, the Navy and various sectors of the fishing industry.

9. RECREATIONAL FISHING

In general, recreational fishing opportunities for albacore are determined by the annual distribution of the fish during migration. However, NMFS could expand the recreational albacore fishing opportunities by upgrading

NMFS advisory services to include information customized for recreational fishermen. NMFS could also expand recreational opportunities by relieving potential commercial-recreational conflicts.

10. FINANCIAL AND POLICY ASSISTANCE

Constituents favored continued or increased financial assistance to the U.S. albacore fleet. Foreign governments subsidize their fishermen to a far greater extent than the assistance offered the U.S. fishermen. To improve their competitiveness with subsidized fleets, domestic commercial fishermen suggested aid in the forms of tax relief or incentives, vessel obligation guarantees, and direct subsidies for diesel fuel purchase. As one example of inequity, a constituent pointed out that a foreign fishing vessel repaired in a U.S. shipyard actually would pay less than a domestic vessel for the same work because of the tax structure.

III. CARRYING OUT THE PLAN: THE NEXT STEPS

Although some of the options selected confirm the desirability of maintaining activities that are already planned or implemented, a large number of the options selected require starting new activities for which more detailed planning and budgeting are required before they can be put into operation. Many of these, such as research for the design of improved forecasting systems, will require a great deal of citizen input and require a large measure of cooperation among government, industry, and recreational interests if they are to be successfully planned and carried out. There is

also a need to inform the commercial and recreational fishing industry as well as other interested citizens about the overall program strategy. As mentioned previously, responsibilities and assignments for carrying out these planning and operational activities within NMFS were discussed by the Directors. The resulting assignments of responsibilities among the various NMFS offices are given in Figure 3.

The roles of the various NMFS offices within each category were designated as either 1) primary responsibility or 2) participant. The Directors of offices with primary responsibility will be accountable for conducting operational planning and for soliciting and coordinating input from citizens and other participating NMFS offices in setting out these plans. In most cases the office with primary responsibility will also carry out the operations, but in some cases the work may be done through contracts, grants or coordinated efforts of others. Also, it should be realized that NMFS will not be able to implement all of these options at once. Budgetary considerations, the press of other priorities, staff availability, etc., are some of the reasons why all of the work may not be undertaken in the short-run. However, because the strategic planning was oriented toward the desirable objectives of the constituents, there are a number of options included in the NMFS strategy which can be initiated and carried out by the constituents themselves. In these cases NMFS would have a supporting role; (e.g., see asterisked items in Figure 3).

NMFS operational planning and program budgeting and execution based on the strategy will begin immediately. For example, the SWFC and the SWR have

NMFS ALBACORE PROGRAM Actors/Roles for each design category

X Primary Responsibility
V Participant

NMFS Offices	1. Citizen participation in planning	2. Fishery data & statistics systems	3A. International cooperation for science	3B. International fishery management	3C. Development & integration of information for research & management	4. Fishery advisories & extension	5A. Fishery development *	5B. Product quality *	5C. Marketing *	6. Product development *	7. International trade policies	8. Central Pacific fishery base	9. Recreational fishing	10. Financial & policy assistance
F Directorate	X													
F/M Management	V			X			V		V	V	X	V		V
F/S Science & Technology	V	V	V	V				X (1)	V	V				
F/NWR Northwest Region	V	V		V	V	V		V	V	V	V		V	V
F/SWR Southwest Region	V	V		V	V	V	X	X (2)	X	V	V	X	X	X
F/NWC Northwest & Alaska Fisheries Center	V	V		V	V		V	X (3)		X				
F/SWC Southwest Fisheries Center	V	X	X	V	X	X	V					V	V	

For these categories the albacore tuna industry will have a strong role in developing overall direction and policies. NMFS will have a supportive role.

X(1) – Inspection program
X(2) – Introduce on-board preservation methods
X(3) – Improve quality to consumer

Figure 3

maintained a joint planning task force which will prepare operational plans and options for the Center and Regional Directors' reviews and approval prior to the next Fiscal Year. The SWFC, SWR and other NMFS Offices will prepare Current Year Operational Plans (CYOPs) for each Fiscal Year prior to the beginning of the Fiscal Year on October 1. The albacore-fishery related plans for the next and succeeding Fiscal Years will be based on the strategy discussed in this report. From time to time the albacore fishery situation will be reviewed by NMFS, together with its constituents, and changes or updates to the program strategy may be made as a result.

A Directory of NMFS Offices with lead responsibilities for a portion of the NMFS albacore program is given in Appendix C.

Acknowledgements

The authors have had the privilege of working with some very talented and nice people over the course of a year in several meetings and workshops. It was these others who actually produced the results of which we only report here. The members of the Task Force are to be commended for a job well done; they often had to work extra hours to perform both their normal duties and the planning work. The citizens who donated their time to participate so ably in the long-range planning workshop are owed a debt of gratitude by NMFS and their fellow citizens as well. The NMFS managers and Directors who carried out their responsibilities in an exemplary manner deserve our thanks. Last but not least we thank Ms. Mary DeWitt and Ms. Lorraine Prescott for their excellent typing services, not only for this manucscript but for all of the others preceding it as well, and Ms. Frances Tonsich for her editorial assistance.

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APPENDIX A

WORKSHOP ON STRATEGIC PLANNING FOR NMFS NORTH PACIFIC ALBACORE RESEARCH AND DEVELOPMENT PROGRAM

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APPENDIX B

WORKSHOP ON LONG-RANGE PLANNING FOR THE NORTH PACIFIC ALBACORE FISHERY

June 1-2, 1983

Participants

Mr. Edward Deringer	Commercial Fisherman Lomita, California
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APPENDIX C

DIRECTORY OF NMFS OFFICES WITH LEAD RESPONSIBILITIES FOR PORTIONS OF THE NMFS NORTH PACIFIC ALBACORE PROGRAM

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APPENDIX D

The NMFS Directors Meeting on Strategic Planning for the NMFS Program for North Pacific Albacore Research and Management

The meeting attended by NMFS Directors was held for the purpose of establishing program objectives and selecting the options to form the NMFS strategic plan for albacore research and management. The objectives and strategy was established in light of the constituents' desirable goals and objectives, and was intended to support them to the extent that the NMFS mission could accommodate these objectives. The participants of the meeting were asked to:

- o consider the issues and opportunities involved with the North Pacific albacore resources and fisheries;

- o discuss the pros and cons of the possible and feasible options for resolving the issues or taking advantage of the opportunities;

- o reach a consensus on the preferred options to be included in the long-range NMFS program for albacore research and management; and

o determine the roles and responsibilities for carrying out the NMFS albacore program.

The participants were provided with background materials before the meeting, including a draft of the options field and the report of the constituents' workshop. See Section II for part of the background material related to the Options Field.

The meeting was facilitated by a professional, non-government facilitator. All of the options were displayed on a magnetic board visible at all times to the participants. The participants first discussed the meaning of each of the options within each of the design categories, one at a time. SWFC and SWR technical staff on the albacore planning task force were available to answer questions and to explain the significance of options, issues or opportunities based on material from the constituents workshop or based on facts. When the participants were satisfied that they understood the meanings of the options, they reorganized the options field and reduced it to 14 sectors by combining the four research sectors into a single sector - Development and Integration of Information for Research and Management. They then arranged the sequence of the 14 sectors into a preferred order for discussion. This was done with the assistance of a computer with Interpretive Structural Modeling (ISM) software. The resulting sequence showed close relationships among some sets of the sectors. These were in two sets; the first set of closely related sectors included International Cooperation, Fisheries Management and the research sector. The second set included the

sectors for Fishery Development, Product Quality and Marketing. A few of the options within the restructured options field were edited to better reflect the group's thinking and a few more options were added by the workshop participants to produce the final options field (Figure 2 of the report). When the final option field was established, the group discussed the pros and cons and desirability of including each option in the NMFS strategy, and through consensus selected those to be included in the NMFS albacore program. A combination of discussion and voting was used to arrive at a consensus for selecting or rejecting individual options for the strategy.

Because there were logical relationships among some of the categories, it was possible that selections of certain options in one category could eliminate choices in the remaining categories. Therefore, during the meeting, logically inconsistent options in the remaining categories were removed from consideration after the selections were made for a category. However, only a few options were thus affected. From the Directors' point of view, the final choices in each of the design categories shown in Figure 2 constituted the best alternative design of the NMFS albacore program strategy.