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FISHERIES OF MAURITANIA, 1971

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FISHERIES OF MAURITANIA, 1971

Norman L. Pease

INTRODUCTION

FAO estimates that the potential yield of marine fish between the Strait of Gibraltar and Dakar, Senegal, is more than 3 million metric tons. Of these, 2.5 million tons are pelagic species and at least 600,000 tons are bottom species. These figures do not include the octopus-squid group, tunas, or shellfish. Mauritania's share of the potential yield is not precisely known, but it has a broad shelf area subject to annual upwelling which enriches the waters and provides excellent environmental conditions for bountiful marine resources. Its continental shelf is 30 to 90 miles wide and 120 miles long between Caps Blanc and Timiris and from 20 to 40 miles wide from Cap Timiris to its southern boundary, the Senegal River.

Until Mauritania started to develop its own commercial fishery within the last decade, it had only a fresh-water fishery along the Senegal and Gorgol Rivers and a small marine artisanal fishery. Construction of a fishing port at Nouadhibou, started in 1965, was completed in 1968. All of this activity is taking place in a seaport at the northern extremity of Mauritania's 350-mile coastline. New plant capacity for all types of fish processing (freezing, drying, canning, and fishmeal reduction) was based on more than 200,000 tons of production per year.



Figure 1.--Hot, dry desert winds provide excellent conditions for drying 100-lb. (round weight) salted corvina.

Unfortunately, facilities such as fish-unloading docks, replenishing docks, and repair facilities were either not provided or were only adequate for less than half the number of vessels required to achieve the production goal. As a result of these inadequacies and some reported poor management, the 14 fishing vessels that had been purchased in Europe could not operate efficiently and the government-supported fishing company filed bankruptcy. The vessels were sold to help meet the debt, and the government assumed a \$7 million debt balance.

A policy was then developed to license foreign flag vessels to fish in Mauritania's waters and to use the monies collected to defray the bankruptcy debt. This policy has been successful, and the debt should be retired by 1976. Government officials now indicate that after the debt has been paid the licensing of foreign vessels will be restricted to the fleets of countries that install new shore processing facilities or use the present ones in Nouadhibou. Construction of new processing plants, however, is prohibited until the planned port expansion program is completed as explained below.

PORT FACILITIES

Public and private interests have invested about \$25 million in port and processing facilities. The harbor was dredged, and a 912-foot cement fishing dock was constructed in 19 feet of water. A commercial pier, sometimes used by fishing vessels, is 688 feet long with a 208-foot pier head and three finger piers, each 67 feet long.

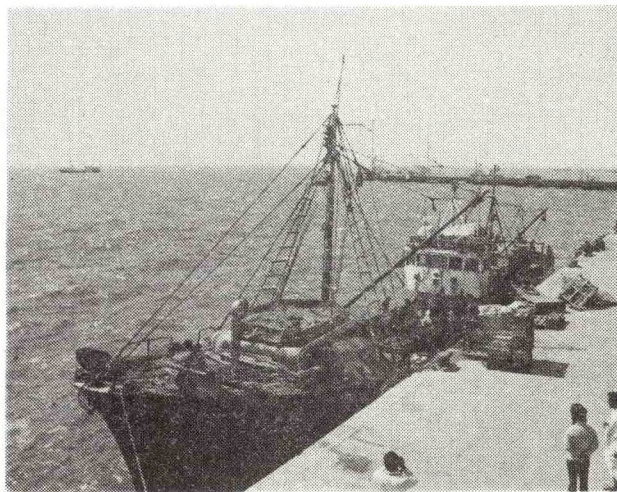


Figure 2.--Japanese trawler unloading a mixed catch of fish and octopus in Nouadhibou. Pier for general cargo vessels extends to the left in background.

Unloading is generally done with the vessel's own gear, although there is one station that uses an elevated pipe system to pump sardines directly from a vessel to either of two fish meal plants.

Nine processing plants have been built that can either freeze, dry, or can fish or manufacture fish meal; one plant can do all four. Their combined processing capacity (round weight of fish) is as follows:

	<u>Tons/year</u>
Frozen	50,000
Dried and salted	50,000
Fish meal	200,000
<u>Canned (tuna)</u>	<u>5,000</u>
Total	205,000

Four of the companies also freeze a total of more than 200 tons of ice per day and have storage capacity for 350 tons of ice.

Employment is provided for over 2,000 Mauritanians ashore and about 600 aboard various vessels.

PORT LIABILITIES

Additional facilities are required to handle the increased number of vessels needed to deliver adequate amounts of fish to the processing plants. At the present time vessels have to replenish their food, water, fuel, and fishing supplies at the fishing dock. Ice is available at only one location, and fuel is delivered by tank truck. The breakwater does not provide adequate protection, and vessels need more time to unload in the rough waters. Some vessels use their offshore anchor to reduce pounding on the dock.

Repair facilities are limited to one marine railway capable of hauling only vessels with no more than an 11-foot draft. The usual assortment of marine hardware and vessel spare parts outlets is not available in Nouadhibou, and the government does not permit duty-free importation of these items without special dispensation.

Cost of certain supplies and services are higher than in other West African ports:

Fuel	\$00.17 per gallon
Ice	\$14.00 per metric ton (2,205 lbs.)
Fresh water	\$00.70 per cubic meter
Electricity	\$00.06 per KW
Frozen storage	\$00.07 per pound/month

All these limitations detract from the use of the port. However, they can all be corrected and the government has drawn up plans for expansion of docks and protective seawalls. New depots that supply water,

fuel, and ice are to be constructed. A 1,000-ton drydock with adjacent outfitting docks will be built. Other inducements are being planned to make Nouadhibou a more attractive port. To finance this construction the government has applied for a loan from a world lending agency.

FISHING FLEET

Over 300 vessels, mostly foreign flag, are currently authorized to fish in Mauritania's waters. These include Dutch, French, Greek, Italian, Japanese, Panamanian, and Spanish. Each flag group operates under separate agreements, usually negotiated annually with the Mauritanian Government. The fee is based on the gross tonnage of the vessels and whether the fish caught are unloaded in Nouadhibou. An approximate maximum tonnage of fish to be taken is stipulated in some of the agreements. Because of limited port facilities, many of these vessels land their catch in their own countries.

In addition, FAO estimated that another 300 vessels of international distant water fleets fish the high seas off Mauritania. Production figures are not available for the entire fleet, but FAO estimates that the combined production of the 600 vessels, authorized and distant water fleets, is more than 500,000 tons per year.

FISHERY RESOURCES

Inshore Shrimp

Mauritania has had two officially sanctioned shrimp exploratory operations. The first, in 1970, was for 12 months by five Greek vessels, and the second, by four Spanish trawlers in 1972. The species they found is Penaeus duorarum or pink shrimp, common in other West African waters. A second species, Parapenaeopsis atlantica, is also present, but commercial quantities have not been taken.

The report of the Greek operation indicates they found shrimp in the Cap Timiris area between 18° 50'N. and 19° 45'N., in 20 to 30 fathoms from August to February. Peak catches were made between September and November. All vessels were single-rigged with fish trawls that had a foot rope length of 150 to 200 feet. The best monthly catch by a single vessel was 13,000 lbs. (tails) in October. The poorest monthly catch by a single vessel was 1,300 lbs. in both January and February. The report, in summary, concludes that shrimp stocks are inadequate to support a year-round fishery but does recommend additional study.

The Cap Timiris area is a somewhat unusual shrimp ground because it does not have any river system that creates the extensive brackish water estuaries necessary for the postlarval stages in the life cycle of these

shrimp. Also, along with the shrimp are two genera of fish usually associated with brackish water: mullet, Mugil spp., and bonga, Ethmalosa fimbriata. Local marine scientists suggest that underground fresh water is surfacing, creating the necessary favorable conditions.

The four Spanish shrimp vessels, which trawled along the southern coastal section of Mauritania, north of the Senegal River, landed 113 tons of heads-on pink shrimp caught in February and March 1972. This averages 8.5 tons (tails) per month per vessel. If this good commercial production rate should continue, it will undoubtedly stimulate a new fishery.

Offshore Shrimp

Fishing, primarily by Spanish flag vessels, has indicated two separate deepwater stocks of shrimp. The first, composed of a single species, Parapenaeus longirostris, is found between 150 and 175 fathoms. The second stock is composed of three species, Aristeus varidens, Plesiopenaeus edwardsianus, and Plesionika martia, which are found between 350 and 400 fathoms. Unfortunately, production statistics are not available for these species, but the Spanish fleet has been fishing these stocks for at least the past 5 years.

Lobsters

Mauritania has commercial quantities of two species of lobsters. The first, found in shallow water in 2 to 5 fathoms, is called the green lobster, Panulirus regius. The second is the red lobster, Palinurus mauritanicus, which is found in 150 to 200 fathoms. The green lobsters are captured primarily with tangle nets and traps; the red lobsters are taken with trawls. A French lobster fleet catches red lobsters and delivers them directly to France alive

A small Mauritanian lobster fleet harvests the green lobster stocks found between Cap Blanc and Cap Timiris and, by special agreement with the Spanish Government, also off the southern coast of Spanish Sahara to Cabo Barbas. In 1968, lobster landings dropped drastically and prompted a curtailed fishing season and a limiting of lobster vessels. Initially the season was closed from September to March; then after a year of increased production the closed period was reduced to only December to March. The following statistics indicate the fluctuations in production.

Exports of P. regius (green lobster)

<u>Year</u>	<u>Live weight in pounds</u>
1962	14,599
1963	11,554
1964	55,556
1965	109,342
1966	184,470
1967	229,264
1968	83,087
1969	161,308
1970	94,450
1971	282,735

The fishery is being closely monitored, and its future will depend on the balance maintained between fishing effort and stock recruitment.

Finfish

The most abundant bottomfish species landed in Nouadhibou include the sea bream, Dentex spp. and Pagrus spp.; corvina, Argyrosoma regium and Argyrosoma hololepidotum; several species of flatfish in the families Bothidae and Solidae; and two dogfish, Mustelus mustelus and Leptocharias smithi. The sea bream and flatfish are processed as fresh or frozen; the corvina and dogfish are headed, split, and salted for drying.

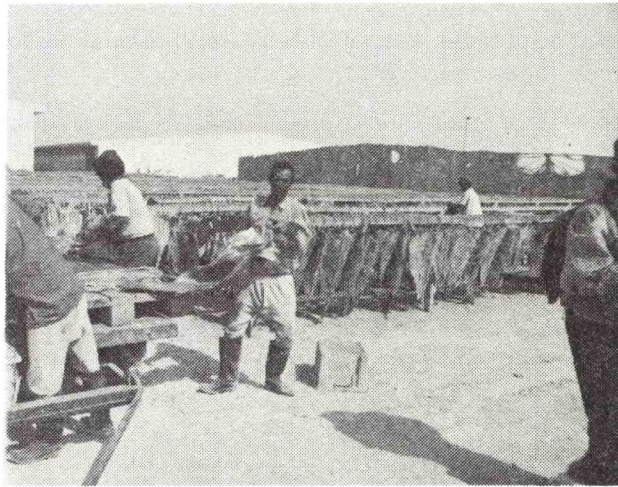


Figure 3.--Fish for drying are headed, split, cleaned, and heavily salted. Drying takes about 2 weeks, after which they are packed in 50-kilogram (110-lb.) containers for export.

Mullet, Mugil spp., taken by the artisanal fishermen is also split, salted, and dried. Principal export market for the dried fish is the Congo.

Herring, Sardinella aurita and Sardinella aba, are landed primarily in September to November for processing into fish meal.

Small quantities of skipjack, Katsuwonus pelamis, are landed for the canning plant.

Octopus, Octopus vulgaris; cuttlefish, Sepia officinalis; and squid, Loligo vulgaris, are landed in large quantities and frozen for export to Europe and Japan.

In 1971 the following production (round weight in tons) was landed and processed as listed below:

Fish meal	40,577
Frozen	10,785
Dried	10,986
Fresh	4,951
Canned	<u>3,011</u>
Total	70,310

ARTISANAL FISHERY

Fresh-water commercial fishing employs about 15,000 fishermen; both regular and part-time. Most of this fishing is concentrated along the Senegal River and nearby lakes. Production averages about 15,000 tons per year. The fishermen use wooden dugout canoes and hooks and lines, fixed nets, and seines set in the river. Large haul seines are also set from the river bank and hauled by 20 to 30 men. The best fishing is when the river is low.

Marine artisanal fishing employs about 350 Mauritians of the Imraguen tribe and 250 Senegalese, who produce about 3,000 tons annually. The Imraguens have a long fishing history and have traditionally used the drying and salting method for preserving their production, which they sell along the coast and even in neighboring Senegal. They also sell a product called "poutargue" made from mullet roe which is dried, salted and compressed into 1-kilogram (2.2-lbs.) packages and encased in wax for export. The annual production of this product has been around 25 tons.

With the modernization of the port of Nouadhibou, some of the artisanal fishermen have moved to that area to take advantage of the sales outlets.

TERRITORIAL SEA CLAIMS

On June 9, 1972, the Mauritanian Council of Ministers approved a draft bill to extend their territorial waters to 30 miles. When finally approved this will supercede a 1967 ruling that extended their territorial sea claims to 12 miles. A base line was established between Cap Blanc and Cap Timiris, and the 12-mile limit extended seaward from that line. This was done at that time to protect a rich fishing bank found within those limits. The 12 miles was measured from the low-water mark from Cap Timiris to the southern border with Senegal.

All trawling is prohibited within the confines of the Baie of Levrier, and all fishing is prohibited within the 3-mile limit except for seiners or hand line fishing vessels less than 12 meters (39.4 feet) long. North of Cap Timiris between the 3-mile limit and the base line, fishing is

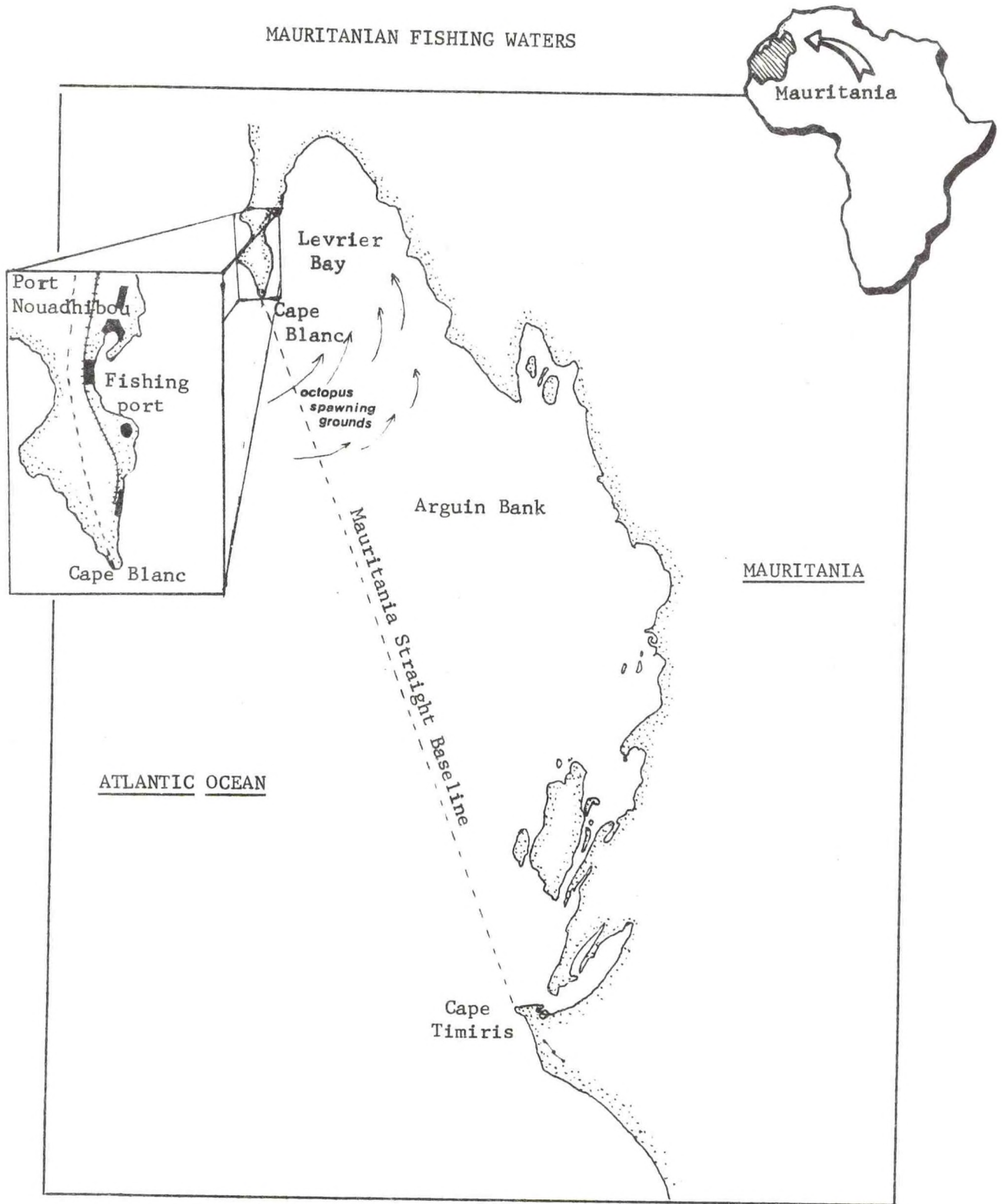
restricted to Mauritanian and foreign flag vessels less than 22 meters long that are operated by persons with contracts to deliver their catch to Noudhibou. Between the base line and the 12-mile limit (soon presumably 30 miles), foreign flag vessels of any size may fish on payment of an annual fee.

Mauritanian Navy vessels began surveillance of territorial waters in 1967. Two of these vessels are 17 meters (55.8 feet) long, and the other two are 32 meters (105 feet). The last two have a speed of 30 knots. Reportedly, the Navy is very diligent about their duties.

RESEARCH

A small fishery research laboratory is located in Nouadhibou and staffed by three scientists and a supporting staff. They have a 17-meter research vessel, a combination side trawler and purse seiner. Their duties include collecting fishery statistics and conducting research on lobsters, mullets, mussels, and shrimp.

MAURITANIAN FISHING WATERS



In April 1966, Mauritania declared an exclusive 12-mile fishing zone by adding 6 contiguous miles to her territorial sea. Then, in February 1967, Mauritania extended her territorial sea to 12 miles. In addition, a straight base line was drawn between capes Blanc and Timiris. The fisheries zone was declared to extend 12 miles seaward from the new base line. This decision, in effect, extended Mauritanian fisheries jurisdiction to more than 40 miles in certain areas. In July 1972, Mauritania again extended its jurisdiction to 30 miles beyond the baseline.