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# **West Africa: The Fisheries Dilemma**

*June 1986*

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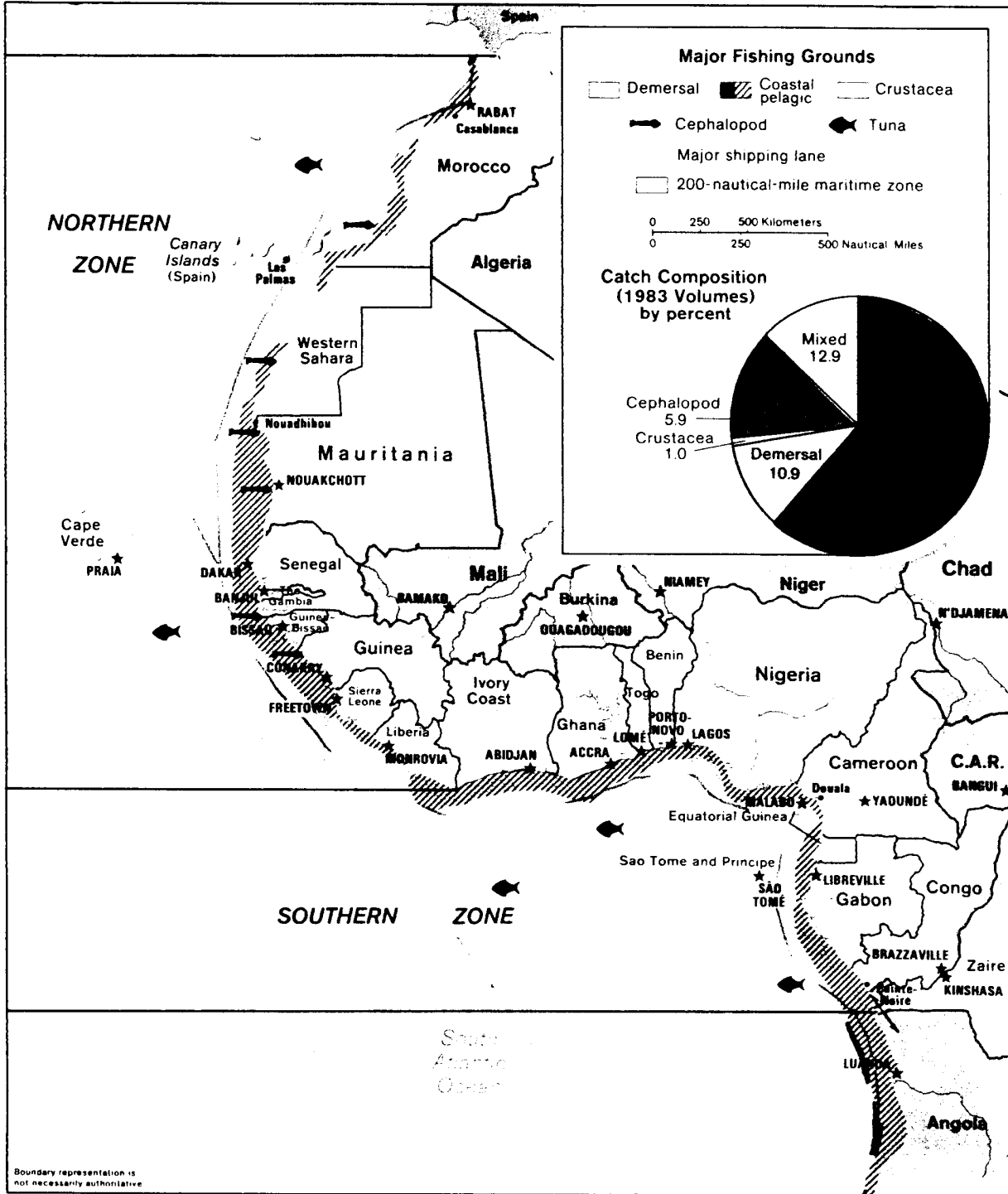
### **Summary**

Heavy, often unrestrained exploitation of fish by Soviet and other non-African vessels poses a growing threat to West Africa's marine fishery resource. Stocks of some of the main commercial species are in danger of depletion. A marked decline in these fisheries would further weaken the economies of several West African states for whom they provide an important source of foreign exchange. Destruction of a valuable supply of protein would also be a grave loss to this food deficient region. Yet many coastal states lack the manpower and equipment necessary to prevent abuses.

Soviets and other non-Africans continue to be the main beneficiaries of the region's rich fisheries, harvesting almost 60 percent of the annual catch. The Soviets take 10 percent of their national catch in West African waters and derive both economic and political benefits from fishing agreements with regional countries.

Increasing awareness of the threat to marine resources, deteriorating economic conditions, and a greater concern for food security among West African states make prospects for remedial actions more favorable now than at any time during the recent past. A number of countries would welcome Western assistance in the management of their fisheries.

West African Fisheries



## Introduction

The waters off West Africa support some of the richest concentrations of marine life in the world. Fisheries not only represent an important source of foreign exchange for a number of financially strapped coastal states, but provide the generally malnourished region with much needed protein. The limited ability of these states to exploit, manage, and police their offshore waters allows heavy, often unrestrained, exploitation by Soviet and other foreign fishing fleets. In fact, foreigners harvest about 60 percent of the reported catch, while the region as a whole remains a net importer of fish--many of which are caught in regional waters.

Fishery experts believe that all of the major and many of the minor species are fully- to over-exploited, and are concerned that valuable breeding stocks are being endangered by illegal fishing techniques. There is also fear that unrestricted exploitation will result in a depletion of resources similar to that which has occurred off the coast of Namibia. The ability of the littoral states in the region to provide the equipment, manpower, or funds necessary to effectively enforce legal restrictions on fishing is limited. Most of the states failed to develop appropriate management policies or to support such policies with adequate technical and administrative personnel.

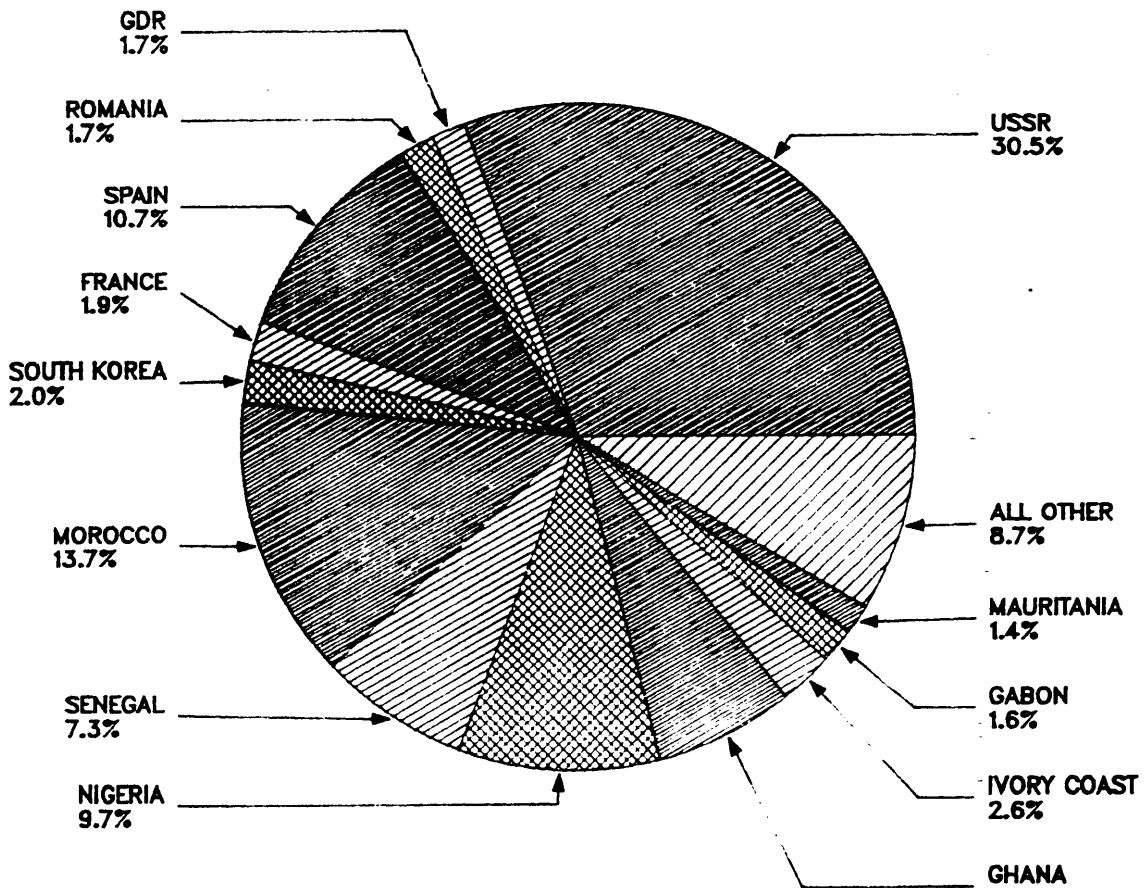
The Soviets can use fishing agreements in West Africa to gain legitimate commercial access to ports, onshore facilities, and local institutions. A number of coastal states continue to maintain agreements with the Soviets despite suspicions that they are being cheated either through underreporting catches or through agreements which deprive them of scarce foreign exchange earnings. Several are dissatisfied with the nature and level of assistance provided under these agreements.

Besides the USSR, non-African countries with substantial fishing capabilities in the region include Spain, South Korea, East Germany, Romania, and France. Of the Africans, only Morocco, Nigeria, Ghana, Ivory Coast, and Senegal have sizable industrial fleets. Throughout most of the region, traditional fishermen using small craft supply fish for domestic consumption.

Western interest in development and management of the marine fisheries is primarily humanitarian. Fish represent a readily available and ecologically sound source of additional protein for an area beset by recurrent drought and famine, and by chronic economic difficulties. An improvement in the ability of these countries to harvest and manage their fisheries would help conserve a valuable protein source, and provide additional foreign exchange for the region's bankrupt economies.

# CATCH BY COUNTRY

1983



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The Fishery Resource

The distribution of fish within West African waters is uneven, but two distinct zones are apparent: a Northern zone extending from Morocco through Liberia, and a Southern zone extending from the Ivory Coast through Zaire. (See Map) The richest concentrations of fish occur off the northwest coast; waters to the south are less productive. Foreign fishing vessels operate primarily in the north, but find markets for their harvest among the more heavily populated countries of the south.

Five major types of fish are harvested:

Coastal pelagic species (sardines, sardinella, mackerel, etc.) account for about 60 percent of the region's catch by volume. Heavy exploitation of these species by Soviet and East European fleets as well as by local traditional fishermen in the Northern zone is placing stress on existing stocks. Management is difficult because of the migratory habits of the species.

Cephalopods (cuttlefish, squid, and octopus) make up the region's most valuable catches. The main cephalopod grounds lie in the Northern zone off Morocco, Mauritania, and Senegal. Spanish, Moroccan, South Korean, and Mauritanian vessels harvest most of the catch which is then marketed mainly in Europe and Japan. Signs of overexploitation have been reported.

Crustacea (mainly shrimp) are found mostly near river mouths and are fully exploited in both zones. Spanish and other non-African vessels harvest about half the total catch. Senegal exports significant amounts. The extensive involvement of traditional as well as industrial fishermen in shrimping makes proper management of the stocks difficult.

Demersal fish (bottom-dwellers including seabream, hake, croakers, sole) are heavily exploited in the Northern zone by Spanish, Portuguese, Soviet, and African industrial vessels. In the Southern zone African fishermen exploit stocks in the inshore areas, but fishery experts see room for expansion offshore. Good management of this fishery is feasible because of the limited involvement of traditional fishermen.

Ocean pelagic species (tuna) form an important resource for the African industrial fleets with both Ghana and the Ivory Coast harvesting significant amounts. Spanish and French vessels, using Abidjan, Ivory Coast as their main regional base, are also active. Prospects for good fishing in the Indian Ocean could draw more French, Spanish and other vessels out of West African waters.

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### Non-African Involvement

Despite a gradual decline in their numbers during the past decade non-African vessels continue to report<sup>1</sup> harvests of over half the marine catch in the region, especially from the rich Northern zone. Their home countries--the USSR and Spain in particular--take advantage of the still poorly developed local African fishing industry. Non-African vessels operate under a variety of arrangements e.g., country-to-country, multilateral, and private investment agreements. African states receive licensing fees, grants in aid, research and training, capital investments, or concessions in joint ventures in return for fishing rights. Joint ventures are attractive to many of the coastal states, because they supposedly promote the transfer of technology and provide for eventual local control of fishing. But in practice they often result in the stagnation of the local industry; they can deprive locals of needed foreign exchange and fish protein. For example, the Soviets reportedly charge Estrela do Mar, their joint venture with Guinea Bissau, more in foreign exchange than the Bissauans earn from it.

Most foreign assistance to West Africa's fishery sector is in the form of bilateral aid with Japan, Sweden, France, Norway, and Canada the major donors. The EEC, OPEC and other multilateral organizations are also major sources of aid. The impact of the assistance on increasing the amount of fish available for sale locally, however, has been limited. A recent study noted that assistance has been heavily weighted toward infrastructure and capital equipment for the industrial sector rather than toward the development of the traditional sector which provides most of the fish for the local market.

### Soviets and East Europeans

Fishing agreements provide the Soviets access to local ports and allow them to position their vessels near international shipping lanes. The agreements also provide the Soviets, who rely heavily on the fishing industry for protein, with about 10 percent of their national catch. Romania and East Germany are even more dependent on these waters for fish, with 60 percent and 40 percent respectively of their national catch coming from these waters.

In 1983 about a third of the regional catch by volume was landed by Soviet vessels. The Soviets are also a major supplier of fish products to West African coastal countries. The Soviets fish principally off the northwestern coast from Western Sahara to Liberia. Although they are suspected of poaching and of grossly underreporting catches, their vessels are only occasionally arrested for a fishing violation and operate largely unpoliced throughout the region.

The Soviets maintain fishing agreements with several countries in the rich Northern zone. Establishment of fishery treaties began in the 1970s following the creation of 200-mile Exclusive Economic Zones. The treaties

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<sup>1</sup>Catch reports submitted by the Soviets and Eastern Bloc countries are commonly believed to be less than half of the catch actually taken; a recent study estimates that actual Soviet catch may be three times that reported. Other foreign fleets are also thought to under report.



give Soviet vessels access to the region's fishing grounds and often include provisions for training, the survey of resources, the development of local infrastructure, and the sale of fish to local markets. In return the Soviets often receive hard currency, a large percent of the catch, and use of local ports.

Some Soviet fishing agreements, such as those with Equatorial Guinea and Senegal,<sup>2</sup> have been terminated, but others, such as those with Guinea, Guinea-Bissau, Sierra Leone, and Mauritania have been renegotiated despite unhappiness with Soviet performance. Dissatisfaction has resulted from the failure of the Soviets to provide training, processing plants and other promised shore facilities. For example, in Mauritania the Soviets refused to build the ship repair facility agreed upon in preliminary accords, and relations between the two country's were further strained in 1984 when several Soviet vessels were detained for illegal fishing activities; yet Soviet involvement in Mauritanian waters has continued because Mauritania desperately needs fishing revenues and jobs for its populace.

Soviet joint ventures with private Spanish (Sovhispan) and French (Fransov) interests are active in harvesting, marketing, and processing fish in the region. For both the Soviet and the West African traditional fishermen, coastal pelagic fish are the primary catch. The Soviets also reportedly manufacture fish meal with much of their catch.

The Eastern European catch off West Africa has decreased over the past few years, but Romanians and East Germans continue to harvest 60 percent and 40 percent respectively of their total marine catch in the region. Their activities are concentrated in Mauritanian waters. According to United Nations Food and Agriculture Organization (FAO) reports, the Poles are no longer fishing in the area.

### Spain and Western Europe

The proximity of West Africa's productive waters to Europe draws many fishermen into the region. For Spain, waters off Morocco and Western Sahara are increasingly attractive. The importance that Spain attaches to these areas is reflected in the favorable terms Morocco extracted in its 1983 agreement with Spain. The value of the catch by Spanish vessels in the region exceeds that of all other nations. From bases in the Canary Islands and southern Spain, Spanish vessels operate primarily off the coast of Morocco, Mauritania, and Senegal. They also fish in the Gulf of Guinea and in central African waters. Spanish vessels have been cited for fishing violations and like the Soviets are suspected of overfishing and underreporting their catches. Operating within the framework of government-to-government and company agreements, they harvest tuna, crustacea, cephalopods, demersals, and small pelagics--marketing the latter throughout West Africa.

French, Portuguese, and Italian vessels also operate in the region.

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<sup>2</sup>The Soviets no longer have a fishing agreement with Senegal; but they use Dakar Marina for servicing and repair of vessels and Dakar International Airport for transferring crews.

French vessels—generally owned by private companies working within the framework of EEC agreements—operate primarily out of Abidjan and Dakar harvesting relatively high value tuna, demersals and lobsters. The Portuguese have joint venture agreements with Mauritania and Guinea Bissau. Italian catches in the region have fluctuated, but have generally been less than most other non-African actors. Italian vessels are normally based in Senegal and Togo.

### East Asian

The South Koreans and the Japanese have been the primary East Asians involved in regional fisheries, but the Chinese, using Las Palmas as a base, are also beginning to fish in the region. South Korean fishing vessels operate out of bases in the Canaries and harvest cephalopods, demersals, and tuna. The ROK has provided training assistance to countries in the region. Japan has been a major source of bilateral aid for West African marine fisheries; recent assistance includes a total of almost \$3,000,000 in grants in aid to Togo and Ghana, and the gift of a research vessel and loan of a training team to Nigeria. Japanese vessels have been relatively inactive for the past few years, but in late 1985 Japan signed a one year agreement with Morocco allowing them to harvest tuna in Moroccan waters. The PRC reportedly signed a fishing agreement with Guinea Bissau in 1984. Chinese vessels are also reportedly fishing in Senegalese and Sierra Leonean waters.

### Economic and Nutritional Significance for West Africa

Despite the underdevelopment of their fishing industries, marine fish and fish products play a significant role in the trade balances of several West African states. In 1983, the latest year for which there are complete statistics, \$1.4 billion worth of fish were caught in the waters off West Africa. Fish are particularly important to the economies of the northern coastal states such as Senegal, Cape Verde, and Guinea-Bissau where they are the principal source of foreign exchange; in Mauritania fish are projected to exceed iron ore as the primary foreign exchange earner in 1986, and in Morocco they comprise a major item of trade and source of employment—generating \$190 million in revenues in 1983. Elsewhere, in Guinea and Sierra Leone, the potential for generation of foreign exchange earnings from fish exports is also believed to be significant. The principal exporters of marine fish products are Morocco, Spain's Canary Islands, Senegal, Ivory Coast, and Ghana.

Foreign exchange earnings based on fisheries are obtained through licensing fees and other remunerations from foreign fleets as well as from export of fish and fish products. However the full potential foreign exchange benefits from fishing arrangements are seldom realized. Coastal states frequently have only limited capability to properly establish and enforce fishing agreements. Some may also lack the political will to do so. Furthermore, fee collection is frequently based on reporting by those who are fishing the waters; fishing agreements and protocols also often contain conditions which favor the foreign vessels.

According to a Fishery Committee for the East Central Atlantic (CECAF) report, intra-regional trade in fish accounts for only 15 percent of the region's import requirements. France, other West European countries and the USSR are major suppliers. The drain on limited foreign exchange is sizable,



*1. Part of Senegal's aging industrial fishing fleet*



*2. Modern Soviet factory trawler, Dakar*



*3. Spanish tuna boats in fishing port, Dakar*



*4. Building traditional fishing boats, Banjul*

especially for large importers like Nigeria or economically strapped countries. Insufficient local supplies occur primarily in the south with its less prolific resource base, but shortages also occur in the north where local fleets cannot meet domestic needs and foreign fleets licensed to fish in territorial waters land insufficient quantities of low cost fish for sale to locals. The major consuming countries are Nigeria, Ghana, Senegal, the Ivory Coast, and Togo. The market for fish is also strong in the Congo, Cameroon, and Gabon.

Fish have been a major source of protein in the region, and rapid increases in population and recurrent droughts in traditional grazing areas have added to their importance. FAO estimates about one-half the animal protein consumed in most coastal states is in the form of fish and fish products. The concentration of the region's burgeoning population along the coast gives added significance to this resource. According to a recent study by CECAF, the average regional production of fish per capita in 1980 was only 40 percent of average regional consumption. The region accounts for about 20 percent of the world trade in canned mackerel and sardine (pelagics).

African coastal states could decrease imports of fish, conserve foreign exchange, and create new employment opportunities if policies limiting foreign fishing and encouraging local traditional or industrial fishermen were instituted. According to fishery experts an increase in the exploitation of coastal pelagics by locals could result in a significant increase in protein food supplies for the region, if processing facilities and trade and marketing policies are also made available.

The fishing industry in West Africa is estimated to employ over 600,000 traditional and 15,000 industrial fisherman. Additional personnel are employed in marketing, processing, and distribution. An expansion of the African industrial fleets would not open up a large number of jobs in the fishing sector, however, a reduction in traditional fishing operations would affect not only fishermen but also those who depend on processing, distribution, and marketing for their livelihood. Morocco, with the most developed fishery sector in the region has 70,000 employed in the industry.

#### Status of Management and Development Efforts

Poor management and heavy exploitation threaten the future of the region's marine fisheries. Coastal countries are unable to effectively patrol their offshore waters, enforce existing laws, or maintain the technical and administrative structures needed to support appropriate policies. Not only are stocks of some of the principal commercial species over-exploited, but post-harvest losses are generally high, and the handling, processing, and marketing of traditional fishery products remain major constraints to expansion of the industry.

The growth of national management capabilities has been hampered by high costs, manpower deficiencies, and inadequate development of institutional structures and enforcement capabilities. Moreover, reports of corruption in fishery ministries are not uncommon.

Naval and coastal guard units are generally small and poorly funded; they often lack equipment, trained personnel, spare parts, and air surveillance



5. *The damaged Siaka Stevens, a Sierra Leoneon patrol vessel, Freetown*

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| Country               | Length<br>Coastline<br>KM <sup>2</sup> | Extent<br>Continental<br>Shelf<br>KM <sup>2</sup> | Enforcement<br>Unit |
|-----------------------|--|---|---------------------|
| Morocco               | 2,300                                  | 75,000  | Navy                |
| Mauritania            | 754                                    | 32,500  | Navy                |
| Senegal               | 500                                    | 30,000  | Navy                |
| Gambia                | 80                                     | 5,200   | Harbor Patrol       |
| Cape Verde            | 1,000                                  | 10,000<br>3,500                                   | Navy                |
| Guinea-<br>Bissau     | 350                                    | 52,500  | Navy                |
| Guinea                | 320                                    | 39,500  | Navy                |
| Sierra<br>Leone       | 300                                    | 29,900  | Navy                |
| Liberia               | 560                                    | 17,400  | Coast Guard         |
| Ivory Coast           | 600                                    | 11,600  | Navy                |
| Ghana                 | 550                                    | 21,700  | Navy                |
| Togo                  | 70                                     | 1,700   | Navy                |
| Benin                 | 100                                    | 2,600   | Navy                |
| Nigeria               | 860                                    | 32,300  | Navy                |
| Cameroon              | 450                                    | 25,000  | Navy                |
| Eq. Guinea            | 200                                    | 50,763  | Navy                |
| Gabon                 | 800                                    | 39,000  | Navy                |
| Congo                 | 180                                    | 16,000  | Navy                |
| Zaire                 | 40                                     | 1,029   | Navy                |
| Sao Tome/<br>Principe | 135                                    | 43,903  | Navy                |

capabilities. Lengthy coastlines and extensive continental shelf areas exacerbate their problems. The small Mauritanian navy for instance, is tasked with policing a 754 kilometer coastline from a base in the northern part of the country; operations of its six patrol boats and two aircraft are limited by fuel and spare part shortages.

Policing efforts are often directed at limiting illegal fishing by foreign vessels rather than at full enforcement. Even these attempts are often frustrated. High seas inspections of vessels are infrequent—especially for those fishing under joint venture or bilateral agreements. Coastal states from Sierra Leone to Morocco with rich fishery resources are especially vulnerable to overfishing abuses by foreign fleets. But even states to the south with less productive waters often suffer abuses.

The absence of a strong legal framework also gives rise to management problems. The establishment of legislation to delimit fishing zones and territorial waters is still incomplete as is that regulating catch rates, weight and size limits, and type of gear. Conflicting claims over jurisdiction of offshore waters such as those off Western Sahara and those in the Guinea-Bissau/Senegal boundary zone fuel disputes and inhibit activities.

Because of the difficulty of mobilizing fishery expertise and financial resources at the national level, most basic fishery management functions have been carried out under the direction of CECAF, a Food and Agriculture Organization/United Nations Development Program (FAO/UNDP) funded organization. CECAF facilitates communication between member states and supplies technical expertise. The stock assessments, catch statistics collecting and training activities carried out under its direction are essential to the formation of good management policies.

The involvement of ECOWAS (Economic Community of West African States) in development of the fishery sector has been minimal, despite the concentration of prime fishing grounds and large markets in its region. The activities of the francophone West African Economic Community (CEAO) in the sector have also been limited.

### Prospects for Development

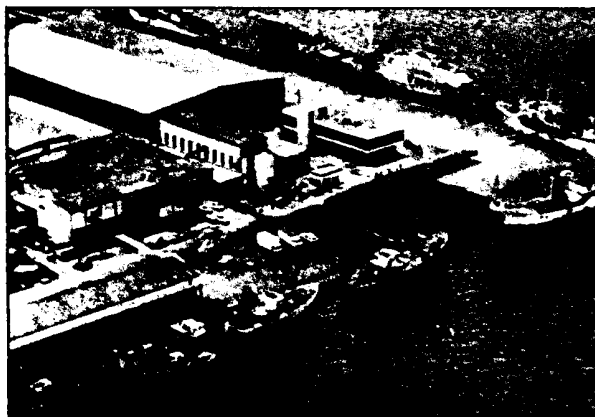
Recent technical studies indicate that future growth of the local fishing industry and continued viability of the marine fishery resource will depend on the ability of African states to reduce pressures on marine stocks—especially on coastal pelagics and cephalopods. Improvement in management and enforcement capabilities would help reduce these pressures. Regional cooperation will also be necessary to ensure the continuation of intra-regional dialogue and the availability of the stock assessments, statistics, and basic training activities critical to implementation of realistic management policies. If the ability to manage and police this resource can be improved, the expansion of the local fishing industry can proceed without threatening stocks. To attract private investment for the expansion, governments must establish favorable policies.

Efforts to develop the marine fisheries of West Africa face enormous obstacles, but prospects for gain are perhaps more favorable now than ever before. There is a growing awareness that past arrangements have done little

to improve the local capabilities and that foreigners, especially the Soviets, continue to reap the main benefits of the rich offshore waters. This awareness has prompted interest in strengthening safeguards for the fishery resource. Serious efforts to develop management capabilities and to encourage private investment would help reduce Soviet and other foreign presence in the sector.

Despite the improved climate, however, it is unlikely that development will be either rapid or sustained. Making changes often requires having the political will to redirect limited human and financial resources. This may be difficult, especially for countries which rely on existing agreements for their supply of fish for urban areas or for foreign exchange earnings, or where important nationals benefit from current arrangements. In other instances, the importance of bilateral agreements with countries whose vessels fish their waters may override concerns over the loss of fishery resources. The record of state run industry in West Africa has not been good. Private development of the industrial fleet would probably be most effective, but to date insufficient private foreign investment has been attracted to the industry. Assistance to this sector is likely to be required in a wide variety of ways and over a long period of time.





6. Fishing port and cold storage plant, Abidjan



7. Fishing port, Dakar



8. Frozen fish packing plant, Dakar



9. Laborers at fish processing plant, Dakar



*10. Repairing nets, Dakar*