

## Growth Predicted for Senegal Fishing Industry

Senegal's fishing sector showed a sharp decline in 1981 compared with catch figures for 1980 according to the latest Annual Report on the Senegalese fishing industry, "Resultats Generaux de la Peche Maritime Senegalaise, Annee 1981," published by the Direction of Oceanography, Ministry of Maritime Fishing. The catch decreased considerably from 359,230 metric tons (t) in 1980 to 229,317 t in 1981, a shortage of 129,913 t, or a decrease of almost 36 percent.

On the other hand, the total revenue for 1981 is valued at CFA28.06 billion<sup>1</sup> compared to CFA36.4 billion in 1980, a decrease in value of approximately 23 percent. Of the above catch, 1981 exports totaled 90,204 t for a total value of CFA37.5 billion compared to 1980 figures of 84,036 t, amounting to a total export value of CFA32.5 billion<sup>1</sup>, an increase in value of about 15 percent. Major exports went to Ivory Coast (44,360 t), followed by France (23,863 t), Congo (5,173 t), Spain (4,984 t), and Japan (3,353 t).

### Artisanal Fishing

The 1981 traditional artisanal fish landing totaled 148,528 metric tons for a total value of CFA11.0 billion compared to 197,605 metric tons in 1980 valued at 13.4 billion. Once again this demonstrates the decline in the traditional artisanal fishing catch compared to the 1979 figures of 187,769 metric tons and to 226,740 metric tons in 1978.

According to the "1981 Annual Report on Senegalese Fishing Industry," the number of fishermen in

the traditional artisanal fishing has increased by 1,018, from 30,707 in 1980 to 31,725 in 1981, all using the traditional fishing pirogues, with or without engines. In 1981, the total fishing pirogues were estimated at 4,931 with engines, and at 4,180 without engines. It is considered that a large portion of the total artisanal catch is consumed locally without undergoing any process or treatment.

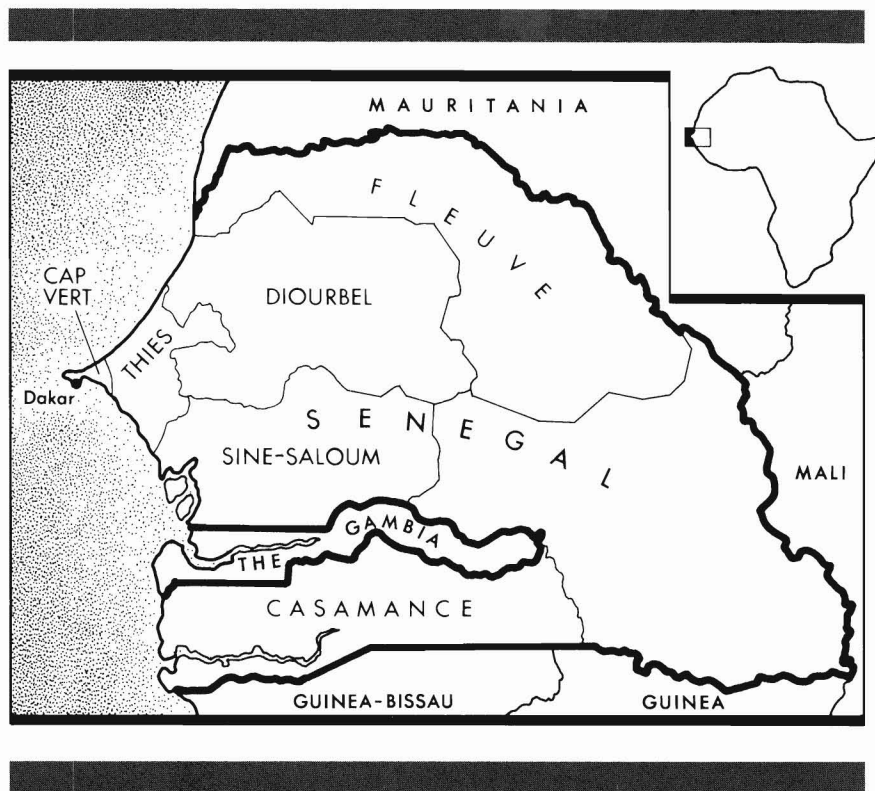
### Industrial Fishing

There has also been a sharp decline in Senegalese industrial fishing in 1981, which decreased from 161,625 t in 1980 to 80,789 t in 1981, a loss of

almost 50 percent. Of the above catch figure of 80,789 t in 1981, 18,425 t were caught by sardine vessels, 42,895 t by trawlers, and 19,469 t by tuna vessels, all valued at CFA17.06 billion.

In 1981, the total tuna fleet consisted of 30 trawlers, 4 Senegalese and 26 French. These included 3 purse seiners, all Senegalese, and 27 canners, of which one was Senegalese. It is believed that a Senegalese fishing and canning firm, the Société Nouvelle Conserveries du Senegal (SNDCS), has ordered two tuna purse seiners from a Mexican naval construction firm, to be delivered in 1983-84.

The tuna catch for 1981 (local catch) totaled 10,648 t for a total value of CFA3.07 billion compared to 8,346 t in 1980 valued at CFA2.03 billion. The tuna catch for 1981 landed in Dakar by foreign vessels is broken down as follows: Spanish vessels landed 7,135 t and French vessels landed 4,047 t making a total



<sup>1</sup>The Senegalese C.F.A. franc was valued at 336.5 = US\$1.00 as of 30 June 1982.

**Table 1.—Senegal's fisheries catch by domestic and foreign fleets, 1980-81.**

Item	Catch (t)		Per- cent change
	1980	1981	
Artisanal fishing			
Fleuve region	10,714	6,774	- 37
Cap-Vert region	27,013	20,126	- 25
Thiès region	115,921	89,125	- 23
Casamance region	11,042	9,922	- 10
Sine-Saloum region	31,979	21,637	- 32
Louga region	138	139	+ 0.01
Improved artisanal fishing, long-line fisheries (Cordiers)	798	805	+ 0.01
Subtotal	197,605	148,528	- 25
Industrial fishing <sup>1</sup>	43,636	52,359	+ 20
Foreign catch from Senegalese waters:			
France	22,391	15,666	- 30
Spain	16,159	9,598	- 41
Poland	75,893	-	- 100
Greece	-	1,562	+ 100
Italy	3,546	1,604	- 55
Subtotal	117,989	28,430	- 76
Grand total	359,230	229,317	- 36

<sup>1</sup>Including sardines, shellfish, tuna, and other species (Senegalese trawlers).

tuna catch of 21,830 t for 1981, compared to 16,924 t in 1980. The main species landed were albacore (11,950 t), Listao or bluefin tuna (9,827 t), and Patudo (53 t).

The latest available Senegalese export figures for 1980, which totaled CFA100.8 billion, show that the fishing industry ranked first as an export earner for Senegal with 20.7 percent of total exports, exceeding peanuts with 17.4 percent, and phosphates with 16.3 percent.

### Foreign Fishing

Senegal has now the following bilateral agreements with the following countries: 1) The European Economic Community (EEC, which includes France, Greece, and Italy) agreement runs from 15 November 1981 through 15 November 1983; 2) with Spain, which was signed 16 February 1982 and expires on 16 February 1984; and 3) with the Ivory Coast.

Senegal usually obtains financial compensations from countries with whom it signs bilateral agreements to fish in Senegalese waters. For instance, it obtained CFA2.5 billion from the EEC, and CFA2.3 billion

from Spain. Besides, these countries participate in training and research programs, and 33 percent of the fishermen aboard their vessels must be Senegalese.

France used 20 trawlers in 1981 to catch 7,942 t of fish including soles, shellfish, tuna, shrimp, and other species. Spain used 30 trawlers to catch 2,277 t, Italy used 8 trawlers to catch 1,604 t, and Greece used 7 trawlers to catch 1,562 t.

The production of the Senegalese fishing industry is expected to increase soon thanks to the establishment of a new Senegalese-Danish fishing company which is supposed to double the fishing industry's production. This project will form and manage the complete production chain from catch to export, including all elements of processing from transport, treatment, and freezing to packing. The total annual catch and production of this company is estimated to be at about 100,000 t of fish. The shareholders will include private Senegalese businessmen (51 percent), and private partners from Denmark and Faroe Islands (49 percent). The company will be using the most modern vessels with electronic equipment and sensor devices, which will allow the detection of fish-beds and will be able to fish in

waters more than 600 m deep.

According to the NMFS Foreign Fisheries Analysis Division, the data in Table 1 indicate a substantial decrease in the 1981 catch from the previous year. There are several reasons for this.

In the area of traditional fishing, the fish meal factory at Djiffer, Sopesine, closed in June 1981. This factory, which had a production capacity of 150 t/day, was a major landing point for much of the catch landed in the Sine-Saloum Region. In addition, weather conditions on the coast during the second part of 1981, the prime fishing months, were less favorable than the previous year, limiting the fishing time for artisanal fishermen.

In the area of industrial fishing, the major factor in the decrease of the foreign catch was the termination of the Polish fishing agreement in November 1980. The decrease in the French catch can be explained by the fact that the number of French boats operating in Senegalese waters decreased by 45 percent. The Spanish catch was reduced due to uncertainty over the signing of a new accord after the expiration of the previous one in December 1980. (Source: IFR-82/101).

## South Africa's Tuna Fisheries

The Republic of South Africa is the most important fishing nation in Africa. Its 1980 fisheries catch totaled 0.6 million metric tons (t), the largest in Africa. The country's fishing industry has experienced severe financial problems during the past decade as rising costs created difficulties for many companies and fishermen. Faced with declining catches and depleted stocks of many traditional species, such as sardines and rock lobster, South African fishermen have been seeking new fisheries. Among them were tuna fisheries.

In 1979, many South African fishermen believed that tuna, especially yellowfin tuna, offered attractive prospects. South African fishermen had previously caught only small

quantities of tuna (Table 1). Attracted by rising prices and a higher than usual catch in 1978, many South Africans entered the tuna fishery in 1979 off Cape Agulhas—a fishery, which had been neglected in previous years. The 1979 tuna catch rose dramatically as a result of this expansion. South African tuna fishermen caught a record 8,300 t in 1979, mostly yellowfin tuna. The 1979 tuna catch also included about 340 t of albacore and negligible quantities of bigeye, skipjack, and other tunas.

Major investments were made in the tuna fishery in 1979. Some observers advised caution, but many fishing companies began tuna fishing despite these warnings. More than 50 vessel owners rigged their vessels for

Table 1.—The South African tuna catch, 1975-81.

Species	Catch (t)						
	1975	1976	1977	1978	1979	1980	1981
Skipjack tuna	1		40	90	12	61	111
Albacore	154	35	74	126	344	1,469	1,857
Yellowfin tuna	18	6	167	281	7,907	540	186
Bigeye tuna					20	422	381
Other species	5		4	16	3	45	7
Total	178	41	285	513	8,286	2,537	2,542

Table 2.—The South African tuna fleet, 1975-80.

Type of vessel	Number of vessels <sup>1</sup>					
	1975	1976	1977	1978	1979	1980
Live-bait vessels (refrigerated)	3		1		35	37
Live-bait vessels (freezer)					15	18
Longliners					4	5
Purse seiners	2	4	4	4	5	5
Total	5	4	5	4	59	65

<sup>1</sup>These figures do not include recreational tuna fishing vessels.

tuna fishing, while others purchased new vessels in France. One South African company invested over \$2.5 million in the tuna fishery.

In 1979, the tuna fleet totaled 59 vessels, a remarkable increase over the 4 vessels that had been reported in 1978 (Table 2). Most of these vessels were rigged for live-bait fishing, but longliners and purse seiners were also deployed. Some of the smaller vessels could only refrigerate their catch and had to freeze it onshore, but the larger and newer vessels froze the catch on-board. Several South African processing companies constructed additional ice plants, freezers, and cold stores to accommodate the increased catch.

South African canners, however, made no new investments to process the increased tuna catch. Most of the South African tuna catch was exported frozen, especially to canneries in Italy.

Tuna fishermen continued to expand operations in 1980, when 65 vessels were deployed in the fishery. The fishermen also extended their operations to the Southeast Atlantic off Saint Helena Island and Vema Seamount, but they were unable to locate the large schools of yellowfin tuna that had been reported there in 1979. Aerial surveys off Cape Agulhas also failed to find the yellowfin. As a result, the yellowfin catch plum-

meted from 7,900 t in 1979 to only 190 t in 1981. The increasing albacore catch (from 130 t in 1978 to 1,890 t in 1981) did not compensate for the yellowfin catch decline..

South Africa's tuna industry "virtually collapsed" for lack of fish in 1980, according to one South African source. Despite continued high prices for tuna, profits declined because of the low catches and the large number of new tuna fishermen. Several of the newly-ordered tuna vessels were left unused after their arrival from France. Many vessels have now been reconverted and are being used to harvest other species of fish. (Source: IFR-82/120).

## West European Fish Take Stable, 1978-81

The total Western European fisheries catch has remained stable at about 11.5 million metric tons (t) since 1978 (Table 1), even though there have been sharp fluctuations in the catch of individual species. Denmark and Norway continue to dominate European fisheries, accounting for over 40 percent of the total European catch. The Danish 1981 catch was only slightly under the 1980 catch, but the Norwegian catch increased over 150,000 t in 1981. Danish fishery catches are a particularly sensitive issue, as the Danes are insisting on an expanded quota from the European Economic Community (EEC). Disagreement on this subject has been the primary obstacle to EEC agreement on a Common Fisheries Policy.

Several European countries have reported major changes in their fisheries catch since 1978, even though the total catch for the region has been relatively stable. Major catch

increases have been reported by Turkey (+88 percent), Ireland (+45 percent), Portugal (+36 percent), and the Netherlands (+25 percent). Ma-

major catch declines have been reported by Germany (-24 percent), and the United Kingdom (-23 percent). (Source: IFR-82/130R).

Table 1.—Western European fisheries catch, 1978-81.

Country	Catch (1,000 t)				Per-cent change <sup>2</sup>
	1978	1979	1980	1981 <sup>1</sup>	
European Economic Community (EC)					
Denmark <sup>3</sup>	2,058.4	2,005.0	2,301.4	2,262.0	+ 9%
United Kingdom	1,029.7	904.7	823.4	795.5	- 23
France	767.9	732.2	765.4	721.0	- 6
Italy	399.3	426.1	444.5	450.0	+ 11
Netherlands	324.4	323.7	340.4	434.4	+ 25
Germany (FRG)	411.9	356.1	296.9	313.0	- 24
Ireland	104.0	92.8	149.4	190.5	+ 45
Greece	102.2	105.5	103.0	103.0	+ 1
Belgium	50.6	47.1	45.6	49.3	- 3
Total EC	5,248.4	4,993.2	5,270.0	5,318.7	+ 1%
Norway	2,586.6	2,650.2	2,400.2	2,554.0	- 1%
Iceland	1,566.7	1,645.3	1,514.9	1,441.2	- 8
Spain	1,373.1	1,205.1	1,264.7	1,260.0	- 8
Turkey	244.1	349.7	426.9	459.2	+ 88
Sweden	193.4	205.6	240.7	262.8	+ 36
Portugal	252.2	242.6	265.2	250.3	- 1
Finland	136.8	131.4	140.7	135.1	- 1
Austria	3.7	4.1	4.3	4.4	+ 19
Switzerland	3.8	3.9	3.5	3.7	- 3
Cyprus	1.3	1.3	1.3	1.5	+ 15
Total	11,610.1	11,432.4	11,532.4	11,690.9	+ 1%

<sup>1</sup>Preliminary statistics.

<sup>2</sup>1978-81

<sup>3</sup>Includes Greenland and the Faeroe Islands.

## EEC Council Sets 1983 Guide Prices

The European Economic Community (EEC) Council reached agreement on fish guide prices for 1983 on 13 December 1982. These guide prices establish a base price on which reference, intervention, and producer prices are set, and they are designed to protect the EEC fishermen from market instability and low-priced imports.

The new guide prices were effective 1 January 1983 and are of significant importance to U.S. exporters; intervention measures are set into motion when import prices fall below the established reference price. U.S. companies wishing to receive a copy of these guide prices should write to: National Marine Fisheries Service, EEC Guide Prices, P.O. Box 1109, Gloucester, MA 01930-5309.

## Peruvians Predict Severe El Niño

The Instituto de Mar (IMARPE) of Peru reports that preliminary oceanographic data suggests that a severe "El Niño" may be underway. El Niño is an oceanographic phenomenon where warm water intrudes into normally cool Peruvian coastal waters, causing extensive damage to species like anchovy that are particularly sensitive to temperature fluctuations. Water temperatures 4°C above normal were being reported off Peru. The 1982 anchovy catch was one of the best in recent years. Should an El Niño occur, however, Peru's 1983 catch might fall substantially below 1982 levels. (Source: IFR82/172).

## Brazilian Government Promotes Tuna Fishing

A new Brazilian Government project to promote tuna fishing was suggested last fall by SUDEPE, private businessmen, and the Banco Nacional de Crédito Cooperativo (BNCC). Credits were being made available to the fishermen to modernize their vessels with improved engines, sonars,

freezing equipment, etc. The BNCC is also financing both the domestic construction and the importation of new tuna vessels. SUDEPE is experimenting with a new vessel design which utilizes both diesel engines and sails on the same vessels. (Source: IFR 82/172).

## Mexican Fisheries Officials Are Named

Mexico's new President, Miguel de la Madrid, who assumed office 1 December 1982 has appointed Pedro Ojeda de Paullada as his new Fisheries Secretary. Ojeda de Paullada has no previous fisheries experience, but is highly experienced in international negotiations. He is 49 years old and formerly held two cabinet-level posts: Attorney General and Secretary of Labor. Most recently he served as President of Mexico's governing party, Partido Revolucionario Institucional (PRI).

Mexican observers regard him as a good administrator and often refer to him as the PRI's chief ideologue. His two deputies will be fisheries negotiator Ambassador Fernando Castro y Castro and former Sinaloa State Governor Alfonso Calderon. The new Banco Nacional Pesqueros y Portuario (BANPESCA) Director is Victor Manuel Navarrete. The director of the Instituto Nacional de Pesca, Jorge Carranza Frazer, was retained in his position. (Source: IFR82/172).

## French Eye New Method to Preserve Albacore

Experiments using a pickling brine to help preserve albacore are being examined by representatives of the French Scientific and Technical Institute for Marine Fisheries (ISTPM). The method was tried last year by three small-scale fishermen using four tunas.

One tuna was preserved in ice in their usual manner, a second one was frozen whole at -20°C, and the third and fourth, eviscerated and whole, respectively, were preserved at -4°C, after having remained in a pickling

brine at -8°C for 12 hours. Palate tests, conducted for the journal *Le Marin*, indicated "very good" external appearance and flavor of the pickled tunas, and the quality of the eviscerated and whole ones was reported to be similar. Further experiments are expected to determine whether fish quality can thus be enhanced aboard older vessels with relatively small investment. Reportedly, an albacore vessel would need a 3 m<sup>3</sup> pickling brine barrel and a 5 hp refrigerator compressor. (Source: LSB 19:1982).

## Norway Exports More Salmon to the U.S.

Norway has begun to export increasing amounts of fresh Atlantic salmon, *Salmo salar*, to the United States, the world's most important salmon (Pacific) fishing country. Norwegian shipments to the United States, which are mostly fresh Atlantic salmon, totaled nearly 390 tons worth \$3.1 million in the first 6 months of 1982. Although still relatively small, they represent a huge increase over the 2.5 tons of salmon exported to the United States in the same period of 1981.

U.S. importers were apparently impressed with the high quality of the Norwegian product. Norway is rapidly expanding its salmon ranching operations and over 400 such farms are now active. Norway's salmon exports to all countries have, as a result, increased from 1,800 tons in the first 6 months of 1980 to 4,400 tons in the same period of 1982, or by 140 percent. (Source: IFR).

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