

# JAPAN

## 1971 MARINE FISHERIES CATCH SET RECORD

The Japanese catch in marine fisheries during January-December 1971 reached a record 9,135,000 metric tons, up 538,000 tons, or 6%, over 1970. This was reported by the Statistics and Survey Division, Ministry of Agriculture and Forestry.

The predominant catches were Alaska pollock, 2.7 million tons, and Pacific mackerel, 1.25 million tons; both species combined were 40% of total. Other substantial increases over 1970 were sardine, sandlance, saury, salmon, bluefin tuna, and albacore; decreases were notably large for squid and skipjack, among others. ('Suisan Tsushin', Oct. 21, 1972.)

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## GOVERNMENT'S NEW TRADE CONTROL AFFECTS FISHERY EXPORTS

To meet the problems that may result from yen revaluation, the Japanese Government has adopted an ordinance controlling exports. The Ministry of International Trade and Industry (MITI) began to implement the ordinance on Dec. 7, 1972.

Products subject to export control include those that exceeded US\$100 million during August 1971-July 1972. Fresh and frozen fishery exports totaled about \$120 million. Coming under control are 18 fish species. These include tuna (skipjack, albacore, yellowfin, bluefin, and others), swordfish fillets and steaks, sailfish, sea bream, yellowtail, Pacific mackerel, saury, salmon, shark, rainbow trout and goldfish, and others. The export ceiling (in value) for each species has been set at the value exported during August 1971-July 1972, plus 52.6%; exports over that will be prohibited.

### Industry Fears Controls

The fishing industry fears trade control will seriously affect exports. On Nov. 9, 1972, 10 major groups petitioned the Fisheries Agency, MITI, and other agencies to exempt fishery products. They said the restriction would be very bad for exports of frozen

Greenland turbot and Alaska pollock fillets; these recorded rapid gains only recently. ('Nihon Suisan Shimbun', Nov 13; 'Suisan Keizai Shimbun', Nov. 3, 1972.)

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## WILL SEVERED JAPAN-TAIWAN DIPLOMATIC TIES AFFECT FISHING INDUSTRY?

The resumption of diplomatic relations between Japan and China opens an era of friendship-political, economic, and cultural. Before, Sino-Japanese trade was conducted privately on a limited scale; now it will be greatly expanded. However, this development has cut the close friendly ties between Japan and Taiwan and ended the bilateral trade agreement. Taiwan trades heavily with Japan. Either she may take economic reprisals against Japan and promote greater trade with other nations, or she may continue exports to Japan on a private basis but reduce imports.

### Japan-Taiwan Fishery Links

In the fisheries, unlike other industries, Japan's ties with Taiwan have been closer in technical cooperation than in investments. Cooperation produced a vigorous trade. In 1971, Japanese fishery exports to Taiwan reached 22,870 metric tons worth 2 billion yen (US\$6.67 million); imports recorded 29,000 tons worth 13.3 billion yen (\$44.3 million). Exports to Taiwan are mainly fish oil, canned fish, and salted, dried, or smoked products; imports are mostly live young eels for culture, shrimp, and tuna.

The fishery trade has continued favorably, particularly for Taiwan. If it is halted or reduced, Taiwan's economy would be hurt. The outlook for the fishery trade is that it will be reduced.

### Fishing Safety Involved

The termination of diplomatic relations presents a problem involving safe operation of Japanese vessels fishing off Taiwan and the nearby islands claimed by it, such as Senkaku Island. One vessel was seized recently by Taiwanese authorities. Similar seizures can be expected, particularly if

## JAPAN (Contd.):

Taiwan extends its territorial sea limits from the present 3 miles. ('Suisan Keizai Shimbun', Oct. 10, 1972.)

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TUNA FEDERATION LAUNCHES  
MEDICAL AND SUPPLY SHIP

A 2,990-gross-ton medical and supply ship, 'Japan Tuna', was launched Oct. 21, 1972. It was ordered by the Federation of Japan Tuna Fisheries Cooperative Associations (NIKKATSUREN). It will be used to provide medical service, fuel, and provisions to about 200 members vessels longlining in the eastern Pacific. (Note: In Japan, the eastern Pacific generally includes the area east of 130°W. longitude, which runs near the Marquesas Island.)

## Medical Facilities

The 'Japan Tuna' will cost 400 million yen (US\$1.3 million), including a 30-million-yen (\$100,000) government subsidy for medical facilities: separate rooms for examination, X-ray, and surgery.

NIKKATSUREN, which began high-seas refueling in 1963, previously used chartered tankers for that service. ('Suisan Keizai Shimbun', Oct. 25, 1972.)

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FISHERY TEAM TO SURVEY ALASKA  
IN SUMMER 1973

Japan will send a fishery team to Alaska in July or August 1973 to survey the coastal resources. The project results from a proposal for a joint survey reportedly agreed to by Governor Egan and a visiting Japanese economic mission.

The Japanese will present their proposal to Alaska. Under study is a plan to send 10 men to survey primarily kelp, abalone, and sea-urchin resources jointly with Alaskans. The Alaskans hope the survey will contribute to the state's economic growth. ('Suisan Keizai Shimbun', Nov. 8, 1972.)

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TAIYO IS BUILDING COLD  
STORAGE IN CUBA

Taiyo Gyogyo is building a 10,000-ton-capacity cold storage at Santiago de Cuba for the Fisheries Ministry. Cost is 1 billion yen (US\$3.3 million). Construction was begun in September 1971 and is scheduled for completion in mid-December 1972. It is being handled through Ataka Industries. Cuba's operation of the cold storage will result in greater fish trade with Taiyo, which already is buying shrimp.

Taiyo is planning to build another 10,000-ton cold storage for the Construction Ministry for vegetables and bananas; it is negotiating to build a third plant.

The firm also is reported to have been approached by the Cuban Government to construct a canning plant and a shipyard capable of building 1,000-2,000-ton ships. ('Suisan Keizai Shimbun', Nov. 11, 1972.)

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MORE SHRIMP TRAWLERS  
APPROVED FOR GUIANAS

In late October 1972, the Fisheries Agency tentatively approved the entry of 52 more vessels into the shrimp fishery off the Guianas. At present, seven firms are operating 70 shrimp trawlers there out of Georgetown (Guyana), Paramaribo (Surinam), and Port of Spain (Trinidad).

Of the 52 vessels, 21 will be licensed for operation by the 7 shrimping firms; these firms are building a 500-ton-capacity cold storage in Paramaribo jointly with local interests. Thirty-one will be licensed to vessel owners forced out of the North Pacific salmon fishery, Isei (East China Sea) trawl fishery, and the sea bream longline fishery off New Zealand. ('Suisan Keizai Shimbun', Nov. 14, 1972.)

KRILL FISHING EXPEDITION  
TO ANTARCTIC OCEAN

The 'Chiyoda Maru' (2,000 gross tons) departed Tokyo Oct. 27, 1972, on a krill fishing expedition to the Antarctic Ocean. It was chartered by the semigovernment Marine Fishery Resource Development Center.



## JAPAN (Contd.):

The vessel was scheduled to operate for about two months in the region from the pack-ice line to the Weddell Sea. Production target was 1,000 tons: 800 tons would be frozen fresh, 200 tons would be cooked and frozen. Also, krill extracts would be produced experimentally.

## Itinerary

Enroute, the vessel was slated to call at Valpariso, Chile, December 2-3, 1972, and will commence operations on December 11 near 55°S. latitude and 60°W. longitude. Operations will end Feb. 9, 1973. Return to Japan is scheduled for March 19 with a stop-over at Durban, South Africa, on Feb. 15, 1973. Gear used include 3-4 meter "wakumi" (framed nets), fish pump, seine net, and attractant lights.

The Japanese previously had conducted three experimental krill fishing trips to the Antarctic. The Soviets are said to have taken about 2,300 tons in 1971. An FAO study estimates krill abundance at 300-500 million tons. ('Suisan Keizai Shimbun', Oct. 30, 'Minato Shimbun', Oct. 26, 1972.)

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## BUY TUNA FROM THE PHILIPPINES

The Japanese refrigerated carrier 'Filipina Maru' (350 gross tons) returned recently to Yaizu with 45 metric tons of yellowfin and bigeye bought from Filipino fishermen. The vessel was sent to the Philippines in July this year. Its crew spent 3 months buying tuna from natives fishing in 3-5-man canoes in the Sula Sea from bases in southern Mindanao Island and Zamboanga.

## Cash to Fishermen's Agent

Cash payment was made to the fishermen through a representative of the canoe operators. Although some U.S. tuna packers and Japanese trading firms are said to be buying tuna from the Philippine canoe fishermen, this is the first time that a Japanese vessel has been sent there to buy tuna. The owners of the 'Filipina Maru' hope to continue this operation. ('Suisan Keizai Shimbun', Nov. 3, 1972.)

## S. KOREA'S MARINE-PRODUCTS CANNING INDUSTRY GROWS

S. Korea's canning industry is small but important to its economy. Between 1967 and 1971, the value of all canned foodstuffs increased from US\$7.2 million to \$14.6 million. Exports of canned goods (primarily mushrooms and oysters) increased in value from \$1.1 million to \$7.7 million.

Production of canned marine products increased from 4,957 metric tons in 1967 to 6,695 tons in 1970 and jumped to 23,703 tons in 1971. The Office of Fisheries said canned oyster production of 10,116 tons (landings were 54,000 tons), led this increase. Very few people eat canned oysters in S. Korea; practically the entire production is exported. In 1971, these exports were worth \$1.4 million (\$140,000 in 1970, \$36,000 in 1969); they accounted for 18% of value of canned-food exports and 75% of export of canned marine products.

## Smoked and Boiled Oysters

The oyster exports were almost equally divided between smoked and boiled. The U.S., principal market, imported \$1.3 million in 1971; as of June 1972, the figure was \$2 million. Saury, mackerel, squid, and other shellfish also are canned for export and domestic consumption.

## Bright Industry Future

The canning industry expects a bright future. Raw materials, such as oysters, are readily available. Low labor costs and streamlined export procedures make the S. Korean products highly competitive. Therefore, exports of canned products are expected to increase rapidly in the next few years.

The industry also expects to increase domestic trade. Until recently, canned foods were not popular. However, the rise of a middle class has resulted in growing acceptance of canned products. Domestic consumption decreased in 1971 due to a poor business year and increased export promotion. But industry leaders expect the domestic market to improve. (U.S. Embassy, Seoul, Sept. 20, 1972.)

# NICARAGUA OFFERS SOME INVESTMENT OPPORTUNITY

Nicaragua has limited to 100 the number of shrimp boats licensed to fish on the Atlantic coast. This limit will be increased to 108 to accommodate eight already purchased boats. However, no further increases on the Atlantic are foreseen.

Only 38 shrimp boats are operating on the Pacific Coast, though 103 are authorized. Another dozen boats might be accommodated on the Pacific side, the government says, but further growth would affect sound conservation practice.

## Best Opportunities

The best opportunities for new investment appear to lie in species other than shrimp and lobster. Finfish are almost entirely untapped. Except for the almost incidental catches by shrimpers, most other fishing is traditional rather than commercial, characterized by in-shore handlining from small boats. No studies have been made and little practical fishing done, so the quantities of fish available are still unknown.

## Oysters & Lobsters Good Bets

Industry sources believe oysters and scallops also are good bets for investment and exploitation. Large beds of "midget" oysters are known and could be harvested immediately. However, dredging to spread the oyster beds and allow stunted oysters room to grow to a more marketable size probably would be more profitable. The problem remains of satisfying U.S. Food and Drug Administration requirements for importing molluscan shellfish into the U.S.

## Shrimp Catch Rising

Nicaragua's shrimp catch is on the upward swing of its normal cycle. It reached 4.3 million pounds for first-half 1972, compared to 2.96 million pounds for first-half 1971. Over the next several years, both shrimp and lobster production should increase steadily. Three factors are involved in this projected growth: 1) more boats will be operating off Pacific coast; 2) in 1971, Nicaragua established protection for shrimp-breeding grounds in lagoons and river mouths of Atlantic coast by prohibiting all shrimping there. Finally, most Pacific shrimpers are working the shallow and medium depths that hold white shrimp. By adding larger-capacity winches, boats also will be able to fish for red shrimp at greater depths and increase total catch 20%.

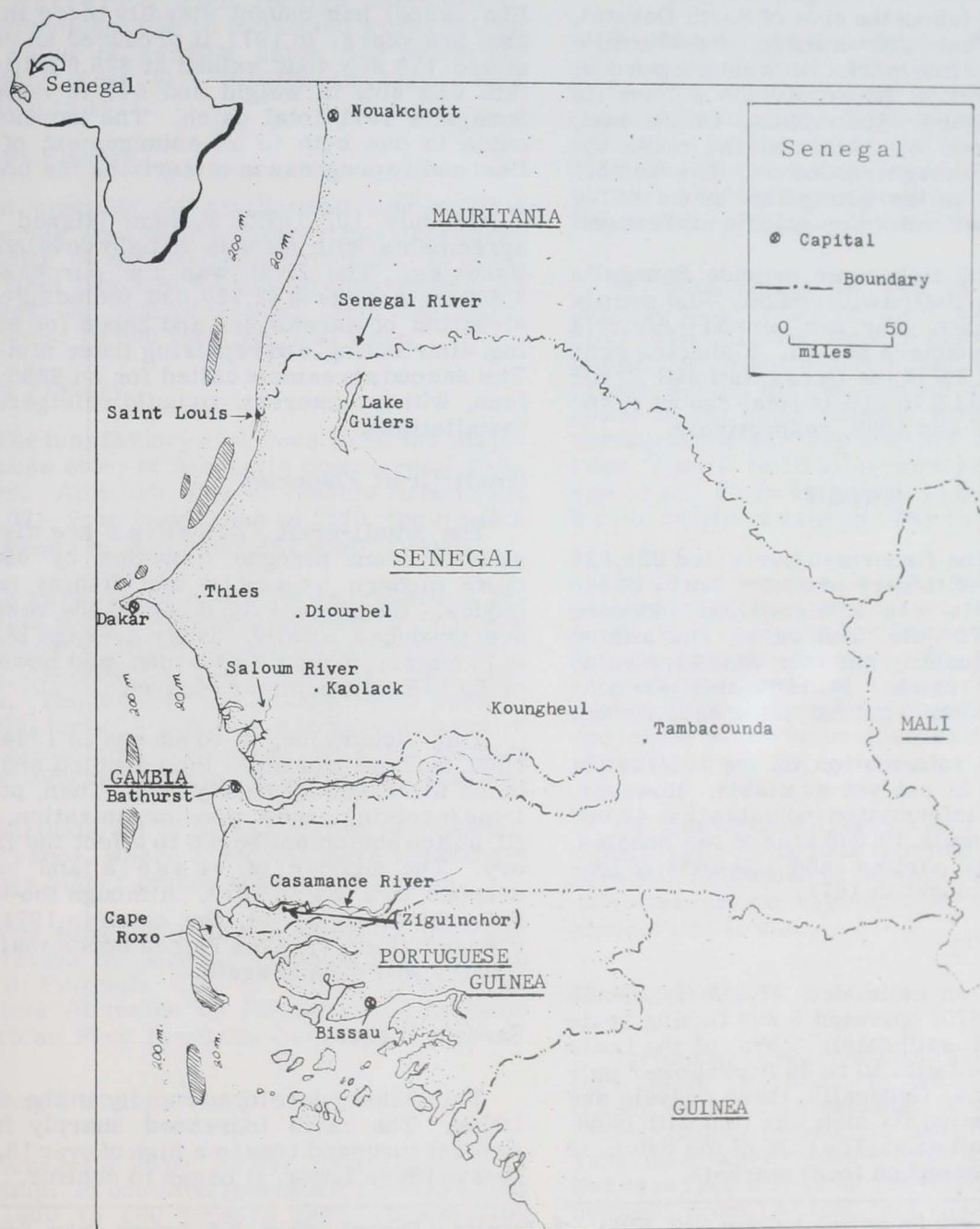
## Lobster Trapping

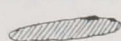
Lobster trapping should become more productive over the next several years. There is some concern that this easily overfished species might be damaged by unrestricted industry growth. This is a long-term problem, and no restrictive legislation is being considered.

## Unrestricted Exports to U.S.

There are no restrictions affecting exports to the U.S. On the contrary, due to growing demand and excellent prices, the U.S. will continue as Nicaragua's best market for seafood, especially shrimp and lobster. (U.S. Embassy, Managua, Sept. 25, 1972.)





 Shrimp fishing grounds.

# THE FISHERIES OF SENEGAL: 1971

William B. Folsom & R. E. Neumann

The Republic of Senegal, roughly 76,000 square miles (about the size of South Dakota), lies on the West African bulge. Its 300-mile Atlantic coastline marks its western border, while the Senegal River divides it from its northern neighbor, Mauritania. On the east, it is bordered by Mali; on the south by Guinea and Portuguese Guinea. The Gambia extends 200 miles along the banks of the Gambia River into the middle of Senegal.

The 30,000 fishermen provide Senegal's 3,840,000 population with roughly 30.6 pounds of seafood each year per person--Africa's foremost consumers of fish. Fisheries contribute about 3% of the Gross National Product (GNP), and 8 to 11% of total export earnings for 1967 and 1968, respectively.

## CATCH

In 1971, the fishermen harvested 221,828 metric tons of fishery products worth US\$45 million. This was a significant increase over the 1970 catch and value, and almost double the quantity and four times the value of the 1960 catch. In 1960 this French-speaking country gained its independence.

Complete information on the 1971 catch, by species, is not yet available. However, preliminary information indicates that 43,000 tons of sardinella, 15,900 tons of sea breams, 4,600 tons of shrimp, and 133 tons of lobsters were caught in 1971.

### Canoe Fishery

In 1971, an estimated 27,960 fishermen (27,131 in 1970) operated 5,293 fishing boats (canoes and sailboats); 2,578 of the boats were equipped with 10 to 25 horsepower outboard motors. Generally, these vessels are crewed by two to six men who fish with handlines or small nets. The bulk of the catch is sold unprocessed on local markets.

"Pirogue" fishing (indugout canoe or boat like canoe) has caught steadily more in the past few years. In 1971, it produced an estimated 178,883 tons valued at \$28.6 million; this was 80% in weight and 64% in value of Senegal's 1971 total catch. The increasing catch is due both to an enlargement of the fleet and to progress in motorizing the boats.

On July 12, 1972, Senegal signed two agreements with Canada to help develop its fisheries. The first was for purchase of 3,500 motors worth \$2,720,000, including construction of warehouses and shops for storing, distributing, and repairing these motors. The second agreement called for an \$880,000 loan, without interest, to build refrigerated installations.

### Small-Craft Fisheries

The small-craft fisheries are distinguished from pirogue fisheries by use of more modern vessels and fishing techniques. Based on FAO designs, the vessels are produced locally. Their average length is 13 meters, weight 6 to 8 tons, and powered by 65 to 70 horsepower engines.

This fishery began to expand in 1964; by 1966, the fleet had more than doubled and the catch increased by nearly 50%. Then, problems involving credit, poor organization, and ill-suited equipment began to affect the fishery. The number of vessels and catch dropped to a low in 1970. Although the vessels remained at 14, the catch in 1971 increased slightly. This raised hopes that the fishery will expand again.

### Sardine Fishery

This fishery developed rapidly in the mid-1960s. The catch increased sharply from several thousand tons to a high of over 18,000 tons in 1969. Later, it began to decline. The

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number of vessels has remained constant-- 4 Senegalese and 1 French-owned vessel-- but their equipment is now wearing out. Senegal believes that the sardine resource has suffered from foreign exploitation. Nevertheless, due to increased world prices, the value of sardine catch has increased slightly from \$1.1 million in 1970 to \$1.2 million in 1971.

#### Trawl Fishery

In contrast to small-craft and sardine fisheries, the trawl fishery has increased steadily in vessels and production. In 1971, the fleet reached 83 (58 French-owned, 11 Senegalese, and 14 others); their total catch exceeded 10,000 tons for first time.

#### Tuna Fishery

The tuna fishery continues to be the major success story of Senegal's commercial fisheries. Although only 47 vessels fished tuna in 1971, four fewer than in 1970, their catch increased by 54% to 18,461 metric tons.

Of particular interest is the record of the Societe Senegalaise d'Armement a la Peche (SOSAP), a mixed industry/government venture, compared to catch by French tuna vessels. The SOSAP fleet numbered 17 vessels in 1971 (only 15 fished due to late delivery of two boats from Germany). It caught slightly over 50% more than the 30 French vessels.

Virtually all of Senegal's tuna is exported to France, where a special quota agreement brings higher prices than world prices.

The tuna catch is processed by the Conserveries du Senegal Alimentaires (African Food Products Co., or SAPAL) and by the Societe Africaine de Produits Alimentaires (African Food Products Co., or SAPAL).

#### Shrimp Fishery

Senegal's most promising fishery is shrimp. Production increased from 124 tons in 1960 to 600 tons in 1966, when marine shrimping began, and to 4,599 tons in 1971.

#### Estuarine Fishery

The commercial fishery is based on young, estuarine shrimp--pink shrimp (*Penaeus*

*durarum*, called "la grosse" or la blanche" in Senegal). It began in 1959 when a plant was built on the Casamance River in southern Senegal.

The fishery is very simple. Between May and August, 800 to 1,000 fishermen operate in an area 40 kilometers up river from the town of Ziguinchor. Each fisherman has an anchorage on the river. A 12-mm mesh net held open by two beams is placed across the current, slightly above or below the surface. The net is held in place by two dugout canoes.

At night, when the tide is running, the dugouts are towed to their anchorages by plant owners. The owners also lend fishing materials. When the tide changes, each fisherman brings his net ashore and sells his catch to the plant owners, who collect the shrimp in trucks. The average catch per net runs from 5 to 10 kilograms per day, but it can reach 30 to 40 kg/day in good locations during height of season (May to July).

There are several shrimp-processing plants along Casamance River. Most of their production is trucked to Dakar for export to Europe (mainly France). The largest plant is at Ziguinchor--the Amerger-Casamance plant. It is new, well managed, and has one operation which brine-freezes cooked whole shrimp.

The Casamance fishery could be expanded considerably, but lack of roads downstream prevents collection of shrimp catches. Outside Casamance region, there are no major shrimp resources.

#### Marine Fishery

Shrimping at sea was begun on an exploratory basis in 1963. In 1965, five vessels fished; by 1966, 16 vessels. These were old side-trawlers rigged for twin-trawling. In 1968, many were replaced by modern vessels. Between 1966 and 1968, the shrimp catch increased from 195 tons to 2,142 tons. Presently, the trawl fleet takes over three-fourths of the total shrimp catch (4,599 tons in 1971).

There are two major trawl shrimping grounds: in the north, a 350-square-mile area extending from Cayar Canyon to north of St. Louis (fishing from November to



April). The second area is off Gambia River, a narrow stretch of mud 450 squares miles long between mouth of Casamance River and Bissagos Islands. Production is usually good between August and November.

Deepwater shrimp (*Penaeus longirontris*) are taken on continental slope (200 to 400 fathoms), mostly by Spanish and others.

## DOMESTIC & FOREIGN DEVELOPMENTS

### Port Development

Development of Dakar's fishing facilities has been consistent, if not rapid, over the past 10 years. The Government has been developing the ports while relying on private capital, foreign or domestic, to provide freezing and processing plants. The two main projects of the Third Plan, now largely completed--construction of a large \$1.5 million fishing pier and deepening of port's fishery portion by six meters--should aid fisheries.

### Foreign Participation

Most foreign investment involves European (mainly French) participation. However, a U.S. firm and, more recently, a Kuwait-based firm have invested.

Star-Kist, a large U.S. firm, has a 32.5% interest in Societe de Frigorifiques du Senegal (SOFRIGAL), a freezing and storage operation. The latter neither cans nor fishes for itself. Its plant is equipped with brine-type freezing tanks. It has a freezing capacity of 100 metric tons per 24 hours. There are four cold-storage rooms with a total capacity of 2,000 tons. Two ice machines produce a total of 35 tons of flake ice per day, used primarily by local boats.

Another foreign investor is Gulf Fisheries company of Kuwait. It has 24 vessels based in Dakar. It is the largest shrimping operation in Senegal. The vessels are identical

small trawlers built in France. Operations began in 1970.

The trawlers freeze their catch onboard. Each vessel has a 50-ton storage capacity. Previously, the shrimp were retained onboard until transshipped for export. The company now has leased cold-storage facilities.

Senegal encourages foreign investment with the possibility of 5-year "tax holidays," duty-free import of materials, and easy capital repatriation.

### New Legislation

Senegal claims territorial waters of 12 miles. She believes foreign fishing outside these limits has severely affected local catch. In April 1972, the National Assembly passed a law establishing a fishing zone 110 miles beyond the 12-mile territorial sea. This law, signed by the President in July, provides that foreign companies may fish within these waters if they reach agreement with the Government.

The French are not affected because they have an agreement permitting them to fish within territorial sea. On June 1, 1972, Senegal signed an agreement with Spain. The latter will help in fishery research, train fishermen, and land part of their catch in exchange for fishing rights. Reportedly, the Norwegians and Japanese are actively negotiating for similar agreements.

## TRADE

Senegal has made progress in recent years in exporting fishery products. Most go to Europe and African countries. The development of processing industries remains the weakest part of Senegal's attempt to develop its fishing resources, among the most valuable along the West African coast.

Senegal continues to import sizable amounts of fresh, chilled or frozen fishery products. These imports, however, are valued below their total fishery exports. This provides the industry with a favorable balance of trade.