

More Than \$10 Million Paid by Foreign Nations to Fish in U.S. 200-Mile Zone

Foreign nations paid \$10 million in fees to the United States by 10 February to fish within 200 nautical miles of the U.S. coast during 1978, according to the National Oceanic and Atmospheric Administration's National Marine Fisheries Service.

About 800 foreign vessels are expected to fish in the 200-mile zone, and total revenues are anticipated to amount to \$10.1 million from the poundage fees, based on the dockside value of the fish taken, and \$0.9 million from the

vessel permit fees. When observers are placed aboard foreign fishing vessels, observer costs will be collected and the total will increase.

The Commerce Department agency reported that the largest total fee—\$5,960,653—has been paid by Japan, permitting that nation to catch 1,157,635 metric tons (t) of fish with up to 450 vessels within the U.S. 200-mile zone. Second largest fee—\$3,549,978—was paid by the Soviet Union, allocated 493,928 t with up to

200 vessels. The Japanese allocation is primarily for pollock, and the Soviet allocation primarily for pollock and hake, two species that are not sought by U.S. fishermen.

Other nations that have paid fees, the amount of catch allocated, and number of vessels already issued permits to fish, are: South Korea, \$370,497, 92,598 t, 18 vessels; Spain, \$266,347, 18,156 t, 30 vessels; and Italy, \$78,978, 4,125 t, 15 vessels.

Permits were to be issued to Bulgaria, which has paid \$16,513, 1,504 t, 3 vessels; to Mexico, \$155,070, 10,528 t, 14 vessels; and to Taiwan, \$26,094, 5,822 t, 8 vessels. Applications approved but not ready for permit issuance were from Poland, \$162,262, 22,622 t, 22 vessels; and Cuba, \$112,183, 9,715 t, 17 vessels. France and the Federal Republic of Germany (West) were also expected to apply for permits to fish.

NOAA Names New Deputy, Associate Administrators

Paul L. Leventhal and James P. Walsh have been selected to be Assistant Administrator for Policy and Planning and Deputy Administrator, respectively, of the National Oceanic and Atmospheric Administration, the Commerce Department agency has announced. Leventhal is a former journalist and special counsel to the Senate Government Operations Committee while Walsh, for the past year, was general counsel of the Senate Committee on Commerce, Science, and Transportation.

Leventhal assumed the new position as part of a reorganization of the Commerce Department agency by NOAA Administrator Richard A. Frank. The reorganization is designed to equip NOAA to meet new responsibilities which Congress has entrusted to NOAA over the recent past, such as ocean use and resource management, and climate and weather modification.

During much of 1977, Leventhal, under a Ford Foundation grant, wrote a book on nuclear proliferation which will be published this spring by Ran-

dom House. In connection with the book, he was a research fellow at the Harvard Program for Science and International Affairs, with guest privileges at the Brookings Institution.

Leventhal was special counsel for the Senate Government Operations Committee from 1972 through 1976. His responsibilities included the reorganization of atomic energy and governmental enforcement functions within the Executive Branch and the study of Federal science policy and research and development activities.

From 1969 to 1972 he was press secretary to New York Senator Jacob K. Javits, and also served as campaign press secretary to New York Senator Charles E. Goodell in 1970.

A former journalist, Leventhal was Congressional correspondent for the National Journal in 1972. From 1961 to 1968, he did political and investigative reporting for Newsday, the New York Post, and the Cleveland Plain Dealer.

A native of New York City, Leventhal received a bachelor's degree, magna cum laude, in 1959 from Franklin and Marshall College, Lancaster, Pa., and a master's degree from New York's Columbia University Graduate

School of Journalism in 1970. Leventhal, his wife Sharon, and their two sons live in Chevy Chase, Md.

Walsh, a native of Coos Bay, Ore., was director of the Senate's National Ocean Policy Study during 1977 in addition to his Senate committee duties. Richard A. Frank, NOAA Administrator, said that Walsh's knowledge and experience in ocean affairs, as well as his understanding of NOAA's atmospheric missions, will be a welcome addition to NOAA's management team.

From 1972 until last April, the Stanford University graduate served as staff counsel to the Senate Commerce Committee and counsel to the Senate Ocean Policy Study. In those posts he had responsibility for all ocean-related legislative programs, merchant marine, ocean pollution, coastal zone management, and other related subject areas.

Walsh received his J.D. and LL.M. degrees from the University of Washington in 1970 and 1971, respectively, and until June 1972 was Assistant Attorney General for the State of Washington, including service as counsel to the State's Oceanographic Commission.

He is a member of the Law of the Sea

Advisory Committee at the State Department, as well as the Washington and District of Columbia Bar Associations and the American Society for International Law. Walsh, his wife, and two children live in Washington, D.C.

Foreign Fishing Vessels Off U.S. Coastlines Decrease in November

The 256 foreign fishing and fishing support vessels sighted during November 1977 within the U.S. 200-mile conservation zone continued a 5-month decline from the year's high of 767 sighted in June, and were 122 fewer than those identified in October, according to preliminary figures released by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, a Commerce Department agency.

The decrease is due primarily to the closure of the Pacific hake fishery, with normal seasonal decline in fishing activities and reduction in the number of foreign vessels permitted to fish within the 200-mile zone also contributing.

The foreign vessels, from eight nations, were sighted off the coasts of New England and the mid-Atlantic States and Alaska. The largest number, 142, was from Japan, which had 126 vessels fishing for groundfish and pollock off Alaska, and 16 fishing for squid off New England and mid-Atlantic. The Soviet Union had 49 vessels fishing for groundfish in Alaskan waters.

The summary of foreign fishing vessels operating off U.S. coasts during November 1977 and November 1976 is listed here in tabular form.

Foreign vessels sighted off the coasts in 1976 were as follows: January-420, February-510, March-435, April-560, May-924, June-970, July-842, August-543, September-514, October-452, November-258, December-240. In 1977: January-319, February-314, March-180, April-235, May-374, June-767, July-786, August-492, September-437, October-378, and November-256.

The November sightings were made by representatives of the National

Area	Nation	No. of vessels	
		Nov. 1977	Nov. 1976
New England, mid-Atlantic	E. Germany	9	1
	Soviet Union	0	8
	Poland	0	11
	Spain	30	11
	Japan	16	9
	Italy	7	10
	Bulgaria	0	1
S. Korea	0	4	
		62	55
West Coast	Panama	0	5
	Soviet Union	0	1
	S. Korea	0	9
	Bulgaria	0	5
	E. Germany	0	8
	Taiwan	0	1
		0	29
Alaska	Japan	126	89
	S. Korea	16	3
	Taiwan	1	2
	Soviet Union	49	80
	Poland	2	0
		194	174
	Total	256	258

Marine Fisheries Service and by personnel of the U.S. Coast Guard, conducting joint fisheries enforcement patrols from Coast Guard aircraft and cutters.

Pharmaceutical Waste Dumping Eyed in Gulf

A study of the environmental effects of dumping pharmaceutical wastes at a site about 40 miles north of Arecibo, Puerto Rico, was started in February by three universities under \$350,000 in grants from the National Oceanic and Atmospheric Administration (NOAA).

P. Kilho Park, Manager of NOAA's National Ocean Survey (NOS) Ocean Dumping Program, said the biological effects, chemical fates, and dispersment of about one million gallons of waste was to be studied. Onsite activities concentrated on dispersion of waste plumes, while laboratory work focused on the specific effects of the wastes on different types of marine organisms including fish and other marine life.

The wastes, shipped by barge from Puerto Rico, included organic solvents and the remains of antibiotics production such as penicillin. After being dumped, they were tracked by the re-

search vessel *Knorr* of Woods Hole Oceanographic Institution, and by a NASA aircraft from the Langley Research Center.

Universities receiving grants for the monitoring program from the Commerce Department agency are Texas A&M University, College Station, Tex. (\$230,000); the Marine Science Institute of the University of Texas, Port Aransas, Tex. (\$105,001); and, Johns Hopkins University's Chesapeake Bay Institute, Baltimore, Md. (\$42,000).

The scientific party was directed by Michael Devine and Edward R. Meyer of the Ocean Dumping Program, and included scientists from the Chemistry and Oceanography Departments at Texas A&M, and NOAA's Atlantic Oceanographic and Meteorological Laboratories in Miami, Fla.

BILLFISH, SHARK RULES PROPOSED

Proposed regulations to prevent the retention of billfishes and to control the tonnage of sharks that may be caught by foreign fishermen off the Atlantic Ocean and Gulf of Mexico coasts have been published by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. The regulations implement a Preliminary Fishery Management Plan prepared by the Commerce Department agency. The preliminary plan will remain in effect until final plans for these species are developed by the appropriate Fishery Management Councils.

Under the regulations, which were expected to become effective in late February, foreign fishermen will be required to release any blue marlin, longbill spearfish, sailfish, swordfish, or white marlin caught within the U.S. 200-mile fishery conservation zone. These fish often are caught on longline gear being used for tuna, a species not under the jurisdiction of the Fishery Conservation and Management Act of 1976. The floating longlines, sometimes 50 or more miles long, are rigged with thousands of baited hooks.

The proposed regulations require foreign fishermen to obtain permits if

they are using gear that may catch billfishes and sharks. If billfish are caught, they must be released by cutting the leader to the hooks or by other means without removing the fish from the water, regardless of their condi-

tion. In addition, the foreign ships must file weekly reports on, among other things, the numbers and types of billfish caught and released. An annual report also must be submitted.

A total catch of not more than 1,150

metric tons of sharks, excluding dogfish sharks, is established by the proposed regulations. When the limit has been caught, the same restrictions as to billfishes will apply to all sharks caught on longlines.

Marine "Rafts" Show Promise in Luring Fish

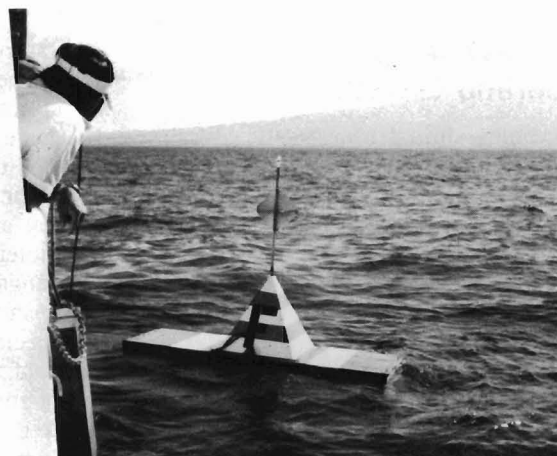
The National Oceanic and Atmospheric Administration (NOAA) *RV Townsend Cromwell* returned to Honolulu on 17 December after a 30-day cruise off of Palmyra Island to study the effectiveness of artificial drift objects to attract schools of fish, particularly tuna. Results were called "encouraging."

"Tunas, particularly the skipjack and small yellowfin, are known to be attracted to drifting logs and other objects. In the western Pacific where such objects are plentiful, Japanese tuna fishermen regularly fish around these logs, and even tie up to one at night so that they may fish around it the next morning," says Richard Shomura, Director of the Honolulu Laboratory of the NMFS's Southwest Fisheries Center.

Walter M. Matsumoto, Chief Scientist of the cruise, reported that a series of rafts, spaced about 1 mile apart and connected by a line 5 miles long, was set adrift 285 miles northwest of Palmyra Island and followed for 16 days. Each raft measured 4 feet × 12 feet and had a 2-foot strip of rope netting either 50 or 100 feet long suspended from it to simulate a log floating vertically in the water. The rafts were monitored daily for accumulation of fish under them, and an area of up to 6 miles from the rafts was scouted for bird flocks and fish schools. Matsumoto noted that on the open ocean the appearance of bird flocks usually indicates the presence of fish schools.

Two bird flocks appeared in the vicinity of the rafts on the third day and a total of 17 bird flocks were seen from the third through the eleventh days. None were seen in the last 5 days due to poor visibility caused by bad weather. Two of the bird flocks were pursued and the chase led to two fish schools, one of

This raft, 3 feet wide × 12 feet long, is made of 2-inch × 6-inch lumber. Netting, 12-foot × 45-foot fine mesh (1-inch stretch mesh), is hung from one end of the raft. Buoys (not shown) have two 55-gallon drums as the main flotation units. Netting, 45 feet long, made of 3/8-inch polypropylene rope was hung from them.



skipjack tuna, the other of skipjack tuna and small yellowfin tuna. All fish schools and bird flocks except one were seen within 3 miles of the rafts, suggesting that the rafts may have been effective in attracting the schools. On the basis of these encouraging results, simi-

lar cruises will be made in the future.

This study was one of several conducted by the NMFS's Honolulu Laboratory to help commercial fishermen increase their tuna catches. It was done in cooperation with the Pacific Tuna Development Foundation.

FISH MEAL, OIL SUPPLIES TOLD

Supplies of fish meal and fish oil in domestic and international trade declined during the first half of 1977 from a year earlier, while the supplies of fish solubles increased, according to the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, a Commerce Department agency.

Fish meal and fish solubles are nutritionally important ingredients in some manufactured animal feeds, especially feed for poultry and farmed fish, trout and catfish. In the United States, fish oils are used as ingredients only in inedible products, like paints, varnishes, resins, plastics, and lubricants.

Fish meal, oil, and solubles are pro-

duced from many species of fish, including menhaden, anchovy, herring, pilchard, and capelin, most of which are not eaten by humans. Total production of fish meal, 100,005 short tons, fell by one percent during January-June 1977, despite a 10 percent rise in menhaden production. Menhaden solubles helped raise the total production of fish solubles by 3 percent to 44,818 short tons. The oil yield of menhaden landings, however, fell substantially, reducing total U.S. production of fish oil by 18 percent, to 52 million pounds.

Production of fish meal by member countries of the Fishmeal Exporters Organization, excluding Angola, fell 21 percent during January-May 1977.

Nevertheless, exports from those countries rose, as high inventories at the beginning of the year were drawn down rapidly. Peru accounted for most of the decrease in fish meal production, most of the increase in exports, and most of the inventory reduction.

Imports of fish meal by the United States fell by 6 percent during the first

half of 1977 from a year earlier to 53,777 short tons, mainly because of the decline in receipts from Peru, down about 11,000 short tons, and from Canada, down about 5,000 short tons. These declines were partially offset by the increase in receipts of almost 13,000 short tons from Norway and other countries.

The reduction in both U.S. imports and exports of fish meal and fish oil indicates tighter domestic and international supply situations. While the United States is a net importer of fish meal, it is a net exporter of fish oil. In the first half of 1977, U.S. fish oil exports were at the lowest level since 1968.

Ultraviolet Rays Affect Shrimp Growth, Survival

Some shrimp near Seattle, Wash., are getting sunburns, as part of a study to determine the effects that thinning of the atmospheric ozone layer might have on terrestrial and aquatic life.

"Scientists as well as the public are increasingly concerned that pollutants in the upper atmosphere may deteriorate the protective ozone layer and therefore allow dangerous ultraviolet radiation to reach the earth's surface," David Damkaer of the National Oceanic and Atmospheric Administration said. "But there is very little information on the effects of ultraviolet radiation on living creatures, particularly its effects on marine life."

With funds from the Environmental Protection Agency, Damkaer is studying the effects of varying levels of ultraviolet radiation on zooplankton—tiny drifting animals—that live in the upper layers of the sea. So far, the scientist and his colleagues at NOAA's Pacific Marine Environmental Laboratory (one of the Commerce Department agency's Environmental Research Laboratories) have found that ultraviolet radiation can have dramatic, even lethal, effects.

Though seawater filters out much ultraviolet radiation from the sun, Damkaer explained, in clear coastal waters some 10 percent of this radiation striking the sea surface can still penetrate to a depth of about 30 feet (10 m). Many species of zooplankton, including the larvae of commercially important species of shrimp, crab, oysters, and mussels, live entirely in this upper 30 feet.

In the Manchester Aquaculture

Laboratory of NOAA's National Marine Fisheries Service, across Puget Sound from Seattle, Damkaer is exposing a wide variety of species to differing doses of ultraviolet radiation. He notes how their behavior, growth rate, and survival are related to the amount of ultraviolet, length of exposure, and wavelength of radiation, paying particular attention to commercial species and species known to be critical elements of the ecosystem. The experimental zooplankton are kept in seawater taken directly from the Sound, and are illuminated by sunlamps with filters to vary the intensity.

Experiments so far have been conducted on three commercial shrimp species, with dramatic preliminary results, according to Damkaer. Newly hatched shrimp larvae were exposed to white light and to ultraviolet radiation for 3 hours a day. After 12 days, 74 percent of the larvae that were exposed only to white light were still alive; fewer than 18 percent had survived the ultraviolet treatments. Furthermore, Damkaer said, the development of the shrimp exposed to ultraviolet was retarded.

Although it has not yet been possible to determine exact subsurface ultraviolet light levels, Damkaer speculates that shrimp larvae may already be living near their tolerance limit for ultraviolet, and that a slight increase could be damaging. In fact, plankton life cycles may be timed to seasonal changes in ultraviolet radiation from the sun. Zoologists have wondered why the breeding period for shrimp is not at times when food is most abundant. The difference may be due to ultraviolet levels. "Perhaps their late winter, early spring, breeding period has evolved to

coincide with a period of low ultraviolet levels and fair food supply," Damkaer suggested. "Perhaps poorly understood fluctuations in some plankton populations parallel fluctuations in ultraviolet radiation."

The NOAA scientists are now focusing on the larvae of crabs, who seem to have a greater tolerance to ultraviolet, according to Damkaer. This study is still in its preliminary stages.

Food Fish Market Review Reported

Canned salmon consumption in the first half of 1977 was 50 percent above the first half of 1976 as prices of major fishery products hit record levels, according to an economic analysis by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. The Commerce Department agency report said supplies of tuna were restricted, resulting in increased prices and fewer sales, because the U.S. tuna fleet remained in port for about 2 months.

Salmon exports doubled, principally because Japan's heavy buying of fresh and frozen salmon, but continued above-average production of canned salmon in the remainder of 1977 was expected to sustain supplies and consumption at the previous year's level. Higher prices for major fishery products have caused increased price competition with meat and poultry and may have begun to affect sales of some finfish products, the analysis said.

Movement of sticks and portions and cod and flatfish fillets was practically unchanged, while sales of ocean perch fillets declined because of lower

supplies. Consumption of canned sardines was relatively unchanged.

Wholesale prices for fish sticks and portions increased 25 percent over 1976; cod fillet prices were up one-third; other fillet prices increased 5-8 percent. Canned tuna prices were 16-20 percent higher. Canned salmon prices were mixed; red salmon prices were higher, but canned pink and chum salmon prices were lower.

New supplies in the first half of 1977 were aided by record imports of fish blocks, an 18 percent increase in imports of canned sardines, a similar increase in raw tuna imports, and a 38 percent rise in groundfish landings. However, substantially lower imports of flounder, turbot, ocean perch, and halibut restrained supplies.

New supplies of finfish products will be limited by seasonally low landings, quotas restricting catches here and abroad, and strong overseas markets that may draw supplies away from the United States.

Supplies of finfish products should continue to meet quantities demanded, except that block, fillet, and halibut supplies are expected to tighten in the early months of 1978.

Demand was expected to remain good, except for some weaknesses in demand for sticks, cod fillets, halibut, and canned tuna. There may be increased resistance to record finfish prices, and increased competition from relatively lower meat and poultry prices, appearing to steady finfish prices.

Fishing Violations by U.S. Fishermen Reported

During 1977 there were more than 170 alleged violations of regulations governing the catch of cod, haddock, and yellowtail flounder by U.S. commercial fishermen in the New England area, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service has announced. Approximately 90 vessels were involved.

Under the regulations, a violation may result in a maximum administra-

tive fine of \$25,000, suspension or revocation of the license, or forfeiture of the catch and vessel. Mitigating circumstances may lead to recommendation of a lower penalty or downgrading of the violation to a citation, usually issued for minor infractions and not carrying a penalty. There were approximately 115 citations issued during 1977. Most of the alleged violations occurred when fishermen caught more fish per trip than authorized by regulations.

Proposed fines have ranged between \$500 and \$25,000 for each violation, depending upon the extent by which the authorized catch limits were exceeded. The average proposed fine for U.S. fishermen who exceeded the limits by 10-25 percent is about \$2,800; by 26-100 percent, about \$7,300; and by more than 100 percent, about \$21,000.

It is estimated that more than 1.3 million pounds of cod, haddock, and yellowtail flounder have been landed by domestic fishermen in excess of the quotas of about 132 million pounds established by the regulations.

All fishermen have been notified of alleged violations pending against them for 1977. Following review by National Marine Fisheries Service headquarters, Notices of Violation are sent to the fishermen, telling them of the alleged infraction and the amount of the proposed administrative fine. They have 45 days to pay the fine or request a hearing.

The regulations, issued by the Secretary of Commerce, were implemented to enforce the Fishery Management Plan for Groundfish as developed by the New England Fishery Management Council and approved by the Secretary.

Winter of 1976-77 Chilled Gulf Stream to Unusual Depth

The severe winter of 1976-77 in the eastern United States caused the Gulf Stream system to give off unusually large quantities of heat to the atmosphere, according to a report by a National Oceanic and Atmospheric Administration (NOAA) oceanographer.

The Gulf Stream carries heat as well as water, and helps regulate the planet's temperature. In winter, the stream transports enormous quantities of water-borne heat energy northward, and yields up large amounts of this energy to the cold winter atmosphere. In 1976-77, the Gulf Stream system seems to have given up more heat than usual, leaving the northwestern Sargasso Sea chilled to depths as much as 100 m (300 feet) deeper than in more moderate years.

"The main surprise here is that a single severe winter could so disrupt recent warming trends," according to Ants Leetmaa, an oceanographer with NOAA's Atlantic Oceanographic and Meteorological Laboratories in Miami, Fla. In a recent issue of *Science*, Leetmaa described an exploratory cruise aboard NOAA's *Researcher* to the northwestern Sargasso Sea last spring, to observe the effects of the record-breaking winter. The area surveyed was roughly between long. 67° and 73°W, and lat. 32° and 38°N. Instruments that sense temperature, salinity, dissolved oxygen, and other physical properties of the sea were used in the investigation.

Ordinarily, seasonal cooling in this area in winter creates a "pool" of water with temperatures of about 64°F (18°C), with a well-mixed layer extending from the surface to about 1,000 feet (350 m), according to Leetmaa. The main thermocline—a layer where water temperature and density change sharply—occurs under this very stable layer of so-called "18-degree water." Thus, Leetmaa wrote, vertical shifts of the thermocline indicate changes in the volume of the pool of 18° water—and the extent to which the ocean has been cooled by the atmosphere.

Leetmaa found the thermocline south of the Gulf Stream had descended significantly after last winter. In the southwestern area, he detected the thermocline at slightly more than 2,400 feet (800 m), the deepest level discovered on the expedition. In more moderate years, he reported, this thermal boundary lies between 1,800 and 2,100 feet (600 and 700 m).

"It is very difficult to cool ocean

water to great depths by even half a degree, and push the thermocline down a hundred meters," Leetmaa wrote. "Enormous quantities of heat must be removed from the water column to change water temperature at all, and the deeper the cooling extends, the more heat has to be lost. For example, a half-degree temperature change in a column of water 500 m deep takes five times the heat loss of reducing the temperature by a half degree in a column 100 meters deep.

"Most winters don't have much effect on the volume—or temperature—of the persistent pool of 18° wa-

ter. But another winter like the last one could cool it down more, increasing the pool's volume and pushing the thermocline still deeper."

While the processes that create the persistent pool of 18° water in the Sargasso Sea are not well understood, Leetmaa noted that they may play a role in regulating global climate. "Some scientists," he said, "believe that the Gulf Stream system is partly sustained by the processes that create this relatively cold pool of water." That possibility will be explored in further studies by the Commerce Department researchers.

Charter Boat Owners Can Delay Taxes for Construction, Repair

Charter fishing boat owners can delay paying Federal taxes on income from their vessels and use the funds to construct new, or reconstruct used, vessels, under a new ruling adopted by the National Marine Fisheries Service's Fishing Vessel Capital Construction Fund program.

Under the regulation change made by the Commerce Department agency, a vessel is now qualified for the program if it is documented by the Coast Guard to operate in both the fisheries and the coastwise trade. Previously, only vessels documented solely in the fisheries trade were qualified. An additional qualifying factor for charter fishing vessels is that they be certified by the U.S. Coast Guard to carry more than six passengers. This requirement can be overcome by providing proof that the vessel is used for commercial purposes.

The Capital Construction Fund program allows fishing vessel owners to keep Federal taxes they otherwise would pay on income from the operation of their vessels, provided the taxable income involved is reserved for the construction of new vessels, or the reconstruction of used ones. The taxes deferred eventually are repaid to the

government through a reduction in the future depreciation allowed on vessels constructed or reconstructed under the program.

Charter fishing vessels also are qualified for another NMFS vessel assistance program, the Fishing Vessel Obligation Guarantee Program. Again, dual documentation is required and the six-passenger certification applies. Up to 15-year financing at reasonable interest rates is available under the Fishing Vessel Obligation Guarantee Program for the debt portion of vessel construction, reconstruction, or reconditioning costs. The 15-year ceiling on debt maturity would be increased to 20 years under a proposal now being considered.

Interim Policy Proposed on FCZ Joint Ventures

Foreign vessels within the 200-mile Fishery Conservation and Management Zone may be permitted to buy or receive fish caught by U.S. fishermen, under an interim policy proposed by the National Oceanic and Atmospheric Administration (NOAA) in February. Vessel owners wishing to participate in such so-called "joint ventures" with U.S. fishermen would be required to obtain permits issued under Preliminary Management Plans.

The permits would be issued by the Secretary of Commerce after it was determined that the fish to be sold or delivered by domestic fishermen exceeded amounts U.S. processors were capable of, and intend to, process. In addition, the amounts of fish caught by American fishermen could not exceed the limits established to insure a continued growth of the stocks. The foreign vessel applying for the permit also must have demonstrated the capability to process the American catch.

Several other factors would also be considered in issuing a permit: the potential for gear conflicts between U.S. vessels, the impact on U.S. consumers, prices at all levels, and the impact on employment in the fishing industry and on the income of domestic fishermen, processors, and industry workers.

Under the proposed interim policy, foreign countries would have to inform the State Department of the amounts of each species of fish they would obtain from U.S. fishermen, in addition to information normally furnished for a permit to fish within the 200-mile conservation zone.

The relevant Regional Fishery Management Council would obtain public comment on the applications, and would recommend to the Secretary of Commerce approval or disapproval, indicating any terms and conditions that should be contained in the permit. This recommendation would be reviewed with the Secretary of State and the Coast Guard, and approval or disapproval would follow. If the application were approved, it would be issued to the foreign country with any conditions and restrictions the Secretary deemed necessary.

Each application would be considered individually, and a permit would be valid only for the calendar year in which it was issued. Any permits issued would not set a precedent for permits requested in later years.

The proposed interim policy appeared in the Federal Register on February 8. A final policy is expected to be developed late this year. Prior to adoption it will be published and the public given an opportunity to comment on it.