

U55.302:F53/5



Fisheries Development

Wave of the Future

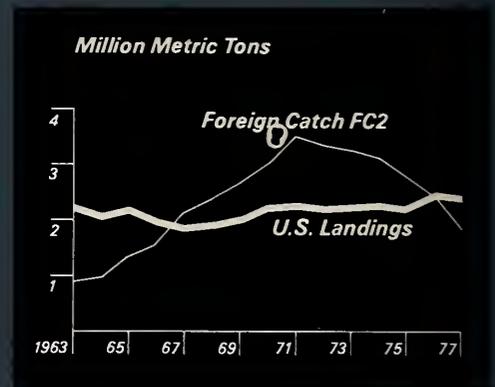


Fisheries development is a cooperative industry/government activity that identifies fisheries business opportunities and fosters growth

Our Nation's fisheries are a valuable resource that pumps more than \$7 billion annually into the U.S. economy from commercial fishing and related supporting activities alone, and several billions more from recreational fishing. There is ample opportunity to significantly increase this contribution.

Since 1970, our annual commercial fisheries landings have remained relatively static at 2.0 to 2.5 million metric tons. Fisheries resources available to U.S. fleets could, however, support a catch of more than 8 million metric tons annually.

Part of the potential increase in catches for U.S. fleets lies in the results of improved management of known resources. Part represents the replacement of foreign fleet activity in the U.S. fisheries conservation zone.



This chart represents total landings by U.S. commercial fisherman at U.S. ports and catches off U.S. shores by foreign fisherman, round weight, mollusk shells excluded.

Continued on page 4



**Improved management
of known resources**

C55 302-F53/5

STATE UNIVERSITY
DEC 21 1978
JIM N. DIRECTOR

Large concentration of squid near Santa
Catalina Island, California.

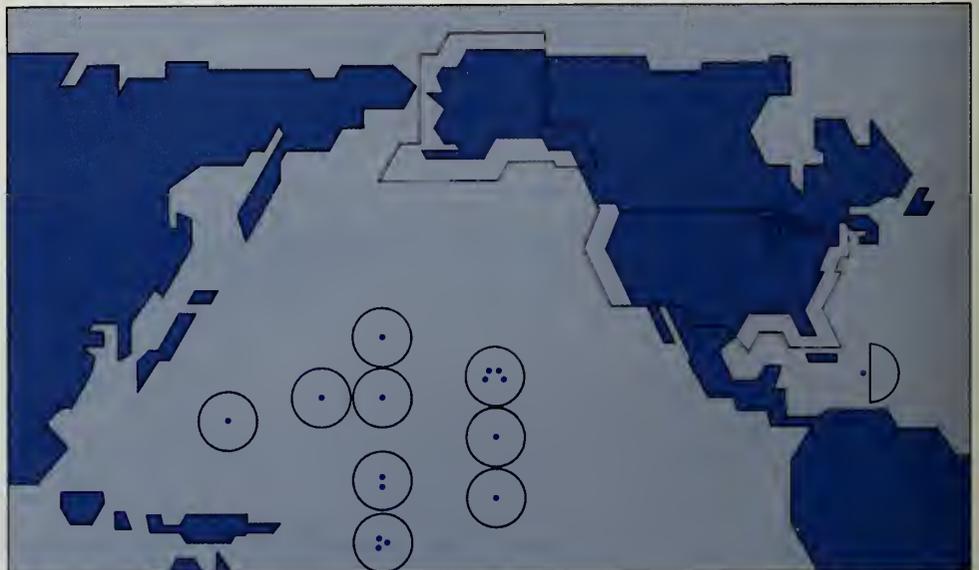


Replacement of foreign fleet activity in U.S. coastal zones

Gulf shrimp trawlers



Soviet BMRT stern trawler off the Washington coast.



United States 200-mile Conservation Areas.

Development of commercial markets for new species



Inspecting croaker on conveyor belt into processing plant.



Preparing an emulsion of fish muscle.

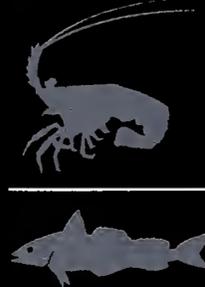
Processing minced sucker products.

We now allocate 1.9 million metric tons of fish to foreign vessels because domestic producers lack the capacity and business structure to catch and process these resources. A still larger part of the potential increase in U.S. production comes from among hundreds of species not now fished that await development and utilization as commercial fishery products.

An expanded fishing industry that can take fuller advantage of our fishery resources means more food, more jobs, more income, a reduction in trade imbalances, more high quality protein, and other benefits. U.S. fleets now supply only about one-third of the edible fishery products consumed in the United States. Two-thirds is imported from a host of other countries. The domestic development of our fisheries potential could result in U.S. fishermen supplying two-thirds of our edible fish and shellfish requirements, while building export markets as well. This could add \$8 to \$10 billion to the U.S. economy and create 200,000 to 300,000 new jobs in commercial fishing, food processing, and industries that support fishing.

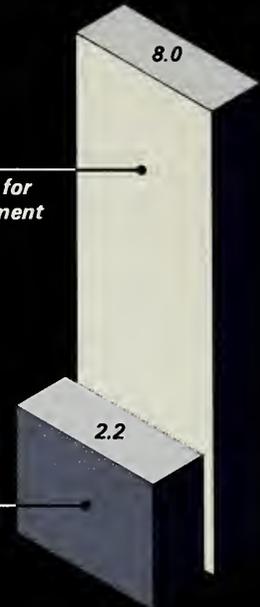
There are additional benefits for the economy and for consumers. Fisheries development can help the U.S. imbalance of payments by reducing our dependence on imports and paving the way for developing export markets. We now import about \$6 in fishery products for each \$1 exported. Our trade deficit in fisheries products alone is over \$2 billion annually. The potential exists to narrow this gap significantly. In brief, fisheries development will produce benefits to industry, to consumers, and to the United States as a whole.

There is a Potential for More Than Tripling the U.S. Catch of Fish and Shellfish



Potential for Development

1970-76 Average



U.S. Landings of Fish and Shellfish in millions of tons

The Substantial Contribution Made by Fisheries to the U.S. Economy can be Significantly Increased

Fuller Utilization of U.S. Fisheries by U.S. Industry Would Create a Substantial Number of Jobs



Value Added to U.S. Economy from Commercial Fishing in billions of dollars

200,000 to 300,000 Potential New Jobs

Potential for Development

1970-76 Average



Fisheries-Related Employment in the United States in thousands of jobs

Services provided by The National Oceanic and Atmospheric Administration (NOAA)

Primary Government responsibility for fisheries development in coastal waters rests with the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce. Within NOAA, Federal fisheries development programs are administered by the National Marine Fisheries Service (NMFS). In addition the NOAA Office of Sea Grant supports fisheries development activities at the State and local level by providing grants to qualified colleges, universities, and other agencies and institutions.

National Marine Fisheries Service (NMFS)

The NMFS role in fisheries development is catalytic in nature. NMFS brings together people from industry, the States, and other Federal agencies so that a broad range of resources and talents can be brought to bear on developing our fisheries potential. NMFS assists in identifying and analyzing the opportunities for fisheries development. Efforts are made to reduce barriers such as a lack of fishing and processing technology, institutional barriers, a lack of suitable product forms, acceptable quality, or consumer information. NMFS assists in transferring available information about lesser used species to fishermen, processors, sellers, and consumers. NMFS also provides certain services to the domestic fishing industry. These services include financial assistance, industry and consumer education, market development assistance, product standards development, product inspection, and market and trade information and forecasts.

There are regional differences in the types and quantities of untapped fisheries resources available, the ability of industry to take advantage of development opportunities, and in philosophies about how to develop fisheries. Because of this, the NMFS approach to national fisheries development is often on a regional basis.

NMFS development programs are financed both from funds appropriated by the Congress and tariffs on imported fisheries products.

Several NMFS activities impact on developing less popular fisheries and in strengthening existing fisheries. The more important of these are:

Resource Assessment This NMFS program identifies and measures the seasonal and year-to-year variation in U.S. fishery resources. Essential for the management of the Nation's fisheries, this work also provides a growing data base on lesser-known resources and is an important source of information for use in fishery development efforts. For most species with commercial potential, NMFS scientists know their areas of concentration, their relative volumes and productivity, and their seasonal movement.

New Technology Development for New Species NMFS personnel and contractors develop equipment designs and techniques to improve the capture and processing of underutilized species. This work includes: (1) conceptual design and experimental fishing with new gear; (2) developing and testing new or improved handling and processing techniques to preserve quality; and (3) identification of the edibility characteristics of each species and development of new product forms and standards.

Market and Trade Development and Services NMFS has education programs for consumers and retailers to familiarize these groups with the nutritional and economic values of seafood, and the methods of handling, preparing, and using fishery products. Although less popular species are emphasized, traditional species are also featured in many of the activities. This activity both provides the means for communicating about species which are being developed and helps correct temporary supply/demand imbalances in the marketplace for traditional species. In addition, NMFS helps foreign buyers and domestic producers get together to develop export markets for U.S. fishery products. Other activities include:

- Fishery marketing and consumer specialists who provide consumer and trade information and assist processors in product development, introduction, and testing.
- A National Fishery Education Center develops consumer and trade

education materials such as fish charts, recipe booklets, educational brochures, and slide presentations.

- National Market Situation and Outlook reports review current conditions in the marketplace and provide three to six-month outlooks of supply and demand conditions for major fisheries products.

- A Fishery Market News Service provides current information on prices, market conditions, production, imports, exports, cold storage holdings, and

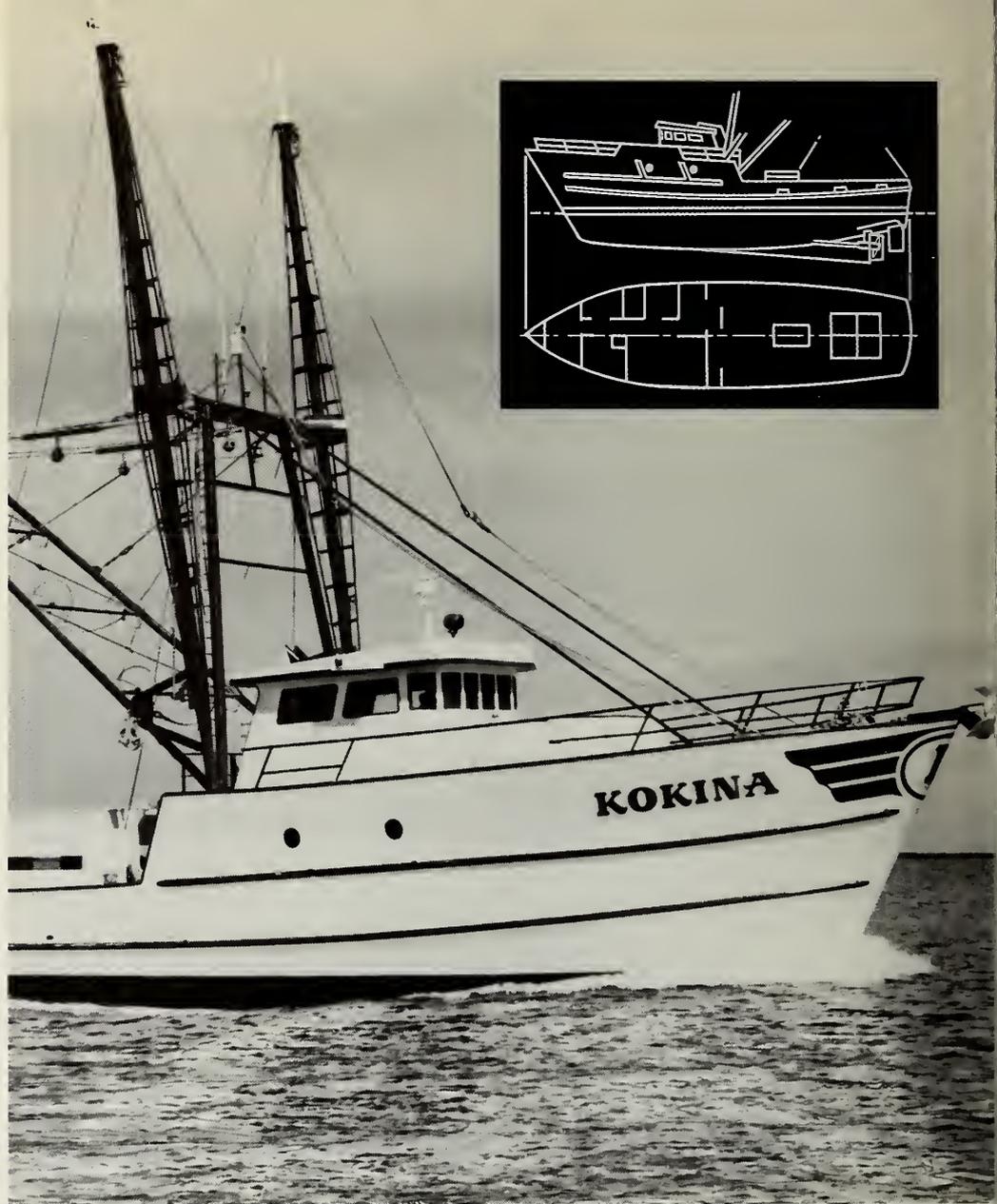


Studying growth rings to determine age of fish.

Assisting in the development and financing of new fishing vessels.



Observing feeding habits of lesser-known species.



market receipts of fishery products in major fish trading centers.

• Arrangements are made for fishing industry participation in export marketing seminars and foreign trade fairs through cooperative efforts with other agencies such as the Agriculture Department's Foreign Agricultural Service and the Commerce Department's Industry and Trade Administration. Several Commerce Department organizations work with NMFS seeking to find domestic and export markets for nontraditional species.

Economic Analyses of fishery development opportunities are made to help set program priorities and to provide venture analyses. Economic analysis also results in recommendations to U.S. negotiators on the need for fisheries tariff protection and removal of foreign import restrictions.

Inspection Services and Product Standards NMFS provides a voluntary inspection program which is paid for by its users. Seafood producers, packers, brokers, and buyers may subscribe to a variety of inspection services for plant and vessel sanitation; product inspection for wholesomeness and condition; product grading for quality; chemical, physical, or microbiological analyses, or general consultative services. Inspection certificates are issued attesting to the results of the inspections or analyses. Inspection marks appear on product packages meeting necessary standards. Standardization activities are an integral part of the NMFS program on seafood inspection quality, safety, and identity. Standards are developed to delineate

uniform product requirements for quality, safety, and suitability for consumption.

Development of Suitable Market Names for Fishery Products Some resources are unknown to sellers and consumers. Even though a "new" species may be a good substitute for a well-known product, it is difficult to win acceptance for an unfamiliar name (e.g., Pacific hake or Gulf croaker). When the product itself is unfamiliar to consumers (such as squid to most Americans), the problem of winning acceptance is compounded.

NMFS has a program to develop a new uniform system for establishing market names for fishery products. The basis for the names are the edibility characteristics of the fish rather than the common or usual name of the fish used by fishermen and scientists. The new system will allow consumers to shop intelligently for seafoods. Further, this system will facilitate consumer

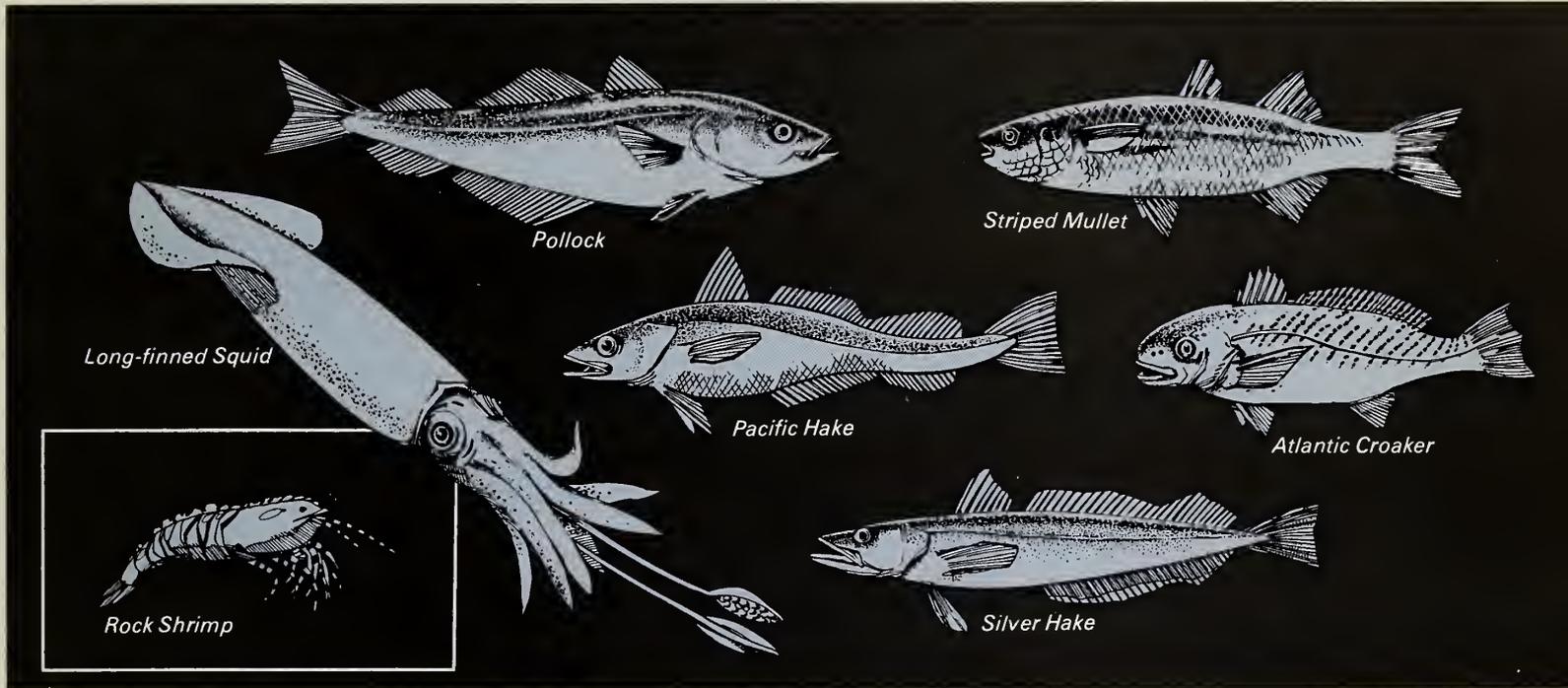


Studying life histories of commercial and recreational species.



Assisting in the marketing of fishery products.

Locating and identifying non-traditional species with commercial and recreational potential.



acceptance of many new species which have common names that adversely affect consumer selection. Industry representatives have been particularly supportive in helping NMFS develop this new naming system.

Financial Assistance Two NMFS financial assistance programs help the fishing industry obtain debt and equity capital for vessel construction and refurbishing.

The Fishing Vessel Obligation Guarantee program compensates for the fishing industry's general lack of access to private markets for long-term debt capital. The program through a federal guarantee makes long-term loans from the private sector available to the fishing industry at reasonable interest rates. Guarantee loans with maturities of up to 20 years are available under this program

for financing up to 87.5 percent of the cost of constructing or reconstructing vessels. This programs pays for itself through guarantee fees charged to users.

The Fishing Vessel Capital Construction Fund program compensates for the fishing industry's general lack of access to private markets for equity capital. It does this by allowing participants to defer paying the Federal tax they would otherwise have to pay on income earned from the operation of fishing vessels. Those Federal taxes can then be used to help pay for the cost of constructing or reconstructing fishing vessels.

This approach both reduces the portion of vessel construction costs that otherwise would have to be borrowed (debt) and accelerates the industry's ability to accumulate vessel downpayments (equity).

Both programs are also available to commercial vessels that carry fishing parties for hire, provided such vessels

have dual documentation in both the fisheries and coastwise trades.

Although tax-deferred funds under the Fishing Vessel Capital Construction Fund program can be used for high-risk ventures in fisheries development, the Fishing Vessel Obligation Guarantee program is limited to projects whose economic feasibility can be firmly demonstrated. Thus, the guarantee program cannot be used for less popular species until after commercial success has first been demonstrated.

Other fisheries financial assistance programs administered by NMFS provide indemnification against the risk of domestic fishing vessels being seized by foreign governments and make loans to domestic fishermen whose vessels or gear are damaged by foreign vessels operating in the U.S. fishery conservation zone.

Developing and testing new fishing techniques.

Sea Grant Programs

Research The Office of Sea Grant provides Federal grants to colleges, universities, and other institutions to support research, education, and advisory service programs in use of marine resources. At least one-third of the program funding comes from non-Federal sources. Projects include development of improved techniques and gear for catching fish, aquaculture studies, economic impact studies, searches for marine plant and animal extracts with medicinal properties, searches for uses of shellfish wastes, improvement of processing techniques, development of methods to improve product quality, and studies in other areas such as socioeconomics and ocean law. Several NMFS programs complement Sea Grant activities. Together they provide a research base far broader than either could alone and involve the best researchers in both government and university laboratories.

Education Educational programs supported by Sea Grant cover a wide range, from development of graduate and undergraduate courses to preparation of educational materials for elementary and secondary schools. Examples of Sea Grant education efforts are graduate assistantships for student participation in Sea Grant Research, technician training programs to meet shortages of skilled personnel, and development of new areas of expertise such as ocean law.

Marine Advisory Service Sea Grant Marine Advisory Service agents provide assistance to commercial and recreational fishing industries, seafood processors, supporting industries, and the general public. They are responsible for transferring knowledge developed in research programs to the users who need it and to alert researchers to needs, problems, and opportunities in the field. Agents also participate in programs to create a greater public awareness of marine affairs.



Collecting specimens for underwater research.



Other U.S. Department of Commerce Support

In addition to NMFS and Sea Grant, the Department of Commerce has several other agencies which assist fisheries development. These varied organizations provide grants, staff support, organization work, and information that can directly assist fisheries development.

Industry and Trade Administration

The Industry and Trade Administration operates both domestic and foreign business offices and assists the industry in importing and exporting products. Special efforts in construction with NMFS are being made to develop markets for new species through foreign trade fairs, trade missions to other countries, export seminars on how to sell products overseas, and programs where foreign buyers are brought to the United States to meet with domestic producers.

Economic Development Administration (EDA)

The EDA Office of Technical Assistance provides support by funding organizations working to produce jobs and economic opportunities. In the past it has funded port and harbor improvement projects and provided operational funds for foundations whose main function is development. EDA also funds specific development projects.

Regional Commissions

Each Department of Commerce Regional Commission provides a Federal/State partnership created to encourage and induce orderly, accelerated economic growth in the region. The membership of each Commission includes a Presidentially appointed Federal Co-chairman and the Governors of the respective States. Commitments are made to support long-range economic development programs that will result in permanent gains in income levels.



Protecting and developing marine habitat.



Locating and isolating food for immature shellfish.



Developing new methods to expand aquaculture.

Industry/government partnership

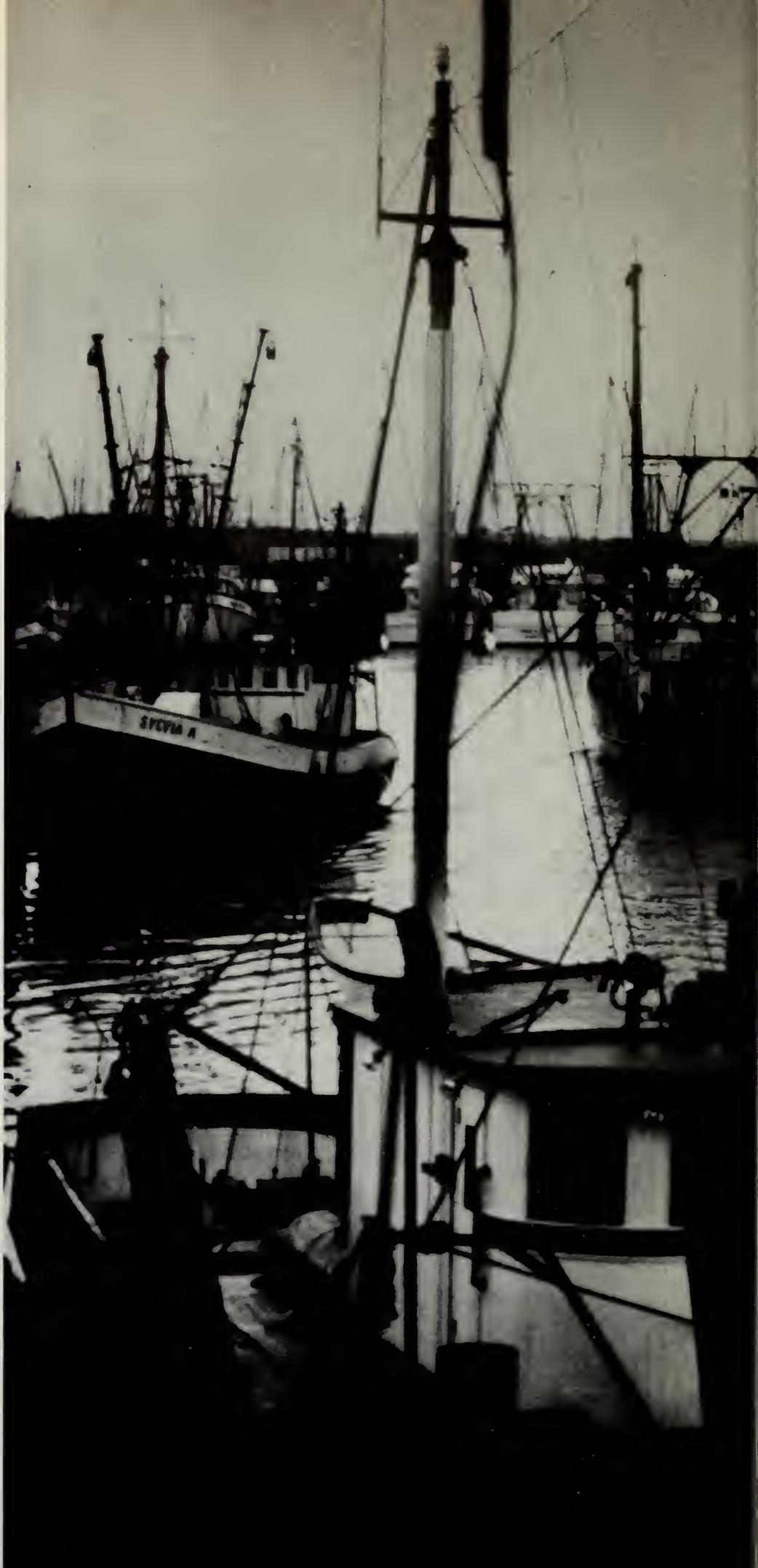
Various means of fostering fisheries development have been pursued. Some of the most successful have been industry-initiated efforts to establish functional, permanent, and effective self-help organizations to implement and supervise industry development projects. The following examples have been successful by providing a focus for industry participation through a single entity and by attracting government and private funds for their research and development needs.

New England Fisheries Development Program

This government/industry partnership was formed in 1973 to develop lesser-known fishery resources in the New England area. Program leadership is provided by a Task Force of industry advisers from the New England Fisheries Steering Committee. Key State officials also participate in the planning process. An NMFS program manager was appointed to oversee projects and coordinate NMFS technical support. Sea Grant institutions throughout New England have made a large contribution to this program.

The primary aim of the program is to help develop economically sound industries from species previously unused by the U.S. industry. To accomplish this, all aspects of the selected species are studied, and development efforts are evolved to meet the specific needs of each species. Research and development work includes reviewing data on resource availability; developing new harvesting technology or adapting already existing harvesting methods; developing efficient handling, storing, and sorting methods for vessels and plants; reviewing current technology, its applicability to the new species, and the development of new technologies if necessary; investigating various product forms in both domestic and foreign markets; and developing new or expanded markets. The impact of the program is estimated to be an annual \$20 million increase in the New England economy and an increase of 850 new jobs during 1973-76.

Vessels of the Atlantic fishing fleet.



Pacific Tuna Development Foundation

There are vast, latent tuna resources in the Central, Western, and South Pacific that can provide the basis for a cooperative development program by the U.S. tuna industry and by the people of Hawaii, American Samoa, Guam, and the Trust Territory of the Pacific. Funding for the Pacific Tuna Development Foundation is provided by NMFS Saltonstall-Kennedy funds (fees from tariffs on imported fishery products), industry, and the Pacific Islands Development Commission. The main objective of the island areas is to provide employment and economic development in their areas. The tuna industry's objective is to find additional supplies of raw material and fishing areas for its expanding fleet.

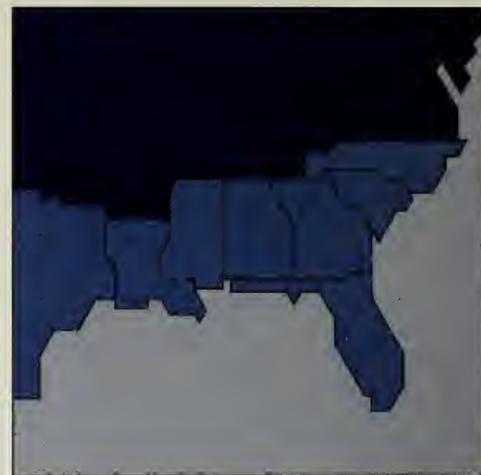


School of tuna in the Pacific Ocean.

Gulf and South Atlantic Fisheries Development Foundation

The Gulf and South Atlantic Fisheries Development Foundation was chartered in 1976 with representatives appointed from existing fisheries industry organizations from Texas to Virginia. Operational funds were provided primarily by an Economic Development Administration (EDA) grant with additional contributions by

participating industry organizations. Project funds were provided by EDA and the Coastal Plains Regional Commission. NMFS provided staff support for the Foundation until an executive director and administrative assistant were hired. Projects include developing midwest markets for Southeastern underutilized species, conducting a mackerel seining demonstration project in the Western Gulf, preparing a seafood industrial park feasibility study for the State of Florida, and preliminary work on several other projects.



Fishing for croaker in the Gulf.





Alaska Fisheries Development Corporation

The Alaska fishing industry believes that it is imperative to have a single entity to evaluate the research and development needs of the fishing industry in Alaska, to solicit and secure public and private funding for research and development projects and disseminating results and conclusions of the projects, and to work with the public and private sector to stimulate and encourage development of the fisheries in these waters.

The industry has formed a nonprofit corporation, the Alaska Fisheries Development Corporation, the membership of which will reflect equitably the interests of both fishermen associations and processors from all sections of Alaska.



Bringing Alaska king crab on board.



Unloading halibut.

The National Marine Fisheries Service and Sea Grant provide a broad range of services to fishermen, dealers, processors, wholesalers, retailers, food service firms, and consumer groups.

Consult the following offices for more information regarding research, market development and other fishery development services.

National Marine Fisheries Service

Terry L. Leitzell

Assistant Administrator for Fisheries
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7283

Jack W. Gehringer

Deputy Assistant Administrator
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7243

Winfred H. Meibohm

Executive Director
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7292

Joseph W. Slavin

Acting Director, Office of Utilization
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7261

David H. Wallace

Director, Office of International Fisheries
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7514

Roland F. Smith

Acting Director, Office of Resource
Conservation and Management
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7218

Robert F. Scott

Acting Director, Office of Science and
Environment
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7469

John T. Everett

Chief, Fishery Development Division
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7451

Thomas J. Billy

Chief, Seafood Quality and Inspection
Division
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7458

Michael L. Grable

Chief, Financial Services Division
National Marine Fisheries Service
Washington, D.C. 20235
(202) 634-7496

Bob E. Finley

Director, National Fishery Education
Center
100 East Ohio Street
Chicago, IL 60611

National Marine Fisheries Service

NMFS regional offices are responsible for planning, organizing and implementing fishery management, conservation, and development programs.

Regional Directors

Northeast Region

William G. Gordon
14 Elm Street, Federal Building
Gloucester, Massachusetts 01930
(617) 281-3600 Ext. 200

Southeast Region

William H. Stevenson
9450 Gandy Blvd.
St. Petersburg, Florida 33702
(813) 893-3141

Southwest Region

Gerald V. Howard
300 S. Ferry Street
Terminal Island, California 90731
(213) 548-2575

Northwest Region

Donald R. Johnson
1700 Westlake Avenue, North
Seattle, Washington 98109
(206) 442-7575

Alaska Region

Harry L. Rietze
P.O. Box 1668
Juneau, Alaska 99802
(907) 586-7221

**National Marine
Fisheries Service**

Northeast
Robert Temple
191 Maine Street
Gloucester, Massachusetts 01930
(617) 281-3600 Ext. 214

Northwest
Robert Balkovic
1700 Westlake Avenue, North
Seattle, Washington 98109
(216) 442-5366

**Regional Fisheries
Development Chiefs**

Southeast
Jack Greenfield
9450 Gandy Blvd., North
St. Petersburg, Florida 33702
(813) 893-3271

Alaska
Walter G. Jones
P.O. Box 1668
Juneau, Alaska 99802
(907) 586-7224

Southwest
Howard O. Ness
300 South Ferry Street
Terminal Island, California 90731
(213) 548-2518

**National Marine
Fisheries Service**

NMFS fisheries centers conduct multidisciplinary research to provide fisheries management and development information to support national and regional programs of NMFS.

Southwest Fisheries Center
Izadore Barrett, Director
8604 La Jolla Shores Drive
La Jolla, California 92038
(714) 453-2820

**Fisheries Center
Directors**

Northeast Fisheries Center
Robert L. Edwards, Director
Woods Hole, Massachusetts 02453
(617) 548-5123

Northwest and Alaska Fisheries Center
Dayton L. Alverson, Director
2725 Montlake Blvd., East
Seattle, Washington 98112
(216) 442-4760

Southeast Fisheries Center
Richard Berry, Acting Director
75 Virginia Beach Drive
Miami, Florida 33149
(305) 361-5761

Office of Sea Grant

Office of Sea Grant
Ned A. Ostenso, Director
National Sea Grant Program, NOAA
Washington, D.C. 20235
(202) 634-4120

Dr. Hugh J. McLellan, Associate Director
Grants Management and Head,
Environmental Studies Division
National Sea Grant Program, NOAA
Washington, D.C. 20235
(202) 634-4019

Robert D. Wildman, Deputy Director
National Sea Grant Program, NOAA and
Head, Living Resources Division
Washington, D.C. 20235
(202) 634-4028

Robert J. Shepherd, Associate Director
Marine Advisory Services and Head,
Human Resources Division
National Sea Grant Program, NOAA
Washington, D.C. 20235
(202) 634-4132

Arthur G. Alexious, Associate Director
Program Development and Head,
Non-Living Resources Division
National Sea Grant Program, NOAA
Washington, D.C. 20235
(202) 634-4019

Richard C. Kolf, Head
Commercial and Development Division
National Sea Grant Program, NOAA
Washington, D.C. 20235
(202) 634-4124

The Fisheries Conservation and Management Act of 1976 conferred upon the U.S. fishing industry priority rights to harvest millions of tons of fishery resources now being used primarily by foreign fishing nations. However, access to these fisheries does not automatically generate a renaissance in the U.S. fishing industry. We now must develop the capacity to harvest, process, and market these resources at a profit to the industry, and in the public interest as a stimulus to the U.S. economy. Diversion of these resources from foreign fisheries to U.S. utilization can help greatly to lessen our enormous negative foreign trade balance, now some \$2.1 billion for fisheries products alone. Full domestic realization of our national fisheries development opportunities will bring under U.S. control a rich flow of protein food from the sea—a renewable strategic resource of great potential importance now and for the future.

Photo Credits:

Credits for photos from left to right are separated by commas, top to bottom by dashes.

Cover: Earnest Braun from The Image Bank.

Cover Inserts: Mark Joseph, Joe Upton, Joe Munroe from Photo Researchers, Inc., Mark Joseph

1: J. Sill from The Sea Library/PO

2: Ed Smith - William High

3: Sea Grant, Ed Smith - NOAA Magazine

5: NMFS

6: William High

7: George Mattson, NMFS

8: NOAA Magazine

9: Sea Grant

10: H.P. Mefford

12: Ed Smith

13: Martin Litton from Photo Researchers, Inc., Marine Construction & Design Co. (MARCO)

Inside back cover: Jim Amos from Photo Researchers, Inc.





U.S. Department of Commerce
Juanita M. Kreps, Secretary

National Oceanic and
Atmospheric Administration
Richard A. Frank, Administrator



National Marine Fisheries Service
Terry L. Leitzell
Assistant Administrator for Fisheries

