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Chairman – J. R. Jackson, Jr., *Manager,*
Exploration Department Environmental Affairs,
Exxon Company, Houston, Texas

Multiple-use Conflicts between Fishermen and other Users of the Ocean with a Consideration of a Possible Expanded Federal Role

ROLAND F. SMITH
Chief, Office of Living Resources
Office of
Associate Administrator for Marine Resources
National Oceanic and Atmospheric Administration
Rockville, MD 20852

There was a time when commercial fishermen were the dominant users of ocean space over mid- and outer-continental shelf areas. Since World War II, however, the fisheries as well as other ocean industries and ocean-related activities have increased dramatically, and multiple-use conflicts have occurred in areas never before subjected to such pressures. Recent concern among fishermen about this increased competition for ocean space has been brought about largely because of greatly expanded efforts to extract fossil fuels from offshore areas, many of which also are our most productive fishing grounds. However, offshore oil and gas development is not the only multiple-use conflict experienced by commercial fishermen, as we shall see.

Assessing the potential environmental impact of commercial and industrial activity on living marine resources is a statutory responsibility of government, both federal and state. This mandate is carried out with important contributions from academia, industry, and the general public. It is a regulatory and advocacy role well-recognized and generally accepted by everyone.

The purpose of this paper is to consider the various types of multiple-use conflicts faced by commercial fishermen, and to review the role of the Federal Government in helping fishermen and workers in other industries to make a living on the same ocean at the same time. I propose to discuss the non-environmental factors – that is, the physical, economic, and social aspects of ocean development that may affect the ability of fishermen to function effectively

under mounting multiple-use conflicts. These problems are not new; but they are no longer localized to a few fishing ports or on isolated fishing grounds. Instead, they occur coast-wide – indeed, worldwide. They are becoming far more complex and have potential impacts on many more fishermen. The conflicts occur because of competition for ocean space and port facilities, competition for labor and services, and pressures upon the fisherman to change his life style. Such competition and pressures may cause injury, endanger lives, damage vessels and gear, create costly delays, or force a fisherman against his will into other occupations or social patterns.

Listed here are major categories of ocean activities that may conflict or compete with U.S. commercial fishing operations, as follows: (1) Foreign fishing, (2) Marine recreation, (3) Shipping, (4) Offshore installations, (5) Submarine cables, (6) Ocean dumping, (7) Marine mining, and (8) Offshore oil and gas exploration and recovery[1].

(1) Foreign Fishing: Conflicts between United States and foreign commercial fishermen have been highly publicized, especially in areas such as Georges Bank, where U.S. fishing vessels must compete with the larger and faster trawlers and factory ships of foreign nations. Competition is for both the resources and for ocean space, resulting in decline of stocks, collisions, and gear losses. International negotiations have produced better conservation regulations and methods for dispute settlement, but the problems continue among fishermen and fishing nations. Under extended fisheries jurisdiction, it will be possible to reduce this type of conflict as mechanisms are established to allocate resources and reduce excessive fishing effort.

(2) Marine Recreation, especially boating and fishing, is one of our most rapidly expanding ocean activities. While data are unavailable, observations suggest that the number of commercial fishermen displaced or inconvenienced by the expansion of port facilities to accommodate recreational boaters exceeds those similarly affected by offshore oil and gas development. Significant competition for certain resources as well as ocean space also has developed between some recreational and commercial fishing groups. Here, too, with the authority soon to be obtained through extended fisheries jurisdiction there is an opportunity for the states to work with the Federal Government to help reduce these kinds of conflicts.

(3) Commercial Shipping tonnage has more than doubled in the last 20 years and is expected to double again in the next decade. Super carriers (above 100,000 dead weight tonnage) will increase in number and will change drastically ocean routes, cargo flows, port developments, and even the demographic

[1]Statistics used in this discussion under items 3 to 8 were obtained largely from the report "The Effect of Increasing Multiple-Use of Ocean Space and Resources on World Fishery Production and Extraction," by Robert P. McGeevy, University of Washington, Institute for Marine Studies, Washington. Working Paper #4 prepared for the 8th Session of ACMRR and sponsored by the FAO Department of Fisheries and the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration.

patterns of coastal regions. Electronic and other vessel traffic control systems will become much more common in areas with heavy ship traffic; and while these will reduce collisions and gear losses, the added traffic will restrict commercial fishing in specific areas or at certain times.

(4) Offshore Installations on the nation's continental shelf areas will increase dramatically in variety and number in the coming decade. Besides oil rigs, these may include air and marine terminals, giant power plants, mineral extraction and desalinization facilities, other industrial complexes, storage areas (both surface and submerged), recreational facilities, and perhaps even cities. Most of these kinds of structures already exist somewhere in the world. In the United States, numerous offshore islands are being contemplated. Los Angeles plans an offshore airport; and of the 20 to 30 nuclear power plants projected by 1985 for U.S. marine areas, at least 8 to 10 will be located offshore. Such facilities will compete for ocean space and port facilities, and create navigational hazards; and the extent to which commercial fishermen will be impacted will depend on the area and the degree to which adequate planning has been undertaken to accommodate all interests.

(5) Submarine Cables: Contrary to popular conceptions, communications satellites will not replace submarine cables; on the contrary, by 1980, nearly double the existing capacity, or 27 million circuit miles of cables must be added. Submarine power cables also will increase, especially in connection with development of offshore installations such as power plants and industrial complexes. The major interference of these to fishermen is the snagging of trawling gear. This does not happen too frequently (68 transatlantic cable breaks in the past 15 years), but both fishermen and cable owners suffer severe economic losses when such accidents occur.

(6) Ocean Dumping activities are increasing worldwide; but it is now U.S. policy to regulate this practice and to develop alternatives to this method of waste disposal. We can expect to see, in the next few years, the start of a decline in the amount of waste materials disposed of in the U.S. coastal areas; consequently, a reduction in the amount of fishing area destroyed or rendered unavailable for fishing. This reversal in the historical trend is already in evidence in the Gulf of Mexico, where ocean dumping of industrial wastes has dropped substantially since 1973. Around the United States there are 119 approved ocean dump sites, 98 of which are used for dredge spoil. The remaining 21 (mostly in the northeast) are used for sewage sludge, industrial wastes, and construction debris. Most of these dump sites are located in poor or marginal fishing areas. Thus, the competition for space is minimal. In some areas, such as in the New York Bight, pollution from ocean dump sites has spread to adjacent fishing grounds, driving away fish and shellfish or making them unsuitable for human consumption.

(7) Marine Mining: Many coastal areas will see increased development of offshore sand and gravel resources; dredging for fossil shells will continue although this is not expected to increase significantly; more facilities for the extraction of chemicals and fresh water from the sea are projected; deep-sea mining is on the verge of becoming commercially viable. All of these activities and their associated onshore processing plants and ship support activities will add to the competition for ocean space and port facilities used by fishermen.

(8) Offshore Oil and Gas Developments: Because this aspect of ocean development has had the greatest publicity, there has developed an opportunity for all vested interests to become organized – resulting in a polarization of views and the concomitant flurry of activities associated with such emotional confrontations. Regardless, there are many important lessons to be gained, as will be noted later.

Since 1947, 2,075 platforms have been located beyond 3 miles and additional structures are being built to drill in water from 1,000 to 6,000 feet. These offshore structures and their land-based terminals are connected by pipelines. An indication of the intensity of this development can be realized by the fact that off Louisiana there is a total of 4,875 miles of pipelines.

In addition to the movement into deeper waters in the Gulf of Mexico, new areas off other sections of the U.S. coasts are in the process of being developed. Many of these are in areas of traditionally heavy and productive fishing by both domestic and foreign vessels, such as Georges Bank in the Northwest Atlantic and the Gulf of Alaska. For the United States, these offshore areas represent about 10% of the total known U.S. oil reserves,[2] but 30-40% of the world's oil production is expected to come from beneath the oceans and, again, is mostly from rich fish producing areas. Thus, the potential for conflict with commercial fishing operations amply justifies the concerns of fishermen.

All offshore structures and development create the same generic type of multiple-use problems for fishermen: (1) competition for space, (2) navigational hazards, (3) seabed obstructions, and (4) interference with fishing activities. The net result means that important fishing grounds can be lost, or rendered inaccessible to fishermen. The latter would come about because of the need to maintain sufficient distances from such structures to avoid collisions, especially in heavy seas or because of poor visibility, such as would occur at night or in fog. Sufficient distance also must be maintained to avoid entanglement of fishing gear in debris discarded from the offshore structures. Sea bed obstructions, such as those associated with the underwater completion of oil wells, inactive studs, and underwater pipelines can cause sizeable economic losses from damaged or lost fishing gear. These activities and operations associated with offshore structures can be particularly serious for bottom trawlers; other operations such as purse seining and midwater trawling are much less seriously affected.

[2]**Geological Estimates of Undiscovered, Recoverable Oil and Gas Resources in the U.S.– U.S.G.S. Circular 725; statistics from American Petroleum Institute and American Gas Association.**

Aside from the potentially serious environmental hazards from spills, dredging, and channelization, nearshore operations supportive of the offshore activities may, as noted earlier, compete with commercial fisheries for port space, service facilities, and labor to the point where the fishermen may be seriously disadvantaged economically.

Having listed the principal ocean activities that conflict with commercial fishing, and recognizing that the projected increase in such activities has the potential of creating much more conflict, what can be said about a possibly increased federal role to help resolve them?

In considering the need for an expanded federal role to resolve multiple-use conflict problems involving fishermen, it is relevant to review what has been accomplished in the past. Because of the amount of available documentation, experience with the oil and gas industry can provide an insight as to how similar or related future problems might be addressed.

The first lesson learned from oil industry – fishing industry conflicts is that it is possible to work together in mutual trust, to the benefit of both groups. However, every possible effort must be made to eliminate or reduce the conditions that can lead to confrontation. Haphazard and rapid onshore development of support facilities, terminals, refineries, petro-chemical plants, and others, will create congestion in local ports; excessive and costly competition for labor and services will occur, not to mention a host of other social and economic impacts on the local fishing community. Under such conditions, polarization of views are certain to develop; thus, greatly delaying workable accommodations.

We can also conclude from oil – fishing experiences that not all activities need to be located in the coastal zone. Even boat building is not so water-dependent that it cannot be conducted inland. The location, or relocation, of such activities to inland areas can take the pressure off coastal regions where limited space needs to be reserved for essential water-dependent activities.

Many conflicts between fishermen and offshore oil producers in the Gulf of Mexico were resolved by the oil and fishing industries working with appropriate agencies. When workable solutions were reached, the necessary regulations were promulgated by the U.S. Department of the Interior. Louisiana has pioneered in this approach and her success has had worldwide impact in terms of achieving better understanding of the problems and their solutions.

Recently, in New England, the Atlantic Offshore Fish and Lobster Association (with data supplied by the National Marine Fisheries Service) persuaded the Bureau of Land Managmeent of the Department of the Interior to withdraw from proposed lease sale 71 tracts on Georges Bank totalling 400,000 acres, on the grounds that fishing on these areas involves techniques which cannot be used where physical obstructions exist.

In the United Kingdom, good success in alleviating friction between offshore oil producers and fishermen is apparently being achieved through the Fisheries and Offshore Oil and Consultative Group, comprised of representatives of both industries and appropriate government agencies. This group deals with issues of a general nature and organizes subcommittees to handle specific problems. Direct

consultation may be arranged between individual oil companies and fishery representatives concerning specific problems such as pipeline routes. Small group meetings in local fishing ports are sponsored by bringing together skippers from fishing boats and those from supply boats and other support vessels.

To date, there has been no comparable U.S. federal activity which comes to grips with these kinds of non-environmental issues. Environmental impact statements, required under the National Environmental Protection Act of 1969 (NEPA), deal only indirectly with these kinds of problems. Yet, with the projected increases in ocean development and recent legislative authorities given federal and state governments (the Coastal Zone Management Act of 1972 [Public Law 92-583]; the Marine Protection, Research, and Sanctuaries Act of 1972 [Public Law 93-627]; the Deepwater Port Act of 1974 [Public Law 93-627]; and proposed extended fisheries jurisdiction legislation), something more may be required in the way of policy guidance and other assistance at the federal level.

NOAA is the federal agency responsible for the conservation of living marine resources and, as such, is actively involved in assessing the environmental impacts of ocean development. The National Marine Fisheries Service (NMFS) in NOAA is intimately concerned with the problems of recreational and commercial fishermen. A case can thus be made for placing responsibility for resolution of multiple-use conflicts involving fishermen in the National Marine Fisheries Service. Such a trend is already developing in some NMFS regions, where local commercial and recreational fishing groups seek out the Regional Director as the advocate for fisheries in these types of problems. This is because the Regional Director and his staff generally have good rapport with the fishermen and good communications with state and federal agencies concerned with encouraging and/or regulating those other ocean activities. What needs to be more effectively developed is better communication with the ocean developers. There is, in fact, a catalytic role which NOAA-NMFS can play in getting opposing factions together, and it can involve at least five major areas:

1. Insuring that each group clearly understands the other's problems and mode of operation.

Direct interaction between fishermen and other ocean industries is an essential first step in creating understanding and cooperation. Most of the conflicts between commercial fishermen and oil and gas producers in the Gulf of Mexico have been successfully resolved in this manner. For example, one of the major complaints of fishermen, the presence of debris on the bottom, cannot be resolved by regulation, but by a better understanding of the problems of the fishermen on the part of the skippers who operate the support vessels that service the offshore structures.

2. Keeping active and open channels of communication among all concerned parties.

As an activity develops in a new area of ocean space, a period of adjustment will be needed between the new user and fishermen. This early period of understanding and adjustment must be met with a good attitude on the part of both

users, thus it is most essential to keep lines of communication open at all times during this difficult period. In addition, the mechanisms which exist for communication and coordination among governmental agencies must be used fully and effectively so that the actions of one agency do not create unnecessary conflicts with user groups which may be another agency's concern.

3. Exploring the potential benefits that can accrue to both groups.

Fishermen can bring important and valuable skills, such as boat handling and knowledge of local hazards and weather conditions, to other ocean users. Other ocean industries can employ excess labor and equipment from the fishing industry; offshore structures can provide fishermen with weather observations, first aid, and other emergency measures. The fact that oil rigs attract and concentrate fish is a well-known example of how the activities of one group can benefit another.

4. Avoiding confrontations that force a "winner-loser" situation.

All parties must work to accommodate tradeoffs and compromises that are based on sound judgment and that lead to rational solutions. Other ocean industries should consult more with fishermen and with state and local governments to avoid last-minute confrontations and to ease the problems of adjustment caused by their increased activities. For example, consideration might need to be given to developing new fishing gear technology or different operating procedures that could easily be accommodated without seriously affecting fishing efficiency or costs. Essential port facilities and services of the new industry can be planned to also improve existing accommodations needed by fishermen.

5. Assuring that commercial and recreational fishing interests get proper consideration in regional economic analyses and planning activities that relate to other ocean industries.

The Office of Coastal Zone Management, the Office of Sea Grant, and the National Marine Fisheries Service—components of NOAA—can play an important role by providing essential data to assure that fishermen's contributions to the local culture and regional economics are recognized and given equitable consideration. In this connection, the National Marine Fisheries Service and the Fish and Wildlife Service are cooperating with the Office of Coastal Zone Management in the development of criteria which states can use to give full consideration to all fishing interests in the development of state coastal zone management plans.

In summary, we are moving into an era of dramatically increasing activity and development throughout most of our continental shelf area. This will have a

tremendous impact on the economy and social patterns in many of the nation's coastal communities, and the ultimate effects are difficult to predict. There is no shortage of prophets, however, ranging from those who see nothing but gloom and doom to those who liken the coming decade of ocean development to the Golden Age of Sail that stimulated the economic development of New England in the mid-1800s. The truth is obviously somewhere between these extremes, but where and how we end up on this continuum depends on how well we all plan and work together – a trite phrase perhaps, but nevertheless containing the truth that leads to triteness. The fact is that there are no major technical problems impeding ocean development that are beyond the capacity of science and engineering to solve. The real problem is in the resolution of social, economic, and other multiple-use conflicts. This is perhaps the area the Federal Government – especially NOAA – needs to address in a more positive manner, to ensure equitable consideration of our important fishing industries.