

VIEWS CONCERNING USE OF THE LIVING RESOURCES OF THE CALIFORNIA CURRENT

GERALD V. HOWARD, Regional Director
Pacific Southwest Region
Bureau of Commercial Fisheries
Terminal Island, California

I have been asked to express the views of the Bureau of Commercial Fisheries concerning the legal, economic, sociological and technological problems impeding the best use of the living resources of the California Current and how they can be resolved. The impediments are generally rather well known. It is their resolution which presents the challenge.

A major objective of the programs of the Bureau of Commercial Fisheries is to seek the resolution of problems which handicap the economic well-being of the domestic fishing industry and hinder the best use of the fishery resources. Success of Bureau research and service programs, however, depends on close collaboration and cooperation with other parties, especially State agencies.

Pertinent to the present discussion is that regulation of fishing in the United States, aside from that done under treaty with other nations, is done under State laws rather than Federal statutes. As a result, the States have major influence or control over the development and utilization of the nation's fishery resources. Bureau influence is largely advisory and, depending on the policy of the States, its role is active or passive in the development and rational utilization of the aquatic living resources.

To a considerable degree, varying with the situation, State and Federal fishery programs are both complementary and interdependent. It is common, for example, for the Bureau to provide research information of vital importance to a State and for State policy and regulations to affect sharply the degree to which Bureau goals can be attained. The interdependence of State and Bureau programs means that team work is essential and that a vigorous State agency is important to the Bureau and vice versa.

IDENTIFICATION OF THE PROBLEMS

The title of the present session of this symposium categorizes the problems which are impeding the best use of the living resources of the California Current as legal, economic, sociological and technological. I will treat the legal and sociological problems as one category and the economic and technological problems similarly. In each instance the pair is so closely related.

It is also convenient to categorize the principal fisheries which operate in the California Current because they have quite different characteristics and problems. I would identify three, the "tuna" fisheries which take the tropical and temperate tunas; the

"wetfish" fisheries which harvest mackerels, anchovies and bonito; and the "bottomfish" fisheries which harvest, though not exclusively, species taken by trawling.

Californians generally do not think of the tropical tunas as a resource of the California Current, probably because they occur in its southern extension off Baja California and rarely in commercial quantities off southern California. I have included them not only because they support California's most important fishery, but because the long-range tuna fleet's experience in overcoming economic difficulties has been more successful than that of other elements of the California fishing fleet. I especially wish to mention things that the tropical fleet has done to place itself in the more enviable situation.

A major factor preventing the rational use, including expansion, of U.S. fisheries, lies in regulations existing at the State level. Tabulations exist in various recent publications which indicate that California has a share of prohibitions against efficient fishing and better utilization of the resources available to the several users. This group is well aware of the restrictions on the kinds of commodities into which fish may be manufactured. You are well acquainted with the restrictive quotas applied to the anchovy fishery with respect to the total quota and the geographical quotas. You also know that there are prohibitions against certain gears and the capture of certain species for commercial use.

The objective of too many regulations, unfortunately, has not been to maintain the fish populations at levels which permit maximum sustainable yield and to assist in their efficient and equitable harvest. Rather, the origin has been sociological and has resulted too often from conflicts between and among users of the resources—conflicts between sport and commercial fishermen, among sportsmen and among commercial fishermen. Regulations which have that basis permit neither maximum use of our fishery resources nor their efficient harvest, and they inevitably discriminate against some users.

In that connection, it is encouraging that a number of recommendations have been made recently for a policy for the management of the marine fishery resources which, if adopted, should go far to remove legal and sociological barriers which impede the best use of California's living resources of the sea. The recommendations which are similar, appear in *California and Use of the Ocean* (University of California, Institute of Marine Resources, IMR Reference

65-21, October 1965) and *California Fish and Wildlife Plan* (California Office of State Printing, Volume 1, Summary January 1966) and *Proceedings of the Governor's Advisory Commission on Ocean Resources*. References for the recommendation made by GACOR are provided in *Compilation of Recommendations of the Governor's Advisory Commission on Ocean Resources* (December 20, 1966, State Office of Planning, Department of Finance). Although the separate recommendations differ slightly, essentially they urge that the marine resources be managed to attain the optimum sustainable yield while encouraging efficient harvest. They recommend that where recreational interests are involved, priority should be given to reasonable and legitimate demands of recreation and that the commercial fishery should be encouraged to use any harvestable surplus. Implementation of that policy would be appropriate for the situation in California. It would go far to eliminate conflicts among users of the resources and thereby automatically contribute to the efficiency of commercial fishing.

Implementation of a management policy like that described would make it much easier to tackle the major economic problem which has long confronted California fishermen—the competition from imported fishery products from other states and foreign countries. At least 50 percent of the fresh and frozen fish and perhaps 80 percent of the fish meal utilized in California are imported. Whereas present requirements for these products exceed the landings, local catches are delivered in a manner and at prices as to limit their sale. The fact that California fishermen must pay higher prices for vessels, gear, salaries, boat repairs and insurance is largely responsible for their higher production costs.

Much more attention must be given, now and in the future, to means of lowering the cost of catching fish and improving the quality of the landings if California fishermen are to compete successfully and to increase their share of markets in California and elsewhere. The key to accomplishment in this area is the application of technological advances. An array of technological improvements are required. Among them are improvements to existing vessels and gear, new types of vessels and gear, improved practices of handling and holding of fish at sea, improved processing techniques and new products. The application of ocean research results to improve fishing strategy also has its place.

The introduction of improved technology in the fishing industry obviously requires money. Except for the tuna fisheries, investment capital has not been attracted to our fisheries for many years and fishermen generally have had difficulty obtaining loans to outfit, repair and replace their vessels. The situation described has been particularly critical for the wetfish fleet based in San Pedro. The plight of the wetfish fishermen stems from the competition from imports but it is compounded by the small quota of anchovies for reduction purposes. Were the quota higher, volume of production conceivably would reduce unit production costs.

Beyond the application of technological advances and the need for capital, marketing of the catch is yet another problem in some fisheries of the California Current. There appears to be a need for vigorous marketing programs to expand the market available to the bottomfish producers, especially in northern California where vessels are on limits and unable to fish full-time. It would seem that well directed activity in this area might recover specialized markets now held by foreign products.

Comparison of events in the tuna fisheries with those in the wetfish fisheries and the bottomfish fisheries over the past decade attest to the contribution of technological advances and investment capital. The comparison is not entirely fair, however. Tuna is a high-priced fish; domestic demand for the catch exists; conflict among harvesters is minimum; and regulations are either not needed or based solely on the principle of maximum sustainable yield. Recovery of the tuna fishery from near disaster in the late 1950's caused by foreign competition is well known. Improvement in their situation resulted from the introduction of the purse seine power block which permitted conversion from bait fishing to seining and also the introduction of new vessels of advanced design. Today, this fishery probably is in the best economic condition of any large group of fishermen in the United States.

I should say the observations about the economic condition of the tropical tuna fishery are not meant to imply that tuna fishermen are without problems. They have many but, so far, the majority has demonstrated the ability to adjust to changing conditions and to make a profit.

Except for the tuna fisheries, California fishermen generally have been free of international problems which inevitably occur when more than one nation harvests the same resource. I will not get into the international problems of the tropical tuna fisheries but will mention that foreign harvesting of resources off California has begun. The degree of future impingement by other nations will depend to a large extent on whether California is adequately harvesting its resources. If it does and can prove it, foreign impingements can be controlled. Success here depends on the State's ability, together with the Federal Government through the Bureau, to establish a defensible position regarding the optimum harvest of the living resources occurring off its shores.

SOLUTION OF THE PROBLEMS

The fundamental step towards resolving the problems impeding the best use of the living resources of the California Current is adoption and implementation of a management policy like that previously cited. I refer to the management of the resources to obtain the maximum sustainable yield, with appropriate consideration to the interests of both commercial and sport fishermen in harvesting the resource.

It is clear to those of us in the Bureau, in the California Department of Fish and Game and the Scripps Institution of Oceanography who have been engaged

jointly in CalCOFI that the necessary scientific information is available for the State to manage the major resources in accordance with the policy described. Unfortunately, this situation does not appear to be generally well known to those outside this circle.

Since the capability to carry on a more enlightened system of management of the resources does exist and the impediment to its adoption perhaps may lie in conflicts among users, more effort needs to be spent preparing and disseminating popular material on the results of the scientific research which has been accomplished. It is important to remind ourselves that conflicts often arise not only due to lack of scientific facts but also due to the lack of presentation of known facts in an intelligible fashion. Certainly more effort is needed in extension activities of various kinds, and it is required on a continuing basis.

If a better job were done informing the public of research and management results, many of the conflicts we have grown accustomed to would not arise. It is safe to say that if the facts about our resources were better known squabbles between sportsmen and commercial fishermen and within each group, would subside to the point that fishermen might realize that they have more in common than they have to quarrel about. They would find that fluctuations in the resources are caused by such things as competition among the species and changes in the environment as well as by man and that it is possible to control the man's activities in a rational manner.

Besides maintaining fishery populations at levels which permit maximum sustainable harvest, regulations should be designed to encourage fishing efficiency. Harvesting efficiency is the key to successful competition with foreign fishermen because of our higher living standard. Historically, regulatory practices have often outlawed newly developed and more efficient gear or vessels in favor of old established units. Harvesting efficiency cannot be promoted if fishermen cannot take advantage of technological advances.

Aside from providing the basis for the rational use of the living resources, there are other important ways in which information resulting from fishery research or fishery oceanography can assist harvesting efficiency. The few areas which I will mention fall within the capabilities of the Bureau's Fishery-Oceanography Center at La Jolla and its Ocean Research Laboratory, Stanford. Research underway at these laboratories as it progresses will provide the fisherman with information which he can use to improve his tactical scouting and catching operations. Already considerable progress has been made in forecasting space and time variations in the distribution and abundance of albacore along the west coast. Also, radio advisories are provided to albacore fishermen as well as sea surface temperature charts which are used in their fishing operations. There is no reason why similar information and services cannot be developed for other fisheries in the California Current as we increase our understanding about the resources, provided the funding situation is favorable.

Besides the contributions which biological and oceanographic research and services can make towards the rational and efficient harvest of the living resources of the California Current, the Bureau looks to important contributions which can be made from research in technology, marketing programs and gear research.

Whereas government, both State and Federal, as well as the academic institutions, must assume the leadership for and the conduct of the biological and oceanographic work, the fishing industry should do an appropriate share of the work in marketing and technology. It is not entirely clear to me just who should assume the major responsibility for the gear research. I think that I favor the idea of researchers developing the understanding of how the biological characteristics of various species of commercial fish may affect their reaction to fishing gear of conventional and unconventional types. Such work can suggest or even demonstrate how fishing gear can be made more efficient. Application or adoption of the findings would be up to industry.

Unfortunately, too little attention is given to problems of handling of the catch at sea, its processing ashore, and its marketing and distribution to the consumer. Industries depending on the resources of the California Current would become more competitive if they could improve present methods in these areas, develop new products, reduce labor costs and recognize the markets of convenience. The fishing industry, if it is to compete with agricultural products and foreign fishery imports must be imaginative, creative and watch for the application of new developments. It spends too little for research and most of it is in the field of quality control rather than the other areas mentioned.

Solution to the problem of giving more attention to technology and marketing in California's fishing industries is difficult because, other than in the tuna industry, the plants are generally small and independently operated. Similarly, most vessels are independently operated rather than fleet controlled. Separately, small independent operators cannot contribute effectively to technological research and market promotion. It appears that somehow means must be taken to make it possible for industry to pool its resources and efforts.

Our Bureau, of course, has a small technological laboratory at Terminal Island and we also have a small marketing program. Our resources are not, nor likely to be, equal to the entire effort required in technology and marketing. Even if they were, I doubt that we are in a position or have the capability to judge best industry's requirements in all matters. I believe that we should continue to undertake special projects in these areas, to coordinate activities where appropriate and to assist in other ways according to need.

As mentioned earlier, money is a key requirement if the California fishing fleet is continually going to adopt advanced technology in its methods of opera-

tion as such becomes available. At the present time, fishermen generally have difficulty obtaining loans to finance the cost of constructing, maintaining and equipping their vessels. Banks and other lending agencies are reluctant to loan money for these purposes. While the Bureau has financial assistance programs which are helpful, they are not adequate to handle all the fishery loan requirements. The availability of money for loans to fishermen does not seem likely to improve until a more favorable climate exists, one which encourages fishing and offers reason-

able opportunity for California fishermen to compete for the market in the State and elsewhere.

Creation of a better climate requires the joint effort of the State and Federal Governments and the fishing industry and it requires public support. It is incumbent on all parties to work to this end. If we do not utilize the living resources off our shores for our benefit, other nations will. If there is doubt about that, we need only remind ourselves that the prelude to large scale fishing on the part of other nations is now occurring off our shores.