

THE POINT OF VIEW OF INDUSTRY: THE PROCESSOR

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We are asked to look at "The legal, economic, sociological, and technical problems which impede the best use of the living resources of the California Current and how these problems might be resolved." I will give primary emphasis to resolving the problems delineated by considering what resources we have to apply to the resolution process.

THE INDUSTRIAL RESOURCE

The commercial industry in California is quite diversified as already alluded to by previous speakers. We range from very small individual operators, and small companies to some of the largest, if not the largest, vessel operating groups and processing-selling companies in the United States. The impact runs far beyond California. Many of you have taken part in many activities related to foreign areas and areas outside California, such as the Northwest and Alaska. To name a few activities:

A San Diego company this year began operation of the largest king crab processing ship in the Alaskan area. It is several times larger than the nearest ship of its kind. Puerto Rico is now the largest tuna processing area in the world and was entirely begun by Californians, and is supplied by tuna vessels owned by Californians, with the top fishing skills provided by Californians. This forms the base for a large grant of federal fisheries funds to carry on research and similar activity there for further advances. The first tuna cannery in Central America (Costa Rica) was started by Californians.

Ecuador, where there has been one tuna cannery (begun by a California company), has seen the start in operation of additional canneries and vessels principally initiated by California companies.

The most explosive growth in world fisheries has been in the anchovy fishery of Peru. Californians have been a large part of this and two of the leading three or four companies are from here.

These developmental activities can be expanded into the African area where fishing bases and cold storage plants were started in Sierra Leone in conjunction with Spanish fishermen, in Ivory Coast, Brazzaville Congo and Senegal with the French, and in Liberia. Japanese fishing companies worked with the Californians in providing much of the supply. Aden and the South Arabian areas were explored.

If we stick to island areas, the development of American Samoa, and Palau in the Trust Territory are also the contributions of California companies and skills.

These developments have considerable relevance when we view what might or can be done about California development problems.

THE MANPOWER RESOURCE

A word about the men. There was sufficient skill in California to open up the tuna fisheries of the Eastern Tropical Pacific, for one example, and to push the developments already noted.

One of the most encouraging things about the California fisheries has been the entry of our young people. Using tuna as an example, during the tough days of the 1950's we used to measure the age levels of fishermen. It was a constantly ascending line but has not been so in the last three or four years. (This can be noticed in Alaska, too.) We have a lot of fishermen, boat owners who have been every place but a growing number of young newcomers who intend to go every place. This has a great meaning competitively.

During the difficult years (and I suppose that in the fisheries end there are few, if any, easy ones) we often heard from foreign competitors, reminding us that Americans would ultimately withdraw from fisheries, particularly the high seas fisheries. This was not the life Americans liked to pursue and they would end up staying home. This has not occurred. It is both amazing and encouraging to discover how many young people in this country are getting into commercial fisheries directly and into the fisheries science, technological and other support areas.

This is happening in California and is a positive force to consider in the resolution of fisheries resource development problems. It can have impact on our fisheries growth.

THE SCIENTIFIC RESOURCE

No state has more concentration of marine science skills than California. At our meeting here we are privileged to have a number of people representing these skills and their organizations which include the California Academy of Sciences, Scripps Institution of Oceanography, California Department of Fish and Game, U.S. Bureau of Commercial Fisheries, the combination of these in CalCOFI, U.S. Bureau of Sport Fisheries and Wildlife, Inter-American Tropical Tuna Commission, and the several university and private organizations. Added to these is the thrust given by corporations interested in the sea.

It was mentioned this morning that California has exported a considerable amount of such skills, but it

has also imported and retained a great number. This has very considerable meaning when we consider bringing scientific skill to bear on California fishery resources and problems.

THE POLICY MAKING RESOURCE

California has made a strong impact on fisheries policy development in the U.S. Such policy development over recent years was referred to this morning.

In terms of specifics, the framework of the Fish and Wildlife Reorganization Act of 1956 was developed in San Diego. It was presented to Senator Magnuson in 1955 with the principal idea of getting fisheries out of the basement at the national government level.

Many talented people were doing useful things. They were individually commended but it was apparent that Congress and the Executive Department were not reading the material. We felt chances for recognition of the importance of fisheries would be improved by adoption of legislation. We wanted an Assistant Secretary charged with fisheries responsibility. Those acquainted with this will recall that there were differences vis-a-vis sport people in the development of legislation which were composed. This joint effort brought about the present U.S. Bureau of Commercial Fisheries and U.S. Bureau of Sport Fisheries and Wildlife. The presence of these Bureaus in California has been a positive force in fisheries developments. To say that similar reforms cannot be effected in California defies good judgment. Once we define what we want to do, it can be done.

There are other broad policy issues in which Californians took leading parts but this one will serve to illustrate the point.

THE LIVING RESOURCE

According to the California and Use of the Ocean report of IMR¹, 20 species make up about 97% of the volume and value of the commercial catch. The sport fisheries are based on about the same numbers but not the same species. There are seven or eight species appearing on each list. Let us examine some of the principal commercial species.

Tuna

Tuna has represented about 50% of the landings volume and 80% of value for some time. The challenge is to maintain tuna volume and increase other species volume. This requires attention as we have no secure position with respect to tuna with competition from many areas, some of it self generated. We compete with ourselves when we operate out of Puerto Rico, which offers strong tax attractions which are difficult to combat. Fortunately, the fisheries immediately to the south and sometimes to the east with heavier percentages of yellowfin make California a more economic point from which to fish than from Puerto Rico. California does not have a fishery by

gimmick as in Samoa. This is a distant tuna fishery (1,000-1,200 miles) but foreign flag vessels can enter as American Samoa is not within the customs district of the U.S. California has no such device available to it. I foresee no drastic growth in tuna but forecast no decline.

Pacific Hake

Hake has been referred to in Alverson and Larkin's paper² as a potential commercial resource. A small amount of work has been done off California, more is planned. Initial evidence while fragmentary is interesting. Who should be responsible? Viewed from the standpoint of property rights, or lack of them, and the legal status, this lies properly within the province of government.

Northern Anchovy

Anchovy is a matter of regulation. The potential is great. The economics present formidable present barriers which I will refer to shortly. What is needed in the anchovy matter at this time is opportunity. While present fisheries activity is limited by the depressed state of the fish meal market, the opportunity is needed for future development.

Jack Mackerel

Blunt's paper² on jack mackerel suggests what may be a major possibility for expansion. We have been limited by vessel size and it seems to me that exploratory fishing on the extended high seas areas can be helpful.

Dover and English Sole

Dover and English sole present possibilities for expansion but are limited by the market situation according to Orcutt's paper.² This does not lie in the province of government. Industry ought to be able to figure out an answer to this.

Pacific Saurry

Saurry was mentioned by Smith³ as representing a potential resource of value. Saurry for use as bait commands reasonably high prices. A question was whether it could be sent to Japan. Some California and Mexican companies are sending fish and shell fish to Japan. In fact, Japan is now importing a number of fishery products so it appears that saury is not out of the question, if this was the best use for it. There are certain other uses and one paper mentions its acceptability as a canned product. Here again, once the resource is proved up which can be done by exploratory fishing, the technological and marketing studies can be undertaken by industry.

Sablefish

Sablefish were mentioned in Longhurst's statement² on squid and red crab. His views are worth examining and a combination of industry and government should explore the potential of these resources.

¹ California Institute of Marine Resources. 1965. California and the use of the ocean; a planning study of Marine Resources. California University, La Jolla, IMR Ref. 65-21.

² Published elsewhere in this report (Calif. Mar. Res. Comm. CalCOFI Rept. 13, 1969)

³ Presented during this symposium but not published.

Pacific Bonito

Bonito could be the subject of a resurgence. The bonito fisheries of Peru have declined more through lack of effort than otherwise. There have been very vexing competitive problems for the Peruvian which devaluation has not cured. We have an opportunity to move in the bonito area.

These are some of the species given more than passing mention at this conference and illustrates some of the avenues which can be followed on resource development. There is much evidence that we have many resources to work on.

RECENT DEVELOPMENTS

If we have all these resources what are the barriers impeding development? First, it should be observed that in the lengthening period after World War II, there has been explosive development in many quite undeveloped areas of the world at a time California's principal volume fishery of sardines was disappearing. It is natural that attention was directed elsewhere.

Looking at them broadly in California we find a good review of them in the reports of IMR and the Governor's Advisory Commission on Ocean Resources.

We need some perfecting of the State's administration of fisheries. We need some pulling together of both a scattering of control and a miscellany of laws and regulations.

We were advised today that these regulations were no great barriers and an intensive review was under way. Perhaps the genesis of the review lies in the work done on these reports. However begun it is a heartening sign that review is going forward. We hope that all of us concerned in any way with our marine fisheries get a shot at these before the final work is done.

I will refer to the realignment of administration responsibility and authority under the concluding section on recommendations.

These recent reports deal with a number of barriers to progress with considerable emphasis on government. There are economic barriers to be measured. We can talk all day about what the quota on anchovy catches should be. Present economic considerations *alone* might dictate in rough terms that you have to have a hole in your head if you want to get into that business—but these conditions change. Who realized in 1953 when the take of Peruvian anchovy was well below 100,000 tons that in a few years 8,000,000 tons would be taken in an area of 20–30,000 square miles and that it could and would be sustained.

Initially there was great concern about elimination of bird life in Peru which was the basis for a long established guano industry. Later it was thought that perhaps shore plants were more efficient means of utilizing the raw material. The birds were not eliminated and the primary problem in recent years has not been resource abundance but supply-demand relationships in finished product. This supply demand relationship forms an economic barrier to development of the anchovy fishery. What the anchovy fish-

ery needs is an opportunity to move effectively when the economic situation clears. The present procedure used in setting quotas did not and does not give the opportunity now and is unlikely to do so in the future. The recent development which can help this is the plan to study how our California fisheries should be administered which could place such matters under the administration of technically competent people.

Elton Sette² talked about research and forecasting as part of the economic picture. Industry can certainly adopt more advanced forecasting techniques with respect to its raw material. I have had some continuing connections with such an effort and it was successful. It was and is an important tool and the key to it was not only talented people who can understand and interpret information—but very importantly that over a number of years a lot of West Coast people successfully battled with the Bureau of the Budget and the Congress to get some more money into fisheries activity by the federal government so that research could be started and carried onward. Like everyone else, I would like to start research on something tomorrow with the expectation that an answer be provided by next week. As you know the things we can use are almost always the accumulation of many years work.

The forms of product are principally industry undertaking but government can be, and often has been, an important contributor. The recent development here is in the pilot plant work on Fish Protein Concentrate at College Park done by the Bureau of Commercial Fisheries, and finding further expression in the new plant to be built somewhere in Senator Magnuson's state. These are good beginnings. The results will be available to us all. The utilization of California's fishery resources can be advanced by this.

Hardly a recent development but affecting progress are the differences between commercial fishermen and commercial sport fishing interests. A recent development in California has been concern over best use of fishery resources. Today I learned that about 8,000,000 people fish recreationally (marine and inland) and their views are important. I estimate that about 120,000,000 people eat fish and think it almost goes without saying that their eating is important. But, there is no contest here on sheer numbers of who does what and who contributes the most. As said this morning, there is so much more in cooperation than in opposition. We are all in the same ocean. This recalls a theory I had when I was running a shipyard. I had two problems—first was the customer who always bothers you. He is a nuisance but there is no way to get along without him. The second was competition which was a bigger nuisance but it kept you on your toes. It is natural that commercial fishermen and sport fishermen compete. We can sublimate this competitive factor by considering that it is what there is to divide that should occupy us—not what divides us. We don't want decision by decibel count or license count. We want and, indeed, urgently need decision on the basis of scientific facts and the rational interpretation we can bring to bear on them.

If you are still with me, I am on the topic of the resource California has in recent developments. These developments create their own barriers and become challenges. Just assume you wanted to build a large anchovy reduction plant in California. This would mean not only a great investment, a large undertaking but new method. We have to have an eye on the neighborhood around us and the effects on it. Our march to the sea is heavy in building waterfront residences, hotels, and marinas. We have to fit in with these. What at one time could not be done can now be done.

While not a recent development, but usually unknown, is the fishing ability of U.S. fishermen as an asset. An analysis of catch per man of American fishermen stacks up well with any competition. It has been generally assumed, to use one example, that the Japanese were the most efficient tuna fishermen and yet U.S. fishermen catch from 3 to 4 times as much per man. This may be only arithmetic as crews were generally 3 to 4 times as large and perhaps a product of a social system. However, there is no basis in individual productivity where we need take a back seat. There is a strong case for individual ability, it is a California asset, or resource. One area where we are being out-distanced is in design, or better said, construction of fishing vessels.

WHAT DO WE DO WITH THESE CLAIMED RESOURCES?

I have listed a number of resources which California can legitimately claim. In combination they are impressive. How can they be brought to bear upon development in California and upon the problems therein?

Courses of action are clearly set in the reports I have referred to. Let us look at the IMR's report "*California and the use of the ocean*" as a particular reference point. It had the benefit of contributions from many in this conference. Let us see if the recommendations in this report represent a clear course of action.

On living resources the first item reads:

"1) The State Government, through cooperation of executive and legislative branches, should establish policy concerning the conservation and utilization of the living resources of the sea under its jurisdiction and influence which will encourage their maintenance and full utilization for the benefit of all of our citizens, which will promote the development of local fisheries and of distant-water and overseas fisheries based on California, and which will be in harmony with the international law respecting fishing and conservation of living resources of the high seas."

It is important that we advance our research to that stage where we can meet the standards of the treaty on conservation of the living resources of the sea as a link with the international conventions on Marine resources and the continental shelf. When we mention, as in the preamble, what has to be done we have to remember that a lot has been done.

It is heartening to hear that the State Legislature has ordered a study and a development of a plan for California's marine resources. This study can be

eased and accelerated by work already done in California. I hope it concludes that we move toward professionalization of our fisheries resources management.

As a conference group we should hear the objectives which follow the first recommendation, together with the remaining recommendations on our living resources of the ocean. These are:

"a) To maintain sufficient populations of all species of marine organisms to insure their continued existence.

b) To maintain adequate aesthetic, educational, scientific and recreational uses, both extractive and non-extractive, of the living resources of the California Current.

c) To give priority to aesthetic and recreational uses in those cases where a species which is an object of sportfishing, and is under control of the State, is not capable of supporting the reasonable requirements of the sportfish harvest and the existing or potential commercial harvest; however, reasonable use of recreational fishing should include curtailment of individual sportfishery bag limits to the quantity that is sufficient to provide satisfying sport.

d) To encourage the growth of local commercial fisheries, consistent with aesthetic, educational, scientific and recreational uses, to foster the utilization of unused resources, and to encourage the development of distant-water and overseas fishery enterprises.

e) To manage, on a basis of adequate scientific information promptly promulgated for public scrutiny, the fisheries under the State's jurisdiction and to participate in the management of other fisheries in which California fishermen are engaged, with the objective of maximizing the sustained harvest and decreasing costs of commercial production.

"2) The present fisheries research and management system and organization should be revised or replaced to make possible the implementation of the recommended policy. This will involve changes in the present statutory basis for fisheries research and management, changes in methods of financing, delegation of additional authority to the management agency, and the establishment of adequate scientific services. A comparative study of systems employed in other states and nations should be made as part of the basis for revision of the California system.

"3) To provide the factual basis for resolving conflicts over the utilization and allocation of use of living marine resources, and to provide a proper scientific basis for conservation management, it is essential that the statistical and scientific services be greatly improved. In particular, means should be developed to provide:

a) Adequate quantitative information on recreational uses of resources especially data on total catch and on catch and effort, for the sportfishery.

b) Adequate catch and effort data for the commercial fisheries, both local and distant-water, to supplement the presently satisfactory data on total catch.

c) Adequate research to furnish in timely fashion required information of the population structure, life history, ecology, and population dynamics of the exploited fish populations, and their associates.

d) Economic research concerning both recreational and commercial uses of the living resources.

e) Prompt publication of scientific data and research results. In developing the research functions, the State should improve scientific service of its own administrative agency and should utilize the capabilities of researchers in the University and other academic institutions.

"4) Existing laws, regulations, and administrative practices regarding the taking of fish and other organisms for recreation or commercial purposes should be thoroughly reviewed, and those which serve no useful purpose, especially those that handicap full use of underused resources, should be removed. Restrictions on the commodities which may be manufactured from fish, as well as restrictions on types and specifications of commercial fishing gear and ancillary equipment, should especially

be revised as promptly as possible. The present system of fishing regulations should be thoroughly revised and replaced by measures better designed to maintain the fish populations at levels permitting maximum sustainable harvest, while encouraging their efficient harvest by California fishermen. A comparative study of measures employed by other states and nations should be made as a partial guide to this revision.

"5) Proper and adequate zoning of the uses of the land along the margin of the sea, making provision for waterfront facilities needed for recreational and commercial uses of the living resources, should be undertaken immediately. Planning for the multiple use of the inshore margin of the sea, including bays, estuaries and the outer coast, should take full account of needs and opportunities for use of the living resources. Long-term planning and adequately unified control is especially required with respect to disposal of all classes of wastes.

"6) The development of distant-water and overseas fisheries should be encouraged by removal of institutional handicaps, as indicated above, and by provision of adequate harbors and other facilities for distant-water vessels.

"7) Underutilized populations of relatively non-migratory sportfish should be made accessible for recreational fishing by additional access roads and small-boat harbors.

"8) A program of habitat improvement for inshore fishes should be pursued, including construction of artificial reefs,

abatement of pollution, introduction of 'pollutants' in ways to benefit the living resources, encouragement of kelp beds, and judicious predator control. Research on the relation of harvestable organisms to their habitat should be accelerated to provide guidance for these activities."

It is my view that the quality of this work, and the depth of these recommendations, provide the basis for answers to development problems. I recommend that we all reread them. I reemphasize my earlier point that administration of California's fishery resources should be put in the hands of full-time technically competent people.

As I have not been involved in California fisheries matters for many years, a re-reading is necessary for me. It is encouraging to see what work has been done, the comprehensive sweep of the recommendations in this and other reports, the resources which we can call our own, and that Mr. Roedel has been able to call this group together to consider what should be done with them.