

# CALIFORNIA'S VIEW OF ANCHOVY MANAGEMENT

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Thank you very much, Mr. Chairman, for inviting me to speak to you this morning at this, the 1975 CalCOFI Conference. As I understand it, this actually marks the 38th year we have had such meetings—22 annual sardine conferences, followed by 16 CalCOFI Conferences beginning in 1960.

I appreciate the opportunity to relate and discuss some of the views we have regarding anchovy management. There are sometimes conflicts between the wishes of the scientists and the decisions of management because management must consider both sociological and political problems. Consequently, the reasons for contravening decisions are not generally revealed.

In 1940, when I started working for the Department, we had a rather large sardine industry and fishery. At that time, concern was developing for the resource because of doubts in the scientific community as to the ability of the resource to support current catches. I know that after World War II the industry and fishermen complained about fishing and that shortly thereafter the Marine Research Committee was organized for the purpose of coordinating and funding additional scientific research on the sardine to determine the reasons for its decline. Today, we all know that we were not successful in properly controlling the sardine fishery or coming up with timely and convincing explanations for its decline. This history is still in the minds of many of our constituents, and is often related in letters we receive from the public. I am not telling you anything new, but it is history that has a bearing on the attitudes of user groups, the public, legislators, commissioners, and others who are involved in making the final decisions. In other words, management of the anchovy reduction fishery must "walk in the shadow" of the sardine fishery.

The title of this talk is, "California's View of Anchovy Management." Some have the definite opinion that maybe the title should be "California's View of Anchovy Mismanagement." I expect if you talk to working biologists, they would probably think that the anchovy resource has not been managed properly simply because sufficient catch has not been permitted relative to population dynamics information. I suspect that if you speak to the sportsmen, chances are good that they would say the same thing, that the title of my talk should be our view of "Anchovy Mismanagement," but for different reasons. In their view far too many anchovies are now being harvested. Likewise, I suspect the chances also are good that if you speak to a commercial fisherman, he would say that it is being mismanaged and agree with the reasons given by the

scientists. If you spoke to the processor, chances are very good that you would also get the view that the title of this talk should be "California's View of Anchovy Mismanagement." It would seem that since so many are apparently dissatisfied, we have not managed the resource properly; however, let's review the decision making process and factors having a bearing upon the resources' utilization.

A brief view of organizational structure within the Department is probably in order. The Marine Resources Region is the management arm of the Department and is responsible for field work, monitoring the catches, contacts with the public, and other activities directly related to management. Research is conducted by Operations Research Branch (ORB) under the direction of John Radovich. The Region works together with the Research Branch (ORB) on certain research programs in which field data and observations can be obtained more expeditiously by our field personnel. It is the Region's primary responsibility to make management recommendations which are relayed to Sacramento headquarters.

The Director, with the assistance of Marine Resources Branch, arrives at a decision and makes recommendations to the Fish and Game Commission, which is responsible for management of the anchovy reduction fishery. For your information, the Fish and Game Commission is composed of 5 commissioners appointed by the Governor to 6-year terms and has direct responsibility for the rules and regulations governing the reduction of anchovies including closing the season on 48 hour notice, if deemed necessary. In his recommendations to the Commission, the Director is guided primarily by biological information supplied by my office, the Region, based not only on our work but that of the National Marine Fisheries Service right here in La Jolla. The Director also is guided by a series of general policy statements in the Fish and Game Code adopted by the Legislature. General objective and policy statements are contained in Code Section 2014, which states that California is to conserve its natural resources and to prevent willful or negligent destruction of birds, mammals, fish, or amphibia. The Department must (Code Section 1000) expend such funds as are necessary for research and field investigations and diffuse such statistics and information as shall pertain to conservation, propagation, and protection, etc. I would like to read Code Section 1700, which is more specific.

1700. It is hereby declared to be the policy of the State to encourage the conservation,

maintenance, and utilization of the living resources of the ocean and other waters under the jurisdiction and influence of the state for the benefit of all the citizens of the state and to promote the development of local fisheries and distant-water fisheries based in California in harmony with international law respecting fishing and the conservation of the living resources of the oceans and other waters under the jurisdiction and influence of the state. This policy shall include the following objectives:

(a) The maintenance of sufficient populations of all species of aquatic organisms to insure their continued existence.

(b) The recognition of the importance of the aesthetic, educational, scientific and nonextractive recreational uses of the living resources of the California Current.

(c) The maintenance of a sufficient resource to support a reasonable sport use, where a species is the object of sport fishing, taking into consideration the necessity of regulating individual sport fishery bag limits to the quantity that is sufficient to provide a satisfying sport.

(d) The growth of local commercial fisheries, consistent with aesthetic, educational, scientific, and recreational uses of such living resources, the utilization of unused resources, taking into consideration the necessity of regulating the catch within the limits of maximum sustainable yields, and the development of distant-water and overseas fishery enterprises.

(e) The management, on a basis of adequate scientific information promptly promulgated for public scrutiny, of the fisheries under the state's jurisdiction, and the participation in the management of other fisheries in which California fishermen are engaged, with the objective of maximizing the sustained harvest.

The Fish and Game Commission has established its own policies for management of the commercial industry and, more specifically, the management of anchovies. Briefly, the Commission policy prescribes that it foster and encourage the development and expansion of the commercial fishing, fish packing, and preserving industries so that our resources may be fully developed in the public interest without endangering the resource. They are clearly obligated by their policy to protect existing uses of the anchovy and to consider the issuance of all anchovy reduction permits when scientific evidence indicates that the resource will not be endangered.

I believe the Commission has been consistent with the original statements it made on the development of the anchovy resource. In 1967 the Commissioners stated that they would seriously consider any increase in anchovy reduction quotas when the industry clearly demonstrates it has the need and capability of utilizing increased tonnages. My recollection is that the CalCOFI Committee

originally recommended that 200,000 tons could be taken in an experiment to increase the sardine population. This 200,000 tons represented about 10% of the total anchovy spawning biomass at that time and was thought to be sufficient to produce a measurable change in the anchovy/sardine system. The Commission authorized a quota of 75,000 tons for reduction with the promise that if the quota was reached during the fishing season, the commercial fishing industry could come back to the Commission and additional tonnages would be considered (Table 1).

TABLE 1  
California Anchovy Landings for Reduction

Season	Landings (tons)	Zone Quotas (Tons)		Total
		Northern	Southern	
1965-1966	16,843	10,000	65,000	75,000
1966-67	37,610	10,000	65,000	75,000
1967-68	6,503	10,000	65,000	75,000
1968-69	28,050	10,000	65,000	75,000
1969-70	83,473	10,000	130,000**	140,000
1970-71	80,752	10,000	100,000*	110,000
1971-72	53,426	10,000	100,000	110,000
1972-73	75,519	10,000	100,000	110,000
1973-74	120,587	15,000*	120,000**	135,000
1974-75	116,587	15,000	115,000**	130,000

\* Quota increased by Fish and Game Commission

\*\* Quota increased by emergency action of Fish and Game Commission for only that season

The Commission has been particularly cautious with the anchovy resource because of the fears of many, particularly sportsmen, that the resource would not be properly managed and would fail like the sardine did years ago. In addition, the Legislature directed the Commission to prevent overexpansion of the reduction industry (Fish and Game Code Sec. 8079).

8079. The Commission shall, whenever necessary to prevent overexpansion, to insure the efficient and economical operation of reduction plants, or to otherwise carry out the provisions of this article, limit the total number of permits which are granted.

During the heyday of the sardine industry, production and plants increased without significant controls with the inevitable result that once people's money and jobs were involved, it became exceptionally difficult to enact legislation to curtail the catch. This lack of flexibility to curtail the catch has been recognized in anchovy management plans. Again, the Fish and Game Commission can and has stopped the anchovy reduction fishery in 48 hours.

In retrospect and considering the public's distrust of the State's ability to control the reduction fishery, the considerable agitation that prevailed in the 1960's, and the doubts of many as to the accuracy of our population estimates, the course of the Commission may have been the most prudent. Presently, public opinion appears to have improved

with less emotional reaction and agitation to quota increases, and more belief that the State intends to safeguard the resource.

In light of this apparent improved public acceptance, let me now discuss some of the views that we in the Department have on anchovy management and what we would like to see in the future.

First, we will be guided by state policy as expressed in the Fish and Game Code and by the Fish and Game Commission. These policies govern recommendations made to the Commission. We are interested in seeing that the anchovy resource is managed so that the reduction industry has an opportunity to increase production in a manner consistent with other beneficial uses such as live bait for sportsmen and food for predators, including sportfish.

One area of great concern for many years and for which we now see a pressing need, is a cooperative management program with Mexico, for the harvest of all marine species that move between southern California and Baja California, including anchovy. This management should be for the mutual benefit of our two nations. I am pleased to see the many representatives of Mexico here, many of whom are presently working closely with our staff. If we don't work together, but go our separate ways, there can only be chaos and the probable eventual elimination of valuable resources.

We have been following with great interest and satisfaction the cooperation that has been occurring between our scientists. You are to be complimented for this sincere effort and I encourage you to continue since success in scientific cooperation will help in the attainment of management agreement within the appropriate governmental process.

In 1967, during the CalCOFI Conference, Walter Shannon, then Director of the Department, stated that we have been unable to convince the public that we know how to manage the anchovy resource effectively. We had recommended that 200,000 tons be harvested, but only 75,000 tons were authorized. Since 1967, increased demand for fish meal and attainment of quotas by the industry have influenced the Commission to increase quotas, as they stated they would, to 130,00 tons for the 1974-75 season. I believe there has been decided improvement in the

attitude of the public relative to their confidence in our ability and willingness to manage the anchovy resource, and that the Commission will continue to authorize reasonable requests for reduction quota increases. There is little question but that the combined landings of Mexico and California will soon, exceed 200,000 tons. It must be strongly emphasized that if we fail to develop agreements for reasonable harvest quotas between Mexico and California, there is a strong possibility that valuable renewable resources may be endangered. It is difficult to foresee the effects that extended jurisdiction will have upon the management and harvest of the anchovy resource. Both Mexico and the United States are contemplating the establishment of greater authority over their coastal resources. Deliberations between the U.S. Federal Government and the states on possible management regimes are now going on. It is expected that the U.S. law will provide that any surplus not utilized by our domestic industry can be used by foreign nations that have established historical fishing rights off our shores. This emphasizes further the need for refining our understanding of the anchovy population and developing an agreement between our countries on the allocation of the central stock.

I believe that through cooperative CalCOFI programs definite progress has been made in improving our understanding of the anchovy resource. In addition, we have made progress in bringing to the sportsmen and other groups the fact that we have the will and knowledge to manage the anchovy resource and are capable of taking the proper measures for safeguarding the stocks should circumstances demand it.

We still need, however, to improve our methods of obtaining timely estimates of the size of the resource. Timely estimates of the resource size should be clear and concise and should be disbursed to the sportsmen and public regularly in order to offset some of the erroneous ideas that develop within their ranks.

The recent anchovy workshop is a step in the right direction. A review of our mutual research and management programs can only result in improving the understanding of the anchovy population and the ability to manage it wisely.