

## Summary and Conclusions of the Coastal Zone Management Session

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In this summary of a well integrated program on all facets of coastal zone management, I shall try to indicate what each speaker stressed; where ideas and analyses complimented or conflicted with each other; and finally, my own analysis of the problems and positions which were discussed.

This session on the United States coastal zone may appear to be out of place at a meeting of the Gulf and Caribbean Fisheries Institute. However, dependence of fisheries on coastal waters, and the growth in coastal zone uses which might conflict with the maintenance of those fisheries is a problem which is not unique to the United States. Every person at this meeting will recognize a present or future problem which might affect the coastal zone of his own country. For this reason it is fitting that the first technical session of the GCFI in Cartagena, Colombia, air the viewpoints of individuals representing government, environment, and industry.

All of the speakers recognize that the problem is more pressing in the United States than in the Caribbean, and perhaps complicated to a greater degree in the U.S., where the individual coastal state has jurisdiction over its coastal waters to 3 miles. The fact that industry, population, recreation, and fisheries are all concentrated on the coast is the basis for conflicting uses. The need to have some centralization of authority resulted in the Coastal Zone Management Act of 1972 which was amended in 1976.

The historical background of this Act was presented by Dr. Harris Stewart of NOAA. In his discussion, optimal use was introduced. This is not an empirical term, but reflects an attempt to effect a compromise between preservation and management; to try to find an acceptable level of degradation. Dr. Stewart further explained the mechanics of the Act which seeks to preserve, protect, restore, develop, and enhance this vital area. Implementation is the responsibility of the state which must develop a plan within 4 years and provide 20% of the funds. The federal government supplies the additional 80% of the funds and provides coordination through NOAA.

The State of Florida has qualified for support which might be expected, since it has the longest U.S. shoreline with the exception of Alaska. It is also an area where pressure on its coastal resources from uncontrolled development has been extremely intense.

General McIntyre of the U.S. Army Corps of Engineers described the management role of the Corps. This organization has four principle water management responsibilities: (1) Military construction, (2) Management of water resources, (3) Water power and flood control, and (4) Protection of coastal waters by

controlling the permits for dredging and filling operations. It is in the last area that the image of the Corps has been revised. At present, the Corps has become a strong protector of the coastal zone as it seeks to find optimization and resolution of conflicting uses. General McIntyre reflected upon a facet of fishing about which all fisheries officials are aware: commercial fishing is governed by factors beyond the fisherman's control. Disposition of vast amounts of dredged material is a major and continuing cooperative effort with fisheries personnel, particularly in areas where shrimp is the major resource.

The confrontation of industrial, recreational, and residential usage of coastal regions was discussed by Dr. Donald D. Dunlop. Why should a power generating facility be sited in a high amenity location? An ideal location, if a utility is to serve a community, should be near people, near cooling water, and convenient for transportation of large quantities of fuel. What are the acceptable limits to compromise? Business in the coastal zone is faced with problems concerned with obtaining permits for construction from all tiers of government; local, state, and federal. Particularly disturbing to industry is the difficulty in dealing with public policy. Dr. Dunlop stated that industry cannot foresee policy; policies are qualitative; they may be ambiguous or absolute; and that different levels of government may have conflicting policies. Environmental policies are particularly troublesome, since they are either negative or restrictive. He stressed the need for rational administration and early recognition of possible areas of conflict among the users of the resource.

Mrs. Verda Horne spoke of the growth in the subversive science – ecology and the background for present concern about the coastal zone. The environmental revolution of the 1960s was responsible for bringing the citizen into the coastal zone conflict. Scientists gave freely of time and information. Knowledge of the interaction between estuaries and most of the valuable fisheries of the United States was disseminated to the public and public officials. Today the value of an estuary is no longer exclusive information of fishery scientists and ecologists.

She stressed the need for compromise, public education, knowledge of ecological systems, and that time for critical decisions is approaching. She recognizes also that the course is difficult partially due to the reaction which produced a "plethora of laws and agencies." Finally, she stated that all persons must have awareness of the fundamental concept of ecology; that the parts cannot be separated from the whole and that each part is affected by the other.

Regulation of the nation's coastline through the Coastal Zone Management Act has started, but in the Gulf coast states it is not possible to assess its effectiveness. Ms. Judy P. Stout suggests that it is necessary to clear away the "haze of administrative hassle."

She clearly stated the reasons for control over alterations in coastal marsh systems. Of four approaches to determine the value of the areas; biological systems support, physical, social, and real estate, only the last can be easily stated in dollar value. In many states during the past years, encroachment by residential and industrial development has reduced estuarine habitat. The effects of this loss are of vital importance to all fishermen and resource managers at this meeting.

Scientific information should be the basis for management plans in coastal areas and while biological systems have unifying bases, data from one region cannot be readily extrapolated to another. Management, planning, and restoration of wetlands based upon sound information are necessary to insure continuity in these areas.

Dr. Ronald Smith spoke of the resolution of fishery conflicts in the U.S. fishery zone. Background for the Fisheries Management and Conservation Act was explained. In the last year prior to its enactment, foreign vessels caught more than 3 million metric tons of fish from U.S. waters. Under the law catches by foreign boats will be reduced. Further, fishing will be regulated by season and area. This will aid certain local fisheries. One of the aims of the legislation is the recovery of overfished species.

Two areas of possible conflict in coastal waters were discussed. One, between sport and commercial fishermen, is certainly familiar to those of us from Florida. What are the trade-offs necessary to support the populations of game-fishes which are also captured commercially, either as incidental catch or as primary objective of fishing effort? The second problem area, according to Dr. Smith, is the absence of federal control from the coast to 3 miles offshore. In this area, territory of the sovereign state, more than 50% of the commercial harvest is landed. The conflict is further fragmented by different state regulations governing the same fishery. He concluded that because of the inherent conflicts, cooperation at all levels was imperative.

It is obvious from the many approaches to a many-faceted problem that certain unifying concepts are apparent. All of the speakers felt that the need exists for rational discussion which recognizes conflicting uses and attempts to effect a balance. We know that governmental regulation at all levels is present in the coastal zone. To find policies flexible enough to achieve management of the resource along with reduction in the administrative struggles remains a goal. Conflicts are part of human nature, but recognition of conflict is a prelude to its solution. We have discussed the U.S. coastal zone from the viewpoint of regulator and regulated. Public participation, better information, and intergovernmental cooperation are keys to helping solve these conflicts. It is my hope that all of you who recognize the symptoms of future conflict in your own areas will benefit from this discussion of problems in the United States and avoid the necessity of having to solve them. I am optimistic about prospects for rational use of our coast and believe that with the recent legislation that we have the proper tools for management. We only need to learn how to use them.