

Part II

SYMPOSIUM OF THE CALCOFI CONFERENCE

Asilomar, California
4 November 1998

A CONTINUING DIALOG ON NO-TAKE RESERVES FOR RESOURCE MANAGEMENT

Interest is rapidly growing within state and federal agencies to reevaluate current practices of marine fishery management, and to consider alternatives that would more effectively maintain healthy coastal populations. This interest is largely motivated by the alarming long-term decline in abundance of several economically important fishery stocks, the increasing potential for significant habitat degradation from anthropogenic sources, and the heightened public awareness of challenges to marine ecosystems. Although the declines in abundance are probably due to a combination of overexploitation and the effects of natural environmental variability on spawning success and survival of young fish, it is clear that traditional management efforts alone have not successfully protected and sustained coastal resources.

Some aspects of spatial management, such as areas closed to fishing, are not new concepts in California.

Various types of fishing gear have been excluded from specific areas of the coast for many years. For example, bottom trawls generally have been prohibited within three nautical miles of the coast, as has the use of gill nets for rockfishes. Fishing for abalone is completely banned in central and southern California, and limited to free diving in the north. Designated reserves (also known as harvest refugia, protected areas, and no-take zones), however, are a relatively new option being considered as a supplement to current management practices in California.

Marine reserves are being promoted to mitigate overfishing and the effects of fishing activities on seafloor habitats. Potentially, reserves can conserve and enhance fish populations by (1) increasing abundance, size, and age composition; (2) protecting critical spawning stocks; (3) providing multispecies protection; and (4) provid-



Figure 1. Participants in the 1998 Symposium of the CalCOFI Conference: A Continuing Dialog on No-Take Reserves for Resource Management. Top row, left to right, Ralph Larson, Richard Parrish, Mark Carr, Steve Murray, and Brian Baird; bottom row, Caroline Pomeroy, Cindy Thomson, Louis Botsford, Melissa Miller-Henson, Mary Yoklavich, and Bill Douros.

ing undisturbed, baseline areas against which fishery-induced changes may be evaluated. They also can help preserve and maintain the natural diversity of individual species, genotypes, and habitats. Although some of these attributes can be expected, reserve concepts largely remain untested, and their effectiveness in fisheries management is poorly understood.

Several recent activities have been initiated to examine the feasibility of using marine reserves to better manage fishery populations on the West Coast. At the workshop "Marine Harvest Refugia for West Coast Rockfish,"¹ there was consensus among scientists and resource managers that marine reserves exemplify a precautionary approach to the management and conservation of rockfish resources. The Pacific Fisheries Management Council appointed an ad hoc Marine Reserve Committee in November 1998 to advise the council on effectiveness, design criteria, and implementation of reserves. In addition, a cooperative process between state and federal management agencies is being developed to consider a system of marine reserves in the Channel Islands National Marine Sanctuary.

¹Yoklavich, M., ed. 1998. Marine harvest refugia for West Coast rockfish: a workshop. NOAA Tech. Memo. NMFS, NOAA-TM-NMFS-SWFSC-255, 159 pp.

Examining issues critical to the establishment of marine reserves requires the balanced perspective and broad expertise of biologists, ecologists, social scientists, economists, resource managers, and policy makers. The 1998 CalCOFI symposium convened such a group to further the discussion of marine reserves for managing California's resources. Our objectives were to (1) identify processes and opportunities for implementing change in federal and state resource management; (2) consider costs, benefits, risks, and alternatives for establishing reserves; (3) examine biological aspects of reserve design; and (4) explore compliance and enforcement issues.

The efforts of several people contributed to the success of this symposium. I extend my appreciation to all participants for their verbal and written contributions to the symposium and proceedings. I thank a long list of scientists and resource managers for their reviews of the individual papers, and Julie Olfe for her technical advice and editorial services. The National Marine Fisheries Service, Pacific Fisheries Environmental Lab supported my efforts to convene this symposium and serve as editor of the proceedings. Thanks to George Hemingway for logistic support throughout the process, and to John Hunter for his perspective on the value of agency policy, planning, and procedures to these proceedings.

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