Public Comments on the U.S. Commission on Ocean Policy's Preliminary Report

Topic Area: Marine Protected Areas and Marine Reserves

Comments Submitted by:

- Marian Parker, Petaluma, California
- Minerva Rogina, Penngrove, California
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September 17, 2004

U. S. Commission on Ocean Policy
1120 20th Street, NW
Suite 200 North
Washington, D.C. 20036

Re: Public Comment on Preliminary Report

Dear Commissioners:

I am a biology major at Sonoma State University in Rohnert Park, California. My main area of concentration is marine biology. I recently completed a course in marine community ecology in which our professor encouraged all interested students to review your preliminary report and to submit comments. I would like to make a case for expansion of the current system of marine protected areas (MPAs), or marine reserves.

In our class, we came to appreciate the precarious state of the world's oceans, in particular the coastal waters. Around the world, marine fisheries have collapsed; at least half of the fishery populations are listed as either overfished or fished at capacity. A few examples are the virtual disappearance of Atlantic Cod and the closure of Georges Bank to fishing in 1994, over-consumption of Chilean Sea Bass in the past decade that has rendered it almost extinct, the demise of coral reef communities in the Caribbean and elsewhere, the decimation of species such as the Barn Door Skate on the Atlantic Coast and Pelagic sharks in the Gulf of Mexico as "by-catch" of industrial fishing operations and the destruction of Mangrove ecosystems by large-scale shrimp farming.

Closer to home, the fishing industry in Bodega Bay, an historic fishing village on the Sonoma Coast, is moribund due to over-extraction, which not only depleted targeted fish populations, but trawling equipment disrupted the seafloor, leading to the destruction of other species, as well. In many cases, human impacts have altered the entire structure of marine communities by removing large predators, such as cod, or other crucial members of the food web.

One step that is needed to help restore the health of our marine communities is to expand the current system of marine protected areas. Unlike marine sanctuaries, in which virtually all activities are permitted except for war and oil drilling, MPAs are "no take" zones that afford threatened and endangered species a much greater degree of protection.

A broad definition of an MPA adopted by the Union of Concerned Scientists is "any area of intertidal or subtidal terrain, together with its overlying waters and

associated with flora, fauna, historical and cultural features, which has been preserved by legislation or other effective means to protect all or part of the enclosed environment." Three main types of MPA are fisheries management, ecosystem diversity and "special features," which might contain something of cultural or historical importance, such as a ship wreck, or one that protects a particularly vulnerable life history stage of a marine organism.

Studies throughout the world have demonstrated the positive effects of MPAs, including increased species abundance, overall increases in ecosystem diversity and larger sizes of individuals, which is correlated with increased fecundity. Some have even had unintended benefits, such as the dramatic increase in scallop populations on Georges Bank after it was closed to cod fishing.

Where there is spatial connectivity between species within MPAs and outside populations, they may also have positive regional effects. Individuals are able enter and leave the refuge in order to interbreed and increases in populations within MPAs can have spillover effects by adding to the outside numbers. The larvae of many species may be transported long distances to settle in different adult communities or, in some cases, to establish new ones. The net effect is not only increased numbers, but also an increase in genetic variation within species.

Marine protected areas, if properly designed and managed, can be a win-win situation for endangered and threatened species, their marine communities, and us. However, this requires international cooperation as well as expanded research and development at home in order to protect and preserve our global resources.

Comment Submitted by Minerva Rogina, Penngrove, California

Dear Members of the Ocean Commission,

I am pleased to hear that actions are being taken to address the declining state of our oceans. As an aspiring marine scientist and someone deeply concerned about the health of our environment I laud your efforts to promote an ecosystem based analysis and management of the ocean communities. To better manage our ocean it is important to consider the potential benefits of marine reserves that prohibit fishing and collecting. Ecological studies have demonstrated increased abundance in commercially and ecologically important species that provide benefits that go beyond the perimeter of the reserve. Reserves provide protection for a diverse assemblage of species that can become reproductively mature and supply larval stocks to regions outside of the reserve. This has been observed within a short time of the creation of the reserve or protected area. My hope is that these efforts will serve to protect and stop the decline in our oceans before it is too late.

Thank You,
Minerva Rogina
Sonoma State Student
Penngrove, California

Comment Submitted by Suzanne Fortner, Santa Cruz, California

To whom it may concern;

The PEW Oceans Commission, which came out in June of 2001, emphasizes the declining health of our oceans and suggests various approaches help stabilize, or even reverse this decline. In this report many policy recommendations were made, some of these include the creation of a National Oceans Policy Act (NOPA),regional ecosystem councils, a national system of marine reserves, and an independent National Ocean Agency. The overview of recommendations also incorporated important conservation actions which would help restore the health of our oceans, including ecosystem-based planning, regulating fisheries management, protecting coastal habitat, regulating and controlling both point source and non-point source pollution, and sound conservation. Throughout the report a greatly emphasized issue is the need to increase scientific knowledge and research and to educate the public.

The preliminary report of the US Commission on the Oceans, just recently released on April 20th 2004,does a good job overall of covering the important issues affecting the health of our oceans. The PEW Commission and the US Commission mentioned almost all of the same recommendations, but there were a few minor differences. The PEW Commission recommends the creation of regional ecosystem councils, while the US Oceans Commission recommends voluntary regional councils. The US Commission also dedicates much less of its report to fisheries management, an issue very important to the PEW organization. Also, I found no mention at all of sound conservation recommendations in the US report. The problem with this report that concerns me the most though, is the lack of emphasis on the creation of marine reserves or protected areas.

Chapter 6 of the report mentions marine protected areas as a conservation tool, but only briefly and vaguely. Chapter 11 of the report was titled Conserving and Restoring Coastal Habitats, but only refers to projects already underway and the funding for them. Throughout the report marine protected dare as were mentioned only once and not in much detail. Regardless of the differences of these two reports, both agree that our oceans are in trouble and action must be taken… I strongly agree. Despite the success of many (if not all) marine reserves and protected areas, only small fractions of one percent of the oceans under US jurisdiction are protected. Yet 4.6% of US wilderness is protected, even though America's oceans cover 23% more area then the land does (all data taken from PEW). Scientific studies have shown that marine reserves are successful in restoring ecosystems and enhancing populations through the mechanisms of increasing production, diversity, abundance, and biomass. Current reserves have also been shown to replenish adjacent areas through spillover of adult and juvenile fish, as well as through larval transport. By protecting critical coastal waters we are protecting the structure and function of many ecosystems, and very likely reversing some of the damages humans have inflicted on these systems.

It is a very popular idea amongst all conservation scientists that over fishing has caused a decrease in the mean trophic levels of most almost all fish populations. The PEW Conservation Summary mentions that marine reserves increase fish biomass. Figure 6 in this report shows statistics on these biomass increases around the world. Fish biomass increased by 132% near Hawaii, by 188% in the Philippines, by 496% off of Chile, and by 800% near Kenya. An increased biomass means not only are fish

becoming abundant, but they are also increasing in size. This is good news for both conservationists, and for fishermen. Bigger fish tend to lay more eggs, which in turn increases the population growth rate. The growing populations within the reserve also have positive effects on the surrounding area due to spillover and larval transport. All of these finding highly support the need to establish a national system of marine reserves.

The US Oceans Commission is the first national policy on the oceans since the Stratton Commission over 30 years ago. One main problem with the Stratton report was that action was not taken right away. Hopefully we have learned from our previous mistakes and the final report of the US Oceans Commission will be taken more seriously. We have decreased biodiversity and mean trophic levels as well as changed habitats and ecosystems. A system of marine reserves would help to reverse these affects and should play a larger role in the final report then it did in the preliminary report.

Suzanne Fortner (University of California, Santa Cruz undergraduate student)
Santa Cruz, California