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Testimony of David White
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Before the President's Commission on Ocean Policy

St. Petersburg, Florida
February 22, 2001

Introduction

Thank you for inviting me to speak before you today. My name is David White, and I am the Director of The Ocean Conservancy's Southeastern Regional Office, based here in St. Petersburg. We cover marine conservation issues in the South Atlantic and Gulf Coast states, working in four main program areas: ecosystem protection, clean oceans, and fish and marine wildlife conservation. The Ocean Conservancy has over 900,000 members and volunteers, with over 10,000 members and 32,000 volunteers here in Florida alone.

I would like to focus my comments on the need to develop an adequate network of marine protected areas— MPAs —in America's oceans. But before I begin, please allow me to define my terms. Since there is a lot of confusion around the term "marine protected areas," I want to be clear. When I use the term "marine protected area," or "MPA," I mean any area designated to protect the marine environment. When I refer to "no-take" marine reserves, I mean that subset of MPAs that are closed to all extractive activities.

The Need for MPAs

Why do we need MPAs? The answer spans ethical, ecological, and economic considerations. The United States needs a national system of MPAs, including no-take reserves and ocean wilderness areas, to bolster and sustain our dwindling fish populations; to restore the health of our ocean ecosystems; to deepen our understanding of the complexity of ocean life and our impacts on that

life; and to ensure that our use of economically valuable marine resources is sustainable over the long term.

No-take reserves also provide urgently needed natural laboratories or "control areas" in which to study the marine environment and the effects of our activities on species and habitats. Without having a full array of control areas—of sufficient size to have meaningful significance on an ecological scale—how will we know whether changes in marine fish and wildlife populations are caused by our management practices or other phenomena, such as global climate change, El Niño, or dust from Africa?

In Florida, we have what we consider to be some of the most significant and precedent-setting MPAs yet established in the country. The Florida Keys National Marine Sanctuary, at over 2,800 square nautical miles, was significantly larger than any other sanctuary in the country when designated in 1990. The management plan, released in 1995, established different types of zones, focusing higher levels of protection on some of the coral reef habitats thought to be most vulnerable to damage from human activities. This is still the most extensive use of MPA zoning in the U.S., and we hope that this approach will be further refined and applied in other places. As you know, the Tortugas Ecological Reserve and the contiguous Research Natural Area within Dry Tortugas National Park—which we consider together to form the nation's first fully protected ocean wilderness area—was approved just last year. Those of us who were involved in the effort know that establishing such protected areas can be an arduous and complex process. But we also share the feeling that ensuring the protection of the most outstanding coral reef ecosystems in the Tortugas is among the most valuable work we've ever done.

What the Science Tells Us

Study after study, carried out in the U.S. and around the world, tells us that MPAs work. Don't get me wrong: they are not the answer to all of the challenges facing marine conservation and resource management today. They are not a panacea. But if properly designed and managed, they represent the single most comprehensive, robust, and effective ocean management tool available.

Studies also demonstrate that the greatest benefits result from fully protected "no-take" reserves. Protecting an area from fishing leads to rapid increases in biomass, abundance and size of exploited species, and increased biodiversity.[1]

Here are some specifics. In a study of 100 'no-take' areas around the world, researchers discovered that, within the reserves:

- Population density of fish is on average 91 percent higher than outside reserves;
- Biomass—or total living matter in the areas—is 192 percent higher;
- Average size of fish and other organisms is 31 percent higher; and
- Species diversity is 21 percent higher.[2]

Evidence is also mounting that no-take reserves also benefit fisheries in adjacent areas. Some examples: when a reserve in the Philippines was re-opened to fishing, catches collapsed in nearby

[1] Callum M. Roberts, et al., "Effects of Marine Reserves on Adjacent Fisheries," *Science* (30 November 2001) **294**:1920.
[2] Robert Warner, et al., *Ecological Applications*, in press. Preliminary results printed in "Marine Reserves Called Best Hope for Ocean Species," Environment News Service, San Francisco, CA, February 22, 2001.

areas, but then rose again when the reserve was restored. A network of five small reserves in St. Lucia, in the Caribbean, led to increases in catches in adjacent areas of 46 to 90 percent in just five years, despite a 35 percent decrease in the area available for fishing.[3]

One of the best examples of the benefits of MPAs is from Florida. Merritt Island National Wildlife Refuge is due east of here on the other side of the state. This area has been closed to human activities for almost 40 years due to national security concerns at the Kennedy Space Center. Inside the reserve, populations of snook, drum, trout and mullet are five to 12 times higher than in adjacent areas. Outside the Reserve, recreational fishermen have benefited; this region has consistently produced more world-record-sized black drum, red drum, and spotted sea trout than the rest of Florida waters combined.

We know that in Florida, and throughout our nation's coastal waters, there used to be more and bigger fish. From looking at old scuba magazines, or listening to "old salts"—people who have fished for decades—we know that groupers the size of small cars were common. The Florida Keys was named the "Conch Republic," but has been closed to conch fishing for years because of overfishing. I believe we have not only the chance, but the obligation, to restore the former natural abundance of our seas. I also believe we will never accomplish this unless we move forward decisively with MPAs, no-take reserves, and ocean wilderness.

Lack of U.S. Leadership

I take pride in the fact that Americans created Yellowstone, the world's first National Park, in 1872. I am less than proud that it took us 100 years to establish the first national marine sanctuary, and that we lag behind Australia, New Zealand, South Africa, and Indonesia in this regard. I think the United States should be in the vanguard of ocean management. I find it surprising—and disappointing—that so much of the debate about MPAs, and especially about no-take reserves, still seems to be focused on whether or not we need them, rather than how we should best use them to restore the health of our oceans, revitalize our marine industries, and ensure long-term ecological and economic sustainability.

In creating marine protected areas, we are lagging behind other nations, despite calls to act as early as 1966. In its report to President Lyndon Johnson, the Panel on Oceanography of the President's Science Advisory Committee recommended doing what we are still discussing doing 36 years later: establishing a national system of marine wilderness areas. The report, entitled *Effective Use of the Sea*, specifically advised the federal government to "establish a system of marine wilderness preserves." It stated that such a system would represent "an extension of the basic principle established in the Wilderness Act of 1964." And it went further, stating "that it is the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of Wilderness."[4] More recently, the Scientific Consensus Statement on Marine Reserves and Marine Protected Areas, signed by 161 leading marine scientists a year ago, concluded: "Networks of reserves will be necessary for long-term fishery and conservation benefits."[5] Notice that it says "necessary," not "optional."

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[3] Roberts et al., **294**:1921.

[4] *Effective Use of the Sea*, section 3.4. Washington, DC: Panel on Oceanography of the President's Science Advisory Committee, 1966.

[5] *Scientific Consensus Statement on Marine Reserves and Marine Protected Areas*, released at the Annual Meeting of the American Association for the Advancement of Science, 17 February 2001, page 3.

How do we forge ahead?

The Ocean Conservancy recommends that this Commission, in its report to the President and Congress, make a firm—and consistent—commitment to the use of MPAs as a marine management tool. For significant progress to occur, a decision must be made and communicated that an adequate national system of MPAs, including no-take reserves and ocean wilderness areas, is essential to protecting the public interest and will be developed. For example, the MPA Executive Order called for "strengthening and expanding" the national MPA system, but provided no new authorities. Second, although the primary purpose of the National Marine Sanctuary Act is "to maintain the natural biological communities in the National Marine Sanctuaries, and to protect, and where appropriate, restore and enhance natural habitats, populations, and ecological processes,"[6] most Sanctuaries do little or nothing to restrict fishing. Deadlines for measurable progress toward making sanctuaries a true refuge for fish and other marine species should be set, and progress reviewed regularly.

Although there is no single perfect process for creating MPAs, there are numerous studies documenting approaches to identifying and designating marine protected areas. Based on experiences from around the world, including Florida and California, we recommend that the process of establishing a national system of MPAs incorporate the following guidelines:

1. ALL stakeholders, not just fishing interests and conservation groups, must be involved in the process from the earliest stages. This is harder than it sounds, and requires deliberate and targeted education and outreach. But we have learned that it is counterproductive to come to the table with maps and boundaries drawn before the various stakeholders are engaged. The entire process must be collaborative and involve all stakeholders to facilitate discussion and consensus building on what steps are necessary and why.
2. Education is a key first step, and should include a primer on MPAs, describing the different types and objectives of MPAs, "lessons learned" from other places, and a review of the current status of the potential new MPA site, including available biological and socioeconomic information.
3. Discussion should begin by exploring specific objectives. Are there particular species or habitats that warrant special attention? Can specific management targets be set, such as increasing the size or abundance of fish? How "natural" or untouched do we want different areas to be? Are particular activities to be facilitated or restricted?
4. Scientific information is critical and should be referenced at every step of the process: from formulating specific objectives, to setting targets and evaluating alternatives, to measuring success.

The Philosophy behind MPAs

Beyond the economic and ecological considerations lie ethical ones. To whom do the territorial waters of the United States belong? Like our public lands, our ocean territory is a public resource—it belongs not only to the government, or fishermen, or scientists, or to recreational boaters—but to all of us. Ocean ecosystems and wildlife, including fish, are public resources belonging to all Americans; in that respect they are no different from ecosystems and wildlife on terrestrial public lands. Unlike our lands, all of America's oceans are publicly owned.

[6] 16 U.S.C. §1431(b)(3).

On land, we seek to balance resource utilization with conservation of species, habitats, and ecosystems. We have protected nearly 30 percent of our most spectacular lands by establishing national monuments and systems of national parks, national forests, and national wildlife refuges. Approximately 16 percent of those public lands are designated as wilderness areas. In contrast, our ocean policy has given relatively little consideration to the intrinsic value of marine ecosystems and wildlife, or even the finite capacity of our seas to provide food and absorb our wastes. We are now experiencing the ecological and economic consequences of that narrow and short-term vision.

The 1966 report from the President's Science Advisory Committee, to which I referred earlier, speaks to yet another constituency we cannot ignore: future generations. The report indicates that future generations have a right to enjoy "the benefits of an enduring resource of Wilderness."

Conclusion

Clearly, we still have a lot to learn about how marine ecosystems function: how marine species interact with their environments and how habitats in turn relate to their full assemblage of species. I'm confident that future generations will know more about the functioning of healthy marine ecosystems—and their impact on the quality of human life—if we leave them something to work with. In protecting examples of the many different types of ecosystems, biological communities, and habitats found in U.S. waters as the core of a national system of MPAs, Americans may continue to reap endless benefits in the area of science, fisheries, recreation, heritage, and ocean health.

Chairman Watkins, that concludes my remarks. Thank you for your attention. I'm happy to answer any questions the Commission might have.