C O N N E C T I O N S

Newsletter of the National
Marine Protected Areas Center

April 2003

The mission of the National Marine Protected Areas Center is to facilitate the effective use of science, technology, training, and information in the planning, management, and evaluation of the nation's system of marine protected areas. *Connections* was launched to meet continuing calls by agency and external stakeholders for information about MPA Center activities.

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Clarifying Misconceptions about Marine Protected Areas (Third Part in a Series)

Misconception: All marine protected areas (MPAs) are no-take or no-fishing zones.

Reality: First of all, less than 1 percent of U.S waters are currently protected. Secondly, the term marine protected area is actually a broad umbrella term that encompasses a wide, and sometimes surprising, variety of area-based approaches to marine conservation, and not just no-take areas. In fact, very few no-take areas exist in U.S. waters. Instead, the majority of U.S. MPAs are multiple use conservation areas that often permit both consumptive and non-consumptive activities, such as fishing, diving, boating and swimming.

Examples of multiple use MPAs include most national marine sanctuaries, national estuarine research reserves, national parks and wildlife refuges with marine components, and many state underwater parks. These multiple use MPAs function both to protect ecosystems and, at times, to support sustainable fisheries while allowing residents and other users to enjoy the resource. Potentially harmful activities, like fishing, are sometimes managed in MPAs through specific gear restrictions or through zoning schemes that allocate use to appropriate habitats and/or seasons.

Although rare, no take areas, also called marine reserves, are sometimes used to protect spawning or nursery grounds, or to protect ecologically important deep-water habitats. Some are used as research and monitoring zones to serve as a baseline that allows comparisons by managers and scientists of undisturbed control areas to those impacted by human activities. Of the few no-take areas in U.S. waters, most are small and interspersed within larger areas that allow consumptive uses.

Efforts to incorporate no-take areas into existing coastal and ocean management are occurring in many states. In Florida, Tortugas Ecological Reserve, managed by the Florida Keys National Marine Sanctuary and the National Park Service, is an example of a marine reserve where taking of marine life is prohibited and vessel discharges are restricted. The Reserve was established to protect the diverse marine life and lush coral reefs after input from a 25-member working group that included commercial and recreational fishermen, divers, scientists, conservationists, citizens-at-large and resource managers. Two other examples include the recent approval of California's Channel Islands Marine Reserves, and Oregon's ongoing efforts to evaluate marine reserves as a conservation tool.

Research into the long-term ecological effects of creating marine reserves at these and other sites will help guide the design of future MPAs.

On land when we think about our national parks, we think of them as areas where we can enjoy the great splendor and serenity of the surroundings. They are national treasures where people of all backgrounds can partake in a variety of activities. Some national parks allow fishing, kayaking or boating, hiking, and even hunting. There may be limits on the amount or level of extractive activities, but most Americans agree that those limits are necessary to protect the longevity of the parks. MPAs can be characterized similarly, and taken as one type of management tool that serves to protect the resources within from permanent or irreversible damage.

Have comments about this series? Share them with us. Write to MPACenterConnection@willamette.nos.noaa.gov.

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Sea Grant Organizes Educational Workshops in Northeast Centered on Marine Protected Areas and Their Role in Fisheries Management

Four free workshops were held recently in the northeast for local fishermen, resource managers, environmentalists, researchers, students, and interested citizens to learn more about marine protected areas (MPAs). The workshops focused on MPAs and their role in fisheries management. They were sponsored by the National Sea Grant Program, and developed in partnership with Sea Grant programs in New Hampshire, Connecticut, Maine, and Rhode Island. Additional partners included NOAA's National Marine Fisheries Service, Conservation Law Foundation, and the New England Fisheries Management Council. The steering committee for the project included scientists, researchers, managers, environmental advocates, and fishermen.

All of the workshops were structured similarly. They featured a local university professor who provided an overview of MPAs; a representative from NOAA's National Marine Fisheries Service who spoke about the use of large-scale closed areas for fisheries management and biodiversity protection; a member of the New England Fisheries Management Council who discussed existing protected areas in the New England region; a scientist from the Ocean Conservancy who spoke about the beneficial biological effects of a properly designed no-take zone or marine reserve; and a discussion based on a case study of closed areas in Nova Scotia. In addition, a local fisheries consultant gave a presentation on the pros and cons of no-take zones, and discussed other fishery management issues.

With strong representation from commercial and recreational fishing organizations, participants stated that the presentations offered a balanced view on the issues surrounding MPAs. Attendees stressed the need for the fishing community to be part of MPA planning processes, and were interested in learning about what MPA process did or did not work, from various stakeholder groups. There was also an emphasis on definitions of MPA-related terms, particularly on the term 'lasting protection.' The participants expressed the need for this term to be defined better so that they have a better understanding of the discussion and process.

The agenda, notes, presentations, and other information about the Sea Grant MPA workshops are available at http://seagrant.gso.uri.edu/fa/edworkshops/index.html.

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NOAA Coastal Services Center Offers MPA-Themed Module in Upcoming 'Coastal Applications Using ArcGIS' Course

Geographic Information Systems (GIS) have proven to be an integral tool for decisions being made about designating and managing marine protected areas (MPAs). GIS' central role in this process is the site analysis, which analyzes a location's suitability against a set of previously constructed criteria. Additionally, the use of ArcGIS provides easy to use capabilities in a complete, single, integrated system for geographic data creation, management, integration, and analysis.

In an effort to introduce coastal managers to the fundamentals of performing an MPA site analysis with the aid of a GIS, the NOAA Coastal Services Center has developed a Siting Marine Protected Areas module that will be included in an upcoming course entitled, "Coastal Applications Using ArcGIS." Using a combination of lectures, demonstrations, class discussions, and problem-solving exercises, the module integrates the issue of MPA designation with an intermediate level of ArcGIS functionality.

The underlying theme of the Siting Marine Protected Areas module is that the use of a GIS is only one part of the overall MPA designation process. An introductory lecture provides information on the issues surrounding MPAs while focusing on the ability of GIS to address these issues using spatial analysis. As a real world example, the Tortugas 2000 initiative, largely successful in the integration of GIS into the designation process, is presented throughout this lecture. Tortugas 2000 was a public and stakeholder process that resulted in the establishment of the Tortugas Ecological Reserve, managed by the Florida Keys National Marine Sanctuary and the National Park Service. Additional lecture materials focus on the necessary steps to conduct a GIS site analysis, and the geoprocessing tools that are available within the ArcGIS environment.

Throughout the Siting Marine Protected Areas module, students are encouraged to work in small groups to complete problem solving exercises. These exercises allow the students to examine various data acquisition issues, map out a preliminary MPA site analysis in Florida Keys National Marine Sanctuary, and carry out the analysis in the ArcMap environment using various geoprocessing tools and simple script integration. Many students will find that the module is a refreshing departure from the normal "cookbook" style of technology training.

In addition to MPAs, the Coastal Applications Using ArcGIS course contains modules that examine population growth along the coast, sensitive coastal habitats, and the integration of global positioning system data. For more information on the course, please visit www.csc.noaa.gov/training/gis.html.

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What's New in the Library?

The latest version of the journal *Ecological Applications*, Volume 13, No. 1, Supplement, is currently available online. The issue features various articles focusing on the science of marine reserves, including: emerging science, principles for design, ensuring persistence, avoiding oversights, population models, comparing designs for fisheries and for biodiversity, data estimation considerations, comparing marine and terrestrial ecosystems, size impacts of marine reserves, population and demographic considerations, distance and spacing, and applying ecological criteria in the evaluation, selection, and development of marine reserves. A case study from the Channel Islands is also included.

To access the journal, go to http://www.esajournals.org/esaonline/?request=get-static&name=s1051-0761-013-01-0001.

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April Profile: U.S. Fish and Wildlife Service's National Wildlife Refuge System

The National Wildlife Refuge program, the only federal system of lands dedicated to conserving wildlife, is celebrating its 100th anniversary this year. Since President Theodore Roosevelt established the first National Wildlife Refuge on March 14, 1903, more than 500 areas have been deemed National Wildlife Refuges. Because many of these refuges protect habitats and species situated on coastlines, 162 National Wildlife Refuge sites are currently included in the MPA inventory.

A brief description of the National Wildlife Refuge program follows. The Department of the Interior's U.S. Fish and Wildlife Service manages the program.

Program Mission: The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Authorizing Legislation: Legal authority for National Wildlife Refuges resides primarily in the amended Refuge System Administration Act of 1966. Additional authorities for the establishment and management of refuges include legislation such as the Endangered Species Act, Migratory Bird Conservation Act, Fish and Wildlife Act of 1956, Emergency Wetlands Resources Act of 1986, and the Alaska National Interest Lands Conservation Act, among others. Refuges have been established through Executive Orders, Secretarial Orders and decrees, and direct Congressional designations. New refuges continue to be strategically established through these authorities by donation, transfer, agreements, or purchase.

Management: The National Wildlife Refuge System is the nation's largest system of lands and waters that are managed primarily for the benefit of wildlife. All units of the Refuge System, and the species and habitats they contain, are governed by the regulations found in the Code of Federal Regulations, Title 50.

The Refuge System Administration Act states that it is the policy of the United States that each refuge be managed to "fulfill the mission of the System, as well as the specific purpose for which the refuge was established." In the fulfillment of this policy, some of the overarching mandates for managing refuges include to:

(1) Provide for the conservation of fish, wildlife, and plants and their habitats within the System;

(2) Ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans;

(3) Plan and direct the continued growth of the System in a manner that is best designed to accomplish the mission of the System, to contribute to the conservation of the ecosystems of the United States, to complement efforts of states and other federal agencies to conserve fish and wildlife and their habitats, and to increase support for the System and participation from conservation partners and the public;

(4) Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the System are located;

(5) Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the System and the purposes of each refuge;

(6) Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the System through which the American public can develop an appreciation for fish and wildlife;

(7) Ensure that opportunities are provided within the System for compatible wildlife-dependent recreational uses; and

(8) Monitor the status and trends of fish, wildlife, and plants in each refuge.

Types of Areas Protected: There are 538 National Wildlife Refuges that comprise over 94 million acres in many different ecosystems. For the purposes of marine protection, some of the habitats that are included in the Refuge System are coastal wetlands, marshes, coastal beaches, rocky shorelines, estuaries, mangroves, seagrass beds and coral reefs. Management protection for refuges also extends to the species that are dependent upon the habitats.

Inventory Status of Program Sites: The National Wildlife Refuge System currently has 162 sites included in the MPA inventory. The inventory sites are located in regions throughout the West Coast, the North and South Atlantic, and the Gulf of Mexico.

To view maps and descriptions of the National Wildlife Refuges listed in the MPA inventory, go to http://www2.mpa.gov/mpa/mpaservices/query/query_inv.lasso#single.

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Social Science Research Strategy Ready for Final Review

The MPA Center's Science Institute has been developing a comprehensive research strategy detailing the high priority information needs in social science research related to the planning, management, and evaluation of MPAs. The strategy outline came together following a 2002 workshop comprised of social scientists and practitioners. The draft strategy identifies and prioritizes key social science issues and information needs, and recommends practical methods to meet those needs through research, assessment, capacity building, and leveraged funding.

The latest draft of the national strategy for social science research, which has undergone initial peer and agency review, will be available for public comment on the MPA Center's website, mpa.gov, sometime in April. Feedback will be incorporated into a final strategy, and will be available online and in hard copy.

The Social Science Research Strategy will be posted for review on http://www.mpa.gov.

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EVENTS AND CONFERENCES IN 2003

APRIL
13-16: Saving Our Coastal Heritage: Restore America's Estuaries, Baltimore, Maryland; http://www.estuaries.org/

14 - 18: George Wright Society Biennial Conference, Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites, San Diego, California; http://www.georgewright.org/2003.html

MAY
11 - 16: The Fifth Annual Science and Management of Protected Areas Association (SAMPAA) Conference, Victoria, British Columbia; http://www.sampaa.org/sampaa_conference.htm

13-15: Department of the Interior Conference on the Environment, Phoenix, Arizona. Theme is "Partnering for Environmental Stewardship – Resource Conservation for the Future." http://www.doi.gov/conference/environment/index.html

19-22 May: Native American Fish and Wildlife Society 2003 National Conference, Traverse City, Michigan; http://www.nafws.org/NationalConference.htm

JUNE
4-6: Oceanology International 2003, New Orleans, LA: http://www.oiamericas.com

8: Oceans Day

13-14: International Coastal Management: Tools for Successful Regional Partnerships and Initiatives, University of Georgia, Athens, Georgia; http://www.olemiss.edu/orgs/SGLC/conference.htm

24-25: MPA Federal Advisory Committee, Washington, D.C.

JULY

13-17: Coastal Zone '03, Baltimore, Maryland. Theme is coastal zone management through time; http://www.csc.noaa.gov/cz2003

20-22: Second Annual Public Participation GIS Conference, Portland, Oregon. Abstract deadline is February 14: http://www.ursia.org/ppgis.htm (Smillie)

20-24: National Marine Educators Association, Wilmington, North Carolina: http://www.marine-ed.org/nmea2003

AUGUST

10-14: American Fisheries Society Annual Meeting, Quebec City, Canada. Theme is aquatic protected areas as fishery management tools. Abstracts are due February 24, 2003; http://www.fisheries.org/apa_symposium/homepage.htm

SEPTEMBER

4-6: Centre for Maritime Research (MARE) announces its second international conference entitled "People and the Sea II – Conflicts, Threats and Opportunities," Amsterdam, the Netherlands;http://www.marecentre.nl/people_and_the_sea_2/index.html

8-17: World Parks Congress, Durban, South Africa: http://www.iucn.org/themes/wcpa/

14-18: Estuarine Research Federation's 17th Biennial Conference: "Estuaries on the Edge: Convergence of Ocean, Land and Culture," Seattle, Washington; http://fish.washington.edu/news/erf

OCTOBER

7-11: North American Association for Environmental Education, Anchorage, Alaska: http://naaee.org/

18-22: Coastal States Organization, 33rd Annual Meeting, Portsmouth, New Hampshire

26-29: Hawaii Coastal Zone Management Program's Hawaii Summit-to-Sea 2003, Honolulu. Themes include Traditional and Cultural Wisdom, Ecosystem & Resource Management, Research & Education, and Ocean Industry. Abstracts due May 18, 2003; http://www.hawaiiormp.com/main.htm

25-30: National Estuarine Research Reserves Association (NERRA) Annual Meeting, Charleston, South Carolina

NOVEMBER

2-5: Eighth Estuarine and Coastal Modeling Conference, Monterey Hyatt, Monterey, California; http://www.oce.uri.edu/ecm8/.

8-12: National Association of Interpretation, Reno, Nevada:
http://www.interpnet.com/niw2003/

17-20: Joint Ventures: Partners in Stewardship, Los Angeles, California;
http://www.partnerships2003.org/home.html