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U.S. OCEAN ACTION PLAN IMPLEMENTATION NOAA UPDATE

**NOTE: UPDATED INFORMATION IS
IN RED TEXT.**

JUNE 2007

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CHAPTER 1: ENHANCING OCEAN LEADERSHIP AND COORDINATION

Improving Federal Coordination and Governance

Seek Passage of NOAA Organic Act Establishing NOAA within the Department of Commerce

The Administration's Bill was transmitted to Congress in April 2005. The Organic Act enables the National Oceanic and Atmospheric Administration (NOAA) to work better by more broadly partnering with groups and allowing NOAA the authority to disseminate information. In the House, Rep. Vern Ehlers (R-MI) introduced his version of a NOAA Organic Act-HR 5450. It was jointly referred to both the House Science Committee and the House Resources Committee. HR 5450 was passed by the House on September 20, 2006. Subsequently it was sent to the Senate where it was received, read twice and referred to the Senate Committee on Commerce, Science and Transportation on September 21, 2006. **No further action was taken on the Bill in 2006.** (<http://thomas.loc.gov>)

There were no updates for June 2007.

Support Regional Collaborations on Oceans, Coasts, and Great Lakes Policy in Partnership with Leadership of States, Localities, and Tribes

Support a Regional Partnership in the Gulf of Mexico

The Gulf of Mexico Alliance is a state/federal collaboration made up of the Governors of the five Gulf States and supported by the Gulf of Mexico Federal Workgroup (a sub-group of the Subcommittee on Integrated Management of Ocean Resources), consisting of 13 agencies/departments. The Alliance, working in partnership with the Federal Workgroup, developed the *Governors' Action Plan for Healthy and Resilient Coasts*. The Plan, released in March 2006, identifies five regionally significant issues. These priorities represent an initial focus for action through the Alliance: water quality for healthy beaches and shellfish beds; wetland and coastal conservation and restoration; environmental education; identification and characterization of Gulf habitats; and reductions in nutrient inputs to coastal ecosystems. (www.gulfofmexicoalliance.org)

The *Governors' Action Plan* includes 11 key actions across the Alliance's five priority issues. A companion document released concurrently with the *Governors' Action Plan*, the *Implementation Activities Matrix* details initial state and federal agency commitments to accomplish these 11 actions from March 2006 to March 2009. Work is underway to implement the Action Plan. The Federal Workgroup will continue to support the Gulf States in several specific areas including: increasing federal participation where appropriate; addressing interagency coordination and identifying opportunities to streamline intra- and inter-agency functions; promoting opportunities for bilateral coordination with, and participation by, Mexico and its Gulf coast states; and promoting regional collaboration including identifying needs for observations and management tools that could be forwarded to the Joint Subcommittee on Ocean Science and Technology. The Alliance held an "all hands" Action Plan Implementation and Integration Workshop in July 2006, to detail and expand implementation commitments made in the *Implementation Activities Matrix* and further regional collaboration in implementing the *Governors' Action Plan* by March 2009.

To help implement the Action Plan, several activities have been undertaken. In September 2006, the first *Harmful Algal Bloom Bulletin* for the south Texas coast was released, kicking off a new operational forecasting capability for the western Gulf of Mexico. Three of the four planned state-hosted Regional Restoration Coordination Team workshops were held: Louisiana in November 2006, Mississippi and Alabama in March 2007, and Texas in May 2007. In December 2006, the State of Mississippi and other state and federal agencies hosted a workshop in Biloxi, Mississippi, entitled Microbial Source Tracking in the Gulf of Mexico: Implications for Health and Environmental Management. Additionally, state user needs meetings were conducted in each of the five Gulf States to guide development of a Priority Habitat Identification System (PHINS), a prototype searchable Digital Library and Spatial Data Viewer for regional habitat identification data and information. Furthermore, the Alliance hosted a regional nutrient criteria development workshop in January 2007.

The second annual Alliance “all hands” workshop was held on July 10-12 in St. Petersburg, FL, with over 230 participants. A co-located NOAA Gulf of Mexico Regional Collaboration Team meeting on July 9 gave NOAA a strong presence at the APIIW. Dr. Bill Walker, Executive Director of the MS Dept of Marine Resources, presented his vision for the future of the Alliance – often generically referred to as “phase 2.” The five Alliance Priority Issue Teams identified actions in the Governors’ Action Plan that still need work and developed plans for completing these remaining activities by March 2009. Concurrent technical workshops were held on nutrients criteria development, Gulfwide WQ monitoring standardization, habitat identification techniques, habitat restoration techniques, and regional sediment management.

Advance Regional Fisheries Management

In the fall of 2004, thirteen southeastern States, the U.S. Department of the Interior, the National Oceanic and Atmospheric Administration, the Atlantic States Marine Fisheries Commission, the Gulf States Marine Fisheries Commission, the Gulf of Mexico Fishery Management Council, and the South Atlantic Fishery Management Council signed a Memorandum of Understanding (MOU) formalizing the creation of the Southeast Aquatic Resources Partnership (SARP). In 2006, the SARP membership expanded to fourteen southeastern states, with the addition of Virginia.

The SARP is currently developing aquatic nuisance species management plans and strategies for the Southeast and an *Aquatic Habitat Plan* for the Southeast that are intended to serve as the regional component of the National Fish Habitat Initiative. (www.sarpaquatic.org/) The development of aquatic nuisance species management plans and strategies is still in progress. Texas, Florida, Louisiana, Missouri, and Virginia have completed their plans and have initiated actions pursuant to those plans at the state level.

MOVING BEYOND THE OAP

To formalize coordination and communication a full-time SARP Coordinator was established in September 2005 to enhance and stimulate aquatic conservation efforts at the regional level. SARP has also initiated a detailed strategy for developing the *Southeast Aquatic Habitat Plan*. The first draft of the *Southeast Aquatic Habitat Plan* has been prepared and is under review by the SARP Habitat Subcommittee. The Plan is expected to be approved by the SARP Steering Committee in the fall of 2007. The *Southeast Aquatic Habitat Plan* will be proposed for inclusion in the *National Fish Habitat Action Plan*. SARP is now recognized by the National Fish Habitat Board as one of five Pilot Partnerships under the nationwide *National Fish Habitat Action Plan*.

CHAPTER 2: ADVANCING OUR UNDERSTANDING OF THE OCEANS, COASTS, AND GREAT LAKES

Expanding Our Scientific Knowledge of Oceans, Coasts, and Great Lakes

Develop an Ocean Research Priorities Plan and Implementation Strategy

The Joint Subcommittee on Ocean Science and Technology (JSOST) has actively worked to develop the Ocean Research Priorities Plan (ORPP) and Implementation Strategy. To facilitate public/stakeholder input into the process, a workshop was held in April 2006 in Denver, Colorado. Workshop participants included federal, state, and local governments, academia, educators, non-governmental organizations, and private industry. A public comment period for the planning materials for the ORPP followed the workshop. In June 2006, the JSOST held a day-long retreat to discuss the research priorities, which were produced using the input from the public comments and workshop. A draft of the ORPP was submitted to the ICOSRMI in July 2006. The ORPP was released for public and National Research Council (NRC) review late summer 2006. The public comment period was 45 days from release; the NRC review period was three months. During the NRC and public review period, the JSOST began development of the Implementation Strategy. In addition, a series of public briefings were held around the country to inform and solicit comments from the ocean community on the ocean research priorities. Information sessions and panels were also conducted at several scientific conferences and organization meetings. (<http://ocean.ceq.gov/about/jsost.html>) The Plan was finalized in December 2006.

The Charting the Course for Ocean Science in the United States: An Ocean Research Priorities Plan and Implementation Strategy was released to the public on January 26, 2007. The NRC is currently completing Phase 3 of their study on *Charting the Course for Ocean Science*. The report will be delivered in the summer of 2007. Outreach efforts on *Charting the Course for Ocean Science* are ongoing with several public town halls scheduled for this summer at venues such as Coastal Zone 2007 and the Annual Meeting of the American Fisheries Society. The JSOST is currently working on implementation plans for the four Near-Term Priorities identified in *Charting the Course for Ocean Science*.

Build a Global Earth Observation Network, Including Integrated Oceans Observation

Integrate U.S. Ocean Observing Efforts into the Global Earth Observing System of Systems:

In April 2006, the Joint Subcommittee on Ocean Science and Technology (JSOST) established the Interagency Working Group on Ocean Observations (IWGOO) to advise and assist the JSOST on matters related to ocean observations. A function of the IWGOO is to integrate U.S. ocean observing efforts, including the Integrated Ocean Observing System (IOOS), into the Global Earth Observing System of Systems (GEOSS) and to other international programs. The First Annual IOOS development plan was approved by the National Ocean Research Leadership Council (NORLC)/ Interagency Committee on Ocean Science and Resource Management Integration (ICOSRMI) in January 2006. The Plan addresses many recommendations of the U.S. Commission on Ocean Policy, including those for establishing an IOOS with an emphasis on regional development, developing the capacity for ecosystem-based management, and linking IOOS data and information to applications. (www.ocean.us/IWGOO)

The Data Management and Communications (DMAC) Steering Team established the IOOS-DMAC Guidelines/Standards Adoption Process in May 2006.

In January 2006, the Group on Earth Observations (GEO) released *The GEO 2006 Work Plan*, which was accepted as a living document, subject to further revision and finalization in 2006. The Work Plan sets forth a series of activities and tasks for the first year of GEOSS implementation. The program areas include: Disasters, Health, Energy, Climate, Water, Weather, Ecosystems, Agriculture, and Biodiversity. Within each program area there are specific ocean related activities to build a global earth observation network, including integrated ocean observations. (<http://usgeo.gov/>)

The NOAA GEOSS Integration Manager position was established to coordinate NOAA technical input and manage NOAA's external stakeholder relationships for GEO and U.S. GEO. Key accomplishments and continuing efforts include the GEONETCast for the Americas and NOAA input to the upcoming November 2007 GEO Ministerial meeting. In April 2007, GEOSS America was kicked off. The purpose of GEOSS America is to provide an umbrella framework to advance GEOSS in the Western Hemisphere.

In February 2007, an IOOS Director was approved and a NOAA IOOS Program was developed. This program will provide a focal point and execution for all NOAA IOOS activities. The program is focusing on an Initial Operational Capability for a Data Integration Framework. The IOOS Program in coordination with NOAA's Coastal Services Center is coordinating with the Regional Associations to put in place the Regional Coastal Observing Systems (RCOOS).

Lead Development of International Capacity Building Effort

There is an ever-growing need for capacity building to ensure the long-term operations, maintenance and development of ocean observation systems deployed in both national and international waters. U.S. leadership through the Group on Earth Observations (GEO) and involvement in the Intergovernmental Coordination Groups for regional warning systems is generating political will for this collaborative, scientific endeavor.

U.S. Agencies, in cooperation with the Ocean Studies Board of the National Academies, hosted an international conference in November 2006 to consider the most effective mechanisms for building capacity for the protection and sustainable use of oceans and coasts. **Country reports from Angola, Cameroon, Congo, Cote d'Ivoire, Djibouti, Ghana, Kenya, Mauritania, Mozambique, Nigeria, Seychelles and Tanzania are now available. These reports came from the GLOSS training course held in Oostende, Belgium, in November 2006.** In addition, the U.S. has pioneered an effort to refine the role of the UN Educational Scientific and Cultural Organization (UNESCO) and sister UN agencies to build capacity in a more efficient manner, particularly with emphasis on capacities for natural hazard risk mitigation, including basic sciences and engineering. The U.S. has also begun to implement Sea Grant programs in South Korea, Latin America/Caribbean, and Indonesia, as a means to create an institutional environment for capacity building.

U.S. leadership in tsunami detection and mitigation has probably been the most visible example of U.S. engagement in the international transfer of U.S. ocean technology and expertise over the course of 2006. The U.S. remains committed to sharing best practices, promoting both interoperability and the full and open exchange of data and encouraging the participation of foreign scientists in U.S. government-sponsored oceans research.

Planned Next Steps: Funds were obligated in 2006 and preparations are underway for Global Sea Level Observing System (GLOSS) technology training workshops to be conducted in Mozambique and Mauritius in 2007. The U.S. is also helping to re-establish the water level network in the Caribbean in 2006-2007; this “Third Border Initiative” includes equipment, training, and the development of a sustainable network in support of coastal hazard warning, planning, and mitigation. (www.gloss-sealevel.org/)

MOVING BEYOND THE OAP

NRC Study on International Capacity Building for the Protection and Sustainable Use of Oceans and Coasts

The National Science Foundation (NSF), and the National Oceanic and Atmospheric Administration (NOAA), have joined the David and Lucille Packard Foundation, and the Gordon and Betty Moore Foundation to sponsor a study by the National Academies’ National Research Council (NRC), entitled *International Capacity Building for the Protection and Sustainable Use of Oceans and Coasts*. The study will identify barriers to effective management of coastal and marine resources encountered in coastal nations, particularly in the developing world. In addition, the study will examine current and past efforts to build the scientific, technological and institutional capacities required for countries to develop and implement effective coastal and marine resource policies and recommend ways in which the U.S. and partner organizations, including governments, international bodies, and stakeholders, can help strengthen the marine protection and management capacity of other countries. (http://dels.nas.edu/osb/capacity_building.shtml)

There were no updates for June 2007.

Share GIS Data Through New Corps of Engineers-NOAA Partnership

In June 2005, the National Oceanic and Atmospheric Administration (NOAA) and U.S. Army Corps of Engineers (USACE) made available coastal topographic/bathymetric data collected via the Joint Airborne Lidar Bathymetry Technical Center of Excellence (JALBTCX) partners through a NOAA geospatial data portal. The initial datasets include pre and post-storm topography and hydrography Lidar for portions of the Gulf of Mexico and eastern Florida. More recently, data has been collected and made available for additional portions of the U.S. east coast. The coverage area of the newly added data covers approximately 500 meters inland and up to 1000 meters seaward of coastal New York, New Jersey, Delaware, Maryland, Virginia, and South Carolina.

NOAA/ USACE jointly funded project to fuse Lidar data and spectral imagery into new information products is coordinated through the National Oceanographic Partnership Program (NOPP) and underwent a positive program review in June 2006.

In addition, NOAA sponsored GIS training courses (i.e., Introduction to eCoastal) in August 2005 for USACE staff or invitees representing five states and several different Corps offices. (www.nopp.org) **In June 2006, two Introduction to ArcGISI classes were held.**

Planned Next Steps: The JALBTCX National Coastal Mapping Program will continue to collect and make Lidar data available. In the coming weeks, the NOAA Coastal Services Center will be adding USACE Lidar data collected in coastal North Carolina, Georgia, and Florida, and in the next few months, expect to receive and make available data from the Northeast and Great Lakes coastal regions. The NOPP-funded project continues on schedule with field work as the next major component to the project. **There were no updates for June 2007.**

Develop and Deploy New State of the Art Research and Survey Platforms

Under the current Ocean Action Plan, the Joint Subcommittee on Ocean Science and Technology (JSOST) chartered the Interagency Working Group for Facilities (IWG-F; previously the Federal Oceanographic Facilities Committee under the National Oceanographic Partnership Program) to develop the *National Oceanographic Fleet Plan*. This Plan defines an interagency strategy for federally-owned oceanographic research and survey vessels operated by both federal and academic organizations.

Planned Next Steps: In the summer of 2006, the *National Oceanographic Fleet Plan* was reviewed by JSOST. JSOST has approved the Report. The Report will be updated every five years. .

A New Ocean Exploration Vessel for NOAA

In August 2005, the National Oceanic and Atmospheric Administration's (NOAA) Office of Marine and Aviation Operations (NAMO) awarded a contract to convert the former U.S. Navy surveillance vessel CAPABLE into a NOAA research ship (to be renamed OKEANOS EXPLORER) that will explore the world's oceans. The Navy provided support for the conversion contract and a separate purchase of highly specialized on-board and shore-side equipment to connect expeditions at sea in real time to teams of scientists, teachers, and students ashore via satellite and high-speed Internet pathways.

The conversion of the U.S. Navy surveillance vessel CAPABLE to a NOAA research ship OKEANOS EXPLORER was divided into two phases due to budget considerations. On April 26, 2007, the former USNS CAPABLE went back into dry-dock for the final steps of its Phase I conversion. Phase II of the conversion will focus on the stateroom and mission space conversion, including the installation of a permanent ROV and telepresence control center. The contract package is currently under development and work is expected to begin in October 2007. Final conversion is to be completed by spring 2008. (<http://oceanexplorer.noaa.gov/>).

Expanding the NOAA Fleet

The National Oceanic and Atmospheric Administration's (NOAA) fleet of Fisheries Survey Vessels (FSVs) consists of two ships currently in operation: the OSCAR DYSON, one of the most technologically advanced fisheries ships in the world (delivered to NOAA in January 2005), and the HENRY B. BIGELOW (delivered in July 2006). In June 2006, the keel-laying ceremony (first construction milestone) was held for the third NOAA FSV, to be named PISCES, with expected delivery to NOAA in late 2007. One of the major milestones of construction, the launching, is tentatively scheduled for November 2007. Further construction and outfitting will take place after the launching and the ship is expected to be delivered to NOAA during the summer of 2008. These ships have cutting-edge low acoustic signatures, and have the ability to perform hydro-acoustic fish surveys. They are also able to conduct bottom and mid-water trawls while running physical and biological-oceanographic sampling during a single deployment—a combined capability unavailable in the private sector. (www.omaoo.noaa.gov/)

Planned Next Steps: Design on the SWATH, a hydrographic vessel anticipated to be delivered in early 2008, has been completed and NOAA has awarded the contract for construction of the vessel.

MOVING BEYOND THE OAP

In June 2006, construction began on a fourth FSV, BELL M. SHIMADA. The keel laying ceremony occurred in June 2007. Additionally, the Small Waterplane Area Twin Hull (recently named FERDINAND HASSLER) hydrographic survey vessel is in the detailed design and construction phase. The keel laying for HASSLER was June 15, 2007, and delivery of the vessel is expected in the summer of 2008.

Coordinate Ocean and Coastal Mapping Activities

In June 2006, the Joint Subcommittee on Ocean Science and Technology (JSOST) established the Interagency Working Group on Ocean and Coastal Mapping (IWG-OCM) to advise and assist the JSOST on matters related to ocean and coastal mapping and charting. The IWG-OCM is currently working to develop an inventory of federal, federally-funded, and non-federal governmental ocean and coastal mapping and charting programs, operations, and prioritized needs, and has identified a task group to develop technical and resource requirements for inventory development and implementation. (http://ocean.ceq.gov/about/sup_jsost_iwgs.html)

Planned Next Steps: The task group is conducting an inter-agency technical workshop scheduled for September 11-13, 2007 at the NOAA Coastal Services Center in Charleston, South Carolina that will: a) review existing agency and inter-agency data management tools, b) establish requirements for a comprehensive inventory, c) develop a design for the proposed inventory, including alternative strategies for development and implementation, d) identify agency resources available for development and implementation, and e) recommend an implementation program, including time lines and priorities, with the objective of rapidly implementing the inventory framework consistent with future expansion and enhancement.

Implement New Legislation on Oceans and Human Health, Harmful Algal Blooms, and Hypoxia

In July 2005, the Joint Subcommittee on Ocean Science and Technology (JSOST) established the Interagency Working Group on Harmful Algal Blooms, Hypoxia, and Human Health (IWG-4H) to advise and assist the JSOST with regard to interagency requirements of the Oceans and Human Health Act of 2004 and the Harmful Algal Bloom and Hypoxia Amendments Act of 2004 (HABHRCA 2004). The IWG-4H serves as the Interagency Task Force on Harmful Algal Blooms and Hypoxia, which was reconvened as mandated by HABHRCA.

There has been substantial progress toward completing milestones for implementation of HABHRCA 2004. An International Symposium on Cyanobacterial Harmful Algal Blooms was held in September 2005 and the proceedings from this workshop formed the basis of the *Scientific Assessment of Freshwater Algal Blooms* report. The report has been completed and is currently being reviewed by the JSOST. The report must then be approved by Interagency Committee on Ocean Science and Resource Management Integration (ICOSRMI), then Office of Science and Technology Policy (OSTP), prior to submission to Congress. The NOAA Center for Sponsored Coastal Ocean Research (CSCOR) and EPA staff served as primary authors of this report.

A *interim Prediction and Response Report* for HABs (*National Assessment of Efforts to Predict and Respond to Harmful Algal Blooms in U.S. Waters*), which details HAB prediction and response related research and identifies opportunities to advance prediction and response efforts, has been approved by JSOST and submitted to the ICOSRMI for their review and approval. This report is on schedule to be completed by December 2006.

The *Gulf of Mexico Hypoxia Action Plan of 2001* was produced to meet mandates of the original HABHRCA legislation (1998). As a follow-up, the design process for the five-year reassessment of the *Gulf of Mexico Hypoxia Action Plan of 2001* was completed in June 2005. This Gulf of Mexico hypoxia reassessment will inform development of the HABHRCA 2004 mandated *Scientific Assessment of Hypoxia*. (http://ocean.ceq.gov/about/sup_jsost_iwgs.html) The *Scientific Assessment of Marine Harmful Algal Blooms*, the fourth and final HAB report mandated by the HABHRCA legislation, is due in December 2007. The report is being generated by the IWG-4H with NOAA and NSF staff serving as primary authors.

Planned Next Steps: The *Prediction and Response Report* was published in the Federal Register on September 27, 2006. After a period of public comment, the final interim *Prediction and Response Report* (December 2006), which included a summary of the public comments, was approved by the JSOST. This report is the first step in a process to create the *National Scientific Research, Development, Demonstration, and Technology Transfer Plan (RDDTT Plan) on Reducing Impacts from Harmful Algal Blooms*, due December 2007. A workshop was held in June 2007 as the next critical step for developing the *RDDTT Plan*.

The fourth symposium in support of the Gulf of Mexico hypoxia reassessment, the *Sources, Transport, and Fate of Nutrients in the Mississippi and Atchafalaya River Basins Conference*, was held in November 2006. All four symposia planned as part of the reassessment have been held and peer-reviewed proceedings papers have been produced. These scientific symposia and papers are providing some of the most up-to-date information to facilitate an evaluation of the science by an EPA Science Advisory Board (SAB) Hypoxia Advisory Panel, who will provide recommendations for revising the Action Plan for the Mississippi River /Gulf of Mexico Watershed Hypoxia Task Force. Recommendations from the reassessment will include research needs for guiding future management actions. Many of these needs are expected to be met by CSCOR's newly funded Northern Gulf of Mexico Ecosystems and Hypoxia Assessment (NGOMEX) projects, and by CSCOR-sponsored meetings in 2007 (i.e., the Summit on Long-Term Monitoring of the Gulf of Mexico Hypoxic Zone: Developing the Implementation Plan for an Operational Observation System, and the Ecological Impacts of Hypoxia on Living Resources Workshop).

The EPA SAB Hypoxia Advisory Panel will present a draft advisory report to the Hypoxia Task Force and its Coordinating Committee on their recommendations for revising the Action Plan. Based on these recommendations, and incorporation of new, Task Force-approved thematic areas of focus (e.g. biofuel-driven changes in agriculture, reauthorization of the Farm Bill, lower basin wetland restoration and water diversion, greater specificity and accountability in management actions, etc.), the Task Force will develop an updated Action Plan by the end of 2007 that will articulate a more specific management strategy to reduce the size of the hypoxic zone in the northern Gulf and improve water quality in the Mississippi River Basin.

Increase Ocean Education Coordination

The Interagency Working Group on Ocean Education was established by the Interagency Committee on Ocean Science and Resource Management Integration (ICOSRMI) in January 2006. The working group reports to the co-chairs of the Joint Subcommittee on Ocean Science and Technology (JSOST) and The Subcommittee on Integrated Management of Ocean Resources (SIMOR) and coordinates with Ocean Research and Resources Advisory Panel (ORRAP). The Working Group is charged with improving coordination of federal programs focused on ocean education and outreach.

At the request of the SIMOR, the Working Group submitted an implementation plan for increasing coordination in June 2006. This plan includes four focus areas: (1) Increasing coordination and promoting collaboration among federal agencies and their partners; (2) Evaluating the range of means to enhance the public's knowledge of ocean related matters and ensuring a coordinated education and outreach message; (3) Ensuring that data collected through ocean and Earth observations are translated into useable forms for teachers, students, and the general public; and (4) Assessing the current and future ocean workforce to determine if additional effort is needed to ensure adequate preparation of the nation's ocean workforce. **The Working Group updated the implementation plan in June 2007.**

In support of these focus areas, the Working Group, together with the National Marine Sanctuary Foundation and several other partners, convened a Conference on Ocean Literacy in June 2006 (<http://nmsfocean.org/chow2006/cool.html>). The Conference was held in conjunction with National Oceans Week, as proclaimed by the President for the week of June 4 through June 10, 2006 (www.whitehouse.gov/news/releases/2006/06/20060602-6.html). **The Working Group issued a report on the conference in December 2006.**

The Working Group also developed a survey for taking inventory of federal agency ocean education programs for the purpose of finding areas for increased coordination and collaboration. The survey has been completed. The Working Group is analyzing the data. In addition, the National Oceanographic Partnership Program is funding a study to assess the ocean-related workforce. The study is expected to be complete in May 2008.

Expand the Sea Grant Program Internationally

The Administration is working to share the successful U.S. Sea Grant model of applied research, extension, and education to interested countries in Asia, Latin America, and North Africa. A proposal for Central American Free Trade Agreement (CAFTA) funds to support Ocean Action Plan activities was submitted in March 2006. A donor's conference for developing a Latin America Sea Grant trust fund is being planned for late 2007.

The Administration has been particularly active in Southeast Asia, participating in a May 2005 workshop focused on developing a regional Sea Grant model. In July 2006, U.S. Sea Grant extension experts from Florida Sea Grant led a training program in Padang, Indonesia for approximately 70 managers from Indonesia's Sea Partnership Program on development and implementation of a national extension training program. In 2007, the Sea Partnership Program will be linking into the Indian Ocean Tsunami Warning System's (IOTWS) Coastal Community Resilience programs. A proposal has been submitted for Asia-Pacific Economic Cooperation (APEC) funds to support tsunami resilience and mitigation activities within the sea Partnership Program.

In South Korea, two Sea Grant programs (Yeongnam and Honam) and California Sea Grant are continuing to formalize their sister-school relationships, and meetings were conducted in early July 2006 in Seoul and Mokpo to identify areas of collaboration. In January 2006, the Busan (South Korea) Sea Grant staff visited the National Oceanic and Atmospheric Administration (NOAA), the National Sea Grant Office, and four state Sea Grant Programs (MD, DE, USC, CA), to make a film focusing on the U.S. Sea Grant system that will be used to explain Sea Grant concepts in South Korea.

In 2005, NOAA participated in a scoping trip to North Africa to assess the interest and capacity for adapting the Sea Grant model. The need for a technical assistance plan was reassessed, and subsequently supplanted in support of proceeding with existing extension efforts already in place throughout North Africa. (www.seagrant.noaa.gov/)

Planned Next Steps: Renewed Sea Grant International Extension efforts for late FY07 and early FY08 are being discussed with the Department of State and other NOAA partners.

There were no updates for June 2007.

CHAPTER 3: ENHANCING THE USE AND CONSERVATION OF OCEAN, COASTAL, AND GREAT LAKES RESOURCES

Work with Regional Fisheries Councils to Promote Greater use of Market-based System for Fisheries Management

In the eight fisheries where dedicated access privileges (DAP) have been implemented since 1990, fishermen have enjoyed higher profits, lower costs, longer fishing seasons and a safer, more stable industry. These programs include individual fishing quotas, a community development quota program in western Alaska, and fishing cooperatives (IFQs), all of which provide for some selling and/or leasing of shares and are therefore market-based and driven. The Administration included in its Magnuson-Stevens Act (MSA) proposal that it submitted to Congress in September 2005 a section devoted to DAP programs, including IFQs, community quotas, fishing cooperatives, and area-based quota programs.

In December 2006, Congress reauthorized the MSA, formally establishing the legal procedures and framework for Limited Access Privilege programs (LAPPs). These LAPPs provide exclusive harvest allocations to groups of individuals, communities, or more broadly defined entities called Regional Fishery Associations, and mandate that each program develop a formal policy on transferability. Transferability governs the selling and leasing of harvest privileges. Therefore, all LAPPs will include at least some market-based component, depending on the goals of the Regional Fishery Management Council (Council) that develops the program. To assist the Councils in developing these programs and meet a commitment in the U.S. OAP, NOAA Fisheries prepared a draft paper in November 2006 on the design and use of LAPPs that addresses, among other things, the transferability of these privileges. NOAA Fisheries plans to include the provisions of the reauthorized MSA and issue these guidelines in 2007.

(www.whitehouse.gov/news/releases/2007/01/20070112-3.html)

Planned Next Steps: To promote greater use of market-based systems for fisheries management, the Department of Commerce pledges to work with Regional Fisheries Management Councils, to double the number of DAPs by 2010. This goal will bring eight new fisheries under market-based management programs. Toward this goal, NOAA Fisheries has already approved three new Limited Access Privilege programs – for Gulf of Mexico Red Snapper, Gulf of Alaska rockfish, and the Georges Bank fixed gear sector – that will take effect in Calendar Year 2007.

There were no updates for June 2007.

Foster a Balanced Representation for Regional Fishery Management Councils

New Regional Fishery Management Council members were selected for 2006 in June. The National Oceanic and Atmospheric Administration (NOAA) encouraged nominations from coastal States and recommended appointments that maintained or better balanced representation on the eight Councils. A provision was included in the Administration's Magnuson-Stevens Act (MSA) reauthorization proposal aimed at improving the balance of members on the regional fishery management councils. The Administration's proposal highlighted the importance of the broad representation on the Councils. In reauthorizing the MSA in December 2006, Congress did not include the Administration's specific language on broadened Council membership, but did strengthen requirements for the Scientific and Statistical Committees, significantly upgrading the role of scientific and technical experts. In addition, the reauthorized MSA called for more frequent

training of Council members and further defined the rules on conflicts of interest. These legislative and administrative changes are expected to improve the operations and accountability of the Regional Fishery Management Councils. (www.nmfs.noaa.gov/councils/)

MOVING BEYOND THE OAP

NOAA will work with the Councils to implement the legislative changes affecting their operations. By the 2007 Council nominations season, NOAA will work to clarify the Council member nomination process and nominee qualifications, better define fishing sectors (commercial, recreational, and other), and explain the need for representatives of all sectors on a Council. Under the reauthorized MSA, the Secretary of Commerce has the responsibility to “ensure a fair and balanced apportionment of the active participants in the commercial and recreational fisheries” and review nominees submitted by Governors to “ascertain if the individuals on the list are qualified”.

Copies of the 2006 Report to Congress on Apportionment of Membership on the Regional Fishery Management Councils were sent to the governors in February 2007. The Report includes recommendations to the governors for council nominations to address the balance between all sectors (i.e., commercial, recreational, and other). In January 2007, letters accompanied by guidance kits were sent to constituent state governors soliciting nominations for the upcoming vacancies. The letters to the governors also clarified the need for representatives of all sectors on a Council. In particular, letters to the governors of states on the Gulf of Mexico Fishery Management Council were instructed to submit four nominations for each vacancy, including commercial, recreational fisher and recreational charter or headboat, and “other” sectors. Nineteen fishery management council members’ terms will expire on August 10, 2007. An expanded Council member training program as specified by the reauthorized MSA has been prepared and will be conducted in October 2007 and at least annually thereafter. Among other requirements, Council members will be trained on rules regarding conflicts of interest.

Harmonize Recreational Fishing Data Acquisition for Fishery Management Purposes

In response to the National Research Council (NRC) Review of Recreational Survey Methods, as well as the Magnuson-Stevens Reauthorization Act (MSRA), the National Oceanic and Atmospheric (NOAA) National Marine Fishery Service (NMFS) is developing strategies to improve recreational fishing data collection that addresses issues and recommendations contained in the report. The NRC identified over 200 findings and recommendations associated with the Marine Recreational Fishery Statistics Survey (MRFSS) and other state recreational surveys. These issues affect the use of recreational data in science and management decisions and present challenges for outreach to the recreational fishing community.

In September 2006, NOAA convened a workshop entitled “Recreational Fisheries Statistics Requirements Management Framework” with participants from the states, regional fishery management councils, interstate commissions, and recreational fisheries sectors. A workgroup will now formulate an implementation plan for upgrading the recreational fisheries survey based on the management and stock assessment information needs expressed during the workshop. (www.st.nmfs.gov/st1/recreational/Review_Recreational_Survey_Methods/workshop/2006/2006.html)

In October 2006, NOAA conducted an independent peer review of the recreational fisheries economics data program. The purpose of the review was to: (1) evaluate the NMFS expenditure, valuation, and conjoint surveys for strengths and weaknesses of the survey methods, potential

biases, and recommendations for improvement; (2) evaluate the degree to which NMFS recreational economic data collections from 2000-2006 meet the recommendations included in “Chapter 5 Human Dimensions” of the NRC report, “*Review of Recreational Fisheries Survey Methods*”; (3) assess whether the suite of economic models currently employed by NMFS address management information needs; and (4) evaluate, given budget constraints, whether the approach NMFS is currently using for recreational economic data collection is providing “best value,” i.e., for a given level of investment in data collection and assessments, NMFS provides the most timely, accurate, and complete scientific advice on the economic value of recreational fishing and the economic effects of regulatory actions. The peer review report is available through the following link: www.st.nmfs.gov/st1/recreational/Review_Recreational_Survey_Methods/documents/CIE_recreational_fishery_economics_report.pdf

In January 2007, the NMFS Office of Science and Technology released a Development Plan for Improving Recreational Fisheries Statistics. The Plan describes a cooperative strategy for upgrading recreational fishing data collection programs to meet the requirements of fisheries managers, stock assessment scientists, and the fishing community, as well as addressing the NRC recommendations and MSRA requirements.

In March 2007, an Executive Steering Committee, consisting of executives from NMFS, the Interstate Marine Fisheries Commissions, the Regional Fishery Management Councils, and the Marine Fisheries Advisory Committee, established the Marine Recreational Information Program (MRIP). The MRIP consists of an Operations Team that will be responsible for developing improved surveys of recreational anglers, a Registry Team that will be responsible for developing a national registry of saltwater anglers, and a Communications and Education Team that will be responsible for communicating MRIP progress with stakeholders and the fishing public. In May 2007, the MRIP Operations Team produced a Work Plan for Improving Marine Recreational Fishing Data Collection Programs. The plan establishes several working groups that have been tasked with developing projects to address specific NRC recommendations. The MRIP is hosting a workshop in August 2007 to facilitate the planning process.

Establish Guidelines and Procedures for the Use of Science in Fisheries Management

Two major stakeholder meetings convened to hold discussions regarding the separation of science and management functions within the Fishery management Council process: (1) Managing Fisheries II Conference (March 2005, Washington, DC), and (2) Council Chairs and Executive Director's meeting (April 2005, Dana Point, CA). At these meetings, a series of proposals were developed toward formulating the administration's Magnuson-Stevens Act (MSA) Reauthorization bill. Based on these efforts, language was included in the Administration's version of the reauthorization bill to create standardized processes for conducting peer reviews within the Council's Scientific and Statistical Committees to comply with the Information Quality Act. However, the version of the MSA reauthorization passed in the 109th Congress allows each Fishery Management Council the discretion to establish a peer review process for scientific information used by the Council. The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) will work closely with the Councils as they evaluate and strengthen their peer review processes.

There were no updates for June 2007.

Foster Sustainable Harvests of Key Fish Species in the Caribbean and nearby Atlantic

The National Oceanic and Atmospheric Administration (NOAA) and the Department of State (DOS) are supporting efforts of the Western Central Atlantic Fisheries Commission (WECAFC) to strengthen this body's ability to better manage fisheries in the Wider Caribbean region. A working group was convened in July and October 2005 to strengthen WECAFC's ability to better manage fisheries in the Wider Caribbean. The working group produced a set of recommendations and proposed revisions to the Commission statutes, which were subsequently adopted at the 12th meeting of the Commission in October 2005.

Specifically, the recommendations call for WECAFC to improve its research and data collection efforts, assist in building institutional capacity in the region, promote collaboration among its members and with other international institutions, promote ecosystem and precautionary approaches to adhere to the Food and Agriculture Organization (FAO) Code of Conduct and related instruments, and help fishery managers in the development of scientifically-based management systems for all living marine resources in the region. WECAFC also endorsed the recommendation that a full time Secretary be established to fulfill the requirements of the revised statutes. These recommendations were approved by the United Nations FAO Council, the parent organization for WECAFC, in November 2006. (www.fao.org/fi/body/rfb/wecafc/wecafc_home.htm)

Planned Next Steps: Next steps include the development of Rules of Procedure for WECAFC and strengthening WECAFC's Scientific Advisory Group and various ad hoc working groups, through which WECAFC members will better coordinate their management programs for such key species as queen conch, spiny lobster, and reef fish. **The Rules of Procedure will be considered at the 13th Session of WECAFC in October 2007.**

Establish an Implementation Plan for Combating International “Illegal, Unregulated and Unreported” Fishing

After a series of interagency meetings to review, prioritize, and develop an Implementation Plan for the U.S. National Plan of Action for Combating International “Illegal, Unregulated and Unreported” (IUU) Fishing, the interagency taskforce approved the Implementation Plan in February 2005. The Plan to combat IUU fishing was developed in the form of a matrix containing 47 recommended actions. This matrix constitutes the completion of this specific Action Item under the U.S. Ocean Action Plan and mirrors the U.S. National Plan of Action on combating IUU fishing.

MOVING BEYOND THE OAP

Since the completion of this item in February 2005, at least 30 of the 47 recommended actions under the U.S. National Plan of Action to combat IUU fishing that would not be characterized as ongoing have been completed. Those that are and will remain perpetually ongoing actions have been initiated and are moving ahead. A number of significant events have been supported and facilitated by the U.S. in accordance with this action item. In July of 2005, the National Oceanic and Atmospheric Administration (NOAA) and the Department of State (DOS) partnered with the Government of Malaysia, the FAO Fish Code Program, and the International Monitoring Control and Surveillance (MCS) Network to host a Global Fisheries Enforcement Training Conference in Kuala Lumpur, Malaysia. **The second Global Fisheries Enforcement Training Workshop is being planned for August 7-11, 2008, in Trondheim, Norway. The NOAA is supporting this plan financially and through participation on the workshop planning team.**

The U.S. has maintained and strengthened its commitment to the International MCS Network. At a business meeting of the Network held in January of 2007, the NOAA Office for Law Enforcement (OLE) Director was elected to a three year term as the Network Chair. The formal adoption of the international collaboration project to enhance the Network and for NOAA OLE to host the project was approved at the meeting. Additionally, a senior NOAA enforcement agent has been selected and assigned to serve as the Director of the enhancement project and agreements between the U.S. and New Zealand, Australia, Canada and the UK. The objective of the project is to formulate a small staff and resourced operation that will conduct IUU activity analysis and facilitate an increased level of training and partnership in IUU related operations, particularly to provide support to developing countries. (www.high-seas.org/)

The U.S. is also leading efforts at the United Nations (UN) to combat IUU fishing. At the Review Conference for the UN Fish Stock Agreement and the negotiations of the 2006 UN General Assembly's fisheries resolution, the U.S. effectively advocated for universal adoption of and strengthened measures to prevent, deter, and eliminate IUU fishing, including bolstering flag and port State measures and improving international cooperation and coordination.

Implement Coral Reef Local Action Strategies

The U.S. Coral Reef Task Force and the members of its seven jurisdictions (Florida, Hawaii, Guam, American Samoa, Puerto Rico, the U.S. Virgin Islands, and the Commonwealth of the Northern Marianas Islands) have developed and begun implementing Coral Reef Local Action Strategies (LAS) to address key threats to coral reefs in each jurisdiction. The LAS provides a framework for Task Force member agencies to identify and collaboratively address these threats and additional local needs, connect local priorities to national goals, and coordinate federal agency actions with local management of reef resources. This effort is a significant step forward in advancing the goal of cooperative conservation between the Federal, State, Territorial, and Commonwealth governments.

The National Oceanic and Atmospheric Administration (NOAA), the Department of the Interior (DOI), the Department of Agriculture (USDA) and the U.S. Environmental Protection Agency (EPA) have been key federal partners in implementing the LAS effort and building local capacity for coral reef conservation and management. For example, in August 2005, NOAA, the DOI U.S. Fish and Wildlife Service, the EPA, and the USDA Natural Resources Conservation Service held a series of Successful Coral Reef Grants and Funding Opportunities Workshops in Puerto Rico and the U.S. Virgin Islands to help identify funding and other support for locally-based ridge-to-reef coral reef management and priority coral reef protection and conservation projects. The workshops also offered guidance and tips for preparing a competitive grant application and opportunities for direct interaction with representatives from federal granting agencies. Similar workshops were held in the Pacific during 2006 (Hawaii, Guam, and CNMI).

Community workshops to increase tools, coordination and implementation of actions to improve watershed protection, reduce land-based pollution, and downstream impacts on valuable coral reef resources in the region have also been held. For example, in 2006 community workshops were held in Hawaii, Puerto Rico, and USVI to provide specialized training and technical assistance to coastal managers and other stakeholders to enhance the effectiveness of their local planning and management capability for addressing land-based pollution sources that threaten coral reef ecosystems. Workshop sessions focused on customized design guidelines for innovative and simple

stormwater practices suited for small island development projects and recommended practices to improve erosion and sediment control in island environments.

A workshop hosted by the Coral Disease and Health Consortium (CDHC) was convened in Honolulu, Hawaii in June 2006 to help chart a “Vision for Action” for Coral Disease in the Pacific and Indo-Pacific. The goal of the workshop was to synthesize that state of knowledge, develop strategic research and action plans, and foster collaboration among agency partners and stakeholders. (www.coral.noaa.gov/coral_disease/cdhc.shtml) Several actions have been taken based on recommendations from the workshop. Regional Response teams for investigating coral disease outbreaks have been established, and two training sessions have been offered (Hawaii in June 2006 and Guam in March 2007). A web-accessible electronic atlas of normal histology for representative branching and boulder growth forms of Pacific coral species is being developed to facilitate and promote interactions among investigators in remote locales via web conferencing for education and consultation in coral histopathology.

At the October 2006 meeting of the U.S. Coral Reef Task Force in St. Thomas, USVI, a working session was held to discuss the future of the LAS initiative. As a result of that meeting a guidance document has been drafted which lays out a five step cycle of LAS development and implementation. It is expected that this guidance will be finalized at the next meeting of the Task Force in August 2007 and that in the next two year all jurisdictions will begin the development of new LAS which incorporate these steps. (www.coralreef.gov/taskforce/las.html)

LAS development and implementation is an on-going and adaptive process and is specific to each jurisdiction. Targeted next steps include: (1) Organize a Federal Coral Reef Grants and Funding Opportunities Workshop in American Samoa in August 2007; (2) Identify priority watersheds in each jurisdiction and through greater agency (USDA, NOAA, DOI, EPA) collaboration of resources and expertise, better address the issue of land-based pollution and downstream impacts on coral reef ecosystems. A joint project to evaluate the effects and benefits of practices to reduce or prevent land-based pollution impacts on coral reefs was initiated in Jobos Bay, Puerto Rico in the fall of 2006; and (3) Develop a Plan of Action for Coral Health and Disease in the Pacific that will increase the Pacific jurisdiction’s capabilities to address the impacts of climate change, coral bleaching, and disease. The strategic research plan, Vision for Action, was developed during the workshop held in Hawaii in June 2006. The Plan of Action promotes effective detection, identification, and management of coral diseases in the Pacific region and provides recommendations to address research and management needs, as well as novel strategies to engage public and political sectors in the issues. The report is expected to be available by September 2007.

The final draft of the LAS Status Report is currently being edited and formatted. The final layout is expected to be completed by July 2007.

Protect the Northwestern Hawaiian Island Coral Reef Ecosystem Reserve

Following a multi-year development process involving a variety of stakeholders and interests, President George W. Bush created the world’s largest marine conservation area off the coast of the northwestern Hawaiian Islands on June 15, 2006. In order to permanently protect the area’s pristine coral reefs and unique wildlife, the President used his authority under the Antiquities Act to designate the area a national monument.

The Northwestern Hawaiian Islands (NWHI) Marine National Monument encompasses nearly 140,000 square miles of U.S. waters, including 4,500 square miles of relatively undisturbed coral reef habitat that is home to more than 7,000 species. A quarter of the species found in the NWHI are found nowhere else on earth. (www.hawaiiireef.noaa.gov/)

MOVING BEYOND THE OAP

The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), the Department of the Interior's (DOI) U.S. Fish and Wildlife Service, and the State of Hawaii's Department of Land and Natural Resources are the Co-Trustees managing the Monument. To implement provisions for the national monument from the Presidential Proclamation, the three management agencies have signed a Memorandum of Agreement providing for the general terms and conditions for management and establishing relationships to effectively coordinate and implement management actions. The Co-Trustees are currently developing a joint permitting process for all activities that take place within the Monument. **The joint permit system has been implemented and the Co-Trustees are developing a draft management plan that should be available for public review and comment by early winter 2008.**

Form New International Partnerships to Enhance Management of Coral Reefs

In December 2004, the National Oceanic and Atmospheric Administration (NOAA), the State of Florida, and Australia's Great Barrier Reef Marine Park Authority signed a Memorandum of Understanding (MOU) to improve coral reef resilience. **The MOU is being implemented through a partnership that includes the original partners, the Nature Conservancy and the Florida Reef Resilience Program (FRRP). The FRRP is designed to improve understanding of reef health in the Florida Keys and Southeast Florida region. The FRRP is developing information and protocols to improve: (1) the monitoring of coral bleaching and other impacts on reefs to better understand relative resilience of different reef habitats, (2) the use of remote sensing tools in tracking and predicting reef condition over time, and (3) the understanding of the use and value of South Florida's reefs to human communities. Working with reef managers, academic scientists, and others, the FRRP has helped implement new monitoring efforts, increase understanding of reef resilience, and engaged reef managers and users in discussions of the value and future management of reefs. (See <http://nature.org/florida> for more information.)**

In 2006, the NOAA, the Australian Great Barrier Reef Marine Park Authority (GBRMPA), and The World Conservation Union (IUCN) released "A Reef Manager's Guide to Coral Bleaching" in response to calls from reef managers in the U.S. and internationally for tools and strategies for dealing with impacts of coral bleaching events. The Reef Manager's Guide provides information on the causes and consequences of coral bleaching, and management strategies to help local and regional reef managers reduce this threat to coral reef ecosystems. The Reef Manager's Guide includes contributions from over 50 experts in coral bleaching and coral reef management from 30 organizations. (See www.coralreef.noaa.gov for more information.)

An MOU between NOAA and the University of Queensland (Australia) has also been established to allow interaction of NOAA remote sensing tools with highly instrumented sites in the Great Barrier Reef to develop coral reef ecosystem models. **The MOU between NOAA and the University of Queensland (Australia) supports the Australian Research Council (ARC) Linkage project. This project is co-funded by NOAA, the Great Barrier Reef Marine Park Authority, and ARC. Its aim is to examine ecosystem responses to climate change and help in the development of relevant management tools. While presently focused in the southern Great Barrier Reef of Australia, the**

management tools and methodologies developed during the project will have direct relevance to U.S. interests and coral reefs globally. Meetings were held in March and May 2007 to discuss the science and workplan for the project. Participants are developing detailed plans for the current year and milestones for the remaining years of the five-year project. Activities will include field and laboratory experiments, deployment of oceanographic instrumentation, and synthesis modeling. The first of two High-Frequency radar systems used to monitor the ocean surface (e.g., currents, waves) in the Capricorn-Bunker region in the southern Great Barrier Reef was installed in March 2007. Data from this radar, and the second system to be installed at Lady Elliot Island, will be employed as part of the ARC Linkage project as input for hydrodynamic models.

MOVING BEYOND THE OAP

The Department of the Interior, Department of State (DOS), the U.S. Agency for International Development (USAID), and NOAA are working together on the World Heritage Site nomination process for the Remote Pacific Islands National Wildlife Refuges. The nomination is for the Central Pacific World Heritage Project (between four nations) and the NWHI Marine National Monument/State Marine Refuge. (www.fws.gov/pacificislands/wnwr/nwrindex.html) The Department of the Interior (DOI) received applications for possible inclusion of 36 sites on the U.S. World Heritage Tentative List as part of the nomination process.

NOAA, in collaboration with the State of Hawaii Department of Lands and Natural Resources, nominated Papahānaumokuākea Marine National Monument to the U.S. World Heritage Tentative List. The Papahānaumokuākea Marine National Monument was created by Presidential proclamation on June 15, 2006. The Papahānaumokuākea Marine National Monument is the single largest conservation area under the U.S. flag, and the largest marine conservation area in the world. Many of the islands and shallow water environments are important habitats for rare species such as the threatened green sea turtle and the endangered Hawaiian monk seal. (See <http://hawaiiireef.noaa.gov/> for more information.)

Additionally, the NOAA National Marine Sanctuary Program also submitted nominations for Stellwagen Bank National Marine Sanctuary (SBNMS) (located off the coast of Massachusetts in Federal waters) and Fagatele Bay National Marine Sanctuary (FBNMS) (located in American Samoa).

On May 8, 2007, the Bush Administration submitted the Coral Reef Ecosystem Conservation Amendments Act of 2007 to Congress calling for greater protection for the nation's coral reefs while enhancing marine debris removal and increasing the government's ability to work through cooperative partnerships.

Re-establish Interagency Marine Debris Coordinating Committee

In May 2005, the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Environmental Protection Agency (EPA) hosted an informal meeting of the Interagency Marine Debris Committee (IMDCC). Representatives from eight federal agencies attended the meeting to discuss past, current, and future marine debris initiatives and to discuss purpose and scope of committee. The final charter was completed and approved in March 2006.

MOVING BEYOND THE OAP

Although the IMDCC will look at a variety of marine debris issues, its initial focus is on derelict fishing gear. An ad hoc working group has been formed to discuss and recommend a committee

wide classification for marine debris and a second group is addressing the issue of derelict fishing gear. **IMDCC established an education workgroup to create a unified Federal message on marine debris, and the IMDCC is currently responding to reporting requirements from the Marine Debris Act due to Congress in December 2007.**

Research, Survey, and Protect Deep-Sea Coral Communities

Encourage Protection of Deep-Sea Corals when Developing and Implementing Regional Fishery Management Plans

Amendment 2 to the *Monkfish Fishery Management Plan* (FMP) was developed to address essential fish habitat (EFH) and bycatch issues, and became effective in May 2005. This amendment included closures to Lydonia and Oceanographer Canyons which are known to contain deep coral communities. In July 2005, the National Oceanic and Atmospheric Administration (NOAA) published a response to the Rulemaking Petition to Protect Deep-Sea Coral and Sponge Habitat. The response articulates NOAA's strategy of working with the Regional Councils to achieve increased protection for these resources.

(www.nmfs.noaa.gov/habitat/habitatconservation/DSC_petition/)

MOVING BEYOND THE OAP

Working with Fishery Management Councils, significant steps have been taken to protect deep-sea coral communities in the Pacific. In Alaska, working with the North Pacific Fishery Management Council, NOAA formally established the Aleutian Islands Habitat Conservation Area, which covers 369,000 square miles, approximately the size of Texas and Colorado combined. Additionally, more than 7,000 mi² of Alaskan seamount habitat was closed to all bottom-tending fishing gear, and trawl nets were banned from more than 2,700 mi² along the continental slope in the central Gulf of Alaska. The final rule implementing EFH amendments in Alaska required an operable vessel monitoring system (VMS) on all Federally permitted groundfish or crab fishing vessels operating in the Aleutian Islands and on all Federally permitted groundfish or crab fishing vessels with mobile bottom contact gear operating in the Gulf of Alaska (July 2006). The North Pacific Council is beginning an analysis of potential new habitat conservation measures for Bering Sea fisheries, which may include fishery area closures and/or fishing gear modifications to minimize the effects of trawling on bottom habitats there.

In June 2006, new regulations implementing the Pacific Fishery Management Council's Pacific Groundfish Amendment 19 went into effect. This amendment protects over 130,000 square miles of essential fish habitat from bottom-trawling in a number of regions along the Pacific Coast. This represents over 42 percent of the Exclusive Economic Zone (EEZ) off Washington, Oregon, and California. Much of the impetus to the trawl closures was to protect sensitive biogenic habitats including deep corals and sponges.

In March 2007, the New England Fishery Management Council submitted Phase 1 of its Draft Essential Fish Habitat (EFH) Omnibus Amendment #2 and associated Draft Environmental Impact Statement for public comment. The action includes a range of EFH and habitat area of particular concern designation alternatives, a number of which would provide significant additional protection for important areas of deep sea coral habitat in the Northeast. Completion of the Omnibus Amendment is expected in 2009.

NOAA has also developed the first draft of a *Deep-Sea Coral and Sponge Research, Conservation, and Management Strategy*, which lays out NOAA's goals to research, survey and protect deep-sea

corals and sponges. This draft Strategy will be made available for public comment in the summer of 2007. NOAA is also preparing the first Report to Congress and the public on Deep Sea Corals mandated by the Magnuson-Stevens Reauthorization Act (MSRA). The Report will include steps taken by NOAA to identify, monitor, and protect deep sea coral areas, including summaries of the results of mapping, research, and data collection performed under the new Deep Sea Coral Research and Technology Program.

Complete Survey of Deep-sea Coral in the Gulf of Mexico

In 2006, the Department of the Interior (DOI) completed a 3-year study of deep-sea corals in the Gulf of Mexico (GOM) involving two years of field sampling (2004 and 2005) and a third year (2006) dedicated to data analysis, synthesis of results, and completion of all reports. This project was designed to determine the environmental conditions in the GOM that result in the observed distribution of high density communities, particularly extensive areas of the coral *Lophelia pertusa*, which could be considered important and sensitive to impacts from oil and gas development activities. A manned submersible was employed for the fine scale observations and sample collections required to describe newly discovered, high-diversity biological communities.

MOVING BEYOND THE OAP

A groundbreaking research project is currently underway using the deep diving submersible ALVIN to investigate newly discovered deep-sea communities in the Gulf of Mexico in water depths between 3,400 and 10,000 feet. The project is jointly sponsored under the National Oceanographic Partnership Program, DOI's Mineral Management Service (MMS), and the NOAA Office of Ocean Exploration (OE). **This is a multiyear effort, in which MMS provided funding for the science team while OE provided funding for the assets (i.e., the RV Atlantis and the submersible ALVIN).** The first year of field sampling was completed in June 2006 using the manned submersible ALVIN. Although the emphasis of this study is on chemosynthetic communities, a secondary objective is to study other types of hard bottoms observed, especially aggregations of *Lophelia pertusa*. (www.oceanexplorer.noaa.gov/explorations/06mexico/) **A Remotely Operated Vehicle (ROV), Jason II, will be employed in the summer of 2007 during the second year of field sampling. The OE will provide funding for the ROVA. The OE was successful in obtaining time on the NOAA Ship Ron Brown for this expedition.**

Complete Two International Deep-Sea Coral Exploration Missions to Locate and Describe Deep Coral Communities

Phoenix and Line Islands Expedition: The National Oceanic and Atmospheric Administration (NOAA) supported several expeditions in July 2005 to investigate deep coral and chemosynthetic communities found in the vicinity of the Vailulu'u Seamount, an actively venting volcano near American Samoa. Scientists from the University of Sydney Australia worked with U.S. scientists to examine the area's geology, biology, and ecology. (www.nurp.noaa.gov/)

Vailulu'u Seamount Expedition: This NOAA supported expedition in early July 2005 involved a team of scientists that investigated fish and invertebrate communities found in conjunction with deep coral and sponge communities found in the vicinity of the Phoenix and Line Islands, part of the islands comprising Kiribati. The information complements other efforts to understand the distribution and connections between deep coral habitats in the Pacific, and is critical to support efforts to manage activities that could harm these fragile systems. **Information on the Vailulu'u Seamount, Life on the Edge, and Florida Coast Deep Corals expeditions can be found at the following locations: <http://oceanexplorer.noaa.gov/explorations/05vailuluu/welcome.html>;**

<http://oceanexplorer.noaa.gov/explorations/05coralbanks/welcome.html>;
<http://oceanexplorer.noaa.gov/explorations/05deepcorals/welcome.html>.

MOVING BEYOND THE OAP

Life on the Edge Expedition: This NOAA supported expedition in November 2005 included a representative from the Scottish Association for Marine Science, and investigated deep coral habitats found on the shelf edge and slope in the South Atlantic Bight. The expedition focused on mapping, assessing habitat and habitat function, describing community genetics, and collecting information on coral age required for paleoclimate analysis models.

Florida Coast Deep Corals Expedition: This NOAA supported expedition, also in November 2005, investigated deep coral and sponge communities off the southeast coast of Florida. Researchers from the Norwegian University of Science and Technology took part in this cruise, comparing these systems to those found off the coasts of Norway and Sweden.

The Office of Ocean Exploration (OE) is supporting a second expedition in collaboration with MMS to continue efforts to discover and characterize deep-sea communities in the northern Gulf of Mexico. This expedition will use the NOAA Ship RONALD H. BROWN and the Jason II ROV owned and operated by the Woods Hole Oceanographic Institute (WHOI). In addition, OE is supporting a project to locate and map deep water habitats in the vicinity of the Charleston Bump in the South Atlantic Bight. Finally, OE is supporting an investigation of deep reefs off the Bahamas, and will be supporting an expedition to explore shallow to deep reefs off Bonaire in January 2008. All of these projects will be given coverage on the Ocean Explorer Web site.

Develop and Complete a Status Report on Deep-Sea Corals in the U.S. EEZ

In March 2005, the National Oceanic and Atmospheric Administration (NOAA) hosted an Authors' workshop that reviewed existing information and approaches for the Report on the Status of Deep-Coral Communities of the U.S. The report will include a National Overview and regional chapters from the northeast, southeast, Gulf of Mexico, Caribbean, west coast, Alaska and the Pacific Islands. Each of the chapters is in the final stages of revision and once returned to NOAA will be submitted for peer review as required under the Information Quality Act.

A number of new and significant management actions have taken place in the last year as well as pivotal scientific findings published. The management actions have made enormous strides in deep coral conservation in the U.S. and set the U.S. up as a world leader in this emergent issue. The new scientific findings have given us a better understanding of critical new threats to deep coral resources. It was important that these new actions and findings be included in the report, therefore extending the publication date of the report. The Peer Review Plan for the Report may be found on the Department of Commerce (DOC) website (www.osec.doc.gov/cio/oipr/pr_plans.htm). The full Report on the Status of Deep-Coral Communities will be published as a NOAA Technical Memorandum.

The external peer Review of the Report was completed in January 2007. Authors have revised their chapters and the Report is undergoing final formatting to be published as a NOAA Technical Memorandum before the end of FY07. The NOAA Deep Coral Team is also developing a Deep-Sea Coral and Sponge Research, Conservation, and Management Strategy.

Promote International Marine Turtle Conservation

In July 2004, the President signed into law the Marine Turtle Conservation Act (MTCA) of 2004, which aims to support the international conservation of sea turtles and their nesting habitats. The Department of the Interior (DOI) is implementing this legislation through the U.S. Fish and Wildlife Service (FWS). In FY05, FWS awarded seven grants to assist in international sea turtle conservation efforts in Gabon, Liberia, Mexico, Nicaragua, Oman, Sri Lanka, and Tanzania. In FY06, a total of 77 proposals, representing projects in over 40 countries, were received for funding consideration, and over 20 proposals were selected for funding. **In FY07, FWS awarded 21 grants totaling \$642,000 for projects in Indonesia, Vietnam, Solomon Islands, Costa Rica, Mexico, Honduras, Nicaragua, Panama, Barbados, Oman, Sierra Leone, Liberia, Equatorial Guinea, and Gabon. The projects focus on the protection of nesting hawksbill populations in the Caribbean, leatherback nesting populations in the Pacific and West Africa, loggerhead nesting populations in Oman, and olive ridley arribada nesting populations in Costa Rica and Mexico.** (<http://international.fws.gov/animals/marineturtleprogram.htm>)

Propose Legislation to Reauthorize the Marine Mammal Protection Act

The National Oceanic and Atmospheric Administration (NOAA), the Department of the Interior (DOI), the Department of Defense (DOD) and the Marine Mammal Commission have worked since 1999 to develop reauthorization bills and propose the updated legislation to Congress to reauthorize the Marine Mammal Protection Act (MMPA). The third MMPA Reauthorization Bill the Administration proposed to Congress was transmitted in June 2005.

Central to the proposed bill are amendments to: 1) revise the definition of harassment to create a clear threshold for when an activity constitutes harassment and to clarify that harmful activities directed at marine mammals in the wild are considered harassment; 2) expand Section 118, a regime to reduce incidental take of marine mammals by commercial fisheries, to include recreational fisheries with frequent or occasional incidental takes of marine mammals in the take reduction plan development process; 3) allow the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) to enter into co-management agreements with Native Alaskans prior to a depletion finding; 4) prohibit the release of captive marine mammals into the wild; 5) enhance the MMPA's enforcement capabilities by increasing allowable fines and penalties for violations under the Act; and 6) encourage the use of authorities to reduce ship strikes of whales. (http://thomas.loc.gov/cgi-bin/cpquery/?&sid=cp109O4coM&refer=&r_n=hr180.109&db_id=109&item=&sel=TOC_3964&)

There is no update since sending the bill to Congress in 2005, and that version of the bill remains the latest Administration approved MMPA bill.

Implement New National Bycatch Strategy

In October 2004, the National Oceanic and Atmospheric Administration (NOAA) published the Technical Memorandum entitled "Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs," which included a protocol for standardizing bycatch reporting methodologies to guide Fishery Management Councils in meeting the Magnuson-Stevens Act (MSA) requirements for bycatch accounting and reduction. Also in October 2004, NOAA conducted a series of workshops on techniques to reduce sea turtle bycatch in longline fisheries and has promoted these bycatch reduction techniques in international forums.

MOVING BEYOND THE OAP

NOAA's bycatch feature web page was redesigned and improved in September 2005 (www.nmfs.noaa.gov/bycatch.htm). Each NOAA Fisheries Service Region and the Atlantic Highly Migratory Species (HMS) Division created detailed and action-oriented bycatch reduction plans in 2003. In 2004 and 2005, each plan was updated, and a progress report was submitted to NOAA Fisheries Service leadership. Region-specific and Atlantic HMS-specific bycatch reduction action items will be reported on and updated annually, and used to guide NOAA's strategic bycatch reduction activities.

By mid-January 2008, NOAA shall establish a bycatch reduction engineering program as required by Section 316 of the Magnuson-Stevens Reauthorization Act (MSRA). This program will develop technological devices and other conservation engineering changes designed to minimize bycatch, seabird interactions, bycatch mortality, and post-release mortality in federally managed fisheries. By mid-January 2009 and each year thereafter, NOAA shall transmit an annual report to Congress describing funding, developments in gear technology, and improvements and reductions in bycatch and seabird interactions associated with the bycatch reduction engineering program.

Propose New Limits on Atlantic Gill Net Fishing to Protect Dolphins and Sea Turtles

In November 2004, the Administration proposed limits on gill net fishing in waters off the Atlantic coast to reduce the accidental catch of bottlenose dolphins and threatened sea turtle species.

MOVING BEYOND THE OAP

In April 2006, the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) published the final rule to implement the *Bottlenose Dolphin Take Reduction Plan* (www.nmfs.noaa.gov/pr/interactions/trt/bdtrp.htm), offering conservation measures that will reduce serious injury and mortality to coastal bottlenose dolphins incidental to commercial fishing gear and amending sea turtle regulations currently in place in the Exclusive Economic Zone off of North Carolina and Virginia.

Following publication of the final rule, NMFS staff and fishery liaisons launched an educational campaign in May 2006 to help inform commercial fishermen of their requirements under these new regulations. This campaign included a series of 11 educational workshops from New Jersey through Florida that provided a presentation on the requirements of the regulations, why the regulations were required, and how to comply; presentations on local research; and an informational packet with pertinent materials designed to help commercial fishermen comply.

Planned Next Steps: Monitor the success of the final *Bottlenose Dolphin Take Reduction Plan* at reducing serious injury and mortality below the Potential Biological Removal level by increasing observer coverage in the mid-Atlantic and continuing development of an alternative platform observer program. Continue to offer grants and contracts to researchers working with commercial fishermen to test gear that will reduce bottlenose dolphin fishery interactions while allowing fishermen to maintain their catch levels. Continue to work with the states to evaluate their large mesh gillnet management measures for sea turtle conservation and ensure the measures are effective. In June 2007, a Bottlenose Dolphin Take Reduction Team meeting was held to evaluate the success of the Plan at reducing serious injury and mortality.

Create a National Strategy for Fisheries Enforcement

The U.S. Coast Guard's (USCG) *Fisheries Enforcement Strategic Plan*, together with the National Oceanic and Atmospheric Administration (NOAA) *Enforcement Strategic Plan* and the U.S. *Department of State Strategic Plan*, form the National Strategy for Fisheries Enforcement. Enforcement results are closely monitored by the USCG Headquarters, which works closely with the Coast Guard Atlantic and Pacific Area Commanders to determine the proper assets and resources required to execute the plan's missions. NOAA regularly coordinates with the USCG, providing quarterly reviews of regional enforcement plans and weekly reports on operational law enforcement. NOAA hosted a meeting of all U.S. coastal states in May 2006 in Houston, Texas, representing a pivotal step in the effort to initiate partnerships that will close the gaps in federal and state marine enforcement missions.

MOVING BEYOND THE OAP

The Cooperative Enforcement plans are updated each year through revised/renewed Joint Enforcement Agreements with each participating coastal state. In the coming years, combined federal agencies will work with the coastal state agencies to further refine strategies and implement cooperative enforcement plans, which will facilitate the mission to conserve and protect our marine resources. There were no updates for June 2007.

Propose National Offshore Aquaculture Legislation

The Administration transmitted the National Offshore Aquaculture Act of 2005 to Congress in June 2005. Senators Stevens and Inouye immediately introduced the Administration's bill as S.1195. The bill was referred to the Senate Commerce Committee, and its subcommittee, the National Ocean Policy Study, held hearings on the bill in April and June 2006. There was no further action on the bill in the 109th Congress. In March 2007, the Administration transmitted a revised version of the offshore aquaculture legislation to the 110th Congress. The National Offshore Aquaculture Act of 2007 incorporates improvements made in response to stakeholder input and testimony at the two Senate hearings on S. 1195. In April 2007, Representatives Rahall and Bordallo introduced the Administration's bill (H.R. 2010). The bill was referred to the Committee on Natural Resources, Committee on Ways and Means, and Committee on Foreign Affairs. On June 13, 2007, U.S. Senators Daniel K. Inouye and Ted Stevens introduced, by request, the National Offshore Aquaculture Act of 2007 (S. 1609). Senators Inouye and Stevens also introduced four amendments to this legislation. The House of Natural Resources Committee held a hearing on the National Offshore Aquaculture Act on July 12, 2007. Additional information on the bill may be found at www.nmfs.noaa.gov/aquaculture/index.htm.

Support Aquaculture in the Americas

The U.S. supported and led an Asia-Pacific Economic Cooperation (APEC) project that resulted in a workshop in Mazatlan, Mexico in April 2005 on development of an "Aquaculture Network of the Americas" (ANA). The workshop concluded that the region needs a network of aquaculture expertise to foster development of sustainable aquaculture operations throughout the Americas. Thus, it was recommended that APEC Economies fund a second phase of the ANA project designed to initiate this work.

APEC officially approved the second phase of the ANA project at the APEC Ministerial Meeting in Busan, Korea in November 2005. Funding was committed for a small project in 2006 designed to produce a proposal for funding a two or three year network start-up. This funding proposal was received and accepted by APEC in September 2006 and work is underway to bring participants into

the Network. The U.S., Canada, Mexico, Ecuador, Peru, Chile, and Brazil are expected to be the first network participants. Eventually, the network may be expanded outside of APEC to become a form of inter-governmental organization that would include all aquaculture producers in the Americas. (www.apecsec.org.sg/apec/apec_groups/working_groups/fisheries.html) **There were no updates for June 2007.**

Coordinate and Better Integrate the Existing Network of Marine Managed Areas

In August 2005, the National Oceanic and Atmospheric Administration (NOAA) and the Department of the Interior (DOI) signed an Enforcement Memorandum of Understanding (MOU). The MOU will create greater efficiencies between NOAA and DOI, intended to increase marine conservation efforts in marine managed areas. Specifically, where a number of protected areas are located in the same area or region, there are not only economies of scale in enforcement partnerships, but coordinated activities that may include cross-deputization and sharing of vessel and aircraft resources that allow more effective and efficient enforcement of the laws and regulations affecting that area. To date, implementation has involved jointly-sponsored training on enforcement of maritime heritage resource laws and informal discussions of other collaborations.

To complement the enforcement MOU, in August 2005, DOI's Fish and Wildlife Service and National Park Service, NOAA's National Marine Sanctuary Program and National Estuarine Research Reserve System, and the Marine Protected Areas (MPA) Center created the framework for the General Agreement under the Ocean Action Plan that will implement a more seamless network of Marine Managed Areas. The new Interagency General Agreement on comprehensive coordination among parks, sanctuaries, estuarine reserves, and refuges was signed on August 21, 2006 during the National Interagency Summit in Washington, D.C. The General Interagency Agreement will provide a mechanism to foster greater collaboration among the four federal protected area programs. In addition, regional workshops conducted in FY07 will generate specific local and regional collaborative activities. (www.mpa.gov/)

A partnership among DOI, the state of Florida, and NOAA's Florida Keys National Marine Sanctuary focused on the management of the Dry Tortugas in the Florida Keys and created a unique management plan that balances conservation, research, and recreational use. The Dry Tortugas National Park has established a no-take marine reserve in the park while leaving more than half the park open to recreational fishing. The reserve, called a Research Natural Area, is 46 square nautical miles set aside to protect a pristine area, provide a sanctuary for species that have been affected by harvest or habitat degradation, and foster scientific research. It also will offer outstanding opportunities for non-consumptive recreation and education. (www.nps.gov/drto/ and <http://floridakeys.noaa.gov/welcome.html>)

In July 2006, the draft Framework and NEPA documents were published in the Federal Register. The comment period closed on February 28, 2007. Over the course of the five month comment period, the National MPA Center received approximately 100 individual comments. In addition, the same comment calling for a "national network of marine reserves" was submitted approximately 10,900 times individually by different members of one organization. Overall, comments were received from tribes, states, the public, the MPA Federal Advisory Committee, conservation and industry organizations, academia, and fishery councils and commissions. Throughout the first half of 2007, the MPA Center will analyze the comments received and identify necessary revisions to the Framework document. The MPA Federal Advisory Committee met in Arlington, Virginia, on

April 24-27, 2007, and developed recommendations on management criteria, priority objectives, and categories of MPAs for the National System, issues of significant public comment. Publication of a formal response to comments and the final Framework is planned for late 2007 or early 2008.

The National System of MPAs will be established in 2008. Additional time is required in order to prepare and vet substantive responses to significant, substantive public comment and revise the Framework for the National System of MPAs accordingly. The West Coast MPA Pilot Project was launched in 2006 to develop the partnerships, information, methods, and tools for implementing the national system within a region. The pilot project will be used as a model for other regions. The four federal MPA programs that comprise the “Seamless Network of Marine Managed Areas” and the National Marine Protected Areas Center completed a fact sheet in December 2006 to describe the scope of the two initiatives and the ways in which they are coordinated.

Implement the International Agreement Concerning the *RMS Titanic*

The Department of Justice (DOJ) proposed, and the Department of State (DOS) transmitted to Congress, legislation to implement the “International Agreement Concerning the Shipwrecked vessel R.M.S. Titanic” in June 2006. If enacted, this legislation will implement the agreement called for by Congress in the RMS Titanic Maritime Memorial Act of 1986 (Titanic Memorial Act), and signed into law by President Ronald Reagan. Consistent with the Titanic Memorial Act and with the Ocean Action Plan, the agreement and legislation will designate the RMS Titanic wreck site as an international maritime memorial to those who lost their lives in its tragic sinking and whose grave should be given appropriate respect. They will put in place several other important measures to protect the scientific, cultural and historical significance of the wreck site.

(<http://thomas.loc.gov/cgi-bin/bdquery/D?d099:20:./temp/~bdR2mq:>) The legislation was assigned to numerous committees in the House and Senate; however, no action was taken.

The DOS is seeking approval from Office of Management and Budget (OMB) to resubmit this legislation to the 110th Congress. There have been some modifications to the version submitted to the 109th Congress to address comments raised during the OMB interagency review process about the Department of Commerce/the National Oceanic and Atmospheric Administrations use of enforcement funds, DOJ Office of Legal Counsel concerns about the recognition of collections of artifacts, as well as concerns expressed by RMS Titanic Inc. (the exclusive salvor in possession of the Titanic). The changes have been vetted through the appropriate agencies as well as with the Commission on Environmental Quality. The legislation and the agreement with the United Kingdom would designate the RMS Titanic wreck site as an international maritime memorial to those who lost their lives in its tragic sinking and whose grave should be given appropriate respect.

CHAPTER 4: MANAGING COASTS AND THEIR WATERSHEDS

Conduct Community Workshops to Improve Watershed Protection

An interagency federal workgroup in partnership with the Coastal States Organization (CSO) has worked with state coastal program partners at National Estuary Programs (NEPs), National Estuarine Research Reserves (NERRs) and others to conduct a series of “coastal community watershed workshops.” Additional key partners included the Interagency Coral Reef Task Force and the Urban Coast Institute at Monmouth University in New Jersey, whose support of community workshops was also considered as part of this Ocean Action Plan (OAP) action item. The specific themes of all workshops are outlined below and reports are available for review, as is the draft lessons learned report summarizing recommendations to SIMOR. In Mobile, Alabama on December 6, 2006, a one-day training workshop to improve local knowledge of effective methods for managing erosion and preventing impacts of sediment-laden runoff was held. In Whatcom County, Washington (Puget Sound), the community watershed workshop sponsored through the OAP has been a catalyst for a multi-agency pilot project using improved watershed characterization methods to influence land use decisions. The multi-agency Puget Sound Action Team and the Environmental Protection Agency are addressing three locally developed priorities: (1) Watershed characterization led by technical experts from the state agencies; (2) An action agenda to consolidate and implement extensive local planning efforts; and (3) Community engagement allowing local stakeholders to identify ways that federal and state activities can better support the action agenda and identify barriers to implementation.

In addition, the Interagency Coral Reef Task Force, co-chaired by the National Oceanic Atmospheric Administration (NOAA) and Department of the Interior (DOI), conducted three community workshops in coral reef regions (U.S. Virgin Islands, Puerto Rico, and American Samoa) to increase tools, coordination, and implementation of actions to improve watershed protection and reduce downstream impacts on valuable coral reef resources. These workshops build on efforts in each jurisdiction to implement Local Action Strategies to reduce land-based pollution and other key threats to coral reefs in the region. Each workshop addressed the key needs identified in the Subcommittee on Integrated Management of Ocean Resources (SIMOR) Work Plan, including identifying sources of pollution, identifying possible solutions to pollution issues, and providing the tools and examples needed to implement solutions. (www.coralreef.gov/) The workshops involved a wide range of stakeholders in each jurisdiction from government (federal, territory, local) to non-governmental (business, academic, private land owners) stakeholders. The coastal community watershed workshops have been completed as scheduled. A draft lessons learned document was also completed and will be finalized in June 2007, followed by a briefing for SIMOR.

The Urban Coast Institute (UCI) at Monmouth University in New Jersey was formed in September 2005, partially in response to the call of the U.S. Commission on Ocean Policy to improve regional coastal and ocean information programs and the integration of coastal science, policy, and management. In support of community-based, coastal watershed workshops, the UCI convened local elected officials, state representative, and subject matter experts on October 12, 2006 to identify policy impediments, discuss innovative ways to reduce non-point pollution, and to consider how local actions fit into a regional ecosystem context. This workshop was the first in what is expected to be a series targeted at New Jersey’s growing coastal communities.

Support the Reauthorization of Coastal Zone Management Act

A Coastal Zone Management Act (CZMA) reauthorization bill sponsored by Senator Snowe (S.360) has been reported out of the Senate Commerce Committee. On behalf of the Administration, the National Oceanic and Atmospheric Administration (NOAA) testified in support of the bill and has been working with the 109th Congress on reauthorization of the CZMA. NOAA and the Coastal States Organization (CSO) have also developed a 3-phase process to identify core principles and specific options to be considered for improvements to the CZMA. The first phase, developing a discussion paper and initial scoping, has been completed, and the second phase, discussions with state coastal zone managers, was kicked off in September 2006 with a meeting of resource managers in LaConnor, WA. The third phase will solicit input from the broader coastal community, including state, local, national, industry, academic, recreational and non-governmental interests. (http://rs9.loc.gov/cgi-bin/cpquery/?&dbname=cp109&sid=cp109y827t&refer=&r_n=sr137.109&item=&sel=TOC_17371&)

Planned Next Steps: NOAA and the CSO will complete the final, third phase of a process to identify core principles and specific options to be considered for improvements to the CZMA by the end of August 2007. As part of the process, more than 400 coastal and ocean stakeholders from around the nation were engaged in small group discussions to identify priority challenges and ideas for addressing them. The input from the process will inform efforts to draft an administrative bill, beginning in September 2007. Based on the discussions and their outcomes, NOAA and CSO will develop and evaluate the core principles, options for stronger management and partnerships, and potential legislative scenarios for moving coastal management forward under the CZMA. Specific actions will depend, in part, on the scope of the issues identified and the ideas that emerge through the process.

Complete Near-Term Coastal Louisiana Restoration Plan

The Louisiana Coastal Area (LCA) Ecosystem Restoration Study encompassed 20 Louisiana Parishes and resulted in the creation of a plan that (1) Identified the most critical ecological needs in Louisiana's coastal zone; (2) Highlighted scientific uncertainty; (3) Proposed a near-term program of highly cost-effective projects; and (4) Developed studies of potentially promising, long-term ecosystem restoration concepts. Due to the impacts of the 2005 hurricane season, the importance of the connection between protection and restoration projects has been emphasized. Therefore, the synergy of protection and restoration strategies already developed and proposed for implementation in coastal Louisiana will be investigated and are likely to be incorporated into the State of Louisiana's Master Plan for hurricane risk reduction and coastal ecosystem restoration. Louisiana completed their Master Plan. Some components of the LCA plan have similar components in the state plan.

The LCA plan was finalized in 2005. Planning activities are under way on some components (*i.e.*, river diversion at Myrtle Grove, Science and Technology director, and beneficial use of dredged material). Other components of the plan are on hold waiting for additional funding under the Water Resources Development Act (WRDA).

Implement Gulf of Maine Habitat Restoration Strategy

The Gulf of Maine Council on the Marine Environment officially released the Gulf of Maine Habitat Restoration Strategy in October 2004. This document, which represents a consensus of agencies and non-governmental organizations in both the U.S. and Canada, identifies high priority habitats in the region, methods to restore these habitats, and provides recommendations for

increasing restoration throughout the Gulf. These recommendations, which focus on capacity building, restoration site identification and prioritization, research and monitoring, and outreach, are being aggressively implemented by the Council's Habitat Restoration Committee.

Three salt marsh restoration projects were completed or had significant construction progress in 2005, including the Mill Creek project in Chelsea, MA, the Game Farm project in Sandwich, MA and the Quivett Creek project located in Dennis, MA. Two notable projects that were completed in spring 2006 include the Cheverie Creek salt marsh restoration project located in Cheverie, Nova Scotia and the Belle Isle Fish Company salt marsh restoration project in Boston, Massachusetts. The Cheverie Creek project represents the ongoing international cooperation between the National Oceanic and Atmospheric Administration (NOAA) and partners across the Canadian border and consisted of the installation of a new large culvert that restored tidal flow to approximately 74 acres of degraded salt marsh. The Belle Isle Fish Company project included about one acre of salt marsh restoration as part of a significantly complex toxic waste cleanup effort. In addition, a study initiated by the Habitat Restoration Strategy in the summer of 2005 is assessing the effectiveness of ten salt marsh restoration projects in the Gulf of Maine.
(www.gulfofmaine.org/habitatrestoration/documents/HabitatRestorationStrategyFinal.pdf)

NOAA will continue to work with its partners in the Gulf of Maine region to implement the many recommendations from the Gulf of Maine Habitat Restoration Strategy as part of the NOAA/Gulf of Maine Habitat Restoration Partnership. The salt marsh restoration effectiveness study will continue with data collected in the summer 2006.

During 2006, the NOAA Restoration Center continued to play both a leading and supporting role providing both financial and technical assistance for a number of habitat restoration projects throughout the Gulf of Maine region. After more than five years of outreach and planning the Madison Electric Works dam in Norridgewock, Maine on the Sandy River was removed during the summer of 2006. The dam is the only migratory barrier within historic anadromous fish habitat in the Sandy River, and removing it opened 52 miles of high-quality habitat for Atlantic salmon and other NOAA trust fish species such as American eels, river herring, and American shad. Other NOAA led small dam removal projects in the Gulf of Maine are at various stages of feasibility and permitting. It is anticipated that there may be as many six full dam removals that will take place in the Gulf of Maine during the summer low flows of 2008 including projects in Maine, New Hampshire, and Massachusetts. All combined these projects will restore and open well over 40 miles of anadromous fish habitat.

As part of the regional dam removal initiative, the NOAA Restoration Center/Gulf of Maine Council Partnership has been actively developing a set of barrier removal monitoring (BRM) standards that will help guide the monitoring practices for current and future barrier removal projects in the Gulf of Maine. The draft BRM document is currently under peer review and the pre-removal standards will be field tested at a dam removal project in Merrimack, New Hampshire this summer. The Merrimack Village Dam on the Souhegan River is expected to be removed during the summer of 2008 and the NOAA Restoration Center is providing and staff resources to implement a minimum of two years of post removal data collection that will be used to refine and complete the BRM standards.

CHAPTER 5: SUPPORTING MARINE TRANSPORTATION

Improve Navigation

As of November 2006, 108 National Water Level Observation Network (NWLON) stations have been updated to provide water level and any associated ancillary data (air/water temperature, wind speed/direction, barometric pressure) in real time. A key part of upgrading NWLON stations to real time capability is the replacement of the Data Collection Platform (DCP), the microprocessor based heart of a station, to the state of the art technology. As DCPs are replaced, those NWLON stations will go from hourly to 6 minute transmissions. (<http://tidesandcurrents.noaa.gov/nwlon.html>)

Planned Next Steps: Update 67 additional NWLON stations in FY07, for a total of 175 updated stations. **This action is on target for completion by end of FY07 with 25 NWLON stations updated as of May 1, 2007 for a cumulative count of 133.**

CHAPTER 6: ADVANCING INTERNATIONAL OCEAN POLICY AND SCIENCE

Partnership Creation: White Water to Blue Water Initiative

The White Water to Blue Water (WW2BW) Partnership Initiative was launched in Miami, Florida in March 2004. Participants included over 700 Conference attendees from the Wider Caribbean Region and outside the region such as Africa, South Pacific, Spain, Sweden, Italy, Ukraine, Brazil and Argentina. Approximately 100 partnerships were formed or developed during the conference.

The WW2BW Steering Committee meets regularly and in December 2005, began developing a Strategy for 2006-2008. This Strategy modifies the WW2BW structure to reflect the shared leadership of the Initiative within the Caribbean. As such, an Executive Committee will focus on implementation and development of partnerships to achieve the four thematic WW2BW goals (integrated watershed management; marine ecosystem-based management; sustainable tourism; and shipping) with the help of a larger Council. In November 2006, members of the Executive Committee briefed Council members and regional WW2BW participants on progress made and ways to get involved. In addition, members of the Caribbean Environment Programme (the Regional Seas program) requested its Secretariat to continue support of this partnership. (www.ww2bw.org/)

The State Department's Bureau of Oceans and International Environmental and Scientific Affairs initiative (OESi) and Third Border Initiative (TBI) will provide funding for a WW2BW small grants program that will allow ongoing partnerships to continue and for new partnerships to be developed. **OESi and TBI funds were used to develop new partnerships for coral reef early warning systems, marine mammal stranding response training, developing national plans of action for controlling land-based sources of marine pollution, coral reef protection public awareness, and a watershed management study, among other marine environmental projects in the Wider Caribbean region. The Executive Committee is currently working with the co-chairs of the thematic groups to encourage formation of additional partnerships related to coral reef management, sustainable shipping and tourism, and ecosystem management.**

Support an Integrated Approach to Oceans Management and Reduction of Land-based Pollution

The U.S. Department of State (DOS) received interagency approval for the Land Based Sources (LBS) Protocol to the Cartagena Convention, a first step towards U.S. ratification of the Protocol. When this protocol is ratified by nine countries, it will result in legally binding effluent discharge limitations in the wider Caribbean by the signatories-- a much needed action to protect our shared waters.

In addition, the National Oceanic and Atmospheric Administration (NOAA) was awarded grants from DOS's Bureau of Oceans and International Environmental and Scientific Affairs initiative (OESi) and Third Border Initiative (TBI) to continue funding the NOAA North American Global Programme of Action (GPA) node, primarily through the regional seas programs in the Caribbean and the Pacific. The Caribbean regional seas program is updating a technical report on water quality in the Caribbean, developing a regional action plan on marine litter, and sponsoring Caribbean participation in an International Maritime Organization (IMO) invasive species workshop. Additionally, NOAA has initiated communications about providing technical assistance

to develop National Programmes of Action (NPAs) with the following countries: Mexico, Trinidad and Tobago, Panama, Barbados, Honduras, Dominican Republic, Grenada, Belize, and Dominica.

The U.S. also participated in the 2nd Intergovernmental Review (IGR-2) of the GPA in Beijing, China in October 2006. The IGR-2 confirmed national commitments to the GPA, discussed needs to develop a workplan for 2007-2011 to implement the GPA, and showcased lessons learned. The U.S. also provided information to the Caribbean Regional Seas program on U.S. domestic activities and legislation on marine debris to help the Caribbean develop its regional action plan to address the issue. (www.gpa.unep.org/) **Mexico finished their NPAs with assistance from the NOAA. Trinidad and Tobago NPAs are undergoing final review.**

Advance the Use of Large Marine Ecosystems

A partnership has been developed that links the United Nations Environmental Program Regional Seas Programs and the use of the Large Marine Ecosystems (LMEs). This partnership between the United Nations Environment Program (UNEP), the Global Environment Facility (GEF), and the National Oceanic and Atmospheric Administration (NOAA) will act as a tool for enabling ecosystem based management to provide a collaborative approach to management of resources within ecologically bounded transitional areas.

(www.unep.org/regionalseas/Issues/Large_Marine_Ecosystems/default.asp)

The 6th global meeting of the UNEP Regional Seas Conventions, held in 2004, adopted a resolution to incorporate the LME five-module approach to assessment and management of marine resources, and use LMEs as operational/management units for translating Regional Seas programs into concrete actions. The outcomes of the Regional Seas/LME partnership have included: (1) a table of GEF-LME projects within the Regional Seas areas; (2) an eight-page brochure describing the NOAA/UNEP partnership in Regional Seas; (3) a NOAA/UNEP Report, *Accounting for Marine Economic Activities in LMEs and Regional Seas*, completed in cooperation with the Marine Policy Center of the Woods Hole Oceanographic Institution; and (4) a soon to be completed *UNEP Large Marine Ecosystems Report: A perspective on changing conditions in LMEs of the world's Regional Seas*, on ecological conditions in 64 LMEs of the world.

NOAA and UNEP completed a report on ecological conditions in 64 LMEs of the world, entitled *The UNEP Large Marine Ecosystems Report: A perspective on changing conditions in LMEs of the world's Regional Seas*. A second report, *Accounting for Marine Economic Activities in Large Marine Ecosystems and Regional Seas*, has been completed in cooperation with the Marine Policy Center of the Woods Hole Oceanographic Institute. This report represents the first estimation of the economic level of marine activity in each of the world's 64 LMEs. The report was distributed to participants of the October 2006 UNEP meeting in Beijing, China on Land-based Sources of Pollution.

An annual consultative meeting of the parties engaged in LME Projects was held at the IOC-UNESCO headquarters in July 2006. The participants represented LME projects in Africa, Asia, Latin America, and Eastern Europe. As a result of this meeting, three participating countries - Angola, Namibia, and South Africa - signed an agreement to establish the world's first Large Marine Ecosystem Based Management Commission. **The 9th LME consultative committee meeting is planned for July 2007.**

The Arctic Council and PAME's working group for the Protection of the Arctic environment was established. The participant countries (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the U.S.) have reviewed and accepted a working map of the 17 Arctic LMEs. The LME Program has set up, through e-mail exchange, a network of eight country expert representatives, in an effort to reach consensus on generic suites of indicators for assessing the changing states of the Arctic LMEs. Initial steps have been taken to examine 23 LMEs in the Asia Pacific region in order to provide APEC economies with an accurate up to date understanding of the marine ecosystems and resources upon which a large portion of their economies depend. Sponsors of this project are the U.S., China, Korea, the Philippines, and Mexico, along with other APEC economies.

Additionally, the LME Program is providing information to augment assessments and management of fish stocks and to support regional fisheries organizations in the Guinea Current and Benguela Current LMEs. Information on ocean productivity and oceanography, fish and fisheries, pollution, and ecosystem health contribute to the Regional Fishery Management Organizations. The NOAA LME Program is now partnering with the Global Environment Facility (GEF)/World Bank, five U.N. agencies, and two NGOs to promote the use of LMEs in developing countries of Africa, Asia, Latin America, and eastern Europe. The LME activity now includes 110 countries, an estimated 2,500 participants and partners, and is funded with grants and investment funds totaling \$1.8 billion.

Link the Global Marine Assessment and Global Earth Observation System of Systems

Initial discussion of linking the Global Marine Assessment (GMA) and the Global Earth Observation System of Systems (GEOSS) took place at the Second GMA International Workshop in June 2005 through bilateral meetings with international officials as well as the distribution of GEOSS handouts that describe GMA/GEOSS synergies.

(www.unep.org/regionalseas/Partners/Inter-Agency_Initiatives/GMA/default.asp)

Planned Next Steps: As the GMA and GEOSS continue to establish themselves, both fora will provide mutually supportive opportunities for more formal international linkages. Through international cooperation, the GEOSS will collect and disperse data and information from terrestrial, atmospheric, climate, and ocean observations. The GMA, under discussion since the World Summit on Sustainable Development, will seek to establish a regular, comprehensive process of reporting and assessment of the state of the global marine environment.

The first meeting of the Group of Experts for the Assessment of Assessments of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment was held in March 2007. The outcome of the meeting was a Report on the First Meeting of the Group of Experts for the Assessment of Assessments. The second meeting was held in June 2007.