

Promoting Regional Ocean Stewardship in Mid-Atlantic Coastal States and Federal Waters

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ABOUT THIS PAPER

This “white paper” is a follow up to a workshop held on April 14, 2008 *Improving Regional and Ecosystem-based Ocean Management Approaches in New Jersey*, convened by the Monmouth University Urban Coast Institute. It is intended to stimulate further thought and dialogue among state government personnel, nongovernmental stakeholder groups, as well as participants in an upcoming Mid-Atlantic Regional Ocean Forum scheduled for Dec 1-2, 2008 in Baltimore, Maryland. The paper provides brief background on regional multi-state ocean collaboration approaches and identifies priority issues for ecosystem-based management in the Mid-Atlantic. It also outlines process guidelines to consider when proceeding with the work of “Regional Ocean Governance”. Examples of how this has been done in multi-state programs are referenced in the notes and help scope resources needed to develop such a framework in the Mid-Atlantic. The paper represents the views and perspectives of the author, not the Urban Coast Institute or any other group. It is, however, a reflection of much thinking and pioneering work done by numerous organizations, including the Joint Ocean Commission Initiative, COMPASS, The Nature Conservancy, The Ocean Conservancy, EBM Tools Network, and others.

EXECUTIVE SUMMARY

As policymakers, industry, and the general public increasingly look to the coast and oceans for solutions to emerging needs, all regions along the nation’s coast are best served if they have analyzed their existing marine uses, taken stock of their individual and collective resources, and prioritized their mutual interests, goals, and needs. There is a growing belief that, right now, technology is not delaying solutions to many of the challenges facing our coastal oceans, nor is it predominately a lack of political will. What is currently needed is institutional commitment and support for ecosystem-based integrated regional management, with a clearly defined direction, plan, and committed implementation resources.

Creating a sound and visionary ocean management plan that individually and jointly addresses mutual gains for the states in the Mid-Atlantic region is a wise approach. Over the last half of decade this approach, eco-regional governance, has gotten traction at the multi-state regional level. The Mid-Atlantic is the only area of the nation that has not yet institutionalized a formal multi-state regional ocean governance framework. This framework, whether conceptual or spatially explicit, needs to address priority issues of regional concern, describe the ecosystem, and prescribe approaches to incorporating linkages between social and natural science and management. It needs to articulate ways to improve data collection and sharing, monitor progress related to goals, and incorporate public and stakeholder involvement to build identity for the place and the issues needing recognition.

Common approaches use guidelines such as: identify champions and build a diverse supporting coalition of stakeholders early-on; create a mandate, mission and vision that focuses on mutual management priorities and key outcomes; create a structural framework to serve as an implementing conduit; measure progress, learn and adjust; and *always* communicate the process to the public in terms meaningful to them. The process suggests a reallocation of power and shared authority; it highlights democratic issues around practices of participation, accountability, transparency, and enforceability. The promise is a new management paradigm of regional collaboration that addresses fragmented and sector-specific approaches to inter-connected and complex problems. The vision is one of long-term resilience of marine ecosystems to provide services on which society and the broader web-of-life rely.

INTRODUCTION

The quality of life for residents and visitors to the Mid-Atlantic is inextricably linked to the condition of the coastal and marine environment for economic, social and cultural reasons. The Mid-Atlantic supports large port and maritime facilities, significant fisheries, and is also crucial to the security of the nation. The states are interconnected by their common marine boundary but no framework exists to integrate management of ocean and coastal resources at the multi-state regional level – the scale most effective at addressing trans-jurisdictional boundaries in a region linked by common climate, watersheds, coastal resources and culture. Given potentially conflicting and increasing demands on marine resources, and a general overall degradation of marine ecosystem health, there is a growing perceived urgency for states to recognize their mutual interests, and to set decision-making goals for future ecological and socioeconomic conditions in the Mid-Atlantic. Creating avenues to share information and cooperate among governmental entities and stakeholders, so that they might integrate ocean management policies around issues of energy, ecosystem services, global climate change, and natural resource protection is critical. What is the driver for this need?

On April 14, 2008 Monmouth University convened a workshop, *Improving Regional and Ecosystem-based Ocean Management Approaches in New Jersey*. Participants identified at least six major ecological challenges facing the Mid-Atlantic coastal oceans: loss and/or degradation of habitat; global climate change, coastal contaminants; energy needs; fisheries-stock levels and bycatch; and increasing coastal development. These challenges most felt by coastal communities are not unique to New Jersey, nor to other states of the Mid-Atlantic region. Widespread decline in coastal and ocean ecosystems worldwide has been well documented; and correlated with this decline comes loss of ecosystem services that drive a robust maritime economy, regulate climate and its effects, and provide immeasurable social/psycho/cultural benefits to individuals and communities. Our challenge is to seek management practices that sustain the various uses of the coastal ocean, minimize potential risks, and avoid further decline of ecosystem services. What are the best management practices?

In the last half of decade, both international and U.S. Commissions have called for regional mechanisms to achieve a more coordinated and integrated approach to improving ocean and coastal health. In two comprehensive reports on the state of the nation's oceans (the first ones issued since the release of the Stratton report, *Our Nation and the Sea*, almost forty years earlier), two U.S. Commissions, the U.S. Commission on Ocean Policy and the Pew Ocean Commission, converged on a series of principles and recommendations for managing coastal and ocean resources to stimulate the economy while at the same time ensuring natural resources are used in a wise manner. Both Commissions emphasized that regional approaches are needed to achieve a more coordinated and integrated approach to improving ocean and coastal health. Regional ocean governance is an approach currently being supported by the Joint Ocean Commission Initiative.

BOUNDARIES

The Mid-Atlantic area is typically defined as encompassing the states of Virginia, Maryland, Delaware, New Jersey and southern New York. Yet, this area is also linked to other states through watersheds draining toward the coast of Mid-Atlantic States. Coastal and offshore currents, like the Gulf Stream and cold water coming from the northern U.S. and Canada, flow along our coasts linking our Mid-Atlantic States with far-away locations. The atmosphere also carries various gases and other chemicals, and living organisms including bacteria, insects, and birds from distant locations into our area. Ultimately, people move freely into and out of this area across land, ocean, and the atmosphere. Both global climate and the global economy affect our area. Therefore, the ecosystem within which the Mid-Atlantic is embedded is large – as large as the globe.
Frank Muller Karger, U.S. COP

REGIONAL OCEAN GOVERNANCE

What is Regional Ocean Governance? In the context of this paper, the term refers to a governance paradigm that spans the procedures and structures established for individual states to address marine-related concerns of a group of states and their stakeholders. Multi-state regional initiatives typically define mutual priorities and cooperation mechanisms to share management and responsibilities around specific, well-defined issues. Successful regional ocean governance initiatives engage a wide variety of stakeholders, from all levels of government, non-governmental organizations, industry, and academia in natural and social science-based decision-making. (While *government* is a formal structure that sets public policy and allocates public resources, *governance* can be a process of public-private partnership that helps shape decisions and actions.) The general public is mainly engaged through public education and outreach. Coordinating multiple states is a political challenge; but a coordinated regional approach has the opportunity to create better results on behalf of marine ecosystems, including productive human use and values, and has the potential to provide benefit to multiple parties and at multiple scales.

Today multi-state collaborative agreements have been negotiated in almost every coastal region of the United States: the Northeast Regional Ocean Council; West Coast Tri-Governor's Agreement; Gulf of Mexico Alliance and, most recently pending, the South Atlantic Alliance. These state-led initiatives, all calling for more integrated management of ocean and coastal resources, are becoming "change agents" in an exciting momentum toward increased regional collaboration and ocean governance. There is an opportunity to build on this momentum and consider how the Mid-Atlantic States can organize and coordinate themselves to move enhanced ocean governance from concept to reality, to better use and protect their common marine resources and ensure long-term ecosystem and economic sustainability.

GUIDELINES

Each multi-state collaboration took on the challenge of regional cooperation with commitment and innovation; but each had their own set of founding processes unique to their individual political, ecological and economic needs. It might be useful to portray a generic set of guidelines that helped collaborations in other regions coalesce and engage in innovative thinking.

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"I'll be happy to give you innovative thinking. What are the guidelines?"

thinkers, non-traditional alliances. Leadership exchanges to other regions and interactions with other leaders can be important catalysts for conversation, learning and relationship building. Bringing outsiders to a region can also help inspire leaders to engage; the Mid-Atlantic champions can learn from colleagues in other regions.

IDENTIFY CHAMPIONS AND BUILD COALITIONS.

The appropriate people need to be involved early on. Monmouth University, the University of Delaware, and those attending the December forum are a potential network of "early adopters". Universities are appropriate conveners, seen as credible neutral parties with influence in the community. The NGO community also brings in stakeholders. Conveners build relationships that spawn trust and create the public space for conversation, dispute resolution, and creative thinking. The people most trusted and respected should be assigned to convene and lead teams, but these leaders and partners should be a mix of public/private, entrepreneurs and system

It is not inappropriate to enlist the help of professional consensus-builders early on in the process. Many alliances have used outside “neutrals” to not only add value to the process but also, on occasion, prevent impasse to agreements. Mediators, facilitators, and those practiced at creating “mutual gains” in complex multi-stakeholder negotiations can help parties clarify the difference between “positions” and “interests”. This is particularly useful when building long-term relationships and engaging in shared-fact-finding, values-based trade-off analysis, and decision-making.

It is also important to be aware of the opportunities and limitations of group involvement. Initially, few players may be able to get things moving, sequencing events and players at the politically appropriate times to ensure success. In the long-run, however, effects associated with a simultaneous process (facilitated by neutrals) include a greater sense of legitimacy and “ownership” of agreement, the possibility of new options generated by brainstorming of many more people, as well as altered roles of “deference patterns” and different possibilities for blocking coalitions to form or be thwarted.

Group involvement also helps create coalitions. Coalitions can influence multiple stakeholders in the region. Coalitions have been successful at both influencing regional decisions and bringing regional perspectives to decisions that take place at the neighborhood/organizational level. The early discussions, however, should be grounded with enough credible and provocative analysis to begin making concrete recommendations for change with practical approaches.

CREATE A MANDATE, MISSION, AND VISION. The regional partnership should focus on management priorities vital to the Mid-Atlantic’s economy, quality of life, security, public and environmental health. The area to be included in the governance region should be determined by considerations of ecosystem functioning, political realities, and jurisdictional boundaries. Whether called a partnership, alliance, or council, the purpose should be clearly articulated, enhance local-state-federal collaboration, and strengthen management efforts necessary to address region-wide ecosystem issues. The arrangement should align decision-making on behalf of mutually identified goals, produce multiple state and regional benefits, respect the autonomy of each state while supporting regional sustainability of resources. Created authority should also empower the local work, the bottom-up approach, recognizing that much implementation of state and regional policy takes place at the community and local government level.

CONSIDER THE STRUCTURAL FRAMEWORK. A structural framework will serve as the conduit for implementing policies. Who will lead the effort? Will the governance of the region be led by state heads? What is the relationship with the federal government? What is the composition of the steering committee? What are the technical and working groups? Consider the supporting partners, paying close attention to federal agency partnerships, NGO and private partners, academic support, and local municipalities. A structure and process should aim for

VISIONING

Sometimes visioning exercises are useful to develop a vision for ocean governance through spatial sea-use scenarios. The development of future scenarios is both a communication and a planning tool. Communities often build their visioning process by developing realistic but provocative scenarios about the future and then bring a wide variety of stakeholders to the table to test the scenarios. This helps guide next steps and ground truths assumptions. The activity assumes there will be differences within and amongst each state, but articulating the range of visions is a helpful activity to clarify possibilities and future conditions of the maritime area and connection between basic assumptions, objectives, and future conditions. This exercise can help visualize what will happen if no interventions are made and show new possibilities that can be generated with new management, innovative actions and technologies.

consensus around a vision of regional ocean management and should identify the steps needed to achieve that future. Involving working groups, research organizations, other regional bodies, and community groups is essential at this stage of the process. Appropriate governance frameworks should also eliminate or severely reduce multiplicative and fragmented management. Coastal and ocean-related activities are regulated by many agencies, some with conflicting mandates. Management institutions should operate on multiple nested spatial and organizational scales to be most effective. Joint decision-making might be explored; consistency mandates and codes of conduct help.

IDENTIFY THE INITIAL PRIORITY ISSUES of timely and mutual importance to the regions' resources - natural, socio-economic, etc. Typically none of these are limited by state boundaries. These issues should be regionally significant, benefit multiple parties, and be effectively addressed through increased collaboration at the local, state, and federal levels. For example, in the South Atlantic the priority issues are healthy ecosystems, working waterfronts, clean coastal and ocean waters, and disaster resilient communities. The Gulf of Mexico States identified water quality for healthy beaches and shellfish beds, wetland and coastal conservation and restoration; coastal community resilience; environmental education; identification and characterization of habitats; reduction in nutrient inputs to ecosystems.

At Monmouth's April workshop, both ecological and governance problems in the Mid-Atlantic were identified as priorities. High profile regional ecological problems included ecological flows, contaminants, consequences of climate change, sustainable fisheries and their communities, beach closures and marine pollution, emerging threats. Governance problems were of equal concern. User conflicts, poor coordination amongst managing agencies with fragmented mandates, insufficient funding to address current problems, inability to monitor progress and plan for future challenges, and the emerging pressure on ocean use (alternative energy technologies such as wind and tidal, a growing aquaculture market, etc.) are creating overwhelming governance problems for states and local officials. Limited financial support hampers ability to prioritize and address these important marine issues.

ARTICULATE THE KEY OUTCOMES needed to support the overarching goals of the regional alliance. This is essential to measuring success, finding opportunities for improvement, and communicating to others (both the public and potential funders) about your progress. Key outcomes might include: regional sustainability of resources; integrated solutions that benefit all systems' requirements (i.e. ecosystems, economic systems, and national defense systems) at the state, federal and local levels; better regional alignment of decisions resulting in accomplishment of mutual goals; cooperative leveraging of resources to produce multiple state and regional benefits; better integrated research, mapping and data sharing to enhance science-based decision making; or increased public awareness of the opportunities and challenges in the Mid-Atlantic region. In addition to key outcomes, activities and indicators meant to demonstrate outcomes have been successful must be realistic, clearly described, and implemented.

ROLE OF EBM AND SCIENCE. At the core of responsible Regional Ocean Governance is an ecosystem approach to management, as opposed to one that is a strictly geopolitical or single issue. Ecosystem-based management is an integrated approach that considers the entire ecosystem, including humans, when making decisions about systems – social, natural and economic. It reflects a continuing evolution of social values and priorities, adaptively responding to society's future needs, as expressed through a decision-making process. Place-based, with clearly defined boundaries based on maintaining ecosystem integrity and functionality, ecosystem service management maintains ecosystems in the appropriate condition to achieve agreed-upon benefits. Policy makers and managers take advantage of ecosystems' reliance and ability to respond to a variety of natural and man-made stressors, but recognize the capacity for resilience is limited under cumulative impacts, so they manage carefully when in doubt. Scientific information is extremely important and is used in the deliberation process, but it is only one element in a planning and decision-making process that is fundamentally one of public and private choice. For this reason, ecosystem based management may not necessarily result in an emphasis on conservation when weighing economic, social or cultural factors, but managers should always use best available natural and socioeconomic science and strive to employ EBM principles in evaluating trade-offs and making integrated management decisions.

COMMUNICATE THE PROCESS TO A BROAD PUBLIC. Tell the compelling story about the region, its future, and the crisis avoided and/or opportunities realized by pursuing integrated regional ocean governance. The messages need to be relevant to individuals and constituents, and framed broadly enough to elicit consensus support. Public opinion and values research can be a useful tool, as can professional communication experts. Money spent on professionals who can frame issues, and present problems and solutions in ways understood by many different sectors is money well spent. Engage the media. Communication budgets often initially underestimate the need for good public education – the ultimate source of sustainable support for regional initiatives. Seek avenues to involve the public.

MEASURE REGIONAL PROGRESS; LEARN AND ADJUST AS YOU GO. People value what they can measure. Develop regionally endorsed indicators to measure successes and identify deficiencies on which to focus improvements. Indicator reports are a powerful tool to educate the general public about a region. Be adaptive. Issues change over time and become related to one another. Acknowledge that the process is a work-in-progress and close monitoring of successes and failures, opportunities and challenges will be continuous. Celebrate success and analyze the key components and contributors to the success. Share those lessons with others in the region and other regions, nationally. Educating and cultivating new leadership is extremely important to the regions success.

PREPARE THE NEXT GENERATION to think in regional terms – to think in frameworks that span geopolitical boundaries, sectors, and issues. Engage youth in the civic process of community and stakeholder involvement. Teach them to manage in a way that identifies and selects multiple targets and socioeconomic goals. Multi-disciplinary, cross-sectoral studies are to be encouraged.

IDENTIFY RESOURCES. Any regional initiative will need the money and/or staff resources to support the process. Beyond good intentions, the states and partners need to commit to the longevity of the effort to ensure successful change. It will require some kind of organizational structure, staff and financial support – direct and in-kind. The resources are needed for institutional development as well as developing more data and science to inform good policy. There is general agreement that enough science exists to govern regionally in an ecosystem-based context, but the science needs to be integrated and existing knowledge needs to be synthesized. Data needs to be collected and gaps need to be filled. The data needs to be shared and maintained. And mechanisms need to be developed to more effectively connect emerging science and information as it becomes available. And finally, funds need to be available for monitoring success, communicating, and engaging stakeholders and the public.

THINK CREATIVELY. Combine regional resources, consolidate grants programs, solicit funds from non-traditional sources, create public-private partnerships. Take advantage of economies of scale. Power in alliances can lead to efficiencies when sharing and leveraging resources at the federal level as well as with private funders and industry. Use stakeholders to assist.

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"Sure, we need more research in alchemy, necromancy, and sorcery, but where is the money going to come from?"

CONCLUSION

It's been estimated that the Mid-Atlantic coastal ocean has potential to provide greater than seventy percent of US offshore wind energy, in water depths less than thirty nautical miles off shore. With Mid-Atlantic States individually declaring 2020 energy production goal with twenty percent "renewables", each state is looking at potential for offshore wind facilities in addition to other marine renewable technologies such as tidal and wave. Renewed interest in offshore drilling and LNG terminals are also being considered as part of an overall marine-related energy production portfolio addressing both individual state needs and those of a national economy and security hampered by dependence on foreign oil. Regional management must be coordinated to balance existing, emerging, and undefined future needs, to analyze conflicting uses and services based on social, economic and natural science, and to optimize potential and minimize risk – all with the end goal of helping to ensure the survival of secure, sustainable, viable ocean ecosystems.

Regional governance can allow for better alignment of decision-making when addressing mutually agreed-upon goals on behalf of systems (natural, socio/economic or cultural) that cross jurisdictional boundaries. Coordinated partnerships can strengthen other relationships with non-governmental and private actors, leading to other cross-sectoral opportunities. And, regional efforts have been proven to more effectively execute action plans when partners collaborate and leverage timely funding and other resources. Vision, disciplined thinking, enthusiasm, and an unwavering commitment to address mutual challenges and opportunities will allow the Mid-Atlantic States and the region to remain vibrant and globally competitive. Regional collaboration and ocean governance is one of the best management practices to tackle today's swiftly changing "seascape". Mid-Atlantic leaders can seize the opportunity to craft a new way of management – one that honors the interconnectedness of all systems, all users, and future generations. And, there is no better time than the present.

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NOTES

CURRENT INITIATIVES IN MID-ATLANTIC STATES

The Mid-Atlantic is the only area of the nation that has not yet institutionalized a formal multi-state regional ocean governance framework. A few Mid-Atlantic States, however, have excellent examples of legislated state mandates to address multi-use ocean governance within their state boundaries. And many good examples of partial regional cooperation programs also address specific issues of concern to groups of states. The following are types of models to build upon and scale-up a Mid-Atlantic regional collaboration or governance initiative.

State initiatives

NY – The Legislature of the State of New York has recognized that coastal ecosystems are critical to the State’s environmental and economic security. In 2006 the Legislature passed the New York Oceans and Great Lakes Ecosystem Conservation Act -Article 14- of the NYS Environmental Conservation Law. Article 14 creates a statutory acknowledgment of the need to incorporate ecosystem-based management principles into New York management regimes. Enabling improved coordination and analysis among agencies and place-based authorities managing coastal and marine resources will help New York transition towards an integrated management approach that considers the entire ecosystem. This Act is the first of its kind in the nation, underscoring New York’s vision and leadership. The Act established a nine-member New York Ocean and Great Lakes Ecosystem Conservation Council (Council) from state entities (departments, offices, authorities, universities, etc.) to establish and coordinate efforts to integrate EBM in New York. Among the responsibilities of the Council is developing guidelines to advance and integrate EBM within eight of its agencies and encouraging the same principles within regional place-based programs. The Council’s Executive Director and eight-member staff will submit a report to the Governor and Legislature that recommends a plan, budget, and funding opportunities for implementation of EBM.

NJ – In January 2008 Assembly No. 4332 was approved by the Governor authorizing the New Jersey Coastal and Ocean Protection Council and appropriated (\$75K) for its institution to help safeguard the state's coast and ocean resources. Among other things, the bill calls for an integrated approach to management that integrates biological, social and economic factors into the comprehensive strategy of protecting ecosystems. A nine-member council would oversee policy direction and make recommendations to the Department of Environmental Protection. It amends current law to provide authority to DEP to conduct research and implement plans and programs to promote ecosystem-based management. At the time of this paper, nominations are being gathered in the Governor’s office and it has been reported that the Council may be convened in 2008-09.

Regional Initiatives

Energy Summit: On September 25 – 26, 2008, a meeting was co-hosted by New York and Massachusetts to identify key clean energy issues that could benefit from collaboration amongst states in the Northeast and Mid-Atlantic regions. The *Northeast and Mid-Atlantic States Meeting on Clean Energy Cooperation* focused on strategies for collaboration around clean energy issues including State/Federal relations and climate change legislation, regional renewables policy and program “harmonization”, bioenergy, and ocean energy. Regarding ocean energy, expected outcomes included a multi-state coordinated approach for research, planning, and policy development to advance ocean energy, and regional strategies for addressing multi-jurisdictional regulatory and planning challenges. Several Mid-Atlantic States were represented, including New York, New Jersey, and Delaware.

The consideration of multi-state actions to strengthen the growth of a regional clean energy industry cluster, broadening the regional market for renewable energy, and joint action amongst states to help advance clean energy markets and technology innovation are important components of any regional ocean governance in the Mid-Atlantic. An ocean energy framework within the Mid-Atlantic will also identify opportunities when working with the Northeast, South-Atlantic, and federal government.

Mid-Atlantic Coastal Ocean Observing Regional Association (MACOORA): MACOORA is part of NOAA's Integrated Ocean Observing System (IOOS) responsible for the phased deployment and operation of the Mid-Atlantic Regional Coastal Ocean Observing System (MARCOOS). 30 Co-PIs and 20 institutions from Virginia to Rhode Island are involved, forming a science-based decision support system that works interactively with local, state and federal agencies, resource managers, industry, policy makers, educators, scientists, and the general public to secure information necessary to address issues in coastal hazards, maritime operations, climate change, ecosystem preservation and management, coastal water quality, and national security. MACOORA provides data, models, and products that advance the understanding of the current and future state of the coastal and global environment, and will be a critical partner in any Mid-Atlantic ocean governance alliance.

Chesapeake Bay Program: Probably the longest running and best known of the regional efforts on behalf of the marine resources is the Chesapeake Bay Program. The Chesapeake Bay's integrated ecosystem assessment Pilot Study targets regional policies that focus on habitat restoration, climate change adaptations, highly migratory species protection, and lowering greenhouse gas emissions. They are discovering that regional governance and coordination really matter. 12 technical teams are gathering spatial data, habitat modals, information on depth, substrate, temperature, etc. and ecological marine units are being used to compare potential threats like shipping, trawling and telecommunication lines.

Delaware River Basin Commission: The Delaware River Basin Commission has partnered with the Federal Government, states of New York, Delaware and New Jersey as well as several non profits such as the Nature Conservancy and Academy of Natural Sciences to manage ecological flows in the Delaware River for multiple objectives - water supply, flood mitigation and ecological integrity. Recognizing the 330-mile river is of tremendous economic and social significance for the region and the management challenges transcend political and jurisdictional boundaries, the partners leverage their talents and resources to manage the environmental priorities. (Contaminants, tidal wetlands, ecologically significant species and critical habitats, ecological flows, physical-chemical-biological linkages, food web dynamics, nutrients, ecosystem functions, habitat restoration and enhancement, and invasive species.) The shared resource creates a shared sense of region and cooperation.

The Nature Conservancy's Ecoregional Assessment for MidAtlantic States: The Nature Conservancy's "Northwest Atlantic EcoRegional Assessment and Mid-Atlantic Conservation Planning" is undertaking an Integrated Ecosystem Assessment (IEA) to synthesize and analyze relevant physical, chemical, ecological, and human processes in relation to specified ecosystem management objectives. The boundaries of the work are from Cape Hatteras to Hudson Canyon and conservation targets include marine mammals, seabirds, sea turtles, migratory fish, coastal inlets and bay mouths. Threats to the targets include ocean acidification, sea level rise, nutrients, overharvesting, dredging and construction. The team is developing approaches to abate the threats.

USEFUL WEBSITES:

FEDERAL PROGRAMS:

NOAA Coastal Service Center: <http://www.noaa.gov/>

MULTI-STATE REGIONAL OCEAN GOVERNANCE INITIATIVES:

Gulf of Mexico Alliance: <http://www.gulfofmexicoalliance.org>

Northeast Regional Ocean Council (NROC): <http://northeastoceancouncil.org/>

Joint Ocean Commission Initiative, Matrix of Initiative : <http://www.jointoceancommission.org/>

MID-ATLANTIC SINGLE-STATE INITIATIVES:

New York Ocean and Great Lakes Ecosystem Conservation Council: <http://www.oglecc.ny.gov/>

MID-ATLANTIC MULTI-STATE PROGRAMS:

Chesapeake Bay Program: <http://www.chesapeakebay.net/>

Delaware River Basin Commission: <http://www.state.nj.us/drbc/>

NON-GOVERNMENTAL ORGANIZATIONS

Ocean Conservancy: <http://www.oceanconservancy.org>

The Nature Conservancy: www.nature.org

Meridian Institute: www.meridian.org

Coastal States Organization: www.coastalstates.org

Environmental Law Institute, Ocean Program: www.eli.org

UNIVERSITIES

Monmouth University: Urban Coast Institute: www.monmouth.edu/urban_coast_institute

University of Delaware: Gerard J. Mangone Center for Marine Policy

EBM

EBM Tools Network: Ecosystem Based Management Tools: www.ebmtools.org