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# **Marine Protected Areas in the Gulf of Maine**

*A report on the results of a workshop*

*April 24-25, 1997  
Freeport, Maine*

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## Executive Summary

There has been increasing interest in marine protected areas (MPAs) as a tool for protecting and managing marine resources around the world. MPAs offer a viable option for addressing many transboundary environmental and socioeconomic problems which are contributing to the decline of marine ecosystems. MPAs are typically flexible in their design and can address a wide range of resource and management issues. In this respect, they can be used to: protect biological diversity and productivity; enhance commercially valuable fish stocks; support marine research and education; protect endangered species; and create areas for tourism and recreation.

MPAs have been identified as an ecologically sensible and administratively feasible approach to protecting marine systems and reducing resource-based conflicts in the Gulf of Maine. A binational workshop was held in Freeport, Maine to discuss the need for and value of MPAs in the Gulf and determine a possible course for future action. Participants representing government, science, and marine industries came together to consider a coordinated approach to designating MPAs as a way to effectively address transboundary resource issues in the Gulf of Maine. This report provides a summary of the workshop discussions and outcomes.

Over the course of a day and a half, workshop participants met in small groups and as a whole to discuss various aspects of developing MPAs in the Gulf of Maine. Specific topics of discussion included the objectives for a MPAs project, the value of taking a systems approach, and the roles of existing organizations in implementing a Gulf-wide initiative. At the conclusion of the workshop, participants collectively agreed upon:

- a working definition for MPAs;
- a vision statement for a future Gulf of Maine program;
- specific guidelines for developing and implementing MPAs; and
- a list of recommended actions.

They also agreed to form an ad hoc or “virtual” MPAs Committee to work in partnership with the Gulf of Maine Council on the Marine Environment (GOMC). This Committee will help identify, coordinate, and oversee activities related to designating MPAs in the Gulf of Maine. While this body will have no regulatory powers or permanent headquarters, it will represent the Gulf of Maine community to ensure that future MPAs initiatives meet the needs and goals of all important stakeholders.

## Introduction and Background on Marine Protected Areas

Marine protected areas (MPAs) are becoming increasingly important tools for promoting the conservation and sustainable use of marine resources. In the last twenty years, MPAs have become widely accepted as places to protect, study, and wisely utilize important parts of the marine realm. Today, they offer innovative solutions to some of the most pressing environmental problems and have become flagships of marine conservation programs in many parts of the world (Gubby, 1995). The term "marine protected area" is generally defined as:

Any area of intertidal or subtidal terrain, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation to manage and protect part or all of the enclosed environment.

(Resolution officially adopted at the 4th World Wilderness Congress, 1987.)

Sites which fit this general definition have been given a variety of names including "marine reserves," "marine sanctuaries," and "marine parks." Sometimes these terms are used interchangeably, while in other instances, they indicate differences in levels and methods of protection (Peet, 1990). To clarify the situation and guide protected area managers, the World Conservation Union (IUCN) has developed and refined a classification system for protected areas (Gubby, 1995). These areas are managed primarily for:

- I. Strict protection (i.e. Strict Nature Reserve / Wilderness Area)
- II. Ecosystem conservation and recreation (i.e. National Park)
- III. Conservation of Natural Features (i.e. National Monument)
- IV. Conservation Through Active Management (i.e. Habitat / Species Management Area)
- V. Landscape / Seascape conservation and recreation (i.e. Protected Landscape / Seascape)
- VI. Sustainable use of natural ecosystems (i.e. Managed Resource Protected Area).

Most likely, the world's first marine protected area was the Fort Jefferson National Monument in Florida. Designated in 1935, this area covered 18,850 hectare of sea and 35 hectare of coastal land. Since that date, the number and variety of MPAs have increased significantly. Currently, there are 1,306 MPAs located within 18 marine regions around the world (Kelleher *et al.*, 1995). MPAs range from small, highly protected reserves covering only a few square miles, to larger multiple-use areas in which conservation is balanced with various socioeconomic activities. Due to the wide diversity in the size and scope of MPAs, no single approach in their development and implementation has yet to emerge. As scientists and resource managers continue to experiment, however, the range of issues being addressed by MPAs is expanding.

Recently established MPAs represent a decided departure from the limited marine management tools of the past and their strong links to terrestrial park planning (Agardy, 1994). They are no longer considered to be merely exclusive amusement parks set aside for an elite group of users. Instead, this new generation of MPAs are being implemented to address a wide range of marine resources and management dilemmas, such as the overharvesting of commercial fish stocks. Well-planned MPAs can not only protect critical habitats and general ecosystem functions, but can also meet the needs and even enhance the opportunities of different marine users living in a specific region (Eichbaum, et. al., 1996). Policy makers are discovering that as long as management strategies are based on ecological and socioeconomic realities, multiple interests can be accommodated without adverse impacts on ecosystem function and overall biodiversity. In this respect, MPAs have been used to: protect biological diversity; enhance commercially valuable fish stocks; support marine research, and education; create areas for tourism and recreation; and reduce user conflicts.

## **Marine Protected Areas in the Gulf of Maine**

MPAs have been identified as an important tool for addressing many of the ecological and socioeconomic problems contributing to the decline of the Gulf of Maine ecosystem. The Gulf of Maine, a 36,000 square mile basin stretching from the tip of Cape Cod to the Bay of Fundy, is experiencing the negative impacts from human activities, such as over-harvesting of fishery resources, the presence of toxic contaminants, nonpoint source pollution, and the destruction of habitat from coastal development. Due to the nature of the Gulf ecosystem, and marine systems in general, many of these resource issues are regional in scope, crossing multiple jurisdictions and administrative boundaries. For example, commercially valuable groundfish stocks spend stages of their life histories in different parts of the Gulf. Also, marine mammals migrate vast distances across the marine ecosystem to feed and reproduce. There has been increasing emphasis on MPAs as an ecologically sensible and administratively feasible approach to managing marine systems and helping to reduce resource-based conflicts in the Gulf region. Their use is consistent with the goals and objectives of many existing initiatives including: the Ocean's Act (Canada), National Marine Conservation Areas (Canada), Marine Wildlife Areas (Canada), the US National Marine Sanctuary Act, the NMFS Habitat Conservation Program, and the Gulf of Maine Council on the Marine Environment's goal to protect regionally significant habitats.

A coherent network or system of MPAs which seeks to manage regionally significant habitats may provide a viable response to some of the transboundary problems in the Gulf of Maine and act as a framework for an ecosystem approach to management. Through careful planning and regional coordination, a MPAs initiative focused on the marine ecosystem may offer ecological and administrative benefits not gained through traditional ad hoc or reactive approaches to marine protection. Specifically, MPAs can facilitate the establishment of a marine protection initiative based on critical ecological processes and habitat linkages. They can also help create an administrative network where information is exchanged and compared from one MPA to the next.



## **Workshop on Marine Protected Areas in the Gulf of Maine**

On April 24 and 25, 1997, a binational workshop was held in Freeport, Maine on the subject of MPAs in the Gulf of Maine. The goal of the workshop was to identify the benefits of applying MPAs on an ecosystem level and collectively move forward on developing a MPAs program. Participants representing a diversity of jurisdictions and working sectors came together to discuss the need for and value of a coordinated approach to designating MPAs in the Gulf of Maine. Much of the discussions were based on a previous survey on developing a MPAs program for the Gulf of Maine (Brody, 1996). Special attention was paid to generating policies which seek to meet both the needs of human communities and protect the ecological and economic value of the marine resources on which they depend. The format of the workshop was informal and highly interactive to promote an exchange of ideas and build consensus among different stakeholders.

Workshop participants representing marine industries, management, and science informally discussed various aspects of MPAs and a potential MPAs program for the Gulf of Maine (see Appendix A). Specific topics of discussion included:

- Objectives for a MPAs program;
- The value of taking a systems approach when designating MPAs;
- Existing protected areas and protection programs in the Gulf of Maine;
- The roles of existing organizations in developing a MPAs program; and
- Important next steps in initiating a MPAs program.

## Summary of MPAs Workshop Presentations

### Setting A Context for Marine Protected Areas in the Gulf of Maine

*Dr. Tundy Agardy, US World Wildlife Fund*

We used to think of the oceans as being homogeneous and limitless : the big blue, so enormous that any amount of exploitation or abuse could be tolerated. We now know that is not the case: direct exploitation and indirect degradation threaten to undermine the world's oceans - and with them their immensely valuable productivity and the ecological services they provide. We also know that the biological diversity of marine systems rivals that of land, and is a valid target for conservation and concern. In fact, if one defines biodiversity in its broadest sense, i.e. encompassing habitat diversity and phyletic diversity, the oceans and coasts outrank terrestrial areas. The Gulf of Maine is quite notable in this regard: both in terms of species and habitat diversity - as well as in terms of enormous productivity, this is a global significant and important area.

The threats to the marine environment are myriad and difficult to fully appreciate. The most obvious threat, as far as the general public is concerned, is the danger of extinction facing marine endangered species such as whales, sea turtles and some pinnipeds. These endangered species have suffered at the hands of humans because their inherent life histories render them vulnerable to overexploitation: low reproductive rates or survivorship, slow growth rates, requirements for a series of habitats throughout their lives.

Far more pervasive, however, is the threat to nonflagship species. Overexploitation of fish stocks affects not only the target species (and we now know that some 70% of the world's fish stocks are being harvested at or beyond maximum sustainable yield) but entire food chains and biological communities as well. And it is not just how many fish or other living resources are taken, it is also what species, and how. Overharvest of species that act as top or apex predators or are keystone species can have dramatic consequences for ecosystems. And methods of harvest are important as well: inherently wasteful practices such as shrimp trawling or destructive gears such as dynamite, poison, and certain types of bottom trawls can change community structure and enormously degrade habitat, in some cases destroying it. Activities associated with exploitation of marine resources that go beyond harvesting and may also degrade the environment include fish processing, packaging, and trade.

Other ways that we directly damage the marine environment include altering coastal habitat for development (*e.g.* building breakwaters, sea walls, causeways, channels, etc.). In the extreme, this represents habitat loss instead of merely alteration, as is the case in conversion of coastal marshes or mangrove forests into sites for human habitation or industry. Unfortunately, most of this habitat loss is occurring in the areas where we can least afford it: the most ecologically critical areas of the marine system.

Indirectly we also act to damage or degrade marine ecosystems through our activities on land. Agricultural and human wastes mix with fertilizers and run-off into streams and rivers that

ultimately dump these excessive nutrients into the nearshore area. This in turn leads to harmful algal blooms, which can then in turn lead to massive fish kills and collapse of coastal ecosystems. Run-off also includes toxic chemicals such as PCBs and pesticides, and sediments - and these can have long lasting impacts on individual organisms and entire food webs.

Other indirect impacts on the marine environment include diversion of freshwater, which is in essence the opposite of the above scenario: when freshwater is diverted and is therefore prevented from entering estuaries, the value of nearshore areas in supporting marine forms of life is greatly reduced. Nursery and spawning grounds, feeding areas, habitats important in hydrological balance, nutrient loading areas, and staging grounds for migratory species are all lost as a result. Finally, global scale phenomenon such as warming act as an additional stressor on already compromised coastal and marine ecosystems.

This is certainly not a pretty picture. However, there is reason for hope - hope that our cumulative and multiple impacts on the marine environment can be mitigated. Like the Japanese character for "crisis" which is represented by the pictogram for "threat" over that for "opportunity," we can view the increasing alarm about the state of the world's oceans as a call to arms. It is not too late, if we act now...

In order to promote successful marine conservation, at least four kinds of activities must be pursued simultaneously. First, species or populations of organisms on the verge of extinction must be recovered, in order to maintain the web of life and guarantee continued marine productivity. Second, levels of use of living resources that are truly sustainable must be identified and maintained. Third, the indirect impacts of land use must be minimized. Fourth, those areas that are ecologically most critical and valuable must be safeguarded so that the oceans can continue to provide the goods and services human beings need.

How, one might ask, can these four things be accomplished simultaneously and most effectively? By using marine protected areas to provide a geographic arena in which to practice good conservation. If one views marine protected areas as small scale demonstration models, then we can think of these conservation tools as paving the way for better, comprehensive and holistic conservation of the seas and coasts.

What are the critical steps one must take in designing effective marine protected areas and implementing them in a way that brings most benefit to human societies and nature both? Number one, identifying and involving all users of the resources being conserved is a necessity. This is the case whether the user is an active exploiter such as fishermen or tour boat operator, or a passive user such as a member of a nearby coastal community or environmentalist. It is not enough to develop a plan and then allow user groups to respond to it - the users, all of whom are stakeholders in the future of that area, must be brought in to define what the goals of the conservation activity or protected area should be.

This brings us to the second requisite step in marine protected area design: goal-setting . Goals and objectives for marine protected areas must be defined specifically - the more specifically

stated a goal, the better understanding there is for why that marine protected area should be established and the easier it is to measure future progress against that goal.

The next important steps in designing an effective marine protected area have to do with harnessing scientific and sociological information to figure out the optimal boundaries for the protected area, the zoning scheme for the area, and the forms of management within the area. This is not science for science's sake - this is science in the service of management. Where a paucity of scientific information exists, knowledge can be built on traditional or user knowledge as well. Luckily, in the case of the Gulf of Maine, these are some of the best studied systems in the world - and much knowledge also resides among fishermen and other long time users of the area.

Finally, the design of the protected area and plans for its management must be amended to meet political, social, and fiscal realities. These features of the protected area must be periodically adapted as conditions or needs change - the cornerstone behind adaptive, and successful, management.

## **An Overview of A Survey on Marine Protected Areas in the Gulf of Maine**

*Sam Brody, Maine State Planning Office*

A survey of marine users and other interested parties in the Gulf of Maine region was conducted to obtain input on the need for and value of a MPAs program. In-depth interviews were completed with 66 individuals including: commercial harvesters, scientists, educators, government and marine business leaders, advocacy groups, recreationists, and members of the general public. The survey process was intended to illicit the comments and opinions of those most reliant on the Gulf of Maine ecosystem. Major responses were catalogued and interpreted in a summary report published by the Gulf of Maine Council on the Marine Environment. Qualitative information generated by the survey helped to identify some of the major aspects of a MPAs program for the Gulf of Maine.

### **Survey Results**

Comments and opinions were obtained on the various aspects of a MPAs program in the Gulf of Maine. The survey responses were grouped into major issues and presented in order of frequency mentioned. Table 4 outlines the most widely reported answers.

### **Survey Interpretation and Analysis**

Comments generated during the interview process reveal insights into the perspectives and viewpoints of specific stakeholder categories. The following interpretation and analysis of survey responses is taken from *Marine Protected Areas in the Gulf of Maine: A survey of Marine Users and Other Interested Parties*.

**1. Special or Unique Habitats In Need of Protection:** Responses to this question help build consensus on the identification and location of regionally significant habitats that might provide a target for marine protected areas. Most responses were directed toward areas of high diversity or productivity. Interest in fish habitats (both pelagic and demersal) was displayed across all respondent categories. Educators and recreationists tended to focus on marine mammals, while NGOs and government agencies offered more general comments relating to biodiversity both on and offshore.

**2. Major Issues in the Gulf of Maine That Could Be Addressed Through A MPAs Program:** Over-exploitation of commercial fish stocks, particularly as it relates to the groundfish industry, was widely recognized across all sectors of respondents. A prevailing feeling, even among commercial fishing interests, was that some aspects of harvesting must be addressed to protect critical habitats in the Gulf of Maine. However, onshore activities were also considered to be major problems, indicating a general desire to develop a protective policy that considers human impacts on both the land and at sea. Despite the immense size of the Gulf, conflicts between humans and natural resources, and between one human use and another, was consistently mentioned as a growing problem. Many participants felt that there exist focal points in the marine environment where different types of users congregate. These areas need to receive more directed management to reduce existing and future conflicts.

**3. Objectives for A MPAs Program:** No one objective received an overwhelming majority, suggesting that there exist many legitimate purposes for a marine protected areas program in the Gulf of Maine. Respondents indicated that economic development, such as commercial fishing is equally important as nature conservation (and at times integrally linked) and the two should be balanced in any strategy involving the management of marine resources. Many survey participants, particularly harvesters and government officials, viewed marine protected areas as valuable to enhancing commercial fish stocks. Regardless of the specific objective employed for a marine protected areas program, a majority of respondents emphasized that any effort: a) be driven by sound science and ecological understanding, and b) take an ecosystem approach to protection and management, even if it requires coordinating across state/provincial and international political boundaries.

**4. Major Obstacles In Designing and Implementing A MPAs Program:** Political and economic issues are clearly the greatest obstacles to designing and implementing a marine protected areas program in the Gulf of Maine. Commercial fish and trade interests were most aware of immediate economic constraints, while government agency representatives focused their comments on the difficulties of regional cooperation. No respondent considered the general proposal to be so controversial that it would be impossible to implement.

**5. Major Opportunities For Designing and Implementing a MPAs Program:** All categories of respondents were aware of the unique and relatively pristine nature of the Gulf ecosystem. Many felt that a program should be established at the early stages of resource decline, rather than wait until there is an even greater crisis. There was also a strong sense of a shift in attitudes regarding conservation. Commercial and industrial interests are beginning to realize a need for more protected areas to maintain the economic value of the resource. At

the same time, policy makers are beginning to think more regionally in constructing management plans. This turning tide in awareness might be the greatest opportunity to establish a MPAs program in the Gulf of Maine.

**6. Management Approaches For A MPAs Program:** A large majority of respondents advocated a decentralized structure of management, where major decisions are made through consensus and local community involvement. Commercial fish and trade interests focused on participation and the infiltration of local and traditional knowledge into management decisions. Government agency representatives were especially concerned with the negative effects of creating a new bureaucracy that would further complicate marine management in the Gulf.

**7. General Comments On the Development of A MPAs Program:** General comments generated during the interviews reveal an important trend in stakeholder viewpoints: that a protection program is needed now, at the early stages of environmental decline, but should proceed cautiously, as a step-by-step process over time.

**Summary of the Most Frequent Responses**

<b><u>Response</u></b>	<b><u>% of Respondants</u></b>
<b>1. Special or Unique Habitats In Need of Protection</b>	
Habitats Supporting High Concentrations of Fish	77
Habitats Supporting High Species Diversity and Productivity	44
Whale Habitats	17
Sea Bird Habitats	12
<b>2. Major Issues In the Gulf of Maine That Could Be Addressed Through A MPAs Program</b>	
Unsustainable Commercial Fishing Industry	70
Critical Marine Habitat Fragmentation & Destruction	51
User Conflicts In Areas Where Different Activities Occur	50
Point and Nonpoint Source Pollution	48
Lack of Awareness	16
<b>3. Objectives for A MPAs Program</b>	
Balancing Development With Conservation	70
Public Education On the Value of the Marine Environment	49
Nature Conservation	34
Restore and Enhance Commercial Fish Stocks	24
<b>4. Major Obstacles In Designing and Implementing A MPAs Program</b>	
Political Controversy In Creating A MPAs Program	83
Multi-Jurisdictional and Transboundary Cooperation	64
Lack of Sufficient Baseline Data and Ecological Knowledge	48
Lack of Financial Resources	23
<b>5. Major Opportunities For Designing and Implementing A MPAs Program</b>	
Unique and Relatively Pristine Ecosystem	50
Appropriate Timing/Perceived Crisis	48
Existing Institutional Structures and Programs	43
Growing Support and Awareness for the Conservation of Critical Marine Habitats	20
<b>6. Management Approaches for a MPAs Program</b>	
A Decentralized Management Structure with a High Level of Community Involvement	82
A Consensus-Based, Participatory Approach	65
Participation-Based Management	50
Rely On Existing Institutional Structures	46
Strong Lines of Communication Between Managers, Scientists and Marine Users	49
Flexibility to Changing Conditions and Priorities	15
<b>7. General Comments On the Development of A MPAs Program</b>	
A Proactive Approach to Protecting Marine Resources	28
An Incremental Approach to the Establishment of MPAs, Where Decisions Are Made Based On One Success At A Time	23
Long-Term Thinking and Planning	20

## **Marine Protected Areas Guidelines**

The responses of survey participants were used to develop specific guidelines for the planning, design, and implementation of a MPAs program in the Gulf of Maine. Twenty guidelines were formulated directly out of the comments and opinions of survey respondents to assist decision makers in their efforts to protect the marine ecosystem through the establishment of a series of MPAs. Some of the most pertinent guidelines include are listed below.

- I. Take A Proactive Approach to Marine Protection**
- II. Take An Incremental Approach to the Designation of MPAs**
- III. Rely on Existing Institutional Structures & Programs**
- IV. Encourage Participation & Community Involvement From A Diversity of Stakeholders**
- V. Seek A Balance Between Conservation & Sustainable Use**
- VI. Create Areas of Multiple Use & Multiple Objectives**
- VII. Establish MPAs to Separate Conflicting Uses**
- VIII. Protect & Enhance Economic Resources**
- IX. Create Scientific Knowledge**
- X. Emphasize Public Education & Outreach**

The MPAs survey results could only be used to formulate general guidelines for designating MPAs. Additional work and consensus needs to take place to identify a specific course of action for developing a MPAs program for the Gulf of Maine.

## **Marine Protected Areas in the Gulf of Maine -- Commonalties, Differences and Opportunities for Collaboration**

*David Keeley, Maine State Planning Office*

A leading conservation and management issue for the Gulf of Maine is habitat and species management. Currently, there are several US and Canadian MPA programs, each at different levels of maturity, that are working independently toward their shared management objectives. Bringing these programs together and creating an interdependent network of MPAs to collaboratively address common habitat protection objectives will help managers attain their goals jointly in the most effective and efficient manner possible.

Several MPA programs already exist in the Gulf of Maine including: the National Marine Sanctuary program, the Department of Fisheries and Oceans MPA program, and the Canadian



Wildlife Service's Marine Wildlife Areas program. While each initiative has a particular focus, all seek to protect and management significant habitats. Non-program MPA activities also exist, such as shellfish closures, areas of environmental concern, and whale sanctuaries. In addition, federal and state/provincial laws applicable to designating MPAs, as well as existing protected areas in the Gulf region create a solid foundation and unique opportunity for developing a coordinated approach to designating MPAs.

A network of interdependent sites based on existing protected areas and programs is more effective in attaining the region's multiple habitats and species management objectives, will more efficiently use limited dollars, and will produce better ecosystem-based management results more quickly. Positive outcomes from creating a network include:

**Economic Outcomes** -- A system of MPAs is the most effective way to protect and manage the habitats of highly mobile or migratory species including whales, birds and fish. The increased efficiencies of a networked approach will more quickly and effectively protect economically valuable marine resources, generating greater economic benefits for marine industries.

**Conservation Outcomes** -- A MPAs network will expedite the conservation of priority habitats and/or species, resulting in a more coherent ecosystem approach to management and an enhanced level of biodiversity in the Gulf of Maine. A network will also better respond to migratory management needs for various species, such as lobster brood stock, groundfish, shorebirds, and right whales.

**Scientific Outcomes** -- A MPA network approach will accelerate scientific understanding of priority habitats and ecosystem function by facilitating cooperative research projects, producing consistent baseline inventories, providing a forum for specialized management impact studies, supporting a Gulfwide monitoring effort that focuses on spatial and temporal changes, and permitting statistically valid conclusions to be made throughout the Gulf ecosystem.

**Education Outcomes** -- A network of MPAs will allow the region to better focus on educational and interpretive efforts to increase public awareness, understanding, and support for the protection of the Gulf of Maine ecosystem. Currently, marine educational initiatives are site specific and redundancies in the development of educational materials is inefficient.

**Options for the Future** -- While a coordinated approach to designating MPAs in the Gulf of Maine has great merit, there are several options which can achieve this goal. Strengthening the current informal network might include collaborating on shared marine habitats activities, occasional CO-funding of a project, and improving the communication and interaction between managers. In pursuing an interdependent network participants would identify and act upon shared goals, objectives, and specific activities. This approach could result in a common Gulfwide research agenda; annual work activities which are CO-funded; consistent educational programming; and shared staff, facilities and other resources.

## **MPAs Workshop Outcomes**

Workshop participants collectively agreed upon a working definition of MPAs, a vision statement for a future Gulf of Maine program, specific guidelines for developing and implementing MPAs, and a list of recommended actions. An outline and discussion of the agreement is provided below.

### **Definition for a marine protected area:**

Any area of intertidal or subtidal terrain together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation to manage and protect part or all of the enclosed environment. Such areas may include a range of protection levels:

- I. Strict Protection (i.e. Strict Nature Reserve/Wilderness Area)
- II. Ecosystem Conservation and Recreation (i.e. National Park)
- III. Conservation of Natural Features (i.e. National Monument)
- IV. Conservation Through Active Management (i.e. Habitat/Species Management Area)
- V. Landscape/Seascape Conservation and Recreation (i.e. Protected Landscape/Seascape)
- VI. Sustainable Use of Natural Ecosystems (i.e. Managed Resource Protected Area)

### **Vision Statement:**

Marine Protected Areas (MPAs) are a tool to understand and protect Gulf of Maine ecosystems and achieve sustainable use of marine resources.

### **Guidelines for Marine Protected Areas (MPAs) in the Gulf of Maine:**

Marine Protected Areas in the Gulf of Maine should be:

#### **I. Considered as tools to be used both proactively and opportunistically for protecting Gulf of Maine ecosystems, habitats, and species**

A “proactive,” rather than the traditional “reactive” approach to locating and protecting significant habitats and species is most effective when managing the Gulf of Maine ecosystem. A MPAs program which seeks to protect valuable natural resources before they experience environmental decline from the impacts of human use will: reduce the likelihood of user conflicts or intense competition over scarce remaining resources; save money; and most effectively protect ecosystems, habitats, and species. Furthermore, an early and well-planned system of MPAs may help create a buffer against unforeseen, yet potentially devastating environmental impacts or errors in management. While a proactive approach to designating

MPAs is necessary, policy makers should take full advantage of opportunities which arise independent of a planned approach to locate and protect significant areas in the Gulf of Maine.

## **II. Planned, implemented, and managed with the participation of all important stakeholders**

The planning, implementation, and management of MPAs in the Gulf of Maine should involve the active participation of all important stakeholders. A “bottom-up” approach to the development of a MPAs program involving partnerships across various interests will: reduce potential controversy over the establishment of MPAs; reduce the need for enforcement measures; better incorporate traditional ecological knowledge of fishery resources into the decision making process; and foster understanding, public support, and commitment towards the concepts of MPAs.

## **III. Based on a set of clearly defined objectives and human activities**

MPAs are able to meet a variety of objectives and are often places where many different human activities take place. Common objectives include: conserve biological diversity and ecosystem structure; enhance and restore commercial and recreational fishery resources; support marine research, education, and interpretation; create areas for tourism and recreation; and foster the sustainable use of resources over the long-term. While many possible objectives were cited and discussed by workshop participants, it was generally agreed that MPAs in the Gulf of Maine can meet different objectives and include different activities depending on the nature of the resource being protected and the needs of the community relying upon it. Whatever its intended purpose, each MPA should be designed and implemented on a clearly defined set of goals and objectives.

## **IV. Developed incrementally and equitably over time**

The establishment of MPAs in the Gulf of Maine should involve an incremental process where specific areas are designated based on one success at a time. Future MPAs should be designated in consideration of existing protected areas and programs. An incremental approach to the development of an ecosystem-based MPAs program will be more palatable to affected stakeholders, better allow sound scientific assessment to drive the process, and will less likely overtax available resources. MPAs should also be designated in an equitable fashion, where the burden on resources and communities is distributed as evenly as possible.

## **V. Built upon existing programs and structures**

A MPAs program for the Gulf of Maine should rely on existing institutional structures and their associated marine protection programs. The creation of new organizations or commissions may only further complicate the jurisdictional landscape, causing additional conflicts which would reduce the success of an ecosystem-based MPAs initiative. The challenge for stakeholders is not to create new forms of governance, but coordinate existing structures to attain management goals shared by the broader Gulf of Maine community. A

MPAs program should have close ties with the Gulf of Maine Council on the Marine Environment (GOMC). As one of the only existing forums for international environmental cooperation in the Gulf of Maine, this multi-state/provincial body has the capability to make decisions which consider and benefit the entire marine ecosystem. Future MPA designations should also integrate and build upon existing protected areas in the Gulf of Maine including: National Marine Sanctuaries, fisheries closures, bird sanctuaries, and National Wildlife Areas, etc.

#### **VI. Coordinated across jurisdictions and organizations to better reflect the structure and functions of the marine ecosystem**

The Gulf of Maine ecosystem crosses many jurisdictional and administrative lines (three states, two provinces, and an international boundary). MPAs which seek to protect regionally significant marine resources should be designated to reflect the structure and function of the ecosystem, rather than human defined boundaries. In this respect, MPAs should entail a high level of coordination among organizations and programs which share an interest in protecting marine resources. MPAs can serve as focal points for multi-jurisdictional collaboration where various parties are brought together to work in partnership on common resource issues.

#### **VII. Based on accurate information and sound scientific understanding**

The application of sound scientific principles and the best available information is essential in the development of MPAs. Scientists should play a major role in the MPAs decision making process to ensure that previously collected data and current knowledge regarding significant habitats and their locations are fully utilized. MPAs can also be used to create needed scientific knowledge. A series of MPAs can facilitate cooperative research projects, generate baseline/inventory studies, help understand complex ecological linkages, and provide a means to monitor changes spatially and temporally across the marine ecosystem.

#### **VIII. Monitored and adaptively managed**

A MPAs program for the Gulf of Maine should adopt and promote the concepts of adaptive management. Two conditions must be created for marine resource management to be adaptive: 1) an explicit feedback loop between science and management is maintained so that management can be flexible and responsive to environmental and social changes; and 2) management measures provide a setting for experimental manipulation of regulations so that their efficacy can be objectively tested (Agardy, 1994). A constant monitoring and review process will enable minor adjustments or major changes in the management strategy for any given area. In this sense, MPAs can adapt to the relevant social, economic, and environmental issue of a particular time and in a specific location.

## **Recommended Actions:**

Workshop participants elected to form a MPAs ad hoc committee to work in partnership with the Gulf of Maine Council on the Marine Environment. The Committee, representing a diversity of stakeholders in the Gulf of Maine region, will evaluate and act upon activities which support the application of MPAs as a tool for protecting and managing Gulf of Maine (GOM) ecosystems, habitats and their species. Several projects were identified to be completed in the short-term. Activities to be considered are described below.

### **1) Evaluate Existing Initiatives and Mechanisms Relating to MPAs**

Evaluation of existing MPA initiatives and legal mechanisms will ensure that future MPAs efforts will build upon and incorporate what has already been accomplished in the Gulf of Maine region. Projects identified during the workshop include:

- Review of existing data on the Gulf of Maine ecosystem and identification of information gaps;
- Creation of an electronic database on MPAs in the GOM as a way to centralize, share, and disseminate information. This will be an ongoing project to be completed in phases;
- Production of a GIS-based map and accompanying text identifying the location of existing MPAs in the Gulf of Maine, the laws which govern them, and the programs under which they exist;
- Investigation of existing lists for candidate MPA sites.

### **2) Investigate the Process of Designating and Implementing MPAs**

The process of developing a MPAs program should entail the full participation, representation, and involvement of all important stakeholders. To facilitate this approach to designating MPAs, workshop participants suggested that the ad hoc committee investigate and recommend a MPAs nomination process for the Gulf of Maine. This project will involve: a) a review of existing MPAs nomination processes in the GOM and elsewhere; b) consultation with and input from relevant stakeholders; c) an analysis of the current role stakeholders play in developing MPAs; d) the development of a process which accommodates the needs of all relevant parties and can be used to designate MPAs in the GOM. Special consideration will be given to incorporating local communities and associated organizations into a MPAs nomination process.

### **3) Develop a selection criteria for MPAs in the Gulf of Maine**

A MPAs selection criteria based on existing initiatives will ensure that MPA designations are based on a scientifically and socioeconomically sound review process. The selection criteria will build upon existing efforts and should eventually be tested through a case study focusing on a specific location in the Gulf of Maine (i.e. Bay of Fundy).

### **4) Initiate an Education and Information Program for MPAs**

Educating a broad range of stakeholders on the need for and value of MPAs is essential to developing a successful MPAs program in the Gulf of Maine. Workshop participants identified several projects which will help to increase awareness of the potential benefits of MPAs in managing marine resources. These projects include:

- Development and publication of a case study of Stellwagen Bank NMS that demonstrates the effectiveness of generating scientific understanding of a MPA;
- Development of interactive education programs that articulate the need for and value of MPAs in the Gulf of Maine;
- Press releases, community presentations, and meetings with editorial boards to disseminate the concept of MPAs.

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# Appendices



## Appendix A: MPA Workshop Agenda

### Marine Protected Areas Workshop Agenda

#### Day 1 - Thursday, April 24

- 9:00 -10:00 am \*Steering committee meets
- 9:30 Arrivals and registration
- 10:00 Welcome and Introductions -- Goals of Workshop (Robin Alden)
- 10:15 Keynote Speaker & Questions and Answer period (Tundi Agardy): **SETTING A CONTEXT FOR MARINE PROTECTED AREAS IN THE GULF OF MAINE**
- 11:00 Overview of MPAs Survey: Presentation on survey results, network concept, guidelines for establishing a network in the Gulf of Maine (Sam Brody)
- 11:20 Instructions to the group
- 11:30 Group Break-Outs:  
**Working Session #1 (1 hr.) -- Issues to be Addressed Through a MPAs Program**
- 12:30 pm Lunch
- 1:30 Presentation on Existing MPAs Programs: commonalties, differences, and moving towards collaboration (David Keeley)
- 2:00 Group Break-outs and Panel Discussion:  
**Working Session #2 (1.5 hr.) -- Taking A Systems Approach**
- 3:30 Snack Break
- 3:45 Report back to plenary: develop common themes
- 4:30 Group Break-outs:  
**Working Session #3 (1.5hr) -- Existing Protected Areas In the GOM**
- 6:00 Dinner together and adjourn
- 7:00 - 8:30 Optional evening session to continue discussions

## Day 2 - Friday, April 25

- 8:30 am            Illustrative Summary of previous day, Introduction to day 2
- 9:00                Group Break-Outs:  
**Working Session #4 (1.5 hr) -- Determining the Roles of Existing Organizations / Programs**
- 10:30              Report back to plenary - develop common program themes, discuss the possibilities of transboundary cooperation
- 11:15              Snack break
- 11:30              **Plenary Session: Developing A Plan of Action**  
- Define Important Next Steps: What, Who, How & When
- 1:00 pm            Adjourn with box lunch

\*Executive Steering Committee remains for further discussion on workshop outputs, implementation of next steps.

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## **Appendix D: Descriptions of Major MPA Programs in the Gulf of Maine**

### **MARINE PROTECTED AREAS DESIGNATED UNDER THE OCEANS ACT**

The *Oceans Act* received Royal Assent on December 18th, 1996. The Oceans Management Strategy (OMS), Part II of the Oceans Act, identifies three complementary initiatives that will be part of a national strategy for managing Canada's oceans. These legislated initiatives include Marine Protected Areas, Integrated Management of activities in estuaries, coastal waters and marine waters, and Marine Environmental Quality. The OMS will provide the basis for incorporating MPAs into a broader national planning framework for the coastal zone. At the same time, stakeholders will participate in developing the overall vision of MPAs for Canada. The Oceans Act states that the national strategy will be based on the principles of sustainable development, integrated management, and precautionary approaches.

MPAs under Part II (Section 35) of the Oceans Act:

A marine protected area is an area of the sea that can be designated for the conservation and protection of marine resources and marine habitats. The Act outlines five purposes for the establishment of MPAs:

- (a) conservation and protection of commercial and non-commercial fisheries resources, including marine mammals and their habitats;
- (b) conservation and protection of endangered or threatened marine species, and their habitats;
- (c) conservation and protection of unique habitats;
- (d) conservation and protection of marine areas of high biodiversity or biological productivity;
- (e) conservation and protection of any other marine resource or habitat as is necessary to fulfill the mandate of the Minister of Fisheries and Oceans.

Zones may be established, and specific measures may be prescribed, consistent with the purpose of the designation.

Emergency marine protected areas can be established where a marine resource or habitat is or is likely to be at risk. The emergency marine protected area can last up to a maximum of 90 days.

The MPA Program of DFO will establish a third federal program for marine protected areas. The Oceans Act provides that the Minister will lead and coordinate the development and implementation of a national system of marine protected areas on behalf of the Government of Canada.

## **A Collaborative Approach -- The Discussion Paper and Development of a MPA Program**

The Department of Fisheries and Oceans will involve a variety of stakeholders in determining how marine protected areas will be established and managed. A discussion paper seeking public input and comment was released on February 13th, 1997 and general information sessions were held in March. The discussion paper provides a general overview of what marine protected areas are, the types of marine protected areas provided for in the Act, and a general proposal on how the Department of Fisheries and Oceans could establish and manage marine protected areas.

A key goal in DFO's approach to MPAs is to establish a network of unique MPAs that will reflect the diversity of our oceans. Another key and related goal is to develop an MPA program complementary to those established by Canadian Heritage and by Environment Canada.

Some of the proposed work that DFO will conduct to meet its commitment includes the following:

- Coordinate amongst all federal MPA programs;
- Establish procedures for accepting nominations for proposed MPAs Identify possible priority sites;
- Conduct regional overviews of resources and develop criteria for the selection of candidate sites and the MPA network;
- Establish "pilot" MPAs in high priority sites for further assessment;
- Develop national guidelines and strategies which further develop criteria and provides direction for the development of MPA management plans; and
- Establish a public information and education program

As a key part of meeting this commitment, DFO is currently seeking partnering arrangements with a variety of agencies, community groups, and interests. Some of these arrangements could include coastal communities, the fishing industry, aquaculturalists, aboriginal organisations, conservationists, ocean industries, and federal, provincial/state and municipal governments.

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National Marine Conservation Areas (NMCA) are a type of marine protected area established by Parks Canada. The primary objective of the NMCA Program is to set up a system which is representative of the full range of Canada's marine and Great Lakes environments.

National Marine Conservation Areas are managed for ecologically sustainable use and contain a variety of conservation mechanisms from small zones of high protection, to areas where most resource harvesting and other activities would continue, but managed with conservation as the main goal. NMCAs include the sea bed, its subsoil and overlying waters, the associated fauna and flora and may include islands and some coastal lands. Non-renewable resource extraction and ocean dumping are prohibited. In addition to representing the diversity of Canada's oceanic and Great Lakes environments, NMCAs are also meant to, among other things, maintain ecological processes and life support systems, protect endangered species and their habitats, encourage research and ecological monitoring, and provide for marine interpretation and recreation. The management of NMCAs requires the development of partnerships with regional stakeholders, communities, citizens, Aboriginal peoples and provincial or territorial governments.

To guide the development of a system of NMCAs based on the concept of representativeness, Parks Canada, working with scientists familiar with Canada's oceanic and Great Lakes environments, classified the Pacific, Arctic and Atlantic Oceans, and the Great Lakes, into 29 marine regions. Each region has its own distinct combination of geological oceanographic and biological features. The long-term goal of Parks Canada is to represent each region within the national marine conservation area system. NMCAs are presently established under the 'National Parks Act' but legislation dealing specifically with NMCAs is currently being drafted.

The identification of areas representative of the marine region is a science based study and looks at elements such as: bathymetry, coastal and marine habitats, tides, ice regime, water masses, currents, mixing, freshwater influence, plants, plankton, invertebrates, fish, marine birds, marine mammals. In selecting a preferred NMCA candidate from the areas identified, social and economic concerns are taken into consideration.

The Bay of Fundy marine region and part of the Scotian Shelf marine region fall within the Gulf of Maine region. Given the complexity of the marine environment and the fact that partnerships are integral to the establishment and management of NMCAs, Parks Canada would welcome the opportunity to work with other organisations dealing with MPAs in the Gulf of Maine.

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**Protected Marine Area Program Overview**  
**Canadian Wildlife Service Environment Canada**

*Status* - The Canada Wildlife Act was amended in July 1994 for the establishment of “*protected marine areas within any fishing zone prescribed under the Territorial Sea and Fishing Zones Act.*” In other terms, the amendments created provisions for establishing *marine wildlife areas* out to 200 nautical miles. The Canada Wildlife Act also permits the establishment of regulations for undertaking ... “*wildlife research, conservation and interpretation in any protected marine area.*”

Following the legislative amendments to the Canada Wildlife Act, Environment Canada initiated several internal discussions and workshops. The outcome of these efforts was the production of a report in August 1996 entitled “Towards an Environment Canada Strategy for Coastal and Marine Protected Areas.” The report encapsulates the objectives and focus of Environment Canada’s protected marine area program. The document also describes the role of the program in terms of its contribution to marine conservation in Canada.

Several other Environment Canada programs help protect coastal areas used extensively by migratory birds. The *Migratory Birds Convention Act* allows for the establishment of **Migratory Bird Sanctuaries**, which have been used extensively to protect coastal marine waters. There are currently 14 Migratory Bird Sanctuaries in Atlantic Canada. Two of these are located in the Bay of Fundy, however neither of these have an offshore component. The Ramsar Convention has been used to designate wetlands of international significance. There are currently 8 **Ramsar Sites** in Atlantic Canada. Four are located along the Bay of Fundy Coast. Three of these sites have a marine component.

*Program Focus* - The program is oriented towards the protection of marine areas primarily for the conservation of populations of marine migratory birds and the ecosystems upon which they depend. Although sites are established primarily to conserve birds, Environment Canada’s “marine wildlife areas” would be managed for the benefit of all wildlife.

The proposed characteristics of marine wildlife areas are summarized as follows:

- Selection criteria: criteria will emphasize importance of the area to migratory birds. Unique and critical areas for migratory birds include waters surrounding seabird nesting islands, feeding areas (upwelling areas, polynyas, seamounts), moulting areas, migratory stopovers, and overwintering sites.
- Site boundary: site boundaries would be determined specifically. The area must be large enough for effective conservation and size would vary according to the target migratory bird species. The marine wildlife areas would comprise the air, water surface, water column, and seabed (but not subsoil, unless subsurface rights are obtained).
- Overall management goals: sites would promote ecosystem integrity and conservation of all wild organisms within an area. Management will focus on regulating human activities. Level of protection will be determined on a site-by-site basis through a management plan. Management regime will be achieved through various regulations under existing legislation.

- Enforcement: enforcement strategy would rely heavily on public education and communication, rather than on physical inspection by wildlife officers. The regulations would set out general prohibitions of inappropriate human uses and allow other activities compatible with wildlife conservation only under permit. The department would adopt a cooperative approach to establishment, enforcement, and management, wherever and whenever appropriate.

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## **World Wildlife Fund (Canada) Marine Protected Areas**

In 1989, World Wildlife Fund (Canada) launched the Endangered Spaces Campaign to help protect the nation's dwindling biodiversity. The goal of the Campaign is to establish a national network of terrestrial and marine protected areas that would help conserve the tremendous variety of habitats and ecosystems that makeup Canada's natural heritage. This goal became a matter of public policy when the Canadian Council of Ministers of the Environment, the Canadian Parks Ministers Council, and the Wildlife Ministers Council of Canada signed the *TriCouncil Agreement* in 1992 committing Canada to completing an ecologically representative system of marine and terrestrial protected areas.

The Endangered Spaces Campaign marine goal is to adequately represent at least one third of the marine and Great Lakes natural regions by the year 2000, and complete a marine protected areas system by 2010. To measure progress in this regard, three things are required:

- 1) a map showing each jurisdiction's marine and/or Great Lakes natural regions;
- 2) criteria for assessing representation of a marine natural region; and
- 3) protection standards for judging whether the management regime of a marine protected area is adequate for safeguarding ecological integrity.

### Natural Regions Maps

Maps of marine natural regions delineate areas of broadly similar oceanography, based on factors such as water temperature, salinity, currents, and species distribution. To date, only Parks Canada and British Columbia have adopted natural regions maps for marine protected areas planning. Efforts are underway in some other jurisdiction, including Quebec and Nova Scotia, to develop natural regions frameworks.

The Parks Canada framework consists of only 29 regions for Canada's entire marine territory. While this is an entirely appropriate scale to underpin Parks Canada's national marine conservation areas (NMCAs) program, a finer scale may be necessary for regional planning to ensure that a marine protected areas system adequately represents the full range of biophysical features in each region. For example, the British Columbia natural regions framework extends out to 200 nautical miles offshore and includes 10 mainly marine ecosections and 18 ecosections with marine and coastal components. For their purposes, Parks Canada has defined five marine natural regions for the Pacific Ocean.

### Criteria for Assessing Representation

Adequate representation of ecological features requires more than the mere presence of a protected area in a natural region. Protected areas must be judged to be in the right place, of the right size and the right configuration to help protect biodiversity over the long-term. Gap analysis provides conservationists and policy makers with an important analytical tool with which to assess where additional protection of the landscape and seascape is required.

WWF's gap analysis methodology is well developed for terrestrial protected areas and outlined in a publication, *A Protected Areas Gap Analysis Methodology: Planning for the Conservation of Biodiversity*, by Kevin Kavanagh and Tony Iacobelli. WWF is currently refining the methodology that will be used to evaluate the contribution of marine protected areas towards ecological representation. Essentially, the methodology will involve three levels of analysis: 1) broad physiographic features (e.g., rock type, sediment, depth); 2) oceanographic processes and conditions (e.g., temperature, salinity, light, currents, stratification); and 3) biological communities (e.g. productivity, plants species macro and microalgae, community ecology). Once these characteristics are mapped, an assessment of representation of natural regions is conducted based on criteria which define ecological integrity.

### Protection Standards

As is true on land, simply establishing protected areas to represent biophysical features of a marine natural region is not sufficient to ensure that these attributes will be secure in the long term. For this to happen, measures must be in place to safeguard ecological integrity. For terrestrial systems, the Canadian Council on Ecological Areas has defined ecological integrity as "the capability of a protected area to support and maintain assemblages of organisms (communities) that have a composition, form and functional organization comparable to that of similar ecosystem types of the region." Although no nationally agreed upon standards have been developed in Canada to meet this objective, a common standard is that no industrial activities be permitted in protected areas, especially logging, mining, hydroelectric, and oil and gas development.

Extension of this approach to the marine environment suggests that analogous standards for marine protected should be implemented. WWF believes human activities likely to cause large-scale, long-term habitat disruption should be prohibited in a MPA, especially oil and gas development, dumping, mining, sand and gravel extraction, and bottom dragging and trawling. But not all human activities are excluded. Certain kinds of fishing, tourism, and research can take place. What happens where in a protected area should be evaluated on a case by case basis.

### Reporting Progress

Each year, WWF reports on the progress the federal, provincial, and territorial governments make towards meeting the goal of completing a network of marine and terrestrial protected areas. A National Report Card is released in every spring.

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**National Marine Sanctuary Program- Stellwagen Bank**

The Stellwagen Bank National Marine Sanctuary is an area of approximately 638 square nautical miles (2181 square kilometers; 842 square miles) of ocean waters, and the submerged lands thereunder, over and around Stellwagen Bank and other submerged features off the coast of the Commonwealth of Massachusetts.

A combination of physical and oceanographic characteristics in this area result in cycles of biological productivity that support exceptionally large and diverse populations of fish, seasonal populations of cetaceans (including several classified as endangered) and seabirds. The proximity to land and accessibility of this biologically rich and diverse system have attracted high levels of human activity, principally, commercial fishing and whale watching.

The boundary of the Sanctuary encompasses the entirety of Stellwagen Bank; Tillies Bank to the northeast; and southern portions of Jeffreys Ledge to the north of Stellwagen Bank. The Sanctuary is entirely within federal waters, i.e., beyond the Exterior Line of the Commonwealth of Massachusetts (G.L.C. 132A, s. 13). Segments of the Sanctuary boundary are coterminous with the seaward boundaries of three Ocean Sanctuaries designated by the Commonwealth of Massachusetts under G.L.C. 132A, ss. 13-16 and 18. The northwestern border of the National Marine Sanctuary is contiguous with the North Shore Ocean Sanctuary and the southern border coincides with segments of both the Cape Cod Bay and the Cape Cod Ocean Sanctuary.

On October 7, 1992, Congress passed legislation reauthorizing and amending Title III of the Marine Protection, Research and Sanctuaries Act (MPRSA). This legislation was signed into law on November 4, 1992 (P.L. 102-587). Section 2202 of that law designates the Stellwagen Bank National Marine Sanctuary. Further, it establishes a Sanctuary boundary; prohibits the exploration for and mining of sand and gravel and other minerals in the Sanctuary; requires consultation with the Secretary of Commerce by Federal agencies proposing agency actions in the vicinity of the Sanctuary that may affect Sanctuary resources. The Sanctuary is managed by NOAA's Sanctuaries and Reserves Division of the National Ocean Service Office of Ocean and Coastal Resource Management. Management is based on ecosystem management principles and relies heavily on partnerships and collaboration with co-managers of Sanctuary resources.

Stellwagen Bank and surrounding areas provide one of the richest, most productive marine environments in the United States. The Stellwagen Bank area sustains a large variety of marine mammals and fishery resources which constitute an important ecological and economic resource for the region. Due to its accessibility, the bank is used extensively for whale watching, commercial and recreational fishing, and recreational boating.

Stellwagen Bank's topography allows for cold, nutrient-rich bottom water to surface and mix with sunlight, causing suitable conditions for plankton production. It is this plankton-rich water that attracts many species of animals to the Stellwagen Bank area.

The Stellwagen Bank area is recognized as one of the most important areas in the North Atlantic for whales. serve as an important feeding and nursery grounds for many species of marine mammals including large and small whale species, including humpbacks, fins, minkes, northern



rights, pilots, and orcas. Seasonal visitors also include white-sided and white-beaked dolphins, harbor porpoises, and bottlenose, common, and striped dolphins. Harbor seals, gray seals, and leatherback sea turtles make rare visits to the Bank. Over 30 species of coastal and pelagic seabirds, from the common herring gull to the endangered roseate tern can be spotted at Stellwagen Bank.

The high biological productivity of the bank also sustains commercially and recreationally valuable fishery resources.

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**NOAA / National Marine Fisheries Service**  
**Overview of the Habitat Conservation Program in the Gulf of Maine**

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) is the principal federal trustee for living marine resources and their habitat in the United States. The NOAA Fisheries Habitat Conservation Program strives to protect, conserve, restore, and create habitats and ecosystems vital to self-sustaining populations of living marine resources under NOAA Fisheries stewardship.

NOAA Fisheries works to protect and conserve marine habitats through a variety of habitat consultation activities. NOAA Fisheries staff review proposed coastal construction activities to evaluate potential adverse effects for fish, shellfish, marine mammals, sea turtles, and other living marine resources. These efforts focus on wetland, waterway, and hydropower permit reviews, as well as assessments of federal civil works projects such as dredging and erosion control. NOAA Fisheries provides a variety of consultative services to regulatory and construction agencies, developers, and the general public to develop methods to avoid and minimize the adverse effects of human activities on marine habitat, and to compensate for unavoidable habitat loss or degradation. NOAA Fisheries also serves as a federal trustee to ensure the restoration of marine habitats damaged by oil spills, hazardous material releases, and other unforeseen events.

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act included substantial new provisions to protect essential fish habitat (EFH). These provisions require NOAA Fisheries and the regional fishery management councils to amend all federal fishery management plans to describe and identify EFH for each fishery. In the Gulf of Maine, NOAA Fisheries will be working with the New England Fishery Management Council to designate EFH for northeast multispecies (groundfish), Atlantic scallops, Atlantic herring and Atlantic salmon. Once EFH is designated, federal agencies will be required to consult with NOAA Fisheries regarding any action they authorize, fund, or undertake that may adversely affect EFH, and NOAA Fisheries will be required to provide conservation recommendations regarding any proposed federal or state agency action that would adversely affect EFH.

In the Gulf of Maine, NOAA Fisheries' habitat activities are handled through the National Marine Fisheries Service Northeast Regional Office in Gloucester, Massachusetts. The Gloucester branch of the Habitat Conservation Program focuses on habitat activities in Maine, New Hampshire, and Massachusetts. Habitat activities in the remainder of the Northeast Region are handled through Habitat Conservation Program field offices in Milford CT, Sandy Hook NJ, and Oxford MD.

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**Appendix E: MPA Workshop Agreement**

### **Definition for a marine protected area:**

Any area of intertidal or subtidal terrain together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation to manage and protect part or all of the enclosed environment. Such areas may include a range of protection levels:

- I. Strict Protection
- II. Ecosystem Conservation and Recreation
- III. Conservation of Natural Features
- IV. Conservation Through Active Management
- V. Landscape / Seascape Conservation and Recreation
- VI. Sustainable Use of Natural Ecosystems

### **Vision Statement:**

Marine Protected Areas (MPAs) represent a tool to understand and protect Gulf of Maine ecosystems and achieve sustainable use of marine resources.

### **Guidelines for Marine Protected Areas (MPAs) in the Gulf of Maine:**

Marine Protected Areas in the Gulf of Maine should be:

- 1) considered as tools to be used both proactively and opportunistically for protecting Gulf of Maine ecosystems, habitats, and species;
- 2) planned, implemented, and managed with the participation of all important stakeholders;
- 3) based on a set of clearly defined objectives and human uses
- 4) developed incrementally and equitably over time;
- 5) built upon existing programs and structures;
- 6) coordinated across jurisdictions and organizations to better reflect the structure and functions of the marine ecosystem;
- 7) based on accurate information and sound scientific understanding;
- 8) monitored and adaptively managed.

### **Recommended Actions:**

Workshop participants elected to form a MPAs ad hoc committee to work in partnership with the Gulf of Maine Council on the Marine Environment. The Committee, representing a diversity of

stakeholders in the Gulf of Maine region, will evaluate and act upon activities which support the application of MPAs as a tool for protecting and managing Gulf of Maine (GOM) ecosystems, habitats and their species. Activities to be considered include:

- Review of existing data on the Gulf of Maine ecosystem and identification of information gaps;
- Creation of an electronic database on MPAs in the GOM;
- Compilation and analysis of existing laws, programs, and legal mechanisms relating to MPAs;
- Production of a GIS map displaying existing MPAs in the Gulf;
- Investigation and recommendation of a nomination process for MPA candidate sites which builds on existing programs;
- Investigation of existing lists for candidate MPA sites;
- Build on existing programs to develop selection criteria for MPAs in the GOM and conduct a case study to test its effectiveness;
- Development and publication of a case study of Stellwagen Bank NMS that demonstrates the effectiveness of generating scientific understanding of a MPA;
- Development of interactive education programs that articulate the need for and value of MPAs in the GOM;
- Evaluation and recommendation of methods to ensure the full participation, representation and involvement of stakeholders in the development of MPAs;
- Press releases, community presentations, and meetings with editorial boards to disseminate the concept of MPAs;
- Raise funds to support activities and projects relating to MPAs in the GOM.