

**Massachusetts Ocean Partnership Fund (MOPF)  
Science and Technical Group Meeting  
December 1, 2006**

**Meeting Summary**

MOPF held its first Science and Technical Group (STG) meeting on December 1, 2006.

The objectives of the meeting were to:

- Orient STG members to the MOPF initiative and its strategic goals
- Identify key elements of a Science Plan to support integrated, multi-use ocean management in MA
- Discuss the process for developing a Science Plan as part of MOPF's strategic planning process

This meeting summary is intended to:

- Provide STG members a synopsis of the outcomes and discussions from the meeting
- Serve as a means for those STG and SPG members unable to attend to keep apprised of MOPF developments

The summary is organized in two parts, first a summary of *outcomes* from the meeting followed by a more detailed summary of the *discussions*. A list of participants is attached.

**SUMMARY OF OUTCOMES**

Discussions during the day-long meeting produced general agreement that:

- The MOPF Science Plan will be most effective and useful if it stays focused on the (natural and social) science needs to support integrated multi-use ocean management in MA.
- Certain principles will guide development of the Science Plan. (See preliminary list on page 4.)
- The MOPF Science Plan will be structured to include a statement of principles, discussion of priority focus areas and more specific science themes within those areas and identify the data, research, infrastructure and funding needs for each theme. (See pages 4-5.)

Science Themes

Participants generated a list of science themes relevant to supporting integrated multi-use ocean management in MA. Since that meeting, these themes have been organized/clarified and *sent to you under separate cover for review and prioritization*.

Next Steps

STG members outlined a process for preparing a draft Science Plan product for the February SPG/STG meeting. (Specific dates are proposed here.)

| <b>Date</b> | <b>Task</b>   | <b>Who?</b>                 |
|-------------|---|-----------------------------|
| 12/20/06    | Organize/clarify science themes; circulate to STG & SPG   | A. Rosenberg and MOPF Staff |
| 1/5/07      | Via e-mail: Prioritize “focus areas”; narrow down to 2-3; rank science themes within each priority focus area | STG and SPG                 |
| 1/5-26      | Conduct a call/mtng on each focus area: clarify, expound on themes. Prepare draft Science Plan for Feb. mtg.  | STG/SPG<br>MOPF staff       |
| 1/29        | Circulate draft Science Plan  | MOPF staff                  |
| 2/13 - 14   | Discuss draft Science Plan at February meeting  | STG/SPG                     |

## **SUMMARY OF DISCUSSIONS**

### **Introductions and Overview**

Andy Rosenberg (MOPF Steering Committee, SPG and STG member) chaired the meeting. After participants introduced themselves, Andy Rosenberg offered opening remarks to provide context for the STG’s science planning work, in coordination with the SPG. He noted that the STG is charged with developing a policy-relevant Science Plan to support the goals of MOPF’s Five Year Strategic Plan. Stephanie Moura, MOPF Project Coordinator, reviewed the background of the MOPF initiative, outlined the process for developing MOPF’s Five-Year Strategic Plan and Science Plan by June 2007 and described progress to-date. Stephanie explained that certain central issues had been discussed and clarified at the October SPG meeting, notably the statement of MOPF’s goal:

In its first five years, MOPF’s primary goal is to ensure a comprehensive multi-use ocean management plan is developed and in place in MA by 2012 that:

- (1) integrates management across uses/sectors, resources and agencies,
- (2) reflects input from an intensive public process,
- (3) gains the support of major affected groups and organizations
- (4) establishes a process for adapting the plan to respond to changing conditions, and
- (5) supports sustainable marine industries *and* ecosystem stewardship more effectively than the current management system.

### **Other Relevant Initiatives**

**Verna DeLauer**, N.E. Science/Policy Coordinator with COMPASS, noted several initiatives in the region related to EBM of ocean resources. COMPASS is currently compiling an inventory of relevant efforts and will distribute it to MOPF STG and SPG members when available. Key questions/considerations from this discussion are noted below.

- There is a need for coordination among the many efforts to avoid reinventing the wheel and spend limited budgets efficiently.
- A common theme among these efforts is deliver (develop, communicate) “science to inform management”.

## Science Planning Framework

The bulk of discussion focused on MOPF's science planning framework (draft document distributed in advance). Key points and questions are noted below.

### I. Role of MOPF Science Plan to advance integrated multi-use ocean management in MA

- To be effective, the MOPF Science Plan must:
  - reflect a common sense of direction about priority natural and social science needs to support “integrated multi-use ocean management” and ecosystem-based management (EBM)
  - be relevant to MA decision makers
  - integrate with the MOPF Five-Year Strategic Plan
- What is the appropriate geographic/ecosystem scope for the Science Plan?
  - There was general agreement the Science Plan will focus on Massachusetts state waters, recognizing the following:
    - As an independent entity, MOPF has flexibility to allow for “leaky boundaries” and consider other areas outside the state boundaries as appropriate (coastal zones, adjacent state and GOM waters) among hierarchies of nested ecosystems
    - The Science Plan should try to be explicit about its applicability to different locations (MA, GOM, Southern New England, Northwest Atlantic)
  - It is hoped that the Massachusetts example will be transferable to other New England states.
  - The Science Plan should offer guidance on delineating a system of nested ecosystems.
  - It is important to create boundaries that relate to policy-drivers
- The Science Plan will emphasize an “adaptive management” approach to channel policy-relevant results back into designing further research and management measures. Research and management experiments will consider design, implementation, monitoring, modeling, evaluation and communication phases to facilitate the information feedback loop.
  - What science advisory resources, funding and infrastructure are necessary to do the science?
  - What models and data coordination are needed to do the science?
- Better tools are needed to evaluate ecological, socioeconomic, and other tradeoffs *among sectors* associated with management decisions. The tools won't *guarantee* good choices, as that requires political will among decision-makers. The tools will make it *possible* to be *explicit* about tradeoffs.
  - Existing impact analysis frameworks (e.g. NEPA & MEPA) aren't sufficient. MOPF can *add value* by advancing capacities for integrative evaluations and cumulative impact assessment.

- “What if” simulations are one potentially useful tool to evaluate the ecological and socioeconomic effects of management actions on various sectors and take cumulative impacts into account
- Sound baseline data against which to compare impacts of proposed projects, management actions is important.
  - Thorough explication of impacts of various ocean uses, incl. “new” uses
  - Existing use maps
  - Institutionalize process for regularly updating baseline data, conditions
- How will MOPF Five Year Strategic Plan and Science Plan *add value* to current ocean management in MA?
  - Enumerate steps/process for integrating science into the development of spatial management plan for MA waters.
  - Possibly identify priority management issues and design Science Plan to support resolution of those.
- MOPF Science Plan should facilitate the *best use of existing information* as well as recommend how to obtain additional information.
  - To do this, Science Plan must address infrastructure, outreach and funding needs, in addition to data and research needs
  - Infrastructure example: creation of user-friendly, accessible data base(s) of relevant ecological, socioeconomic, regulatory and other information
  - The Science Plan should consider the use of experimental approaches to data acquisition wherever appropriate.

## II. Structure and Content of Science Plan

There was general agreement that a structure/format similar to the federal interagency *Ocean Research Priority Plan* (<http://www.ocean.us/node/279>) would be effective and appropriate for the MOPF Science Plan.

### Chapter 1: Statement of Principles Underlying Development of MOPF Science Plan

The list below provides examples for guiding principles; it is neither complete nor in any particular order of priority.

- Natural and social science needs (data, research, infrastructure and funding), and strategies for fulfilling those needs, are identified *to support* improved management, specifically “integrated multi-use ocean management” informed by EBM. The feedback loop whereby management responds to science and science responds to management should be strengthened.
- Adaptive management (whether “passive” or “active”) incorporates pre- and post-project assessment and better equips managers and scientists to respond to new information and/or knowledge.
- Availability of tools to explicitly consider ecological, socioeconomic and other tradeoffs across sectors is a critical factor in improving current management systems.
- Transparency in the process of establishing criteria for and selecting priority science themes and objectives will enhance Science Plan credibility. A key criterion is that

science focus areas/themes identified must support development of integrated multi-use ocean management.

- Consider spatial and temporal cumulative impacts of management decisions.
- Area-based management and spatial planning are useful tools in developing an integrated multi-use ocean management plan.
- Note: There was discussion of the use of experimental methods, but no clear agreement was reached among participants on the relevance of this principle for the MOPF Science Plan. Subsequent to the meeting, a participant offered the following for the STG's consideration: "The science plan, and the future research and management actions that it promotes, should stimulate the application of experimental scientific methods wherever possible. For example, specific new management measures must be implemented within a hypothesis-testing framework when possible. This will generally demand replicated experimental and control sites so that scientific methods can be used to determine the effect of the management measure, if any."

Chapter 2: Science focus areas, themes and topics most applicable to MOPF goal of integrated multi-use ocean management in MA

- Description of how these were developed and prioritized.

Chapters 3 -5: Focus areas 1 - 3

A series of similarly structured chapters would follow, one for each focus area. Priority themes would be described and perhaps subtopics within those themes; for each theme, the Science Plan would identify the science needs in four areas: data, research, infrastructure, and funding. Below is an example of the proposed structure for the focus area chapters. Participants agreed the Science Plan must also account for and reflect key cross cutting themes and science needs.

- Chapter 3: Focus area 1
  - Theme A
    - Subtopics i-??
  - Data needs
  - Research needs
  - Infrastructure needs (including information management systems, monitoring programs, outreach/communication needs, etc.)
  - Funding needs
- Theme B
  - Subtopics i-??
- Data needs
- Research needs
- Infrastructure needs (including information management systems, monitoring programs, outreach/communication needs, etc.)
- Funding needs

## Next Steps

See the table on page 1 for a summary of next steps.

**MOPF Science / Technical Group Meeting - December 1, 2006**  
**Participants List**

|     | <b>First Name</b> | <b>Last Name</b> | <b>Affiliation</b>                                     | <b>Title</b>   |
|-----|-------------------|------------------|--|--|
|     | Irit              | Altman           | UNH  | Doctoral student   |
|     | Mike              | Armstrong        | MA Div. of Marine Fisheries                            | Aquatic Biologist  |
| !   | Bill              | Adler            | MA Lobstermen's Association<br>MA Fisheries Commission | Executive Director<br>Member                                 |
| *!  | Priscilla         | Brooks           | Conservation Law Foundation                            | Director Ocean<br>Conservation Program                       |
| +   | Moira             | Brown            | New England Aquarium                                   | Right Whale Sr.Scientist                                     |
| +   | Jud               | Crawford         | Conservation Law Foundation                            | Senior Scientist   |
| !   | Richard           | Delaney          | Horsley Witten Group                                   | Exec. Vice President   |
|     | Verna             | DeLauer          | COMPASS  | NE Science/Policy<br>Coord.                                  |
| *!  | Paul              | Diodati          | MA Division of Marine<br>Fisheries                     | Director   |
| +   | John              | Duff             | University of MA, Boston                               | Assistant Professor of<br>Environmental Law                  |
| +   | Kathryn           | Ford             | MA Division of Marine<br>Fisheries                     | Marine Habitat<br>Specialist                                 |
| +   | Les               | Kauffman         | Boston University                                      | Professor of Biology   |
| +   | Stormy            | Mayo             | Provincetown Center for<br>Coastal Studies             | Director, Right Whale<br>Habitat Studies                     |
|     | Jesse             | Mechling         | NOAA<br>(for Betsy Nicholson)                          | NE Regional Coastal<br>Mngmnt/ CMRP Acting<br>Program Coord. |
|     | Stephanie         | Moura            | MOPF   | Project Coordinator  |
| !   | Jackie            | Odell            | Northeast Seafood Coalition                            | Executive Director   |
| *!  | Robbin            | Peach            | MA Environmental Trust                                 | Executive Director   |
| +   | Judy              | Pederson         | MIT/SeaGrant   | Coastal Resources<br>Specialist & Manager                    |
| *!+ | Andy              | Rosenberg        | UNH-Institute for Study of<br>Earth, Oceans and Space  | Prof. of Natural Res.<br>Earth, Oceans & Space               |
| +   | James             | Sanchirico       | Resources for the Future                               | Senior Fellow  |
| *!+ | Susan             | Snow-Cotter      | MA Coastal Zone Mngmnt                                 | Director   |
| +   | Dave              | Terkla           | University of MA, Boston                               | Professor of Enviro.<br>Economics                            |
| !   | Jack              | Wiggin           | Urban Harbors Institute                                | Executive Director   |

- ! Indicates member of Strategic Planning Group
- + Indicates member of the Science Technical Group
- \* Indicates member of the Steering Committee