

**A Cooperative Research Project Final Report
Submitted to
the Northeast Consortium**



**Marine Resource
Education Program**

Project Title: Marine Resource Education Program

Award Number: 09-024

Performance Period: September 8, 2009 – June 30, 2009

Date Submitted: June 30, 2009

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Abstract

The Marine Resource Education Program (MREP) continues to successfully engage the fishing industry and other interested stakeholders in improved dialogue and understanding of the complex fisheries science and management systems. Each session of MREP includes a full three-day science module and a three-day management module. In 2009, one session of MREP was offered in February (Fisheries Science) and March (Management Process) in West Greenwich, Rhode Island. 25 participants, including 18 members of the fishing community and 7 “others,” attended this session, making it one of our largest ever.

Participant evaluations continue to be universally positive and strongly supportive. Key agency partners, including NOAA Fisheries Northeast Fisheries Science Center and Northeast Regional Office, indicate that the program is valuable for quality interaction with the user community and pledge ongoing participation. The New England Fishery Management Council has recommended that new members of Advisory Panels complete MREP as a prerequisite to their Panel service. Federal agencies and non-governmental organizations in other regions recognize the program as a successful model for educating fishermen in the complex science and management areas that govern their livelihood and are actively seeking GMRI’s consultation in development of similar programs in the Western Pacific, South Atlantic and Gulf of Mexico.

Introduction

It has been widely acknowledged that the complex system of fisheries science and management is difficult for many fishermen and others to navigate. Fishermen attending fishery management council meetings, serving as advisors to the management processes, or partnering in collaborative research require baseline information to be effective in their roles. In 1996, the New England Fishery Management Council convened a Professional Standards Committee to develop recommendations for responsible fishing practices to be incorporated in management planning. The report from that Committee included a recommendation that training be provided to career fishermen, resulting in a professional certification.

The Marine Resource Education Program (MREP) arose from ongoing conversations among fishery activists in the region to create a professional training program for fishermen in New England. In 2000, the Northeast Consortium funded a pilot demonstration project to test the concept of designing and implementing a series of workshops to increase the number of individuals at work in fisheries that are comfortable navigating the fishery data and management systems. An impressive mix of partners from education, science and the fishing community worked to craft a curriculum and means of delivery. The pilot program, based at the University of New Hampshire, has been enthusiastically received within the region and there is interest in using this program as a model in other regions of the country. Seeking a more sustainable administrative structure, the project partnered with the Gulf of Maine Research Institute to further develop a permanent educational program for the marine resource community.

Project Objectives

The Marine Resource Education Program continues to operate under the following broad objectives:

- To substantially increase the number of individuals at work in New England fisheries that are comfortable navigating the fishery data and management systems.
- To break down historical barriers to cooperation, develop leaders in the fishing industry able to promote trust in the management process, forge new areas of involvement of fishermen in the regulatory process and fully engage fishermen in the development of “best available science”.
- To deepen the familiarity of policy and science professionals with the workings of the fishing community.
- To take effective steps toward bridging the gap between fishermen, scientists and managers by bringing together these three disciplines in a neutral setting where they may explore their common goals and their differences away from the pressure of the regulatory process.
- To develop a strategy for a permanent multi-level educational program for the marine resource community throughout New England and explore ways to transfer the “lessons learned” to other regions of the country.

Participants

This project relies on a strong partnership between fishing industry members and non-governmental organizations. The principle partners responsible for executing the project included:

Meredith Mendelson – Community Project Manager, Gulf of Maine Research Institute
Patricia Collins – Community Program Assistant, Gulf of Maine Research Institute

The Gulf of Maine Research Institute (GMRI) served as the administrative home for this program. Meredith Mendelson has been program manager since June 2007, serving as a liaison with project partners, presenters, and Board of Directors, overseeing curriculum review, and leading development of a program website as a resource for potential participants and program alumni. Patricia Collins has provided administrative support on program coordination and logistics since November 2007.

Mary Beth Tooley – Industry Representative, Small Pelagics Group and O’Hara Corporation

Mary Beth was a founding member of the current MREP program and has been actively involved with all aspects of the program including developing and refining the curriculum,

recruiting presenters, facilitating the Management Module and recruiting fishermen participants. In addition, Mary Beth has explored the development of an apprenticeship program to expand the number of people needed in the future to facilitate program delivery. Mary Beth has been a critical contributor to replication efforts in other regions.

John Williamson –Independent Fisheries Advocate, New England

John was also a founding member of the current MREP program and has been intimately involved with all aspects of the program including recruiting the Board of Directors, developing and refining the curriculum, participating in the sessions and recruiting fishermen participants. John remains very active as a principle and has devoted tremendous energy to alumni interviews with the goal of assessing programmatic impact on the fishing community's involvement in management. He has also served as an advocate for developing similar programs in other regions and is actively engaged with GMRI as replication efforts unfold.

Methods

The 2009 MREP session was offered in February (Fisheries Science) and March (Management Process) at the University of Rhode Island's W. Alton Jones Campus in West Greenwich, RI. A mass mailing was sent to federal permit holders in several fisheries (targeting certain permit categories and homeport states) including multispecies (groundfish), scallops, monkfish, and herring. Applications were reviewed by the MREP implementation team (John Williamson, Mary Beth Tooley, and Meredith Mendelson) with an eye towards creating a geographically and fishery-diverse group of participants in each session. Where gaps were identified in particular sectors, further legwork to recruit participants from those areas or fisheries was undertaken, with particular emphasis placed on recruitment of fishermen who've been identified as leaders in their harbors or communities. A great deal of effort goes into the development of a diverse MREP class. While we continue to see a shift in interest towards southern New England, we were able to create a balanced class with a strong cross section of fisheries, gear types and homeports represented.

The curriculum, tailored specifically for fishermen and relevant stakeholder groups, covers two topic areas: a three-day Fishery Science Module, followed by a three-day Fishery Management Module. The Fishery Science Module is designed to provide participants with grounding in the fundamentals of commercial fisheries science. Participants are provided with a basic working knowledge of concepts in population biology and the assessment process, including survey sampling techniques, statistical tools, models and their uses. The science module also covers gear technology, oceanography, emerging ecosystem-based concepts and cooperative research. The Fishery Management Module provides an overview of entities that manage commercial fisheries in New England with an emphasis placed on the structure of the Fishery Management Council and the requirements under the Magnuson-Stevens Act and National Standards. The curriculum covers the components of a management plan, describing the progression of plan development and identifying critical opportunities for participation and input. The format for both modules is designed to create an open dialogue among participants and presenters and explore ways of fostering cooperation among fishermen, scientists and managers.

Data

As this is not a traditional research program, this section is not applicable to the Marine Resource Education Program.

Results and Conclusions

Our primary objective, to offer this course and the opportunity to provide fishermen with baseline information about the mechanisms used to manage the resource and govern their industry, has consistently been met. The 2009b modules both had higher participation than anticipated, an accommodation made due to overwhelming interest in the program and the desire to allow space for fishermen from other regions interested in replicating the program to attend. We have consistently been able to achieve a diverse group of participants, crossing fisheries and gear types, as well as representatives from recreational fisheries, the environmental community, and the shoreside service community. NOAA Fisheries and the USCG send one participant to each session, and often the NEFMC has sent new staff members, reflecting the value of the curriculum as a comprehensive introduction to science for non-scientists, and management for non-mangers.

Comments from 2009 Participants

*"There's a lot more going on behind the scenes than I thought, and...there's a real need to get involved."
--Frances "Sparky" McLaughlin, monkfish fisherman, Islip, NY*

"I've found it very beneficial. It helps me understand some of the roadblocks people face and how I can help them."—Andy Applegate, NEFMC staff

"This management module was an essential part of allowing me to potentially affect future management decisions. Without it, I was completely uncertain as to when or how to get involved."—fisherman (from participant evaluation)

"This was some of the most valuable time I have spent all year."—Jennifer Litteral. Island Institute

We were also able to underscore the value of our board in guiding program goals and objectives. The board serves a key role as representatives of our target audience. Consistent and ongoing engagement of the board has been an integral part of maintaining continuity during the program's evolution both within New England and during the exploratory phases of new programs in other regions.

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In 2009, we furthered the development of the MREP brand by creating a new brochure and we are currently publishing the results of the 2008 Impact Assessment (hard copy to be sent along in the coming weeks).

Program Administration

The fifteenth MREP session was offered in 2009. 25 participants, including 18 members of the fishing community and 7 other stakeholders attended this session, representing NOAA Fisheries Northeast Region Office of Sustainable Fisheries staff, U.S. Coast Guard, community

organizations, industry associations and academic/research institutions. Participation continued to be well distributed in a variety of ways: geographically, with individuals coming from all five New England states as well as New York and Florida (Gulf of Mexico fishermen interested in replication); across commercial gear-types (hook, trawl, gillnet, trap) and vessel size-classes; and across fisheries, with commercial and recreational groundfishermen, scallopers, monkfish fishermen and lobstermen coming together in the learning environment. We continue to hold the program in the winter, which seems to be the best time for attendance. Holding the program in southern New England has extended the range of participants to include a more active group of SNE fishermen who fish in New England waters.

Participant evaluations continue to be positive overall and strongly supportive. In the 2009 session, MREP had to compete with staffing shortages and workloads at NMFS Northeast Regional Office and NEFMC. Due to this reality, two presentations in the management module were given by staffers unfamiliar with the MREP program. While the content was the same, and certainly more than adequate, this did appear to produce some negative feedback from participants. We recognize the tremendous dedication of NERO and NEFMC staff to this program and understand that on occasion, other commitments preclude the regular staff members from participating in our program. We will continue to work with those staffs in order to offer the higher quality program to our participants.

The program continues to provide a unique opportunity for fishermen to interact with fisheries managers and scientists. It allows the industry to put faces to names, and to have a starting point when communicating with NOAA Fisheries, the Coast Guard, and other agencies. The informal educational atmosphere encourages thoughtful discussion, constructive criticism, and free exchange of ideas. Presenters often stay for a meal or an overnight, providing further interaction on both professional and interpersonal levels. This interaction is infinitely valuable, as it builds trust not only among individuals, but also in the scientific and management processes.

Board Communications

The MREP Board of Directors will hold its annual meeting in the fall of 2009. The primary focus of the Board meeting will be to discuss opportunities for expansion of the MREP model, into other regions or as advanced courses. The Board continues to play an active role in the evolution of the program, with several members serving as facilitators or presenters during the modules, and helping to reach out to prospective participants.

Outreach

We have focused our efforts on creation and implementation of a highly visible outreach strategy. In the last year, the program has relied on mass mailings to a targeted group of approximate 1500 federal permit holders from Maine to Virginia, direct recruitment, word of mouth, and distribution of brochures at various venues, including the Maine Fishermen's Forum, FishExpo, all New England Fishery Management Council meetings, and various fisheries association meetings. While we continue to receive more applicants than we have spaces, we often see surges from particular regions or sectors based on recent meetings or management

shifts. In the interest of maintaining class diversity, we still find it necessary to recruit participants to fill gaps each session.

In addition, the Marine Resource Education Program website continues to be updated regularly with the most recent presentations (of those which are time-sensitive) and is available online at <http://gmri.org/MREP>.

Partnerships

MREP's success lies in the ability of the presenters and moderators to engage in thoughtful discussion with the participants.

We have secured a group of presenters who are experts in their fields, as well as charismatic, approachable individuals who encourage debate and welcome questions. These scientists range from academic faculty to staff from the Northeast Fisheries Science Center. The presenters truly enjoy participating in the program and see it as a unique opportunity to engage with the industry affected by their research. Fishermen are often surprised by the candor offered by the presenters, and the access they retain to these individuals after the program.

We also value the tremendous commitment of our industry moderators. In 2009, Kristan Porter, a lobsterman and selectman from Cutler, Maine, moderated the Fisheries Science module. Ted Platz, a monkfish gillnetter from Newport, RI (and Monkfish AP member) moderated the management module. Kristan and Ted have been developing their facilitation skills in coordination with the MREP Implementation Team and perform the critical duty of translating between fishermen and presenters on particularly complex or contentious issues.

Impacts and Applications

Improving the Relationship between Scientists, Fishermen, and Managers

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Outreach to Other Regions and Program Replication

Though the MREP curriculum and presentation was developed to address specifics of management of New England fisheries, there is growing interest and inquiry from other regions of the country in providing similar programs elsewhere. The 2009 session hosted a NMFS employee from the Western Pacific region who audited the program with interest in pursuing a similar program in her region. The Western Pacific is interested in using MREP as a model for

development of an interim educational program, and has contracted with GMRI to bring Meredith Mendelson to Hawaii on a limited consulting basis. Also of note, the Gulf of Mexico Council has recently created an Education and Outreach Committee, and with funding support from the Ocean Conservancy, sent two fishermen to MREP this year. The O&E Advisory Panel also invited Meredith Mendelson and Mary Beth Tooley to their May meeting in Tampa, FL to present the fundamentals and impacts of the MREP New England program. The Advisory Panel recommended to the Committee that the region pursue MREP as a model training program for their region. The MREP Implementation Team is determining the next steps for that process and moving ahead to assist with program development and the identification of an appropriate administrative home.

A recurring request is that this program be replicated for other fisheries (particularly lobster), or governance structures, such as the Atlantic States Marine Fisheries Commission. GMRI is pursuing funding opportunities to explore these options but anticipates that it may take several years to be successful.

MREP Impact Assessment

The Impact Assessment has been completed. An executive summary is currently in publication, and will be ready in early July. We anticipate work for pursuit of publication will occur this fall and winter 2010.

Related Projects

Meredith Mendelson has been contracted as a consultant to the Western Pacific region for one week in July 2009 as that region develops a fishery outreach/education program modeled after MREP. For the time being, the program is going to be administered by NMFS, and therefore will not fall within MREP's scope and brand sufficiently to share the MREP name. However, we see this effort as a stepping stone towards the development of an appropriate resource education program in the Western Pacific region and have agreed to work cooperatively with NMFS over the course of its evolution.

Presentations

Meredith Mendelson and Mary Beth Tooley were invited to speak to the Gulf of Mexico Fishery Management Council's Outreach and Education Advisory Panel in Tampa, Florida as they developed recommendations for the Committee and Council on educational opportunities for the region.

Meredith Mendelson also presented to the environmental studies department at the Maine Maritime Academy on the breadth of her work at the Gulf of Maine Research Institute, with a focus on the impact and value of the MREP program as a tool to effectuate change without advocacy.

Student Participation

Not applicable.

Published Reports and Papers

Not applicable.

Future Research

At the time this report was finalized, the MREP Implementation Team has submitted proposals to continue offering the existing MREP program and to develop an advanced-level program for MREP alumni.

Additionally, we have had many requests for replication of the MREP model in other regions of the country. The MREP Implementation Team is considering these requests and investigating the ripeness of opportunity in the regions that have expressed interest, particularly the Gulf of Mexico/South Atlantic, and is serving a limited consulting role in the Western Pacific. We will remain in close contact with the Northeast Consortium as this discussion continues.

MREP Participants 2009

First Name	Last Name	Category/Sector	City	State
Tony	Alvernaz	LA Scallops	Lakeville	MA
Chris	Anderson	URI	Kingston	RI
Robert	Baines	Lobster	South Thomaston	ME
Tim	Bernadt	USCG	Boston	MA
Chris	Biegel	NMFS	Gloucester	MA
Glen	Brooks	Industry (GOM)	Bradenton	FL
Tim	Caldwell	GF/Monkfish	Swanville	ME
Hilary	Dombrowski	Groundfish	Gloucester	MA
Norm	Edwards	Groundfish	Amagansett	NY
Jake	Everich	Groundfish	Matunuck	RI
Mike	Flaherty	Recreational	Wareham	MA
Dominique	Horvath	NMFS	Honolulu	HI
Nina	Jarvis	GSDA	Gloucester	MA
James	Jordon	GF/Monkfish	Wakefield	RI
Brad	Kenyon	Industry (GOM)	Tarpon Springs	FL
Gary	Libby	GF/Monkfish	Port Clyde	ME
Jennifer	Litteral	NGO	Bar Harbor	ME
Jan	Margeson	GF/Monkfish	Brewster	MA
Greg	Mataronas	Offshore Lobster	Little Compton	RI
Sparky	McLoughlin	Monkfish	Islip	NY
John	Meschino	Lobster	Hull	MA
Shelly	Tallack	NGO	Portland	ME
Jim	White	Party/Charter	Coventry	RI
Paul	York	Herring	Rockland	ME