

FINAL REPORT

Staying Alive: Promoting a Culture of Safety at Sea in New England's Fishing Industry

**Cooperative Research Partners Program
National Marine Fisheries Service Northeast Regional Office
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**Submitted by:
The Massachusetts Fishermen's Partnership**

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Project Title: Staying Alive: Promoting a Culture of Safety at Sea in New England's Fishing Industry

Co-Principal Investigator: David Bergeron, Massachusetts Fishermen's Partnership

Principal Investigator: Madeleine Hall-Arber, Ph.D., MIT Sea Grant College Program

Project goals and objectives

- Train fishermen in safety, damage control, rescue procedures and first aid to improve their knowledge and skills.
- Conduct an investigation to determine why recent safety training workshops in New Bedford have been fully subscribed in contrast to workshops elsewhere that have attracted minimal participation of fishermen.
- Sponsor workshops to practice fire and damage control, raft deployment, flare and EPIRB use, survival suit donning and movement in water, and first aid for injuries.
- Increase interaction between Coast Guard and fishermen to improve communication and collaboration.
- Work closely with the New Bedford Safety Task Force and the Coast Guard to develop a long-term program that will provide on-going opportunities for and participation in safety training for fishermen.
- Survey Coast Guard Operations, Coast Guard-certified trainers and training organizations to gauge interest in participating in a long-term program and/or network.
- Explore potential for lowering the costs of safety equipment and/or insurance in part through active participation in safety training.

Value of project to fishery conservation and management

Fishing is reportedly one of the most dangerous occupations in the U.S. Weather, heavy equipment, mechanical failures, and traditional attitudes may all contribute to injury and loss of life. In addition, safety has reputedly been compromised either directly or indirectly by certain management regulations. Nevertheless, when fishermen are well trained in the use of their safety equipment and procedures, fatalities can be minimized.

Regulatory impacts that surfaced in the fishing year 2004-2005 in the Northeast region were notable for their extremes. On the positive side, haddock became the "poster child" that symbolized the resurgence of the stock biomass. Scallops continued to produce

generous catches. Georges Bank yellowtail flounder signaled only slightly less recovery. The good news about these stocks, however, was sharply countered by a shocking series of deaths among fishermen. The loss of the F/V Northern Edge and several individuals in separate incidents caused many to wonder to what extent regulations may affect safety at sea. Media reports, however, and fishermen took note that the sole survivor of the F/V Northern Edge tragedy was trained in the use of safety equipment and procedures in his native Portugal, while none of the others on board had been trained.

The use of days-at-sea restrictions as one of the major effort controls in the Northeast groundfish fishery has had several obvious impacts. First, harvesters must maximize the economic returns of each day at sea. Since the numbers of vessels capable of fishing in harsh conditions is limited, supply is usually lower during the winter and therefore, prices tend to be higher. Consequently, individuals may “push the envelope” of comfort and safety to try to capitalize on the likelihood of making more money for their catch so they may counter the effect of having less time at sea than in the past.

Also contributing to safety concerns is the smaller crew size on most vessels. Georgianna and Shrader (2005) documented that as vessel owners’ costs increased and individual landings decreased, crew size diminished.¹ In some cases, such as in scalloping, regulations limit the size of crew. The work, however, is physically very hard and experienced crewmembers are aging, leading to both safety and health hazards, a point noted by each of the panels in MFP’s Community Panels Project (see reports at <http://web.mit.edu/seagrant/aqua/cmss/comm%20mtgs/commmtgs.html>).

Soon after the loss of New Bedford’s F/V Northern Edge, New Bedford’s Mayor Fred Kalisz met with the head of National Marine Fisheries Service (NMFS) Bill Hogarth in Washington, DC. Concerned about the loss of life, Dr. Hogarth agreed to give New Bedford \$100,000 to develop a safety training program and the City of New Bedford promised to match that sum with \$50,000.

The Safety Committee of the Mayor’s Seafood Industry Task Force used the city’s funding to conduct safety-training programs for New Bedford’s fishing industry. The training emphasizes the three basic steps that the Coast Guard maintains will allow them to save fishermen who are forced to abandon ship. “I can almost guarantee you that we’ll be able to save you if you put on your immersion suit, grab your EPIRB and get in a raft,” Capt. Mark Landry, Chief of Operations, told attendees at the first workshop.

¹ Georgianna, Daniel and Debra Shrader. 2005. Employment, Income and Working Conditions in New Bedford’s Offshore Fisheries. Final Report for Contract No. NA03NMF4270265, Saltonstall-Kennedy Program, National Marine Fisheries Service, June 22, 2005, page 27.

Project's Accomplishments

This project built on New Bedford's success, extending the benefits of easy access to training and building an ethic of safety at sea among the fishermen not only of New Bedford and Gloucester but several of the satellite ports in the Commonwealth. The participation of the Massachusetts Lobstermen's Association, Plymouth Lobstermen's Association, Mass Bay Groundfish Fishermen's Association, Provincetown Fishermen's Association, Gloucester Fishermen's Wives Association, and other MFP member organizations as formal outreach partners for this project helped attract fishermen who had not been well represented in safety training courses in the past. Three-hundred-seven fishermen (307) participated in the training sponsored by this project. We strongly recommend that every effort be made to support the continuation of safety training.

Project design

1) An advisory group modeled on the New Bedford Seafood Task Force's Safety Task Force was formed. In addition to the principal investigators, membership of the advisory group included the project coordinator; a representative of a group of Coast Guard certified trainers, a representative of Coast Guard operations, representatives of three major fishing industry organizations in the Commonwealth, a health care executive, and two members of New Bedford's task force.

- The project coordinator hired has been in the seafood business for many years and is well-known and liked on the waterfront.
- The advisory group met initially to recommend refinements to the training curriculum, help network outreach and workshop scheduling, review surveys investigating the motivation for fishermen's participation in safety workshops and training capacity gaps. The group advised using the same set of trainers and curriculum used in the New Bedford's workshops, but added a module on first aid/occupational safety.
- MFP's board asked all 18 MFP member organizations to assist in outreach so that active fishermen will participate in the training workshops.
- MFP used its newsletter *Waypoints* and mailing list of more than 4000 fishermen, including captains and crew, and industry members to advertise the training workshops and to promote awareness of the experience of safety training among fishermen. The Fishing Partnership Health Plan included a notice of the training workshops and how to register with its billing to nearly 1000 FPHP subscribers.

2) A sample of participants in the training were interviewed by phone and in person to learn what motivated fishermen's participation in this set of workshops in contrast to the free workshops held in the past that were poorly attended. A draft report on the results of our investigation was presented at the annual meeting of the Society for Human Ecology in 2007. A longer version is currently in press. (Madeleine Hall-Arber and Karina

Lorenz Mrakovcich. 2008 (In press). Reducing Risk to Life and Limb: Safety Training Steps Towards Resilience in Massachusetts' Commercial Fishing Industry in *Human Ecology Review* 15:2.)

3) A survey of Coast Guard operations personnel, certified trainers and local and regional educational facilities identified some of the resources available to meet on-going training needs of the fishing industry. Several of the Coast Guard stations in the area are very well suited to (physically) hosting the training. We found, however, that the professional trainers were more skilled in the hands-on training that has made these workshops so successful, so continued collaboration is recommended.

Further analysis of the potential for establishing an institute similar to the Alaska Marine Safety Education Association was undertaken in a supplementary project.

4) This project requested formal proposals from certified trainers in the region in order to establish a list of those available and determine the minimum costs. In theory, the workshops could be held with fewer than the 8 trainers usually used since all of the certified trainers are capable of handling more than one topic. This would require establishing a limit on the numbers of attendees permitted to join each session. We were reluctant to do so during this project since we were trying to maximize attendance and wanted to remain flexible. An on-going institute might find it necessary to establish such limits to minimize costs and increase predictability.

- Six companies with several certified trainers each have submitted proposals. Trainers are available from Maine to Rhode Island.

5) The project held eight 5-hour training workshops. We hired two trainers per training topic for a total of 10 per training day. The Coast Guard provided two of the ten. All trainers were U.S. Coast Guard certified or U.S. Coast Guard civilian and active duty personnel except for those handling first aid. We had volunteers available for translation. We also had volunteer rescue swimmers for the immersion suit practices.

Date	Location	City	Attendees
7/14/06	Coast Guard Station	Gloucester	44
8/18/06	Mass. Maritime Academy	Buzzards Bay	29
9/22/06	Stellwagen Sanctuary Building	Scituate	32
4/13/07	SMAST	New Bedford	59
4/27/07	Coast Guard Station	Gloucester	61
5/18/07	Harbor Master Wharf	Chatham	10
10/19/07	SMAST	New Bedford	42
10/31/07	Coast Guard Station	Hull	30
Total			307

- The training included:
 - Introduction and overview addressing the whole group.
 - Instructions for man overboard, abandon ship, fire fighting and flooding
 - Practice use of extinguishers for fire fighting; mayday practice
 - Demonstration of flooding and damage control (Coast Guard rig and personnel); practice P-6 pumps operation
 - Ignition of flares
 - Review of raft contents
 - Donning of immersion suits, pool or water beside wharf entry, practice climbing into raft
 - Demonstration by Coast Guard of helicopter rescue
 - First aid station demonstration of basic first aid with explanations of its importance to continued health and well-being of the fishermen. Topics included:
 - Infection prevention
 - Splinting for possible fractures
 - Back care
 - Particulate exposure and prevention
 - Fumes and other hazards

6) Project coordinator and MFP co-PI met with insurance providers, Coast Guard, and potential training and equipment vendors to assess the feasibility of creating an incentive program to encourage fishermen's regular participation in safety training programs perhaps through discounts on insurance or costs of purchase and maintenance of safety equipment. Massachusetts Lobstermen's Association offered members a 5% discount on their P&I insurance if they attended. The Point Club (Pt. Judith) requires members to go through training. Some vendors offered discounts towards the purchase of safety equipment to participants.

7) The Coast Guard's enthusiastic participation in the training provided an excellent opportunity to improve the relationship between the Service and the fishing industry. The introductory remarks and videos of accidents at sea, clearly showing the great efforts made to rescue the endangered vessels, were impressive to all. Some of the personnel demonstrating the damage control unit were excellent, helping test participants' abilities to think quickly while keeping them laughing with the challenge and surprise of spurting water. The helicopter units were invariably a draw with many questions asked and professionally answered. Fishing industry participants also had the chance to discuss generic problems such as inappropriate boardings, or inoperable pumps, in a non-confrontational setting with the Coast Guard officers.

8) For each training session, an immersion suit was raffled off knives and a packet of

educational materials were given to participants.

9) Flares, gloves, safety glasses, fire extinguishers, rafts and first aid kits were used in the project. The trainers provided a few extra immersion suits for attendees who either did not own a suit or forgot to bring their own. A propane tank and fire pan were used for the fire extinguishing demonstration. A company was hired to repack the rafts after deployment demonstrations.

c. Personnel

- **David Bergeron**, Executive Director, Massachusetts Fishermen's Partnership (MFP) managed the grant, including all subcontractors. As Co-PI he participated in the project advisory committee, worked closely with Dr. Hall-Arber throughout the project, assisted in the investigation of potential incentive and cost savings strategies, and assisted in the writing of the final report. Mr. Bergeron has been Executive Director of the MFP since it was organized in 1995. He has extensive experience in grants administration, strategic planning, development, organization building and management. He played a key role in the creation of the Fishing Partnership Health Plan (FPHP) and continues to oversee outreach and enrollment services for the FPHP.
- **Madeleine Hall-Arber**, Ph.D., Anthropologist, MIT Sea Grant College Program participated in the planning of the New Bedford safety training workshops so was familiar with the background and procedures used. Hall-Arber has focused her research on fishing communities since 1975 when she devoted her summer fieldwork as a Brandeis University graduate student to going out on the commercial fishing vessels of Provincetown, Massachusetts. Her research on the impacts of regulatory change on fishing communities has led to her serving on a variety of advisory boards for fisheries management with the goal of helping managers identify ways to mitigate the impacts of their decisions. Her published work on New England fishing communities serves as the basis for describing the human environment for several fishery management plans. In addition, she works closely with fishing industry representatives on several collaborative research projects. Dr. Hall Arber provided the social science technical expertise, led the project advisory group, wrote project advisory committee reports and curriculum recommendations, prepared the interim report, and is the lead author for the project's final report.
- **Ed Dennehy**, Executive Director, New Directions, New Bedford
Mr. Dennehy, the coordinator of the New Bedford Safety Task Force's planning meetings and the workshops, was an invaluable resource, helping this project learn from the New Bedford experience and move the training beyond the New Bedford harbor. Mr. Dennehy participated on the project advisory committee, helping to assure date coordination and mutually refer potential participants so that as many fishermen as possible are trained.

- **JJ Bartlett**, President, Fishing Partnership Health Plan (FPHP), has 12 years experience in the health care industry. He was responsible for creating, launching, and managing all aspects of the FPHP. He was educated at Harvard and holds an MBA from Boston University with a concentration in Health Care Management. Mr. Bartlett participated on the project advisory committee to provide technical expertise on what information on first aid and/or health care should be included in the workshops.
- **Steve Parkes** became the Project Coordinator.
 - He helped coordinate and arrange for facilities use, outreach and participation in safety training workshops with local venues, fishing industry associations, U.S. Coast Guard trainers, etc.
 - Helped coordinate meetings of the project advisory committee;
 - Worked with Co-PI Bergeron and project advisory committee members to assess incentives for participation in training and approaches to improve affordability of the purchase and maintenance of safety equipment and
 - Assisted in drafting project reports and recommendations.

Industry participation:

Rodney Avila, New Bedford fisherman and member of the New England Fishery Management Council, Fred Mattera, Pt. Judith fisherman and U.S. Coast Guard certified safety trainer, and Jay Michaud, Marblehead lobsterman participated as members of the project advisory committee. Member organizations of the Massachusetts Fishermen's Partnership participated in outreach to encourage fishermen's participation in training workshops. These include:

- Boston Harbor Lobstermen's Cooperative
- Cape Cod Commercial Hook Fishermen's Association
- Commercial Anglers' Association
- General Category Tuna Fishermen's Association
- Gloucester Fishermen's Wives Association
- Gloucester Fishermen's Association
- Marshfield Commercial Fishermen's Association
- Massachusetts Commercial Fishermen's Association
- Mass Bay Ground Fishermen's Association
- Massachusetts Lobstermen's Association
- New Bedford Seafood Coalition
- New England Fish Exchange
- Northeast Seafood Coalition
- North Shore Community Tuna Fishermen's Association
- Pigeon Cove Fishermen's Co-Op
- Plymouth Lobstermen's Association

- Provincetown Fishermen's Association
- So. Shore Lobstermen's Association

EQUIPMENT, FACILITIES AND INFRASTRUCTURE CONTRIBUTED BY PROJECT PARTICIPANTS AND ORGANIZATIONS

The US Coast Guard donated personnel and their damage control rig for use during the workshops. When Operations permitted, the Coast Guard donated the personnel and equipment to demonstrate an air-sea rescue (e.g., Jayhawk helicopter).

Each participant was asked to bring their own immersion suit.