Today's date: February 26, 2014

Project number: RR/SSS-5

Project title: Social and economic impact assessment of catch share management in the Northeast multispecies fishery

Project initiation date: September 1, 2012

Project completion date:

Principal investigator: Christopher Glass

Affiliation: UNH/EOS/OPAL

Associate investigator(s) and affiliation(s):
Rachel Feeney, UNH/EOS/OPAL

Technician(s) and affiliation(s):
Natalie Waltner, unaffiliated

Partner(s) and affiliation(s) with SCALE (local, state, regional, national, international) and TYPE (gov't, NGO, industry/business, academic institution, other) (List any collaborators, sponsors, industry partners, municipalities, etc., associated with this project):
Dr. Julie Olson, Northeast Fisheries Science Center
Dr. Madeleine Hall-Arber, MIT Sea Grant College Program
Christopher Kellogg, New England Fishery Management Council
Dr. Kenneth La Valley, UNH/NH Sea Grant and UNH Cooperative Extension
Dr. Joshua Wiersma, Northeast Fishery Sectors XI and XII

Brief project overview/Abstract:
To evaluate whether the multispecies (groundfish) catch share fishery system (i.e. sectors) in the Northeast US is achieving theorized benefits, there must be evaluations of biological, social, and economic impacts. This research is testing theories generated about catch shares, examining their validity and limits relative to sector management in New England commercial multispecies fisheries. The New Hampshire commercial fishery is the focus of this case study. The primary research question is: Has the advent of commercial multispecies sectors in New England impacted fishing practices, social capital and bycatch in the New Hampshire fishery? Northeast Fishery Sectors XI and XII, comprised of multispecies fishermen in New Hampshire, are the particular focus of research, but broader applications of conclusions are considered. Quantitative and qualitative information is being gathered primarily by one-on-one interviews with individuals from New Hampshire, including current New Hampshire sector fishing permit owners, non-sector fishermen, former fishermen, and fish dealers. It is hypothesized that fishing under the control rules governing sectors has resulted in reduced bycatch in the fishery; more flexibility for fishermen to decide where, when, and how to fish; and greater collaboration among fishermen in the conduct of business and bycatch reduction. The applicability of the NH-based results to the broader region will be determined, as well as causes of variation.
Objectives:
1. Measure quantitative and qualitative changes that have occurred relative to the Northeast multispecies sector program that relate to fishing practices, social capital and bycatch;
2. Focus on the New Hampshire fishing industry, but determine the applicability of the results to the Northeast multispecies generally; and
3. Involve a multi-stakeholder team to collect data, conduct the analysis, and then disseminate the results to end users, particularly in the management and fishing arenas.

Research findings/progress during 2/1/13 – 1/31/14:
Data coding and analysis are in progress.
Project team members have met a few times to discuss research.

Accomplishments during 2/1/13 – 1/31/14 (Accomplishments are the key actions, activities or products resulting from Sea Grant research projects. They are distinct from impacts in that they reflect ongoing activities or key results that may not yet have had a significant economic, societal and/or environmental benefit but lay the foundation for such a benefit. Accomplishments may evolve into impacts in the future.)
- Conducting this research within the New Hampshire fishing community has helped some of the fishermen feel like their voice and experience is important.
- Informal conversations are occurring between project investigators, partners, and fishery managers that are informed by the data and preliminary results.

This project is expected to:
- Demonstrate whether the implementation of sectors has indeed resulted in lower bycatch, more flexibility and efficiency, and greater collaboration in the NH multispecies fishery.
- Establish a benchmark to help track changes in the multispecies fishery over time.
- Determine the applicability of impacts to NH fishing communities to the broader region.
- Increase the capacity for fishermen to make business decisions and successfully operate within the sector allocation framework.
- Increase the engagement and understanding of stakeholders and the NEFMC regarding the community impacts of catch shares and how to modify catch share programs to achieve goals identified.

Impacts during 2/1/13 – 1/31/14 (Impacts are significant economic, societal and/or environmental benefits of research.):
NOTE: Include quantitative data to validate the impact, if possible.
This project is expected to:
- Forward the regional priority of identifying the impact of catch share management in the Northeast multispecies fishery.
- Improve understanding about impacts that have occurred since the move from Days-at-Sea to a catch share allocation management program in the Northeast multispecies fishery, and how this policy has impacted the New Hampshire fishing community specifically.
- Provide data on the biological and human dimensions of fishing to improve decision-making among managers and other fisheries stakeholders.
- Engage stakeholders by contributing input on the impacts of and potential improvements to catch share management programs.
- Provide the fishing industry, managers, and other stakeholders with a basis from which to evaluate the success or failure of this transition moving forward.
- Enhance the regional capacity to develop predictive models, for better business and sustainability planning for the fishing industry and fishery management.
This project will provide many benefits to the New Hampshire fishing industry specifically:

• There will be a better understanding of the dynamics of fishing that will be very important to fishermen in business planning.
• Sector operations are expected to improve in efficiency and efficacy resulting from this in-depth analysis of sector performance.
• Although the research is a detailed examination of New Hampshire, fishermen from other sectors in New England and the region as a whole will benefit from the research and lessons learned from this case study.

**Economic benefits realized during 2/1/13 – 1/31/14** (businesses retained or created, jobs retained or created, market and non-market economic benefits):

**NOTE: Please quantify and provide supporting data if possible.**

This project is still in process. So far, it has helped sustain the businesses of the fishermen interviewees who opted to accept the stipend for their participation. To the degree that project results are used to better fisheries management, this project will have long-term benefits for society.

**Tools, technologies or information services resulting from this project that were developed or used during 2/1/13 – 1/31/14 to improve ecosystem-based management** (e.g., that reduce contaminants that harm coastal ecosystems and seafood consumers; that track changes in ecosystem processes, biological responses and conditions):

n/a

**Patents:**

n/a

**Technology transfer (Has a private company utilized this research successfully?):**

n/a. It is expected that fishermen will use the results to be better informed about their community and the impact of fisheries management, which could lead to more informed decision-making by businesses.

**Related grants and contracts** (Other grants and contracts that funded this research or that were obtained as a result of this research.):

n/a

**Leveraged funding** (leveraged funding comes from outside sources and is used to accomplish the goals and objectives of your project. Match associated with your project is not leveraged funding). Provide amount, source, purpose, and start and end date.

n/a

**Problems encountered:**

There were no problems encountered during the reporting year.

**Publications to date** (please cite and attach PDF or send a hardcopy, or provide status if not yet published):

• **Peer reviewed publications:**
  We will be writing papers as a result of this work.

• **Theses/Dissertations:**

Other communications products (non peer-reviewed pubs, manuals, tech reports, videos, etc.): None to date.

Presentations to date, with published abstract citation if applicable: NOTE: For presentations to civic groups, etc. (i.e., to the public rather than a scientific conference), please include number of attendees.
None to date.

Awards:
None to date.

Additional information:

Students Supported (see next page)
## Students Supported

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Continued or New for 2013?</th>
<th>Where is he/she now?</th>
<th>Institution/Department</th>
<th>Duration of support</th>
<th>Type of support (stipend, travel, supplies, etc.)</th>
<th>Type of degree: Undergrad Master’s PhD</th>
<th>Year degree awarded</th>
<th>Title of thesis if supported by N.H. Sea Grant</th>
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