“Job satisfaction, well-being and change in Southern New England fishing communities.”

Lead PI: Dr. Richard Pollnac—University of Rhode Island

1. How closely did the research team follow the original planned scope of work?

The original project summary says it will focus on socio-economic impacts of management, with an emphasis on individual and community well-being. It also provides the NESIA model that includes individual and community variables all in relationship to an overall indicator of combined individual and community well-being.

The project report says it discusses the NESIA model generally but focuses on three specific issues “as well”:

- How has the implementation of management impacted perceptions of the management system?
- How has management impacted elements of job satisfaction?
- How are elements of job satisfaction and attitudes towards management interrelated to each other and to the fishermen’s sense of well-being?

The project report begins by providing an example of how different actions and issues in a fishery would be classified according to the component boxes of the NESIA\(^1\), followed by a discussion of the components of job satisfaction and individual well-being indices, a very nice history of fishing in RI from prior to European settlement through the present, then a section labeled “Management Analysis” that describes current fisherman demographics, their degree and type of engagement in the management process (broken out by crew status, fishery and gear), the a discussion of impacts on fishing activity, income and families, then views on management (broken out by income, type/level of participation and membership or not in a sector\(^2\)). Following “Management Analysis” comes a section on “Job Satisfaction” over time, by demographic characteristics, and in relation to attitudes about regulations. The next section, “Well-Being” is quite short and focuses solely on individual well-being. Then follows the “Discussion” section, which I will comment on below, in the question about that section.

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\(^1\) The example fishery is the RI fluke sector, and it is not made clear that all summer flounder is managed in a completely separate FMP from other groundfish and that the federal fluke FMP uses quotas allocated by state. So it is not just that RI fluke is state-managed; it is federally managed via a system of state allocations. A trivial point perhaps, but it annoyed me.

\(^2\) Presumably these were groundfish sectors? Or was the fluke sector included? Are the two kinds of sectors truly comparable given the very different management contexts? This also raises the issue of why use the RI fluke sector as an example, when the survey responses are all sorted primarily by groundfish vs. scallop vs. lobster?
Generally speaking, the report thus covers socio-economic impacts, job satisfaction and well-being for individuals. It seems lacking, however, in variables related to community impacts and well-being. There is some discussion of community impacts, but only as the sum of individual impacts (as in if fishermen don’t trust management this means a problem of communication between managers and the fishing community) or as a component in the job satisfaction analysis (Community where you live). There is no real discussion of communities as units or organic wholes that are more than the sum of the attitudes and activities of the individuals who live there.

Further, the report does not provide a clear link to the NESIA model – at least not as clear a discussion of these linkages as is found in the example at the beginning of the report. I would have liked to see a narrative similar to that example – or at least the relevant element (management, social problems, occupational attributes, etc.) listed in parentheses and italics next to each variable discussed.

However, the individual aspects that are discussed provide clear and relevant data that will be of use in SIAs in the Northeast.

2. If there were differences between scheduled and completed tasks, did the project team address these and explain why there were differences?

There was discussion of the difficulty they had in finding former fishermen. This is a well know problem and I find no fault with their methods. However, there was no discussion in the report of the lack of community data beyond the level of aggregation of individual data – apparently because the distinction between these two renderings of community was not understood, not considered important. This is a shortcoming.

3. In the results, analysis, and discussion sections of the report, did the team answer their original research question(s)?

They did answer the 3 research questions described at the beginning of the project report itself. They did not, however, answer all questions implied in the project description of the original grant request. I have already discussed those omissions above.

4. Were analytical techniques appropriately used? Was the experimental methodology statistically sound and supportive of the conclusions drawn?

The analytic techniques and experimental methodology were sound. The met statistical standards for the quantitative portions and disciplinary standards for the qualitative portions. Careful attention was paid to statistical significance in all reported findings, making them well supported. The highest standards were met in these regards.

5. Was the raw data included in the appendix complete?

There was no appendix containing raw data.
6. Was the information clearly presented? Were figures and tables appropriately used?

The information about individual variables was clearly presented in the text and well and clearly supported by the tables and figures. Very nicely done!

7. In the discussion section, did the team offer comments on results including observations made while conducting the research; explanations of why a particular gear, sampling strategy, or laboratory technique may or may not have worked as anticipated; how project research results may have advanced the knowledge base about the research topic area; and ideas about follow up research?

The discussion section is primarily a summary of the results of the 3 research questions posed at the beginning of the report – although there is no real mention of the survey results on well-being in the discussion or just literature references.

The finding that regulations for individual fisheries are not as important as fisheries regulations in general does, as the report says, make SIAs for individual species (or assemblages) difficult. I will note that the current move to ecosystem-based management should alleviate this difficulty, though not fully until the transition from current FMPs to Integrated Ecosystem Plans is completed.

The report also mentions that additional research is needed on the skepticism of fishermen regarding management and science, along with outreach and earlier involvement in the management process – especially for groundfishermen. I would add that recent research shows that participation is more fundamental than outreach; what is needed is greater inclusion of fishermen in both the conduct of science and the creation of management measures, in other words, fostering a sense of ownership.

The report also notes that this research supports previous job-satisfaction research and the NESIA model, which it does, and mentions that those fishermen pushed out of the industry will be negatively impacted in ways that will spill over into negative effects on communities. However, I would have liked to see, as mentioned earlier, a discussion based on data from this project (not just the general literature) of the impacts on communities as institutions rather than as aggregations of individuals.
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1. How closely did the research team follow the original planned scope of work?

The team was faithful to the original planned scope of work. The original objectives were (1) to obtain information and data concerning variables in a modification of a model known as NESIA; and (2) to test multiple hypotheses concerning interrelationships between variables of the modified model. Both of these objectives were accomplished, as indicated in the report.

2. If there were differences between scheduled and completed tasks, did the project team address these and explain why there were differences?

The only mention of differences concerned the participation of collaborators from the fishing industry, two of whom left the study, one due to health reasons, the other for reasons not known.

3. In the results, analysis, and discussion sections of the report, did the team answer their original research question(s)?

The following summation is more than adequately supported in the body of the report: “In sum, we have demonstrated significant relationships between management, job satisfaction and well-being; thus, providing support for the model of non-economic social impact assessment (NESIA) developed by Pollnac and his colleagues (Pollnac, et al. 2008).” (p. 42).

4. Were analytical techniques appropriately used? Was the experimental methodology statistically sound and supportive of the conclusions drawn?

The analytical techniques were appropriately used, and the methodology was statistically sound and supportive of the conclusions drawn.

5. Was the raw data included in the appendix complete?
I have not seen raw data in an appendix. The only appendix available to me was Appendix I Survey Form.

6. Was the information clearly presented? Were figures and tables appropriately used?

The information was clearly presented and figures and tables were appropriately used.

7. In the discussion section, did the team offer comments on results including observations made while conducting the research; explanations of why a particular gear, sampling strategy, or laboratory technique may or may not have worked as anticipated; how project research results may have advanced the knowledge base about the research topic area; and ideas about follow up research?

Yes, the team was consistently informative about how the results could be interpreted as well as their implications for understanding the social impacts of regulatory and other changes for Rhode Island’s commercial fisherfolk. They also pointed to the importance of followup research for questions such as the persistence of skepticism about participation in formal fisheries management over 3 decades.
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1. How closely did the research team follow the original planned scope of work?

The research team closely followed their research plan, with a few minor deviations. The departure from stated goals seemed to revolve around narrowing the focus to a manageable body of survey data that could appropriately answer a few specific sub-questions of their initial project. Consequently, some of the data promised in the proposal, including pile sort consensus analysis and observation based empirical methods (to be employed in an exploration of occupation attributes) was absent from the final project, or at least not included in the data analysis. Data from qualitative interviews were not meaningfully included in the data analysis and discussion. The final report did not include the secondary data that was to flesh out social community attributes and social problems possibly connected to shifts in well being among fishing communities. Finally, one objective included “involving stakeholders in the refinement of the model.” If this did occur, it would be good to see more of an emphasis on this in the final project report.

2. If there were differences between scheduled and completed tasks, did the project team address these and explain why there were differences?

There is brief mention made of losing the participation of fishing industry collaborators. It would be good to hear more about the anticipated role of these collaborators in later stages of the project (i.e. coding data, analyzing results, refining the model?) and steps made to compensate for their absence. Although these collaborators were instrumental in locating fishermen to participate in the study, it is unclear if sampling procedures followed the agenda set out in the proposal. Finally, it seems as if fewer former fishermen were located for inclusion in the survey than was originally intended. The failure to locate many fishermen who have left this profession is addressed in the final report, however, the ones who were surveyed are not clearly profiled in the report, and are left to appear as something of a homogeneous group.

3. In the results, analysis, and discussion sections of the report, did the team answer their original research question(s)?

This project provides an important baseline of data for tracking changes in wellbeing due to future management decisions. Consequently, the project meets this important goal, while also providing insight into specific connections between wellbeing, job satisfaction, and management decisions in this particular
The original research questions are addressed comprehensively in the report, particularly the three sub questions designed to test elements of the model. That said, the discussion section could do more to expand beyond the three sub questions in order to address the bigger picture - the applicability of the NESIA model in general, outside this particular case study. Two provocative questions are raised about the type of data that might be used in the model, and the ability of the model to yield an analysis that shows the distribution of impacts of management decisions on fishing communities in the research area (page 4). Revisiting the applied potential of the NESIA model, including methodological considerations would be useful, as would a reflection on how (if at all) this model was refined in the context of this project.

4. Were analytical techniques appropriately used? Was the experimental methodology statistically sound and supportive of the conclusions drawn?

The quantitative analysis used here offers a compelling way to develop a non-economic social impact assessment model with many potential applications. The researchers draw on a rich and fascinating body of work on job satisfaction and well being, and are able to correlate their data to previous research in the area in order to gain insight into social changes in the fisheries over time. My only recommendation here is that some of the qualitative data presumably collected during interviews prior to and after the survey be used in the data analysis section to help interpret and illustrate the survey data. For instance, the researchers propose numerous potential explanations for the composition of two seemingly distinct groups - those who feel participation in management meetings is useful, and those who do not. Qualitative data analysis could help to add much depth to this discussion.

5. Was the raw data included in the appendix complete?

While we get a demographic profile of the surveyed fishermen, we lack a good sense of the qualitative data collected to test the variables in this model. Also, the use of older survey data for comparison with the recent survey is fascinating, but the older data is not well explained in terms of the profile of fishermen surveyed and the sampling procedure.

6. Was the information clearly presented? Were figures and tables appropriately used?

Yes - the information was well organized and clearly displayed in tables.
7. In the discussion section, did the team offer comments on results including observations made while conducting the research; explanations of why a particular gear, sampling strategy, or laboratory technique may or may not have worked as anticipated; how project research results may have advanced the knowledge base about the research topic area; and ideas about follow up research?

As mentioned, the discussion section could be strengthened by including a focus on the overall lessons learned about the NESIA model in terms of determining causality, weighting variables, and identifying relevant subgroups for consideration. Also, while the discussion section contains many cogent arguments about the need for further research to address the real differences between the fishing community and management officials, I would like to see specific questions for follow up research detailed here.