

National Evaluation of Cooperative Data Gathering Efforts in Fisheries

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a report submitted to

the National Marine Fisheries Service

by

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1	Executive Summary	2
2	Introduction	5
3	Methods	6
	3.1 Core questions	6
	3.2 Methods used to gather information	6
	3.3 Methods used for addressing the core questions	7
	3.4 Methods used to validate findings and avoid bias	8
4	Summary Findings and Lessons Learned	10
	4.1 Success is possible	10
	4.2 Each case is unique	10
	4.3 Strong motivation is necessary	11
	4.4 Culture and personal relationships dominate	12
	4.5 Larger contexts influence results	13
	4.6 Bureaucracy must be dealt with	14
	4.7 Link NMFS's science and management roles	14
	4.8 Essential requirements for success	16
5	Sablefish Longline Survey and Combined Logbook Program	17
	5.1 Introduction	17
	5.2 The setting	17
	5.3 The story	18
	5.4 Conclusions and lessons learned	25
6	Oregon Trawl Enhanced Data Collection Project	28
	6.1 Introduction	28
	6.2 The setting	28
	6.3 The story	29
	6.4 Outcomes	30
	6.5 Conclusions and lessons learned	30
7	Cooperative Research Program Addressing Finfish Bycatch	32
	7.1 Introduction	32
	7.2 The setting	33
	7.3 The story	35
	7.4 Conclusions and lessons learned	40
	7.5 Summary	43
8	Cooperative Tagging Center and Cooperative Shark Tagging Program	44
	8.1 Introduction	44
	8.2 The setting	45
	8.3 The story	45
	8.4 Conclusions and lessons learned	50
9	The Pinger Solution	52
	9.1 Introduction	52
	9.2 Background	53
	9.3 The setting	54
	9.4 The story	54
	9.5 Outcomes	58
	9.6 Conclusions and lessons learned	61
10	Northeast Scallop Survey	65
	10.1 Introduction	65
	10.2 The setting	66
	10.3 The story	66
	10.4 Conclusions and lessons learned	74
	10.5 Summary	77

1 Executive Summary

This study looked closely at seven case studies of cooperative fisheries-related data gathering and/or research efforts around the country, ranging from the Bering Sea in the North Pacific to the North Atlantic off New England. Our goal was to identify key insights that could be used to improve the design and implementation of such efforts in the future. Such insights are vitally important, given the need to make the best use of available knowledge and resources to improve stock assessments, develop improved bycatch reduction methods, and increase our basic understanding of the marine ecosystems on which fisheries depend.

More specifically, the National Marine Fisheries Service (NMFS) hopes to utilize the resulting analysis to better target the agency's resources toward scientific projects that can establish successful partnerships with the fishing industry for sustained use and stewardship of marine resources. Thus, the case studies fall into four categories that are typical of government / industry partnerships:

- gear development;
- biological surveys;
- observer programs; and
- ecological studies.

We found that each case study represented a significant success, either in terms of new information produced, long-standing problems solved, or the cooperative relationships formed. Because of their uniqueness, success was achieved by different means in each case. In each, however, some combination of strong positive and negative motivations was an important element in leading participants to risk changing the status quo. The particular ways in which these motivations played out depended in most cases on the culture of the individual fishery and the personal relationships that existed among participants. None of the cases occurred in a vacuum. Instead, they were influenced by the political, legal, economic, or ecological contexts of which they were a part. While some efforts took place in part outside the existing fisheries management infrastructure, each had eventually to deal with the network of rules, procedures, and regulations that govern fisheries. At this point, participants who were knowledgeable about the workings of the management system were invaluable.

A consistent finding was that NMFS' science and management roles often conflict. The actions needed to foster good science and the working relationships on which it depends can be at odds with the actions needed to establish and then enforce regulations. As a result, NMFS' efforts at cooperative data gathering are often viewed with suspicion and new regulatory initiatives can undermine existing cooperative relationships. We suggest that one solution to this problem would be to link NMFS' science and management roles more tightly in some instances, rather than attempt to separate them as in the past. If data gathering efforts are tied to specific management issues, and the data analysis methods needed to address them, it may give participants more "ownership" of the data gathering effort and more of a stake in its ultimate success.

The following table summarizes the key recommendations. Further discussion and substantiation is contained in the body of the report.

Table 1.1. Summary of recommendations.

Design Element	Recommendation
Motivation & Goals	<p data-bbox="451 327 1385 390">Tie the data gathering design to specific management issues and the data analysis methods needed to address them. Link clear “rules of evidence” to explicit decision criteria.</p> <p data-bbox="451 422 1385 506">Only initiate a project when all key groups have adequate motivation. Identify opportunities related to regulatory procedures, economic pressures, or pending closures and legal decisions that can provide such motivation.</p> <p data-bbox="451 537 1385 632">Make sure that studies build on questions of direct interest to industry. Identify these by soliciting industry ideas on how to prioritize information gaps, capitalizing on fishers’ inherent interest in natural history and ecology of fisheries.</p> <p data-bbox="451 663 1385 722">Design the project with an awareness of learning curves of all kinds, and use this to develop realistic expectations about the nature and timing of outcomes.</p>
Building Relationships	<p data-bbox="451 758 1385 842">Identify the requirements for credibility from industry’s perspective and work to meet these. Such requirements might include working at sea together, taking time to discuss scientific questions with fishers on an individual level, and other kinds of outreach at the personal level.</p> <p data-bbox="451 873 1385 999">Create opportunities for new kinds of interaction between industry and NMFS that will provide fishers more insight into the science process and NMFS staff more awareness of fishers’ individual perspectives. This may require specific policies to support and reward NMFS staff who develop effective relationships with industry.</p> <p data-bbox="451 1031 1385 1146">Depend on informal structures and processes for relationship building where possible. However, consider the use of more formal structures and neutral parties when there are large numbers of participants or NMFS alone cannot effectively deliver difficult messages, facilitate communication, or manage negotiations.</p> <p data-bbox="451 1178 1385 1241">In a project’s early stages, allow enough time for venting of resentments and anxieties about past history and the present situation.</p>
Participation	<p data-bbox="451 1272 1385 1335">Encourage participation by credible leaders of all involved groups and make industry an equal partner from the start.</p> <p data-bbox="451 1367 1385 1482">Choose key participants who have stamina, stubbornness, and an interest in and an ability to see other points of view. Include someone with skill at dealing with the fisheries bureaucracy. Strive for continuity of these participants and ensure they have adequate motivations and rewards.</p> <p data-bbox="451 1514 1385 1545">Allow leadership to rotate as different issues arise.</p> <p data-bbox="451 1577 1385 1671">Develop methods of identifying and training NMFS staff and fishers with leadership potential. Encourage them to become involved in relationship building and data gathering efforts and reward them for doing so.</p>

Table 1.1. (continued)

Design Element	Recommendation
Strategy	<p data-bbox="453 327 1365 390">Cast a broad net for potential solutions and look for ways that the ecology, economics, and sociology of the fishery can support or promote the project's goals.</p> <p data-bbox="453 422 1365 506">Where institutional barriers may exist, develop technical solutions first, and use these solutions as leverage for breaking through institutional barriers. Also, utilize industry's ability to work outside the bureaucracy through other avenues of influence.</p> <p data-bbox="453 537 1195 569">Consider keeping the project outside the bureaucracy for as long as possible.</p> <p data-bbox="453 600 1024 632">Break extremely large efforts into more manageable pieces.</p> <p data-bbox="453 663 1328 695">Give some thought at the outset to possible long-term applications of the cooperative effort.</p> <p data-bbox="453 726 1110 758">Learn about and account for past history, down to the personal level.</p>
Program Management	<p data-bbox="453 789 1365 852">Secure dedicated funding for cooperative data gathering so these efforts do not cannibalize resources needed for stock assessment and other activities.</p> <p data-bbox="453 884 1357 936">Select projects with the greatest chances of success by prioritizing potential projects based on clear criteria.</p> <p data-bbox="453 968 1292 1031">Have a clear agreement on how information will be used and on how and when it will be released and by whom.</p> <p data-bbox="453 1062 1365 1146">Improve the ability to learn from experience by establishing a mechanism to enable NMFS staff and industry representatives, nationwide, to share knowledge about the causes of success and failure of cooperative data gathering efforts.</p>