Atlantic Coastal Cooperative Statistics Program
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Coordinating Council Meeting

Tuesday, February 4, 2014 | 4:30 pm

Crowne Plaza Hotel Old Town
901 North Fairfax Street
Alexandria, Virginia

DRAFT AGENDA

1. Welcome/Introductions – Coordinating Council Chair C. Patterson

2. Approval of Agenda – C. Patterson
   ACTION REQUIRED

3. Public Comment – C. Patterson

4. ACCSP Update Report
   Program Status – Program Director M. Cahall
   Update on Program Review Process
   Update on FIN Review (Attachment 1)

5. 2014 -2018 Strategic Plan – M Cahall
   ACTION REQUIRED
   Approval of Strategic Plan (Attachment 2)

6. Recommendations from Operations Committee Review of State Conduct for MRIP – T. Hoopes
   Action Required
   Approval of Transition Plan (Attachment 3)

7. Update on funding Fiscal Year 2014 approved Projects – M Cahall

8. Other Business

9. Adjourn – C. Patterson

Review of Fishery Information Networks
September 9-12, 2013
Portland, Oregon

SUMMARY REPORT

Panel of Reviewers
Stephen A. Bortone, Gulf of Mexico Fishery Management Council, retired
John H. Dunnigan, NOAA, retired
Michael G. Hinton, Inter-American Tropical Tuna Commission
Stephen J. Jordan, U.S. EPA, Office of Research and Development, Panel Chair
Bonnie Ponwith, NOAA Fisheries, Southeast Fisheries Science Center
Edward Waters, Consultant

Introduction

Five regional Fishery Information Networks (FINs) acquire, maintain and disseminate data from marine fisheries of the United States: Atlantic Coast Comprehensive Statistics Program (ACCSP), Gulf Fisheries Information Network (GulfFIN), Pacific Fishery Information Network (PacFIN), Alaska Fishery Information Network (AKFIN), and Western Pacific Fishery Information Network (WPacFIN). The FINs are partners with states, tribes, territories, interstate fishery commissions, regional councils, the National Marine Fisheries Service, and others. This report is a summary of the review of the FINs conducted by the National Marine Fisheries Service as part of its 5-year cycle of program reviews; it has been prepared by the Panel Chair based on the reviewers' independently written reports.

During the 4-day review session, after introductory presentations, an overview of each FIN was presented, first by a representative of the FIN, then by a regional NMFS representative. The presentations, along with extensive background material, were made available to the reviewers before, during and after the meeting. Each member of the review panel independently prepared a written report of his or her general observations, findings and recommendations; the reports were forwarded to the Chair, who used the information to present an oral summary of the reports at the close of the meeting. The review reports generally, but not exclusively, followed a common outline provided by the organizers, with four major topics that supply the organization for this summary report: General Observations, Data and Information Dissemination, Data and Information Management, Program Review and Improvement Process. This report concludes with some observations and suggestions that may be useful for future reviews.

This summary report is a broad overview of the Review Panel's observations, findings, and recommendations. The individual reviews should be consulted for more specific infor-

mation, the various points of view among the reviewers, and valuable suggestions and recommendations not captured in this report.

1. General observations and recommendations

Accomplishments

All of the reviewers commended the leadership and staff of the FINs for their dedication and accomplishments in improving the management and availability of fishery data, despite modest resources and the complex, multi-partner environments in which they operate. The FINs are providing services of high value, primarily to fisheries management entities, but also to other partners and in some cases, the public. Even though these programs have experienced flat or declining funding over most of their existence, they have continued to improve their processes and services. This review suggests a number of ways for the FINs to build on their successes, so that they can be even more efficient and effective in serving their missions.

Strategic planning

Strategic planning is essential for any organization. It is the process of establishing a vision of what the organization will be at some future time, defining the mission, and setting goals and milestones that serve the mission and lead to realization of the vision. With the exception of ACCSP, the FINs generally have not engaged in strategic planning; review panelists strongly recommended that all the FINs should develop strategic plans, including critical reviews of their vision, mission, and goals. It is also suggested that strategic plans should be harmonized across regions, both for the sake of efficiency and as a safeguard against the missions and operations of regional FINs drifting farther apart.

There are many approaches to strategic planning, some formal and some less formal, some top down, i.e. developed mainly by leaders, and some more inclusive, involving all levels of the organization as well as stakeholders. This review does not propose any particular approach, but suggests that effective strategic planning need not require excessive transaction costs, a stated concern for some of the FINs.

Recommendation 1.1: The leadership of the FINs should agree to a common approach and timeline for developing strategic plans covering the next 5-10 years. Planning should include critical reviews of vision, mission and goals.

Coordination among FINs – "regionality is a strength, regionalism is a weakness"

The regional distribution of the FINs is natural and appropriate, given the regional nature of fisheries and management institutions. In this sense, regionality is a strength, and none of the review panel members suggested that the networks should be centralized or merged nationally. Nevertheless, the FINs should be working toward more inter-regional collaboration and

consistency. Although the immediate management needs for data typically are regional, there are national needs, as well as cross-regional needs, facts that seem to demand commonality in standards, protocols, documentation, data accessibility, and the types of core data that are acquired and maintained. During the review, the FIN representatives appeared to put a lower priority on national and cross-regional needs than either the reviewers or the public sector representative. In this and other aspects, there is a sense that the FINs tend to be inner-directed, a symptom of the regionalism that reviewers considered a weakness.

Recommendation 1.2: The FINs should put a higher priority on inter-regional collaboration and coordination. Stronger leadership at the national level, or other modifications to governance structures should be considered.

Funding

It was clear from the review that inadequate funding is an obstacle to improving processes and services for all of the FINs, most acutely for WPacFIN, which is severely under-funded. Although Panel members recognized that a simple recommendation for additional funding from NMFS would be futile, three constructive recommendations are highlighted here.

Recommendation 1.3: Stronger, active outreach to customers and the public (e.g., face-to-face and through social media) will increase the profiles of the FINs, which in turn could give them higher priority in funding decisions as well as additional opportunities to attract outside funding.

Recommendation 1.4: The business model for WPacFIN, which unlike the other FINs is part of a NMFS Science Center, should be reconsidered. A more autonomous model would provide greater flexibility in operations and expanded opportunities for outside funding.

Recommendation 1.5: The FINs should speak to NOAA/NMFS with one voice in budgetary matters, rather than pursuing individual, region-specific approaches.

2. Data and Information Dissemination

There is considerable variation among the FINs in what data are made available, to whom, and by what means. This section addresses some relevant issues and offers recommendations for improving the dissemination of data and information.

Public availability of data, ease of use, outreach

The ideal for an information network is to make comprehensive, well-managed data readily available to any user, and to make potential users aware of the resource. Some of the FINs are farther along toward this ideal than others; some support public access and others do

not, but the review panel and the public sector representative at the review meeting stressed the importance of moving in this direction.

Recommendation 2.1: All of the FINs should adopt a goal to make non-confidential data available to any user, including the public, through accessible, easy-to-use electronic means, including friendly user interfaces and query tools.

Confidentiality

The issue of confidential data sparked much discussion during the review sessions. Confidential data create difficulties for the FINs and users in data dissemination and accessibility. It was recognized that as a matter of state and federal law and policy, the FINs could not have any direct influence on the problem. Reviewers, however, suggested that the issue should be addressed at the national level rather than regionally.

Recommendation 2.2: The issue of confidential data should be addressed nationally, at the NOAA/NMFS level rather than regionally. There should be a uniform national policy and protocol for how confidential data are managed and under what conditions they can be made available.

Meeting national data needs

The FINs have achieved a considerable amount of success in meeting basic regional needs for managing and disseminating data and information. Less attention has been paid to national needs, although national-scale information can be quite important for policy-makers and non-governmental entities. Some reviewers cited this issue as a deficiency in the regional programs.

Recommendation 2.3: The FINs should adopt a shared vision, objectives and mechanisms for supporting data and information needs nationally; the Fishery One-Stop Shop (FOSS) could provide a context and mechanism.[1]

3. Data and Information Management

Disparity of software across FINs; proprietary software

Different software packages, some proprietary, are used by different FINs for managing data. This situation was seen as a weakness by some reviewers, because (1) it can be an obstacle to sharing data across regions or nationally, and (2) it could mean that FINs are more vulnerable to data management failures.

[1] I explored FOSS, but could not get the system to return information in response to a simple query.

Recommendation 3.1: The FINs should evaluate corporately, perhaps in the context of strategic planning, the software solutions that will provide the most flexibility and least risk in meeting both regional and cross-regional needs for the long term.

Quality assurance; data integrity; data management protocols
It was apparent from the review that some FINs do not have documented quality assurance plans, nor was a strong understanding of quality assurance and quality control evident in some of the presentations. Issues such as chain of custody for data, metadata standards, and other operating protocols would be addressed in a programmatic quality assurance plan that could incorporate a data management plan.

Recommendation 3.2: Each FIN should develop a quality assurance plan according to a standard model; a data management plan to ensure data integrity should be included. It would be valuable and more efficient if the plans were coordinated among the FINs using the same model.

Electronic data recording and reporting
The future of data recording and reporting is surely digital and electronic. Some FINs have made more progress in this area than others.

Recommendation 3.3: It should be a goal of the FINs to work together, along with their partners and NMFS, toward maximizing electronic data recording and reporting.

Data gaps
With the great progress made in acquiring, managing and disseminating basic fishery-dependent data, FINs are working toward incorporating additional data of various types. The emphasis appears to vary greatly across the FINs, with some acquiring recreational data, some fishery independent data, and some focusing on biological data from fisheries. While ensuring that basic catch and effort data are well-managed and accessible, FINs will do well to incorporate other key data sets in their portfolios. Although regional priorities may differ, some commonality among the FINs in the types of data they acquire and manage would be beneficial, especially at cross-regional and national levels.

Recommendation 3.4: The FINs should jointly agree on what types of data are the highest priorities to serve both regional and national needs.

4. Review and Improvement Process

The reviewers note that the FINs are committed to continuous improvement and have generally improved their operations and services despite flat or declining budgets. That im-

provements tend to be in different directions from one FIN to another has been noted in earlier comments.

The use of peer reviews is uneven across the FINs, ranging from regular formal peer reviews to more informal internal reviews. Peer reviews come with substantial transaction costs, so that an overly structured or rigid approach to peer reviews could be less than beneficial to the mission of the FINs. Nevertheless, some reviewers thought that minimum standards for peer reviews should be instituted for all the FINs. Regardless of the mechanism or frequency of peer reviews, it is necessary and helpful to the organization to track and document the implementation of review recommendations; this is part of the strategic planning process.

Feedback from partners and the public, along with performance measures, can also contribute to strategic planning. It is important however, that none of the elements of a review and improvement process should be ends in themselves; they provide added value only when applied strategically in line with the organization's mission.

Recommendation 4.1: The FINs should consider adopting a set of minimum, not overly burdensome, standards for the frequency and structure of peer reviews.

Recommendation 4.2:
The implementation of review recommendations needs to be formally tracked and documented, perhaps in combination with customer feedback and performance measures.

5. Suggestions for Future Reviews

The reviewers generally were positive about the process and logistics of the review sessions, including the makeup of the Review Panel and the materials provided ahead of time.

A few concerns were expressed by panel members:

Unevenness in the quality of presentations. It was suggested that presenters needed stronger direction for how to prepare and present their material. "Death by Power Point" is a risk easily avoided with some coaching.

Defensiveness on the part of some FIN representatives, who may not have realized that it was not the job of the Panel to judge individual FINs, but rather to make constructive suggestions for all the FINs.

More clarity in instructions for travel planning and reimbursements could have made the process easier and more transparent for the panel members.

Reviewer 5

1. General observations

The FIN programs are an integral and essential part of the fishery management process in the US. The programs are led and staffed by dedicated professionals that are single minded in achieving their goals and objectives of providing fisheries data directed toward management solutions in fisheries under the auspices of the Magnuson Stevens Act.

After three days of listening to the presentations from FIN leadership, reading over the materials provided, and with consideration of personal experience with FIN programs, below is offered a perspective that should prove useful in the consideration of providing an assessment and suggestions for improvement of the FIN program.

Finding - The FIN programs are often the "first line" of interaction with the various user and mid-level management groups. These include the federal and state fishery agency personnel as well as, and most importantly, the user public. The user public includes fishers from both the recreational and commercial fishing sectors and also includes individuals from environmental organizations and others more peripheral to the fishery management process. Paramount, then is that the Mission and Vision be clearly stated, direct, and forthright. Careful consideration of the presentations in which the Mission and Vision statements for each FIN program were offered (not presented by all programs) indicates additional attention should be paid to these two guiding components. Impressions of the existing statements indicated that the user public would have difficulty grasping the true Missions and Visions as presented, especially in light of the overall fisheries management program. Moreover, these statements should serve as guidance for FIN leadership and staff around which actions and decisions should be made. The Mission statements of all groups as offered are essentially a presentation of major goals and not Mission statements. Similarly, the Vision statements are shallow and provide little information as to the long-term, overarching features to give significant direction to these programs. These Vision statements, if corrected and advertised, should serve the FIN leadership and respective staffs well in communicating with their clients.

Recommendations - It is suggested that all FIN programs revisit their Mission and Vision statements. The revisit should include in the consideration, and be rewritten in concert, of existing NOAA and NMFS Mission and Vision statements as the FIN programs are nested under these. The reconsidered statements should clearly aim to give the user public the sense of the role that the FINs play in the overall fishery management process and get a sense of the larger framework of fisheries management (e.g., sustainability of fisheries resources). The Vision statement should be far reaching and offer a specific direction to the future to guide all future efforts. A Vision statement that says "We desire to be the best…" is not a Vision. A Vision is the culmination of the position and role of the program in the future. While there can be a regional component to these statements, it is not unreasonable that all FIN programs would have arrived at similar conclusions with a clear and concise way to deliver their overarching message to the public.

In concert with revisiting these statements, it is suggested the FINs conduct an exercise to develop a strategic plan that clearly articulates the above mentioned Mission and Vision statements and develop a plan (either independently, or in collaboration with other FIN programs) that gives direction to all future efforts. This is not to be an effort to develop an operational plan as each program should develop this independently based on the resources each has available. Access to professional facilitators should help enable this process.

Findings - Also, from the vista of an overview finding, it is apparent that each program has independently addressed, and sometimes effectively resolved its problems. This is commendable but extraordinarily inefficient.

Recommendations - It is suggested that the FIN programs annually, or at least bi-annually, convene to review the issues specific to each FIN and FIN issues in general as to how they were addressed and the result of the attention given. The convention should include not only individuals involved in administration (as many problems are certainly administrative in nature) but also include technical staff actively involved with data gathering (if appropriate), data dissemination, and data management. The activity of collegially interacting with individuals with parallel experiences in other FIN programs should go far in efficiently resolving and anticipating issues general to all programs. The reluctance of FIN staff to accommodate this suggestion was obvious to the review panel, but this feedback system has worked well in other federal programs and deserves consideration. The currently perceived attitude that is would not be productive is indicative of a lack of introspection among FIN management. Little improvement should be expected if the current climate continues.

Findings - Funding is an issue. Good fisheries management requires accurate, well curated, and timely data. Establishing a consistent, predictable funding flow is the cornerstone of good fisheries management. Currently, there is a great disparity in how FINs approach legislatures and other agencies to obtain funds. This has led to significant variance in the allotment of funds among FINs – to the point that there is clearly an unbalanced circumstance at present.

Recommendations – Because funding for FINs is critical and should not be at the happenstance of the vagaries of lobbying effectiveness, it is imperative that NMFS and NOAA reorganize their allocation structure to assure an even, predictable, and consistent level of funding to the FINs based on mutually agreed upon criteria of need and application within NOAA/NMFS.

In concert with the above issues regarding general features of the FIN program, FINs need to be organized to speak to NOAA with one voice on a regular basis. This would help address the some aspects of the funding inequities already described and also lead to the formation of closer bonds among FINs. If the current trend continues, the future holds that further distances between FINs and the FINs with NOAA will be realized.

2. Data and information dissemination

Findings – In today's world of litigation, having a "chain of custody" with regard to data and information transfer is an essential feature of being able to attest to the reliability of data. There was little indication in FIN presentations that the programs were even aware of the importance of this official aspect of data transfer. Such procedures are the norm in most institutions that deal regularly with data that could be contested.

Recommendation - It is important that the FIN programs develop a chain of custody protocol for the documentation of data transfer. A suggestion would be that one protocol methodology should be developed for the entire FIN program as this feature of data is not regionally unique. Understandably, instituting such a program, while essential, may have to be installed gradually. A suggestion would be to aim for a five-year window of complete adoption from the present so the entire organization's culture becomes attuned to its full implementation.

Findings – Dissemination of fisheries data to the public is a paramount objective to attain FIN goals within the Mission of FINs to achieve sustainability of our nation's fishery resources. Ease of access, public awareness, and compatibility with the public and partner agencies (federal and non-federal) are essential to the proper functioning of the overall management of fisheries in the US. Inspection of the various programs indicates considerable unevenness with regard to outreach in terms of effectiveness and intensity within and between FIN programs. This has led to a lack of appreciation of the availability and utility of FIN data among some user groups, even in its present condition.

Recommendation – It is suggested that the FINs, independently but also collectively, undergo a massive effort to initiate an effective outreach program to address the clientele and services addressed above. To facilitate this effort, the FINs should partner with an effective professional outreach group such as the National Sea Grant Program or MREP (Marine Resource Education Program) to bring their outreach programs up to an effective level. Concomitantly, the FINs should engage in establishing performance metrics to evaluate the effectiveness of the invigorated outreach effort. Outreach should be targeted and refined to meet the needs of each user group. Consequently, outreach here should be multifaceted with different approaches and levels intensity determined to be appropriate to the message and the targeted user group. Concomitantly, programs should not become obsessed with electronic and digital outreach modes. Personal, face to face interaction remains the most effective form of outreach. In the case of the FIN programs, where "buy in" is critical, face to face contact may remain the most effective form of interaction.

Coupled with this outreach effort should be an effort to improve the sense of ownership of the data by the users or clients. While initially this might be a separate effort from that outlined above, in the long term, effective outreach to users should bring a sense of pride of ownership among all the users. This is a long-term, infinite effort that should always be maintained at some level. Continued and effective outreach to integrate a sense of ownership among users (i.e., agency personal and the public) is the single most effective achievement that will lead to long-term improvement in data quality.

3. Data and information management

Findings - It was apparent that there were several different software programs being utilized across the FINs for data management. While each FIN program was relatively comfortable in their own particular software use and application, it is evident that there was an obvious negative feature that was not exposed during the presentations. Having multiple software programs to accomplish similar tasks, especially those that are proprietary, can lead to situations of incompatibility in the future as FINs attempt to cross regions or combine to attack national issues.

Recommendations - Having each FIN "discover" and implement its own data management software flies in the face of logic, effectiveness and reasonableness. It is also obvious that savings in training costs and implementation times can be dramatically increased by adopting data management software platforms that are uniform among FINs. Data are data and immune to the variances of regional expectation.

Findings – During the course of our evaluation of the FIN program there was repeated mention of the Quality Assurance and Quality Control efforts in each program. A cursory evaluation of each program's QA/QC protocol, however, does instill a sense that this is being rigorously or consistently applied within and between FINs.

Recommendations – High quality data are achieved through overcoming several obstacles that help create error. Some errors occur because of transcription error, recording error, and sample design error among others. Efforts are being made by FIN programs to correct the first two components, although no rigorous plan was described as to how this was actually being done. Frankly, these errors are usual and easily detected and correctable. More problematic to the overall goal of FIN is avoiding or reducing the probability of including sample design errors into the final data set. There was no indication that programs were even aware that this might be a problem. All FINs should identify and describe the level that an introduction of a potential error component might bring via sample study design error and move to begin correcting this issue. This would also help programs in the development assumptions that must be stated to help qualify the data. It is acknowledged that much of this error source is outside the immediate purview of the FINs, but more and issue with data-providing partners. A long term goal for FINs is to work with partners to reduce sample design error. This will eventually lead to increased accuracy and precision of the data, thus leading to more reliable fisheries stock assessments. It is likely that a lack of attention to this component of FIN programs will lead to challenges to the integrity of the data.

Findings – All FIN programs recognized the need to modernize and adopt electronic data reporting as a norm for the future. Each program differs as to the degree, rate, and extent that they have each moved toward adopting this new technology.

Recommendations – It is suggested that FIN programs form a cooperative among FINs that allow the sharing of information and installation plans with regard to upgrading and improving their ability to move toward complete electronic data recording and reporting. It is also suggested

that NMFS personal be assigned the task to help guide the achievement of this objective as NMFS as a vested interest in FIN programs in meeting this objective.

Findings – Data integrity and facilitated access are cornerstone features of any FIN program. Through the discussions and presentations by FIN program leadership, it was a perception that if data integrity programs were currently in place, they were not readily apparent. The public and agency users are currently not in a position to appreciate or evaluate FIN programs respective data management protocols.

Recommendations – To assure proper data management, to instill confidence among data users, and to assure data integrity under extreme conditions, it is suggested that (if not already in place) each FIN develop a data management plan that assures data integrity under severe conditions. Moreover, these plans should be apparent to the public to further instill confidence that data integrity among FIN programs is paramount, thoughtful, and considerate of special circumstances or interruptions. Data backup plans should be developed and approved by NOAA/NMFS as part of their continuing contracts to provide data. Multiple back scenarios and offsite redundancy should be included as part of any data backup plan.

4. Review and improvement process

Findings – Currently there is only limited oversight of the FINs. This has led to a drift in programs relative to each other. While each program should be commended for their ability to distribute and manage high quality data with limited resources, there nevertheless should be protocols adopted that allow evaluation of this effort. The protocols should offer opportunity to include recommendations for improvement.

Recommendations – To fully evaluate these FIN programs, an evaluation team should be made available through NOAA that includes NMFS, state agency, and private users. This group would be tasked with evaluating each program and the progress that it makes toward improving its performance measures. Concomitantly, a series of 5-10 performance measures should be developed, given appropriate trials, and eventually adopted (assuming with some modification through the trials). These performance measures (some conducted annually, others conducted every five years) would go far in detecting long-term trends while identifying areas in need of improvement. Moreover, such an evaluation should also be able to determine the effectiveness of any change to protocols or the effectiveness of any modifications to existing procedures. It is odd that FIN programs were not directed to develop such metrics when virtually all programs under NOAA's jurisdiction were directed to develop such metrics several years ago.

Findings – Every program should avail itself to review and incorporate recommendations to improve. The FIN program is no exception. Overtly lacking is a timely and regular program to critically review each FIN program. Moreover, once the limited reviews do occur there was no indication assuring that any reviewers comment or finding was ever adopted, implemented and evaluated.

Recommendations – It is suggested that each FIN program develop an annual review procedure. To improve both the inter-partner and raise the level of sophistication in these programs, that an internal and an external review of each FIN be conducted in alternate years. Along with these reviews, a NOAA/NMFS/Outside consultant team should be tasked with evaluating the effectiveness of any adopted suggestion. Their review should include recommendations for continuance, modification and/or improvement. This same group of evaluators should also be charged with evaluating performance measures that each program developed and adopts.

Findings – There seem to be inconsistencies among FIN programs as to the determination of when data requests are classified as confidential.

Recommendations – While programs may differ widely with regard to this determination, it is important that clients who make request of such data have some sense as to what data are considered confidential and why. Consequently, each FIN should develop a set of readily accessible criteria that are used when making determinations of confidentiality. This should help improve the interaction of FIN programs with users as well.

Findings – The current organizational structure necessarily varies among FINs. Some programs are unduly complex and convoluted. The public and partner agencies are best served when there is a straightforward, transparent and comprehensible structure to any program. It is the obligation of any program manager to develop an organizational management schema that is effective but simultaneously comprehendible. The organizational structure of some FINs should be streamlined, thus improving the public's appreciation and acceptance of the data quality.

Recommendations – Each FIN should reexamine its organizational structure toward a goal of improving accuracy, clarity of purpose, and general public appreciation. NOAA/NMFS personnel should work in tandem with FIN managers to achieve this goal with an eye toward improving overall "buy in" and comprehension by the public.

Findings – Environmental resource management is a fast developing field. As an example, the implementation of GIS-based data queries has revolutionized environmental data management and analysis over the past decade. It should be anticipated that a ballooning of new and innovative ways of handling and managing environmental data will continue to be fast developing. The FIN programs, however, seem to be in a reactive mode when it comes to looking forward to try new innovations in data management.

Recommendations - FIN management in each FIN program should establish a regular program to keep staff abreast of the latest and potentially useful developments in data management and analysis. At some level, staff should be encouraged to maintain their professional status among their peers in professional organizations, most likely through professional society participation and membership. FIN programs should have a professional development program in place to assure that staff are kept current. This program should also help invigorate staff and subsequently help improve staff retention.

Conclusion

FIN program leaders, across the board, are to be commended for the job they are doing with limited resources. Staff diligence in working with the user groups and maintaining positive interactions with most data providers has been a key factor to the program's success. It is reasonable to expect that this level of success will continue to the near future. As indicated above, several suggestions to improve the existing operations of FINs could be implemented without major restructuring of the existing FIN architecture. Providing clearer direction, better outreach, and more explicit protocols are actions that should be able to be undertaken with a minimum of disruption to ongoing functions with each FIN. Most important to the ability of the FINs to adapt to the future is a willingness among FIN leadership to lead their programs toward improvement. This was not readily apparent but may be a subtle part of each program's day to day operation. To effectively provide leadership toward accomplishing changes in the future, this facet of management should not be subtle. FIN program leadership should take it upon itself to assertively and openly offer this direction to its staff, partners, and the public.

General comments

This review will focus on the relationship between the FINs and NMFS HQ and how the FINs are meeting national and regional data needs from the NMFS perspective. Key findings are presented for each topic followed by any relevant recommendations. Findings and recommendations are drawn from the issues, common themes, approaches, opportunities for lessons learned, and examples of collaborative solutions highlighted in the background materials, presentations or subsequent discussions.

Even though the charge for all FINs is basically the same (i.e., to provide accurate fisheries information for stock assessments and management) there is a great deal of difference in how these tasks are accomplished. These differences are driven by a number of factors including the nature of regional fisheries and management; history of data systems in place in the region prior to the FIN MOU; number and diversity of participating partner agencies; whether or not recreational fisheries or other sampled data are included; and interpersonal relationships between FIN, Commission, partner agency and NMFS personnel. WPacFIN is an outlier in almost every respect due to its unique history, institutional structure, diverse partnerships and geographic scope. Consequently some of the findings and recommendations discussed below may not apply very well to WPacFIN.

Regarding the review process itself, a couple suggestions may help make this process easier next time around. First, there may have been some confusion regarding what was expected from this workshop. Admittedly the issues are not straightforward, but perhaps some clearer thinking about the process and the anticipated outcomes would have helped (at least this reviewer) to focus on the problems at hand. For issues as complex as this, entire workshops are probably needed just to draft TORs for the reviewers and presenters. Possibly reflecting this confusion, there was a wide variance in the type, quantity and quality of information presented by the FINs and their liaisons. It seemed difficult for the FINs to focus on describing their challenges, solutions and lessons learned in the context of meeting national needs, thus making it more difficult to uncover possible paths for improvement in their collective mission. There seemed to be tendency for some FINs to stand up and defend their programs as if this review were part of a competition for funding (it's not, right?). Maybe it's only human nature to respond to new, uncertain situations this way, but perhaps better communication regarding the purpose, process and desired outcomes of the review would have helped the FINs to focus their presentations and reviewers to better target their comments.

Findings and recommendations on specific topics

1. Data and information dissemination

Finding: In general the FINs are meeting national and regional needs for providing the data necessary to assess and manage commercial fisheries stocks. This convergence has occurred through a co-evolution of the regional data and management systems. However the FINs are generally busy playing catch-up, i.e., reacting to demands expressed by their management systems, and so are not well able to anticipate emerging or future data needs.

Finding: All regions are affected by *confidentiality* constraints, which are the key factor driving *data access* policies. Although little can be done in the near term to change confidentiality

policies and concerns of data partners, technology is available that allows users to access "simple" data feeds subject to their needs and confidentiality clearance level via web-based query forms. These systems can even initiate and administer requests for confidential data. However it will still be necessary to accommodate requests for complex data feeds on a case-by-case basis, with FIN programmers accessing and crunching the data before providing it to users via ftp links or email attachments.

Finding: Some FINs have expressed satisfaction with the concept of "imbedded analysts", e.g., a FIN staff person housed in (and funded by) a key data user's shop to help coordinate and streamline the user's data access. Other FINs indicated they manage to provide similar services for clients but on a temporary, periodic or ad hoc basis. There does not seem to be a single formula that works best here.

Recommendations: Acquire and install online data access queries to automate user requests for confidential and non-confidential data, and administer user requests for confidential data access (like the ACCSP system). Continue to make FIN analyst's services available to "needy" users either as formal arrangements or as needed basis, as best suits each FIN and its clients.

2. Data and information management

Finding: A major common theme heard during this review was *funding adequacy*. Most FINs have seen flat or falling funding levels for the past decade, even as demands for accurate and timely information have increased. The reauthorized MSA has place increased pressure on federal managers and the fishing industry to demonstrate that exploited stocks are accurately counted and adequately assessed. A fisheries management system can only be as good as the underlying data, so commitments to accountable and sustainable fisheries management practices ought to include funding that is commensurate with the increased mandate and responsibility.

Finding: The physical location and configuration of FIN data storage hardware and power supply systems needs to be carefully considered. Local power outages and natural disasters such as hurricanes or tsunamis need not cripple a FIN if its assets are properly deployed.

Recommendation: Install redundant hardware systems with backup data servers and emergency power supplies in multiple "safe" locations to help prevent disruption or shutdown by localized events.

Finding: Information management *technology* is certainly available and FINs are moving toward adopting electronic and online data systems for loading, transmitting and storing data. Some FINs and/or their partners are using proprietary software for some of these functions. This presents a possible risk on a number of different levels. *Standardization and integration* of data and statistics from multiple sources is an issue in regions where there are partners with different data cultures. FINs have developed the means to integrate various data streams into their data warehouses but with varying degrees of seamlessness, some still requiring considerable manipulation.

Recommendations:

Data systems should be configured using Oracle or other leading database products. These systems can be readily configured using in-house or contracted programmers to meet all data

entry, loading, transmission, storage and retrieval needs. They are widely used in business and government and therefore less dependent than proprietary software on "unique" hardware or programming skills. It would also be much easier to share, transfer, adapt and troubleshoot technological solutions between FINs if all were using compatible software products.

Finding: There do not seem to be systematic policies or processes in place for improving and assuring the *quality* of data housed by the FINs. While some FINs acknowledge this as part of their role, others think it should be managed by their data providers (Some FINs are data providers). This situation can lead to confusion and possible loss of control over data integrity.

Recommendations: FINs should establish data quality policies and standards so that FIN staff, data partners and clients all have a common understanding and expectation of data quality. The process to establish data quality policies and standards should probably be part of the FIN's strategic review process (see below).

Finding: FIN clients, especially those using FINs with multiple data-providing partners, have expressed difficulty with tracking and reconciling updated data feeds. This leads to time wasted reloading and reconfiguring downstream data tables and uncovering why prior results can no longer be replicated using more recent data extracts.

Finding: *Documentation* of information assets and collection and storage of *metadata* on key datasets by FINs are very mixed. There also do not seem to be systematic methods for storing and cataloguing the queries that have been used to extract data feeds (i.e., the issue of "journaling" or version control).

Recommendation: Products for managing metadata such as InPort are reportedly able to store and manage the kinds of information needed for data version and completeness control as well as information about data sources and contacts. These systems are already in use in some FINs and should be implemented by all.

Recommendation: Summary descriptions of data elements, their underlying sources and relationship to other components of the data base should be available on the FIN websites. Likewise Each FIN should have a systematic mechanism for labeling, storing and retrieving queries that have been used to extract user data sets.

Finding: Data *timeliness* was mentioned as an issue, and efforts were described as underway in all regions to speed up delivery of data feeds and data quality assessments. But with the exception of data required by certain fisheries for tracking inseason attainment of individual or sector quotas or catch limits, timeliness need not necessarily be a major issue. Many aspects of stock assessment and management cycles can be tailored around the completion schedules for the key data feeds.

Recommendation: (This is outside the scope of most FINs) A workshop or series of committee meetings examining the timing of data needs for management vs. timeliness of data availability should be conducted in each region. This exercise can fine tune the management and data cycles and help define what are the "best available data" for each stage of the management and stock assessment cycles, thereby reducing the perceived need to rush the delivery or use of possibly incomplete or "unvetted" data.

3. Program review and improvement process

Findings: Application of systematic program review and improvement processes is uneven. Most FINs seem to rely on sporadic and informal methods to identify issues, recommend solutions and follow through. As such it is not immediately apparent how a perceived issue is systematically identified, prioritized, discussed, and addressed programmatically. The periodic reviews conducted by some FINs are a step toward fulfilling this need but must be tightly focused around a TOR addressing the concerns of the FIN and its clients. Otherwise workshops may spin off onto the topics of most interest to the reviewers. Rather than outsider reviews, it may be better to regularize a facilitated internal review process, using FIN staff and a select group of partner agency personnel and data clients who meet periodically to identify, prioritize and assess progress toward attainment of improvement goals.

Recommendations: There should be a formal process for conducting strategic reviews, transmitting decisions and following-up key recommendations. For example, a program review every five years, preferably a facilitated, participatory process conducted by the FIN and NMFS, to review and/or update strategic vision (mission statements, goals, plans, etc.) and chart progress toward achieving long term goals. There should also be annual meetings, e.g., during FIN staff retreats, to track progress toward reaching specific milestones and to foster buy-in to the FIN's overall mission by FIN staff and key partners.

Finding: There is some confusion in some regions about the role of the FINs as "sole" or "comprehensive" provider of fisheries data. This confusion can lead to misunderstanding and misuse of data from the FIN and other sources.

Recommendation: Systematic outreach efforts along the lines of the ACCSP's periodic newsletter should be pursued. Another option is to prepare fact sheet flyers with information about the FIN and its mission, and make those available at regional fisheries council and commission meetings. These opportunities can be used to foster common understanding of FIN's mission and activities among data clients and the public. Also the FIN's mission statements and strategic goals should be posted on each FINs' website for ease of reference by clients, partners, FIN staff and the general public.

Finding: Although FIN directors and staff expressed that they are in regular contact to discuss issues and offer advice, there may be some value to scheduling periodic meetings that bring together FIN staff, selected data partners and data users from all the regions. The purpose of these meetings would be to provide increased opportunities for FINs and their partners to see how other FINs have addressed common issues and handled outreach and partner relationships. However it would not be desirable for a process like this to become just another mandated burden on FINs already limited resources.

Finding: The model of each FIN having an institutional home outside NMFS is appropriate and should be pursued for WPacFIN. This arrangement allows for a separation of data provider from the data client, thereby reducing some political and work load pressures on the FINs. Having the FINs housed under the regional fisheries commissions seems to have generally worked well, allowing FINs to emerge from or hide behind the shadow of their parent organization as needed.

However it may be wise to consider having a clearer separation between a FIN's institutional home of convenience and its operations. This separation could help make it easier for FINs to fulfill and describe their roles in the fisheries world.

Finding: Finally, there was some frustration expressed by FIN representatives and their liaisons regarding "national information needs". The frustration was over the perceived lack of a prioritized list of what data were needed by NMFS HQ. FINs expressed that they were ready and able to supply whatever information was required, but needed clearer directions from NMFS HQ.

Reviewer #11

Fishery Information Network Review
September 9-12, 2013

General recommendations for all Fishery Information Networks

Findings: This reviewer commends the FINS for what they have accomplished in dealing with complex issues of data and information management. Well-managed, accessible fishery data have considerable value, both regionally and nationally. Our review has indicated ways to increase the value by improving (a) data management processes and protocols including quality assurance; (b) data accessibility in terms of timeliness and expanded user communities; (c) more comprehensive and thorough data acquisition; and (d) stronger coordination and communication among the regional FINs. In part, the FINs are aware of these needs and working actively to make improvements. This review, however, has highlighted some issues that require more attention.

The regional distribution of the FINs is natural and appropriate, given the regional nature of fisheries and management institutions. In this sense and others, regionalism is a strength, and there is not a compelling reason to suggest the networks should be centralized or merged nationally. Nevertheless, the FINs should be working toward more inter-regional collaboration and consistency. Although the immediate management needs for data typically are regional, there are national needs, as well as cross-regional needs, facts that seem to demand commonality in standards, protocols, and the types of core data (e.g., landings, effort, value) that are acquired and maintained.

The FINs share a need for greater attention to strategic planning. Do they have a common vision, and if not, why not? Strategic planning does not have to be elaborate or burdensome, but it is a requisite for effective leadership and performance over the long term. How will the FINs adapt to rapidly changing technology? How will they continue to serve their missions and sustain operations in the face of possibly greater resource limitations? How can partnerships and collaborations be strengthened?

Recommendation: In light of these questions and concerns, I recommend a review of the overall governance of the FINs, with consideration given to establishing stronger leadership at the national level. A national director or coordinator could foster stronger inter-regional collaboration, more comprehensive strategic planning, progress toward national data management and data quality standards, and more effective outreach to federal, public and international partners. Alternatively, a standing committee of the regional FIN directors could be charged to pursue these objectives.

Notes on terminology: (1) In this review, "partners" refers to states, territories and tribes unless otherwise specified. (2) I make a distinction (as should the FINs) between *data collection* and *data acquisition*, where data collection means gathering primary data (e.g., from boats, buyers, processors, sampling), whereas data acquisition means the process of acquiring existing data from a secondary source (e.g., state reports to FINs).

Data and information dissemination

Finding: Data accessibility varies across the FINs; AKFIN has no public access, while other FINs accommodate public access to some or all non-confidential data. Public access to data was a key issue for the NGO representative who attended the review, and also has been mandated by Executive Order.

Recommendation: The FINs should seek to make all non-confidential data available within one year post-acquisition. In cases where meeting this objective would conflict with partner policies, high level attention from NMFS and regional management entities may be required.

Finding: The timeliness of data availability and dissemination is a common issue across the FINs. A key obstacle to timeliness is reporting by the state and territorial partners. It was mentioned that there also are regulatory obstacles about which I have no additional information.

Recommendation: The FINs should explore systems approaches to data acquisition, perhaps assisting the partners with more efficient electronic reporting methods. Consistent (national) data standards and data acquisition protocols could work over time to improve the timeliness of data availability, as well as the overall efficiency of data acquisition and management. The issue of regulatory obstacles should be addressed by the regional management entities working with the partners.

Finding: There is considerable variation in the ways FINs provide data to users; this may present a problem to users, especially any user requiring data from more than one region. In general, the FINs appear to underestimate the needs for cross-regional, and especially national-level data for a variety of purposes.

Recommendation: The FINs should consider developing and adopting common standards for data availability and fulfillment of (at least) routine data requests. Data requests, responses, and timeliness need to be documented as a standard business practice.

Data and information management

Finding: The FINS have accomplished a great deal with respect to their limited missions over the past decades. The Atlantic Coast Comprehensive Statistics Program (ACCSP), for example, apparently has been undergoing a continuing process of improving the management and availability of data and information for Atlantic coast commercial fisheries landings. The other FINs also presented evidence of continual improvement efforts.

Recommendation: Maintain the course of continual improvement and evolution. Strive for better coordination, integration, and standardization of reporting systems.

Finding: The FINs for the most part, have succeeded to the point where (as acknowledged by some presenters) it is time to address needs beyond commercial landings. Each of the FINs is approaching this issue in a different way, with apparently different priorities.

Recommendation: Access to more complete effort data could be a starting point. The next priority should be social and economic data (some FINs are acquiring these types of data). Sustainable fisheries are about more than managing harvests for sustainable stock production; economic and social aspects need to be quantified and understood widely. For example, to estimate the real benefits of commercial fisheries, we need to know the economic rents as well as less tangible social benefits and costs. These types of data would be difficult to obtain comprehensively, but it would be worth exploring how representative samples might be obtained through partners or other means.

Finding: Whereas some of the FINs have been acquiring fishery independent data (FID), especially from key surveys, others appear not to have considered it. The situation seems to be similar for recreational fishing data.

Recommendation: NMFS, the states, and some research programs generate FID that can be crucial to stock assessments and management decisions (e.g., juvenile surveys). Some of the FINs acquire and manage FID; those that don't may want to consider including high priority FID data.

Finding: All of the FINs have issues with documenting data and information assets, which should be formalized as part of a quality assurance program. Note that there is a distinction between *quality assurance* and *quality control*, where quality assurance applies to the entire data cycle, from original recording of data to analysis and reporting, whereas quality control applies only to specific aspects of data management such as automated checks for appropriate entries, double entry, etc. It was not clear from the discussions that FIN personnel are aware of these issues. Although the FINs have adopted elements of quality control into the data management process, apparently none has established a quality assurance program. A quality assurance program would help to resolve several of the issues discussed having to do with data standards, documentation, version control, etc.

Recommendation: The FINs, either individually or (preferably) corporately, should develop a quality assurance program and quality assurance (QA) plans which should be reviewed by an independent body. The QA plans could be either programmatic (i.e. applicable to all data managed by the FINs) or oriented toward the special requirements of various types of data. Information about QA plans and examples can be found at http://www.epa.gov/quality/.

Review and improvement process

Finding: The FINs in general have not engaged in strategic planning or performance measurement, although ACCSP has strategic planning, performance metrics and uses customer surveys. A comment was made that resource constraints hindered strategic planning.

Recommendation: Although there is a perspective that strategic planning is the province of the regional management entities, it is my view that each FIN should develop a strategic plan and that these should be coordinated and harmonized among the FINs. A strategic plan is an essential element of effective leadership. Aspects of planning should address (a) the types of data to be acquired and managed to meet user needs; (b) the dynamic nature of technology and how

technological developments might affect data acquisition, management and dissemination in the future; (c) continual improvement in quality and customer service, and (d) infrastructure and personnel. Strategic plans and their accompanying visions should be reconsidered periodically. Resource constraints should not be a serious hindrance to strategic planning. If the leadership has a clear vision, a strategic plan is a natural outcome and should not require major investments of time or resources.

Finding: Some FINs have a formal process in place for periodic reviews; others do not or have abandoned them. In some cases, FINs found the reviews not very useful. Very little specific information was provided about implementation of reviewer recommendations.

Recommendation: FINs should institute systems for tracking and documenting the implementation of review recommendations and relevant decisions.

Finding: It was not within the charge of the review panel to review funding of the FINs, which is complex and not within the control of those who will respond to the review. I note, however, that all of the FINs have experienced flat funding over the past several years, and of course, flat funding means declining funding because of inflation. In the current state-federal budget climate, it would be useless to suggest that the FINs should receive additional funds. Nevertheless, one case stands out: the notable under-funding of WPacFIN. This FIN ~~must~~ covers a huge, diverse region with many special demands on fishery data management. Yet WPacFIN suffers from deficiencies in infrastructure and other critical budgetary needs, one of which is helping the territories improve data collection for their artisanal fisheries. WPacFIN indicated that they intend to ~~would~~ be more active in seeking competitive funding, but these sources are uncertain and ephemeral.

Recommendation: NMFS should pay special attention to the under-funding of WPacFIN and try to assist in any way it can, whether through initiatives as suggested, or by considering its budgetary priorities.

Fishery Information Network Review Report
Reviewer 33

General Observations

High quality, timely data are an essential foundation for sound decision making. To borrow a catch phrase from one of the presentations made this week, "good data, good decisions." While boundaries separating geopolitical and management jurisdictions may be sharp, those boundaries have less relevance ecologically. Successful stewardship of marine ecosystems that span state and federal jurisdictions demands seamless data collections across these boundaries.

The Fisheries Information Networks (FIN) strengthen data collection efforts, and the management and dissemination of those data by leveraging state and federal capacity and applying a more systematic, regional approach. Creation of the FINs to meet regional and national data needs was a logical decision and it appears to be paying big dividends in terms of gains in data collection and access efficiency, quality and timeliness. The FINs are to be commended for the progress they've made since their inception.

Data are such a critical foundation for the meeting the stewardship mission of the FIN's partner organizations that the importance of adequate funding must be raised. This is noble work, which makes attracting dedicated and skilled collaborators easier, but to retain those staff, workloads must be managed. This is especially true when the demand for the integrated data products the FINs are charged with generating is on a known, upward trajectory.

Based on what was learned from the presentations and discussions, each of the FINs could benefit from an increase in resources. Of them, perhaps the most profound need is in the WPacFin where the challenges are daunting and the funding is modest.

Operating Agreements

One of the greatest strengths of the FIN programs is their ability to liaise across state and federal lines to leverage collaboration on data integration. This is a unique and important program capability that brings a value added service to both types of partners. There was a common theme across the FINs that occasionally, FINs were caught in the middle of disagreements regarding policies or procedures between the state and federal partners. This can be expected – if collaboration were always easy, it would diminish the need for the FINs. However, it seems like establishing some form of agreement or procedure for when the FIN "taps out" of a negotiation and allows the state and federal partners to resolve the differences would be beneficial to the long-term working relationships with the FINs. It appears that the one topic most likely to bring the program to this point is the issue of confidentiality. This report will deal with data confidentiality more closely in the "Data Dissemination" section. As a general comment, though, inclusion documentation of decision-making processes and how disputes are resolved would be valuable in the Memorandum Of Understanding or Operating Agreement used to establish and guide the operation of the FINs.

Finding: Negotiated resolutions to long-standing barriers can hamper FINs from realizing full potential.

Recommendation: Operating agreements should include steps to be taken when FIN programs are unable to broker agreements among the program participants.

Strategic Planning

In general, the FINs' self-appraisal on issue of strategic planning indicated that an inadequate level of work has been done on this. Planning is particularly critical for the FINs given the rapid advancements within the information technology discipline and the fact that the data they manage reflect extremely dynamic ecosystems and industries. For example, there is a very strong push for shifting from paper to electronic reporting. FINs appear to be acutely aware of this push and are making progress to address this shift. This will require careful planning because without it, electronic reporting can simply "ensure faster delivery of bad data" as one presenter pointed out.

A strong strategic plan is an excellent tool to help make the business case for returns on investment that additional resources could reap and helps the FINs monitor their own progress toward measurable goals. They can also help monitor material risks in the systems (technology, staffing, etc.) so heavily relied upon for science and management decisions.

Finding: Time and resources allocated to strategic planning is generally inadequate.

Recommendation: Investments should be made in strategic planning and generation and monitoring of measurable goals for the FINs.

There are differences in the mission scope among the FINs. Some are exclusively focused on data integration. Others collect data and integrate it across participating partners. This is not a problem, but it seems clear that this difference influences the stage to which the programs have evolved in the three areas of study for this review. These differences should also be taken in consideration if comparisons are being made across the FINs in terms of funding.

FIN representatives nearly all indicated that more emphasis should be applied to properly documenting the programs. Standard operating protocols, memoranda of understanding, QA/QC standards and protocols, etc. are invaluable resources, especially in partnerships that span multiple governance systems.

Finding: Adequate documentation is lacking for selected components of the FINs.

Recommendation: Each FIN should conduct a thorough review of their documentation and include a plan for addressing the shortcomings in order of priority.

SPECIFIC OBSERVATIONS

Data and information dissemination

Users of FIN data are numerous and diverse but the primary users are the scientists and managers within the FIN region, who require the data for assessing the status of stocks and to implement and evaluate the success of fisheries management measures.

Finding: There seems to be a positive trend, to the credit of the FINs, in data sharing and the spirit of cooperation among the regional partners.

The sheer volume of potential users could be an order of magnitude more by focusing some effort on tools designed for the public and outreach to spread the work on them. Based on input from the presentations, it appears that public access to the data and the degree to which the public is using that access is spotty. This may be by design, because improving public access to the data will likely increase the number of requests for assistance or for follow.

Finding: Public access to FIN data is spotty.

Recommendation: As a minimum standard, construction of user interface tools that make summary tables of the key data types available could be developed. A longer-term goal is development of query tools designed for public access.

Data Confidentiality

It was clear that treatment of data such that it met the data confidentiality policies and procedures of the state and federal partners is the single most controversial aspect of the FIN partnership. It is also clear that a great deal of time and effort has gone into dealing with this, yet disputes and rocky execution of data sharing with respect to confidentiality persists. Government entities are evolving to meet the tax-paying public's expectations for transparency in government decision-making, but impinging on this is the desire for businesses to maintain some expectation of privacy in their transactions to be competitive in today's markets. Individual states and the federal government each have their own sets of policies and protocols to achieve the appropriate balance between these competing needs, making the operation of an integrated data system quite challenging.

It seems like some of these differences have been worked out for data sharing within the region, but sharing data outside the region remains challenging. Operating agreements were discussed in the General Observations section above, but it is worth raising them again in this context. If operating agreements were made between the states and NOAA Fisheries at the onset, rather than between the states and the sub-component of NOAA Fisheries that resides in the region, it would represent a more systematic approach to this issue. The agreements could contain a framework of decision rules to make handling these data more straightforward.

Finding: Data confidentiality is the single biggest challenge to data sharing across the FINs.

Recommendation: Establish operating agreements between the states and NOAA Fisheries, rather than at the regional level that contain framework decisions on sharing of confidential data.

Recommendation: Reserve case-by-case decision-making for unusual, one-off data requests.

Meeting National Needs
The successes the FINs have achieved in meeting regional needs do not appear to be mirrored at the national level. Some of the issues discussed above (lack of state to national-scale operating agreements, framework resolutions to sharing confidential data) most likely lend to this problem. Solutions have been a long time in the making and represent a deficiency in the programs.

Finding: The success the FINs have achieved in meeting regional needs does not appear to be mirrored at the national level.

Recommendation: Revisit the FOSS program to reconfirm the shared vision, program objectives and the mechanism for achieving them.

Data and Information Management

QA/QC Procedures
Existence and implementation of quality assurance (QA) and quality control (QC) procedures is spotty across the FINs. This appears to be driven by the degree to which the FINs are involved in data collection in addition to more universal activities of data management and dissemination. FINs with limited or without data collection activities tended to say that the responsibility of QA/QC fell to the originator of the data. This philosophy generates a missed opportunity for a value added service of a second screening of the data to catch errors that are miss and providing a feed back loop to the originator of the data to stop systematic errors.

Additionally, merger of data from multiple sources creates an additional chance of introducing errors and requires its own QC process.

Finding: Some FINs lack documented QA/QC procedures.

Recommendations: All FINs should have QA/QC procedures in place, regardless of whether they collect the data or not, to improve the quality of the original data and to ensure the quality of data, post integration.

Proprietary Software
The use of proprietary software for data management is strategic decision that must be carefully weighed from a cost and risk perspective. Often, use of proprietary software may generate cost savings in the short term, but the decision has some potential risks.

Finding: Some FINs rely on proprietary software as the foundation for data access.

Recommendation: Within and among the FINs, weigh the benefits and risks of proprietary software relative to other alternatives. If continued use of proprietary software is deemed the strongest solution, put in place a plan to manage identified risks.

Unresolved Data Conflicts
FINs have different approaches to resolving data differences among participants to generate integrated data products. In some cases data requirements are collected according to standardized formats and protocols. In other cases, data are harmonized after they are collected with varying degrees of success. It sounds like matching records is a persistent problem. One such example were the problems generated by differences permitting with some partners permitting fishers and others permitting vessels. Feedback from data users indicates that matching issues continue to be vexing in spite of many years' of work to resolve them.

Finding: Data matching for some types of data remains problematic, creating inefficiencies among end users.

Recommendation: Seeking systematic solutions to the worst of these problems should bring a greater level of efficiency to using integrated data sets.

Value-added Products and Services
FINs are in a unique position to provide value-added products and services. One example is analyses to evaluate adequacy of biological sampling across the partnership. Are sample size targets set based on the precision requirements of the end users? FINs can harmonize those requirements across the full suite of users to help determine the optimal sampling target, which balances the need against resource availability. Sample targets are often set based on projections of effort levels or landings levels. The "actuals" could be evaluated at the close of the year to determine if the targets were hit or exceeded, providing valuable input to help optimize the system in subsequent years. Care must be taken that this type of work doesn't supersede higher-priority activities, but good planning can help establish the proper balance.

Recommendation: Work with partners to establish a prioritized list of value-added products and services.

Review and Improvement Process

Peer reviews are a valuable tool for strengthening the scientific integrity, efficiency and return on our investment in monitoring and data dissemination programs. Similar to strategic planning, the feedback from a well-designed, independent peer review can ensure a positive trajectory on the evolution of the FIN programs that keeps pace with changes in the dynamic ecosystems and industries they monitor and with the rapid advancements within the information technology discipline. At the pace of today's changes, a status quo system is tantamount to moving backward.

At the same time, it is recognized that peer reviews are time consuming and expensive. Finding that "sweet spot" in terms of the depth and the frequency of peer reviews will require a careful reflection on the program with the goal of bringing the biggest return on the investment in terms of programmatic improvements.

Currently, there appears to be a broad range in the use of peer reviews for programmatic improvements across the FINs. Some do not conduct peer reviews; one FIN has moved from formal, independent peer reviews to internal, facilitated sessions and another does conduct independent peer reviews. Facilitated sessions are a very good idea, allowing internal partners to step back from the noise of day-to-day operations and take a broader look at how the program is functioning. What is missing from that is the fresh look an uninvolved expert can bring to that same drill.

For this reason, a standardized peer review protocol across all the FINs may or may not be useful. Further discussion of this topic both within and among the FINs on the merits of standardized versus customized peer reviews would be valuable in making this final decision. A possible outcome of this discussion could be an agreement to recognize the regional differences in the program by establishing a minimum standard, common to all reviews and allowing the remaining aspects of the review be customized to best meet the needs of each FIN. However, establishing a FIN-wide policy that independent peer reviews are conducted periodically, whether it is via a standardized protocol or not, is strongly recommended.

One of the strengths of the FINs is how they evolved to meet the distinct needs of the region they serve. This week's discussions included the means of communicating best practices so planned or serendipitous strategies that are successful can be shared among the FINs and considered for adoption or adaption. The notion of a FIN "jamboree" was met with nearly universal groans, likely due to the already heavy workload, budget and travel constraints and mixed degrees of benefits from these events. However, there appeared to be common agreement that this peer review was beneficial for brainstorming, comparing and contrasting and technology transfer among the FINS. Perhaps conducting and sharing the results from with-FIN peer reviews could be a lower-cost yet productive means of achieving this objective as an added benefit.

Returning to the notion of the "sweet spot," the fullest benefits of a peer review will only be reaped if there is vigorous follow through on the recommendations. A mechanism must be put in place to study the findings recommendations and work with internal partners and data clients to bin up and prioritize the recommendations according to their executability (funding, logicstics) and potential impacts and then weave the implementation of those top ranked recommendations into their strategic planning.

Finding: Across the FINs, there appears to be a broad range of the use of independent peer reviews to monitor program progress.

Recommendation: Establish a FIN-wide policy that independent peer reviews are conducted periodically and sets the minimum standards for the review.

Recommendation: Include implementation of key recommendations in strategic planning for each FIN, and have in place documented protocols for monitoring progress toward achieving goals.

Recommendation: Share findings and recommendations across FIN peer reviews as a means of monitoring best practices.

Next Steps

Several of the presentations included recommendations for next steps for their programs. Examples included progress on better accounting for fishery participation and for effort. These recommendations should be gleaned and included in the strategic planning process for each of the FINs.

Summary

The FINs have enabled the many partners to benefit from a collective approach to meeting the data-hungry business of living marine resources management. By leveraging skills resources, gaining economies of scale, the FINs bring more products and services to the table than would have been possible otherwise. They've made a significant contribution to the integrity and accessibility of data on behalf of their partners and represent a successful model of collaboration. Their progress is commendable and their commitment and enthusiasm for improving their programs through this review and in general was evident. There is more work to be done but first, their progress must be applauded.

NMFS PROGRAM REVIEW OF REGIONAL FISHERY INFORMATION NETWORKS

Portland, Oregon
September 9-13, 2013

REVIEW PANEL MEMBER REPORT

Panel Member #40

1.0 GENERAL OBSERVATIONS

1.1. Overall Evaluation, Value of the Program

FINDING:

The National Marine Fisheries Service and the States have been investing in the regional fishery information networks for many years. Commercial (as well as recreational) fisheries[1] are national assets, but based on essentially regional phenomena: fishing activities with respect to stocks in varying ecosystems and contexts. States have by far the longest history in collecting commercial fish statistics. The value proposition for the regional fishery information networks has always been that NMFS can best meet its data needs through these collaborative, cooperative programs.

The presentations and discussion at the NMFS Program Review of Regional Fishery Information Networks gave strong evidence to support the assessment that the value proposition continues to be valid, and that regional and national commercial fisheries data needs are being met in a way consistent with available resources. More resources would likely improve results and outcomes. But given available funding, NMFS and the Nation are receiving great value for the investments being made in the regional fishery information networks. For example, we heard in the discussions, from a number of NMFS representatives, was how often the agency staff was able to concentrate on higher priority, more value-added activities because the FIN programs freed them from basic data management and dissemination activities. We also heard of the usefulness of these programs for non-traditional fisheries management decisions, such as support for buy-back programs, limited access privilege allocations, and fisheries disaster relief. The FIN programs are also able to leverage non-federal assets and engagement in a way that NMFS could never do by itself. In addition, they are often able to operate more flexibly and responsively than would be possible within a federal agency context.

The overall conclusion of this reviewer is that these programs have proven their value; and that greater investments would yield more than commensurate benefits.

[1] The scope of this program review has been limited to commercial fisheries.

1.2. Improving the Funding Profile for Fisheries Data Programs

FINDING:

Providing good fisheries management, and maintaining sustainable fisheries, is dependent on many things, but none more fundamental than good data. The regional fishery information networks have been level-funded for most of the last decade. At the same time, the management expectations for what these programs should produce has been increasing. The FIN programs are now facing very difficult decisions about cutting back on important elements. For example, Gulf-FIN is being forced to consider cutting biological sampling, an essential program for utilizing raw landings data in stock assessments. All FIN programs are now constrained from adding to their program profiles because of a lack of funding, in some cases not addressing data needs that are considered important to the fisheries science and management communities.

Despite the universal acknowledgement that these programs are valuable and underfunded, no one seems to have any new ideas about how to improve investments in fisheries data. It should be clear that simply pursuing the same budget and program justification strategies that have resulted in the current situation will not solve the funding problem.

The regional fishery information networks largely do not engage in modern programs to reach out to third-party stakeholders – the regulated community, NGO's, and the public. Some of the FIN programs have little or no interaction with potential stakeholder beyond the program partners themselves. There is insufficient utilization of social networking technologies other sophisticated stakeholder connectivity tools. (Sending an electronic newsletter to a mailing list is so last-century – not a bad idea, but insufficient engagement in today's world.) Stronger stakeholder engagement is essential to building the support necessary for funding increases.

RECOMMENDATIONS:

1.2.1. The regional fishery information networks need, individually and collectively, to develop and implement an aggressive outreach strategy aimed at sufficiently conveying the critical importance of good data to maintaining sustainable fisheries. This needs to involve the full range of contemporary "social networking" tools. It cannot just be about putting out a quarterly newsletter. It cannot be just a collateral duty for a program manager or data analyst. To be successful, it must be professional, consistent and positive. Programs succeed, in funding and execution, when they are supported by the stakeholders who need them.

1.2.2. NMFS should analyze its budget submission with a view to answering the following question: Is the relative investment in data and information infrastructure and programs consistent with the science and management requirements for that data and information?

1.2.3. Third-party interests need to help raise the profile of and appreciation for the value of these critical programs. It is of course not the place of the federal agencies or the FIN networks themselves to encourage this. Nonetheless, third parties such as the NGO community, fishing industry representatives and other customers of these programs need to be a part of delivering the message of the importance of good data to good fisheries decisions.

1.3. The Particular Needs of the Western Pacific Fishery Information Network

FINDING:

Although this program review was not intended to review any of the six specific regional fishery information networks, the particular interests of the Western Pacific Fishery Information Network (WPacFIN) stood out throughout the presentations and discussions in the program review. WPacFIN was clearly an outlier at almost every point of discussion. This region presents unique geographical, cultural and geopolitical problems. Its fishery resources and management authority are spread across wide areas of the globe, and involve collaboration not only on a regional basis but also with other governments. In spite of these challenges, the investments in data and information infrastructure have been relatively paltry. The data systems were not built to support stock assessments, but rather have been aimed at basic fisheries characterization. The hardware and software being used, as well as the communications infrastructure, is at a level lower than substandard for a credible American fisheries conservation and management effort. This is not a capacity issue – it is a question of capability. In addition, unique among the FIN programs, WPacFIN is executed through NMFS (PIFSC). The collaborative nature of the WPacFIN is difficult to maintain within the strictures of the federal agency data management paradigm. The people doing this work are to be commended for their dedication and ingenuity; but the overall investment simply must improve.

RECOMMENDATION:

1.3.1. NMFS and the Western Pacific Regional Fishery Management Council should jointly develop an investment plan to increase the infrastructure investment in WPacFIN to at least a fundamentally acceptable level.

1.3.2. PIFSC, the Western Pacific Regional Fishery Management Council, and the WPacFIN partners should investigate an alternative business model that allows for program management outside of NMFS.

2.0. DATA AND INFORMATION DISSEMINATION

2.1. Confidentiality

FINDING:

The question of confidentiality of fisheries statistics pervades the operations of NMFS commercial fisheries data and statistics programs and of the FIN networks. Data that is considered "confidential" may only be released in specific circumstances to particular parties. In many instances, this greatly limits the ability of federal and non-federal staff to get the data they would like to have for analysis or program management. On the other hand, the value of confidentiality protocols is to provide data providers – fishing enterprises – with an incentive to cooperate and provide accurate information. Any fisheries data program requires this type of cooperation in order to be efficient and trustworthy.

One major problem with the "confidentiality issue" is that it quickly becomes embroiled in political debate. The somewhat natural tension between the government and the regulated industry draws elements from both sides into the argument, trying to gain advantage. For lots of reasons, fishermen and processors want to keep their information secret. Scientists and managers want to be able to use the data for analysis and administration.

The other major problem with the "confidentiality issue" is that it is a legal question. The Magnuson-Stevens Act defines certain legal parameters that are controlling, and that must be implemented by NMFS and the FIN networks. Thus, confidentiality of fisheries data is a constraint that must be dealt with. An even greater challenge arises with the pending Magnuson-Stevens Act reauthorization process. The political climate for considering personal and business confidentiality has been made more difficult recently by headline news stories about federal agencies gaining access to private information outside of and beyond authorized legal processes. If anything, the political climate would seem to dictate that confidentiality controls may become tighter. For those interested in making confidentiality rules more flexible, the current political environment may indicate a strategy of "be careful what you wish for."

In an operational sense, the regional fishery information networks have had varying success in coming up with approaches to manage issues that relate to executing confidentiality protocols. One positive example that came up in the program review was the ACCSP protocol for electronic review and approval by program partners of requests for confidential data.

RECOMMENDATIONS:

2.1.1. NMFS and the FIN programs should not put a lot of energy in the short term into trying to further resolve concerns and frustrations over access to confidential data. NMFS and the three interstate marine fishery commissions should carefully consider their engagement in the Magnuson-Stevens Act reauthorization process with respect to confidentiality, make progress if possible, and endeavor to ensure that reauthorization does not make the processes even more difficult.

2.1.2. NMFS and the FIN programs should further investigate electronic applications for reviewing and approving requests for confidential data.

3.0. DATA AND INFORMATION MANAGEMENT

3.1. Filling the Data Gaps

FINDING:

Each regional fishery information network has its own evaluation of data gaps in its individual programs. The presentations and discussions at the program review indicated some common data gaps among the regional fishery information networks. A lack of effort data and discard data seemed to resonate among the FIN programs. However, there was also some expressed concern about old data continuing to populate various important data elements.

RECOMMENDATION:

3.1.1. NMFS FIS and the FIN programs should undertake a targeted effort to develop a system-wide evaluation of data gaps, and assess the overall impacts of these gaps on the utility of the data being used. This effort should include investigation of the requirements for integration of fishery independent data into the FIN program data sets.

3.2. Moving to the Brave New World of Electronic Information

FINDING:

The program review showed that the regional fishery information networks have varying experience and success with moving toward digital data acquisition and date collection programs. At least in the medium term, if not even in the short term, these efforts will make data acquisition and collection more efficient, and less subject to process error. There is experience with these types of systems around the world. Even fishermen are more digital-savvy, especially if they are part of a larger fishing enterprise.

RECOMMENDATION:

3.2.1. The digital revolution is coming to fisheries conservation and management, and NMFS and the FIN programs should actively promote it. In particular, NMFS FIS could make the development of approaches to electronic records a priority for Fishery Information System funding.

3.3. Data Quality Processes

FINDING:

During the program review a number of the FIN programs included references to "QA/QC," and there were even references made to "Quality Management." "Quality Assurance" and "Quality Control" are particular terms with well-developed meanings. None of the presentations indicated a particularly sophisticated understanding and implementation of Quality Assurance plans and Quality Control protocols. These are fundamental underpinnings for contemporary data and information programs in industry as well as government. We did not hear discussion of such programs as 6-Sigma, ISO data standards, or other approaches to ensuring the quality of fisheries data and information.

RECOMMENDATION:

3.3.1. NMFS FIS should conduct a review of Quality Assurance plans and Quality Control protocols within the regional fishery information networks. After the analysis is evaluated with the FIN programs, a plan should be developed for application across the FIN programs to institute effective QA/QC.

3.4. Defining the Need for Data

FINDING:

Fisheries data and information does not exist for its own benefit. Its value lies in supporting scientific analysis and fisheries management decision making. Problems arise when the essential link between data and decisions is not acknowledged. Fisheries management measures have been known to require decisions that cannot be supported by the existing (or reasonably available) data; or have implied new data acquisition and management that cannot be reasonable supported.

RECOMMENDATIONS:

3.4.1. The regional fishery information networks should attempt to strengthen their participation and input to federal and state fishery management decision development. They should periodically provide a synoptic evaluation of their capacity for meeting the information needs of management decisions being made; and report this evaluation to fishery managers.

3.4.2. The regional fishery management councils should, as management options are considered, specifically evaluate and articulate their understanding of the ability of fisheries data and information programs to support development and execution of fishery management decisions. NMFS, as part of its input to fishery management development, should specifically consider the fisheries data and information requirements or management options.

4.0. REVIEW AND IMPROVEMENT PROCESS

4.1. Program Planning

FINDING:

It is readily apparent from the program review presentations and discussions that the regional fishery information networks are largely characterized by a lack of strategic vision and planning. Most of them have mission statements, some have a vision statement. Most of the FIN programs have goal statements, but they are overly broad and not measurable. Meaningful metrics for success at the program level were not very apparent. Systematic program reviews and evaluations are almost nonexistent. Most of the FIN programs evaluate how well things are going (or not!) by informal committee discussions.

Failure to take a strategic approach to program management ought to be unacceptable. It is impossible to understand how well you are doing if you don't understand what you wanted to do in the first place. Strategic planning creates expectations and the shared understanding that meeting those expectations equals success. Defining and then meeting program metrics is essential to demonstrating program value, especially to the funding sources. The strategic planning process allows programs to prioritize, and to manage issues relating to the program environment, uncertainty, funding challenges, new technologies, and other external factors the affect program success. Additionally, in a situation where programs need support from a broad set of stakeholders in order to maintain their financial viability, a public strategic planning process allows for third-party validation of priorities and success.

RECOMMENDATIONS:

4.1.1. The regional fishery information networks should each undertake and execute a true strategic planning process.

4.1.2. NMFS should include strategic planning as a requirement in funding vehicles for the FIN programs. NMFS FIS should consider providing funding support to the FIN programs to carry out strategic planning.

4.2. Discovering Best Practices

FINDING:

The regional fishery information networks operate independently, with some efforts at collaboration. The NMFS Fishery Information System provides a regular opportunity for cross-fertilization. While this approach serves the customers well enough, one drawback is that the inward-looking perspective of the FIN programs makes it difficult to leverage best practices from other FIN programs, or from fisheries data collection and management programs outside of

the United States. For example, fisheries in other countries have significant experience with electronic reporting systems using modern communications technologies. We seem to be forever reinventing the wheel.

RECOMMENDATIONS:

4.2.1. NMFS FIS should make an intentional effort, as part of its sponsorship of collaboration among the FIN programs, to highlight opportunities to share best practices and focus on developing technologies.

4.2.2. NMFS FIS should proactively investigate and share with the FIN programs on a continuing basis best practices from other countries.

4.3. The Future: New Business Models?

FINDING:

It is increasingly a question whether significant change is necessary to meet the challenges coming over the next decades, e.g., the challenge of finding the funding necessary to support these programs. This question begs further consideration of whether our basic institutional approach to fisheries data collection and management is sustainable, or capable of meeting future needs. The regional fishery information networks are essentially collaborations among state and federal agencies. It is not clear that this basic business model is sufficiently adaptable to accommodate the types and magnitude of change that will be required to support sustainable fisheries policies.

For example, in the broad research community, some agencies have developed partnerships for their work to be managed and executed by third parties, resulting in institutions such as federally funded research and development centers. In other countries, fisheries management and the data to support it rests somewhat on private fishing enterprises operating in a world of property rights for fishing opportunity. The point is that there are other ways of doing business than through state and federal agency collaboration, and some of those business models may better capture the real value of products and services being provided.

There really is not anything proactive that NMFS or the FIN programs should do right now – change of this nature will occur over a long period of time. However, we should be open to acknowledging divergent, or even radically different, ways of collecting and managing fisheries data. Just because we own the box doesn't mean we shouldn't think outside of it.

5.0. SUMMARY AND CONCLUSION

If the question is: how well are the regional fishery information networks meeting national and regional needs, the answer should be: better than could be expected given the level of investment. The FIN programs leverage collaboration for an array of participants that NMFS

could never achieve on its own, and this makes the programs more robust and stronger. These are important programs that should be embraced by NMFS as fundamental to achieving the agency's sustainable fisheries mission.

There need to be new and creative approaches taken to improving the funding profile for these programs. The Western Pacific needs particular attention to improving the basic capability to address needs. NMFS FIS should lead the investigation of best practices, in particular with reference to electronic reporting. The FIN programs need to do a better job of strategic planning, including program evaluations.

Review of the Regional Fisheries Information Networks (FINs)
Conducted for the National Marine Fisheries Service, Office of Science and Technology
Individual Reviewer Report
Reviewer 69

1. General observations

The FINs in large part are meeting the needs of the fisheries councils and parties to which they are responsible, which based on their MOUs[1], include the planning, implementing, managing, and evaluating commercial and recreational fishery data collection programs, and the support for development and operation of a national fishery data collection program.

The scope of this review did not include evaluating whether the data collection programs of the parties to FINs were sufficient to support particulars, such as stock assessment. However, focusing on their mandates to develop and manage fisheries data, it was clear from presentations across the FINs that data problems that were discussed and may be attributed by some to a FIN are in fact not problems of the FIN, but instead are problems with parties unable or unwilling to provide data in [agreed] format and content to the FINs, as well as lack of participation of potential partners in the FIN. Needless to say, these problems need to be addressed by outreach of parties and councils that foster participation by all potential partners with responsibility for conservation and management of shared marine resources.

2. Coordination of activities and resources of FINs

a. Finding: The participants representing the FINs at this review did not include a representative of the governing bodies responsible for establishing the responsibilities and priorities of the FINs. We were briefed by FIN directors or staff on issues and priorities as they understand, and by the representatives of NMFS regional offices. There was no clear sense of whether among the FINs there was opportunity for collaboration or consolidation of common responsibilities, or the undertaking of projects or collaborations that would require direction from governing bodies. It was clear that to the large part FINs operate autonomously, with some exceptions related to sharing experience and resources, and that they see little need for further inter-FIN collaboration or coordination of activities or to invest further in collaborative technical or implementation efforts in support of a national fishery data collection program given current demands and resources available to meet them. Changes in this situation would need to be directed by their governing bodies.

b. Recommendation: There needs to be a policy-level representation in reviews of the FIN program that can clearly identify issues that will require consideration by the governing body, can provide insight to policy-level issues that may be of concern, and that can take to the governing body issues requiring their consideration. No particular mechanism for achieving this is suggested.

[1] MOUs provided or able to be located on FIN websites.

3. Performance evaluation and metrics

a. Findings: Evaluations of performance are required by MOUs1 of FINs. They are established to occur at various intervals, e.g. 5 or 10 years. There was no clear standard for evaluation of performance of FINs.

b. Recommendation: Evaluations of FINs should take place at no more than 5-year intervals. There should be a set of standards for evaluation that are common to all FINs and others as might be established by their governing bodies and parties.

4. Standards for reporting data and data access as regards a national program
a. Finding: The mission requirement that FINs support the development and operation of a national program is hampered by lack of attention to achieving this by the FINs. It was disheartening to hear that personalities have resulted in failure to achieve goals of National interest and that in some cases they may continue to do so. It was concerning that there also did not appear to be a concern among the FINs that this mission objective was not being actively pursued. No significant technical or data management impediments to completing this data-delivery mission objective were presented, which suggests that it could be accomplished easily.

b. Recommendation: It is logical that progress in achieving the missions of the FINs should be among the standards used to evaluate programs, but there should be immediate attention paid to achieving this mission. Representatives with responsibility for directing FIN resources to tasks and a representative of the national program should convene to clearly identify the needs of the national program, the ability for and the mechanisms by which these needs to will be realized, and a short time-line for full implementation.

5. Provision of public domain and confidential data
a. Findings: The MOU requirements of FINs to provide data do not extend to providing data to the public, except as directed by their governing bodies. In general FINs have developed the means to provide non-confidential data to others, as there are requirements for confidentiality that extend to data sharing among their parties. There are instances where FINs have put in place mechanisms for public access as directed by their governing bodies. There is a tension between providing access to data in raw formats, versus access to data which has been processed in ways that recognize
sample designs and data content. The FINs are not staffed with personnel that have expertise in stock assessment or modeling which would be the source of decision rules for developing processed data. We discussed at some length the 3 policy-level concerns for transparency in data and access to data products used to evaluate and manage public resources. It was noted that the parties responsible for conducting assessments of and managing marine resources are generally those developing the processed data, and as a result they hold those data. It was also discussed that access to both is required for data and analysis transparency, and at this time that access is not possible.

b. Recommendation: Problems associated with managing access to and reporting of confidential data are not unique to individual FINs. There should be coordination among FINs to develop

standard reporting requirements for raw and processed data required to provide transparency in resource evaluation and management. It should be clearly noted that aggregations of raw data be such that they retain the maximum possible information content for replicating standardizations required for inputs to resource evaluation. It is suggested that FIN managers/directors coordinate individually with their parties to determine the best means to provide access to the data used to conduct resource evaluations. For example, this might be accomplished by hosting the data as used in the assessment on the FIN site, or by providing a link to this processed data on the site of the party responsible for the analysis.

6. Costs and benefits

a. Findings: Achieving stated missions and goals is constrained by funding in all FINs. There were examples of leveraging of resources and experience among them to realize increased returns from limited funding. The nature of the infrastructure and support required by the FINs is generally the same, and to some degree the solutions and chosen tools to achieve their missions are the same. We discussed at some length how FINs arrived at and now use the same data management software as NMFS, in order to be able to easily pass data to a key party in each region. There was discussion about the unique needs of the FINs that were impediments to integration of services to achieve efficiencies in cost, which while true to some extent, seemed insufficient reason for looking for further potential for collaboration and sharing of resources to reduce costs.

b. Recommendation: The FINs should be encouraged to diligently pursue collaborations that will increase their productivity at minimal cost. This is not a statement that current operations and management are not efficient, but rather that with closer collaboration among the FINs, economies of scale will provide the means for all to increase their productivity with current resources.

7. Standardization of data delivery and presentation

a. Findings: Data interfaces and delivery products of the FINs vary widely. While this is not a problem for them when dealing with their parties, it results in potential for unnecessary difficulties and confusion for those not accessing FIN sites on a regular basis.

b. Recommendations: FINs should collaborate to develop standards for data delivery to the public domain. This should include consideration of formats to be used for delivery, e.g. whether data should be provided as results of queries based on individual requests or if it is sufficient to provide simple data dumps of tables that leave the query process to the user. The support costs of the choices should be a primary consideration.

2014-2018 DRAFT Strategic Plan

I. Introduction

A. Statement of Purpose

This document presents the strategic plan for the Atlantic Coastal Cooperative Statistics Program (ACCSP) for the years 2014-2018. The purpose of this Strategic Plan is to guide continued implementation and further development of the Program. The plan:

- Reaffirms the Program's vision "To be the principal source of fisheries-dependent information on the Atlantic coast through the cooperation of all program partners";
- Presents the collective partners' initiatives for the next five years; and
- Sets key program goals and describes strategies to accomplish them.

B. Overview

The ACCSP includes the 15 Atlantic coast states and the District of Columbia, two federal fisheries agencies (NOAA Fisheries and U.S. Fish and Wildlife Service), three regional fisheries management councils (New England, Mid-Atlantic, and South Atlantic), the Potomac River Fisheries Commission, and the Atlantic States Marine Fisheries Commission (ASMFC). The Partner agencies are listed on page 7.

The Program was established in 1995 to address deficiencies in the data available for fisheries management along the Atlantic coast. These included: incompatibilities between state and federal data systems, a lack of standardized trip-level catch and effort reporting by partner agencies, lack of universal permit and vessel registration data, and a general need for more and better data to support new requirements in fisheries management.

The ACCSP is managed collaboratively by committee. The Coordinating Council, composed of high level fisheries policy makers, is the governing body. The Operations Committee provides guidance in setting standards and funding priorities. An Advisory Committee provides industry input in the Program. Technical committees specializing in commercial and recreational fisheries data, biological sampling and bycatch, and information systems create and guide development of all major Program products.

The 2014-2018 Strategic Plan builds on basic principles related to the goals stated in the ACCSP Memorandum of Understanding (MOU) and the 2012 Independent Program Review Report:

- Continued development and implementation of data collection standards and processes will be done cooperatively across jurisdictional lines and ideally maintained through contributions from all program partners;
- These data will be loaded and maintained in a central data repository and provided through a user-friendly system;
- Program planning will be done collaboratively by consensus through committee;

- The Program will focus on activities that yield maximum benefits by being responsive and accountable to partner and end-user needs based on available resources.

By establishing and maintaining data collection standards and providing a data management system that incorporates state and federal data, ACCSP ensures that the best available statistics can be used for fisheries management.

C. Significant Accomplishments

Since its inception, the ACCSP has helped foster an improved atmosphere of cooperation among its partners. The Program has succeeded in establishing coast-wide fisheries data standards that all program partners have agreed to adopt. All 23 partners remain engaged in the process, and the program has made substantial progress towards its goals.

Funded at approximately $3.5M per year, the ACCSP has established a cooperative project system that allows program partners a great deal of flexibility in working towards ACCSP goals. Approximately $2M is distributed among 10 to 15 partner projects each year. The remaining $1.5M is used to operate the program itself.

Commercial data collection (landings or catch/effort) by state and federal program partners now largely meet the ACCSP trip level standards. These data are loaded as a matter of routine into the ACCSP data warehouse and made available to data users.

Recreational catch and effort estimates are also loaded into the Data Warehouse routinely. The ACCSP has also created unique data analysis tools for recreational and for-hire data.

Major milestones since program inception are summarized in Appendix 1.

D. Program Priorities

Early in the Program, the ACCSP divided fisheries-dependent data into four major areas, and determined overall program priorities based on these areas. Recognizing that the collection and dissemination of metadata is an essential component of each program priority in order of importance:

1. Catch, effort, and landings (including licensing, permit and vessel registration data)
2. Biological data
3. Releases, discards, and protected species data
4. Fisheries economic and social data

The Program will work toward improvements in areas 2, 3, and 4. The funding priorities for 2014-2018 will be determined through annual operating plans and RFPs.

E. Driving Forces/Critical Success Factors

The Program and its actions are influenced by a multitude of factors. These factors are constantly evolving and will most likely change over the time period of this Strategic Plan. However, the most pressing factors affecting the Program today are as follows:

1. An increased demand to maintain status quo while producing more results with stagnant and/or declining budgets,
2. An escalating need for more timely, accurate, and finer resolution data to support fisheries management
3. The challenge to maintain a balance between confidentiality and needs of the fisheries management approaches, and
4. Creating bridges between various constituencies.

This Strategic Plan, through its goals and broad strategies, will seek to address each of these issues over the next five years.

Below is a description of the pressing driving forces/critical success factors expected to influence operations during the planning period:

1. An increased demand to maintain status quo while producing more results with stagnant and/or declining budgets

Maintaining the existing data collection systems (i.e., status quo) and developing new initiatives is challenging while constrained by limited funding. While the program partners recognize the importance of adequate funding for fisheries statistics, ACCSP will continue to compete with other initiatives. Additional funding and human resources will have to be allocated to both the ACCSP and its program partners for the full implementation of the Program. Also, performance-based management requires processes to develop performance goals and use them as a basis for budgets. For programs like ACCSP (i.e., intergovernmental programs), developing and measuring quantifiable results may be difficult and time-consuming because tangible benefits are not always realized immediately.

2. An escalating need for more timely, accurate, and finer resolution data to support fisheries management

Current fisheries management is challenging due to the delicate balance between resource conservation and resource use. There is a constant demand for not only new and different kinds of data, but also more accurate, timely, and comprehensive information, including that from environmental and conservation groups.

Other developments that are likely to affect the ACCSP during the planning period include:

- Continued implementation of MRIP on the Atlantic coast, and
- Creating separate management categories for "for-hire" fisheries and multi-species fisheries.

3. The challenge to maintain a balance between confidentiality and the needs of fisheries management

ACCSP, as well as the entire fisheries management sector, needs to progress as technology evolves. Creating and maintaining systems for electronic reporting, high-speed processing, and warehousing data will give ACCSP the means to improve timeliness, accuracy and efficiency.

Along with data dissemination comes the responsibility of protecting confidentiality. Additionally, new electronic systems will require strong security. The Program strives to achieve the right balance between confidentiality, security and availability. Such concerns will increase as the Program expands. Overall, this balanced approach will provide a better basis for fisheries management decisions.

4. Creating bridges between various constituencies

The fishing industry (both commercial and recreational) has historically felt that regulatory actions are not necessary because of the perception that collected data are inaccurate.

The Program includes industry representatives on its Advisory Committee, Outreach Groups, and has also provided a public access query to the Data Warehouse.

Stronger relationships have been developed instilling greater confidence in the Program and the quality of the data, yet there is still room for improvement.

II. Goals and Strategies

The ACCSP will pursue six goals during the five-year planning period, from 2014 through 2018, to ensure user needs are met.

These goals are:

1. Manage and expand a fully integrated data set that represents the best available fisheries data;
2. Continue working with the program partners to improve fisheries data collection and management in accordance with the evolving ACCSP standards within the confines of limited funds;
3. Explore the allocation of existing Program funds and work with partners to pursue additional funding
4. Maintain strong executive leadership and collaborative involvement among partners at all committee levels;
5. Monitor and improve the usefulness of products and services provided by the ACCSP;
6. Improve outreach and education, as well as maintain support from all stakeholders and constituents; and
7. Support nationwide systems as defined in the Magnuson-Stevens Fishery Conservation and Management Act.

Each goal is described in further detail below. Strategies for achieving these goals follow the descriptions.

Goal 1: *Manage and expand a fully integrated data set that represents the best available fisheries data.*

Ready access to accurate, complete data is a critical requirement of fisheries data users. Achieving this goal will provide tangible benefits to all users of fisheries data by reducing the resources required to obtain, format, and compile disparate data sources.

The ACCSP accomplishes this by providing a unified dataset that combines disparate partner data into a standardized Data Warehouse, representing the best available data, presented in an appropriate format for the purpose. The ACCSP will work with each partner to incorporate the best available data into the Data Warehouse.

Strategies:

1. Identify what the Data Warehouse system architecture should look like in relationship to other large partner repositories, such as the NOAA Annual Commercial Landing Statistics tool, and avoid redundancy. Develop a process for synchronization of data between ACCSP and its partners in priority of need.
2. Focus resources on improving the user interface of the Data Warehouse through user feedback and user-centered design. Enhance features of the Data Warehouse to be more accessible to non-technical users.
3. Maintain quality assurances/quality control standards. Provide clear guidance on Data Warehouse updates.
4. Continue to build project and database management expertise among ACCSP staff and leverage the latest technologies available.
5. Identify and address disparate datasets and incorporate them as resources allow.

Goal 2: *Work with program partners to improve fisheries data collection and management in accordance with the evolving Atlantic coast fisheries data standards.*

The partners recognize that improving fisheries statistics starts with the information gathered in the field. The Program aims to implement the data standards in data collection programs, and ensure program partners maintain existing standards for trip level fisheries data. The standards will be maintained through the collaborative action of the committees.

The expansion of electronic reporting, and the continued development of trip level reporting systems in some partner agencies, will result in substantial data improvements. The continued development of data collection programs will follow the ACCSP priorities. Achieving this goal is the first step to accurate, timely and reliable fisheries statistics.

Strategies:

1. Utilize the committee process to promote full implementation of the data standards by assisting partners with outstanding gaps; demonstrate the successful achievement of standards among program partners.
2. Periodically review the data standards to ensure they are still pertinent, address the needs of program partners, and move the program towards full implementation.
3. Provide targeted information to partners describing the types of data and services available in SAFIS; elucidate how current and increased funding levels will affect the quality and utility of information in SAFIS; seek SAFIS customer feedback and make user interface improvements as requested
4. Provide partner input to proposed annual objectives, milestones, and budgets, as well as conduct annual reviews of actual accomplishments.
6. Develop processes to address budget shortfalls (both anticipated and unanticipated) as well as adapt Program activities, workloads, and project funding decisions.
7. For unique partner projects, estimate project resource needs prior to project initiation: utilize Program committees to assist staff in balancing workloads, given the resources currently available; track individual projects and tasks in order to better account for true project costs; summarize costs and provide to funding sources when seeking additional resources.

Goal 3: *Explore the allocation of existing Program funds and work with partners to pursue additional funding*

As the Program has evolved, some partner agencies have become dependent on ACCSP funding to conduct basic fisheries data collection. This is not consistent with the original intent of the Program and limits its ability to move forward with new initiatives. Current policies for distributing and utilizing funds will be reviewed with an eye towards maximizing benefits to the Program as a whole.

Partner agencies' fisheries data programs are inadequately funded in general. ACCSP will work with its partners to help improve funding overall.

Strategies:

1. Define the Program's critical functions vs. non-critical initiatives and focus resources on critical functions. Partners should provide resources to the Program for tasks deemed to be non-critical initiatives.
2. Evaluate funding priorities and determine if a significant change is necessary to better balance innovation and maintenance projects consistent with the original intent of the Program.
3. Develop incentives to leverage alternative funding (state, federal, and private) for partner projects currently reliant on ACCSP funding.
4. Improve and increase promotion of the Program's accomplishments and emphasize those accomplishments during funding processes.
5. Maintain a strong working relationship with the ASMFC Executive Director and NOAA Fisheries in order to provide input into funding processes, such as the MSA reauthorization.
6. Collaborate with Program Partners in their funding processes by providing outreach materials and other support to demonstrate the value of ACCSP products to Partner agencies.

Goal 4: *Maintain engaged and active executive leadership and collaborative involvement among partners at all committee levels.*

This goal aims to strengthen relationships by engaging partners as active participants, and improving infrastructure for information exchange and communication. Program partner understanding and involvement in ACCSP activities is crucial to the success of the Program. Not only is partner expertise and endorsement key to the development of data collection standards, activities taken on by the Program

are meant to meet program partner needs. Their participation requires cooperation and collaboration across the numerous state and federal fisheries agencies operating on the Atlantic coast.

The ACCSP has always been managed by collaborative committees. These committees have been very successful in fostering the cooperative environment essential to the success of the Program.

Strategies:

1. Maintain and improve upon critical leadership and engagement of the Coordinating Council members, including strengthened Council subcommittees relative to funding, increased staff oversight, and clearly defined Council Chair and Vice-Chair roles and responsibilities.
2. Conduct a governance review to determine the best organizational structure and program management for the ACCSP; evaluate potential administrative and programmatic efficiencies that could be gained if ACCSP were a program under ASMFC.
3. Maintain the committee process, balancing efficient use of time and resources between in-person and webinar meetings, given current program funding levels.
4. Clearly articulate expectations, requirements and processes between partners and the ACCSP (e.g., between ACCSP and NOAA Fisheries Science Centers).
5. Support program partners relative to legislative and executive processes necessary for improved data collection.

Goal 5: *Monitor and improve the usefulness of products and services provided by the ACCSP.*

The ACCSP recognizes success will be measured by the user experience both in entering and in utilizing ACCSP data in fisheries management decisions. The Program strives to be the principal data source for fisheries scientists and managers.

Fisheries management agencies need the ability to access fisheries statistics quickly and easily. The ACCSP will respond to user needs by providing flexible tools to accurately represent and disseminate available data. Achieving this goal will improve awareness and acceptance of the ACCSP and improve our utility to all users.

Strategies:

1. Adopt an internal strategic planning and execution process. Use quality program, project and business management best practices in order to focus more on the Program's mission and business practices.
2. Employ methods and best practices to ensure that all Program system software and application products adhere to a standardized system or application development life-cycle.
3. Adopt an improved, centralized "trouble" ticket and enhancement request management system, specifically including response from staff on expected timeline until completion.
4. Employ methods and best practices to ensure continuity of institutional knowledge in the case of staff turnover.
5. Ensure that ACCSP data management practices adhere to applicable and compulsory NOAA Fisheries procedural directives and Information Quality Act requirements to provide metadata and data management plans.
6. Continue to develop and maintain a transparent and comprehensive system of annual performance plans and evaluations to positively reward staff and recognize accomplishments.

Goal 6: *Improve outreach and education and increase support from all stakeholders and constituents*.

The ACCSP aims to foster active support and participation of program stakeholders and constituents. Groups targeted are those that have the greatest interest in fisheries data: fisheries managers, stock assessment scientists, social and economic scientists, commercial and recreational fishermen, non-governmental organizations, legislators, and media.

In addition to information sharing among constituents, ACCSP strives to strengthen relationships by engaging partners as active participants. Many ACCSP outreach activities will be coordinated through federal, regional, and state fisheries agencies.

Strategies:

1. Ensure that stakeholders will be able to articulate the value of ACCSP.
2. Enhance the capabilities of the Data Warehouse through an improved user interface and advisory services and by better communicating the data consolidation process.
3. Enhance the capabilities of the Standard Atlantic Fisheries Information System (SAFIS) (e.g., improved user interface, advisory services); seek SAFIS customer feedback and make user interface improvements as requested
4. Continue and improve upon the collection and management of input on the value of products and services.
5. Enhance participation in the ACCSP outreach activities, especially at leadership levels.

Goal 7: *Support nationwide systems as defined in the Magnuson-Stevens Fishery Conservation and Management Act.*

The Magnuson-Stevens Fishery Conservation and Management Act designates the ACCSP as the Atlantic coast anchor of the national Fisheries Information System (FIS). The ACCSP has been an active participant in the FIS since its inception, providing regional input in the creation of the program and providing assistance in crafting the program structures and processes. FIS is analogous in many ways to the ACCSP in terms of the standardization of processes and data. ACCSP has been able to share much of its experience with the FIS. Regional collaboration has been the backbone of the ACCSP since its inception, especially with the Gulf States Marine Fisheries Commission Fisheries Information Network (Gulf FIN).

ACCSP continues to participate in MRIP as it develops and implements new methods for recreational and for-hire data collection and estimation. Participation by partner and program staff benefits the cooperative development of new MRIP initiatives in conjunction with ACCSP. The ACCSP will meet its responsibilities to the FIS, continue active collaboration with Gulf FIN, and participate in MRIP.

Strategies:

1. Support and participate in the FIS process by remaining an active participant in its technical and management committees, providing data to FIS and sharing lessons learned from the evolution of the ACCSP. Request funding for research or startup projects where the interests of the ACCSP and FIS coincide.
2. Continue to conduct close collaboration with the Gulf States Marine Fisheries Commission by participating in meetings and continuing technical cooperation to ensure that the ACCSP and Gulf FIN data management systems remain compatible.
3. Support and engage in the MRIP process through continued participation in MRIP technical and management committees. Ensure the ACCSP is able to continue to integrate MRIP data products into the Data Warehouse. Request funding for research or startup projects where the interests of the ACCSP and MRIP coincide.
4. Participate in other national level activities that address fishery statistics.

Operations Planning Process

The ACCSP will use the 2014-2018 Strategic Plan as a guide to direct the activities of staff, committees, and partners for its continued progress. Operations plans will be developed annually based on current priorities and progression of committee, staff and partner work.

The Partners of ACCSP

Atlantic States Marine Fisheries Commission
Maine Department of Marine Resources

New Hampshire Fish and Game Department
Massachusetts Division of Marine Fisheries
Rhode Island Division of Fish and Wildlife
Connecticut Department of Energy and Environmental Protection
New York Department of Environmental Conservation
New Jersey Division of Fish and Wildlife
Delaware Division of Fish and Wildlife
Pennsylvania Fish and Boat Commission
District of Columbia Fisheries and Wildlife
Maryland Department of Natural Resources
Virginia Marine Resources Commission
North Carolina Department of Environment and Natural Resources
South Carolina Department of Natural Resources
Georgia Department of Natural Resources
Florida Fish and Wildlife Conservation Commission
New England Fishery Management Council
Potomac River Fisheries Commission
South Atlantic Fishery Management Council
Mid—Atlantic Fishery Management Council
NOAA Fisheries
U.S. Fish and Wildlife Service.

Incorporated for Reference *(will be links in hard copy, but only hyperlinks for the online version)*

1. MOU creating the ACCSP
2. Strategic Plan for the ACCSP, 2002-2006, 2008-2012
3. ACCSP 2008-2012 Outreach Strategic Plan
4. Atlantic Coast Fisheries Data Collection Standards

STATE CONDUCT OF MRIP APAIS

--- TRANSITION PLAN --- January 14, 2014 ---

EXECUTIVE SUMMARY: Recreational catch information is derived through an Access Point Angler Intercept Survey (APAIS) that is part of the Marine Recreational Information Program (MRIP). At present, APAIS is administered by the NOAA Fisheries and coordinated by a contractor. State involvement varies along the Atlantic seaboard. In October 2013, The ACCSP Coordinating Council supported the development of a transition plan towards a cooperative agreement between the NOAA FISHERIES and ASMFC/ACCSP (hybrid option) for the state conduct of the MRIP APAIS. NOAA Fisheries would retain primary responsibility for survey design, catch and effort estimation, and public data dissemination. ASMFC/ACCSP would act as the central coordinator of the APAIS, including tasks of data entry, compilation, quality control checks & edits, and formatting for delivery to NOAA FISHERIES. States may participate in field data collection tasks at their individual level of preference, following the surveys standard data collection protocols. This agreement will replace the current NOAA FISHERIES-contract company arrangement for data collection and will supply the catch data needed to produce catch, effort, and landings estimates of the marine recreational fisheries of the Atlantic Coast (i.e. there will not be an overlapping benchmark data collection period). After the implementation date of the Cooperative Agreement, the ASMFC/ACCSP will be responsible for all MRIP APAIS data collections on the Atlantic Coast as described in the agreement. Successful transition of MRIP APAIS survey conduct must maintain or improve data quality.

Several options for administration of the APAIS survey were developed, with a goal of moving toward option 4 where all states perform the field survey with agency staff. At this time only two states have noted the need for additional staffing support via options 2-3. This document includes draft roles, responsibilities, tasks and timelines for review and direction by the ACCSP Operations Committee.

Based on the identified steps and time to develop the appropriate agreements, staffing capabilities, and training, a timeline was developed for survey transition on January 1, 2016. Work shall continue to develop the Cooperative Agreement statement of work, state selection of options and budgets. A draft timeline is:

- Jan-May 2014: Development of state implementation plans and Cooperative Agreement Statement of work (agreement by states on portions of survey to conduct, supervisory models, budget items, etc)
- June 2014: Draft State Budgets and implementation plans due to ASMFC/ACCSP. Initiate approval of Cooperative Agreement between NOAA FISHERIES-ASMFC with statement of work and budget. (5 months)
- Oct-Nov 2014: Finalize Cooperative Agreement between NOAA FISHERIES-ASMFC with statement of work.
- Jan-Mar 2015: Final state budgets due to ASMFC, grant package to NOAA Fisheries (processing ~3 months)
- Jul-Dec 2015: Transition preparation by ASMFC, ACCSP, and States
- Jan 2016: ASMFC/ACCSP begins responsibility for recreational data collection Maine through Georgia.

ACTIONS from Recreational Technical Committee (RTC) to ACCSP Operations Committee (OPS) Jan 21, 2014:

The RTC recommend the states reconfirm the selection of preferred administrative option (page 4).

The RTC recommends to the Operations Committee that the ASMFC, ACCSP, and MRIP and the states approve of the direction and timelines noted in the transition planning document, and initiate development of a cooperative agreement with ASMFC for implementation of the MRIP APAIS with ASMFC/ACCSP as the central coordinator for the Atlantic Coast from Maine to Georgia with data collection beginning January 1 2016.

INTRODUCTION: This document is intended to outline and develop the options for transferring the conduct of the MRIP APAIS from a direct MRIP Contract to a Cooperative Agreement between NOAA Fisheries and the ASMFC/ACCSP. Specifically this document should identify the tasks, responsibilities, costs, and timelines necessary to accomplish the transition in an efficient way, minimizing any negative impacts on data collection, with a goal of implementing the transition on January 1, 2016.

A high level of input and coordination are expected among MRIP, ASMFC, ACCSP, and State personnel. Supporting information for each state's preferred implementation option will need to be drafted by the states. Each agency will need to develop internal plans for actual costs, survey supervisory staff, field staff roles and responsibilities. This information will be critical to help MRIP, ASMFC and ACCSP determine the chances of success and appropriate timeline to transition to a new model of state conduct of MRIP APAIS. All timelines, tasks, and costs are preliminary and open to revision. Please consider this a collective starting point for discussions and topics requiring additional details. As background information is gathered and preferred options are recommended, Agency directors are expected to select the final transition parameters in consultations with ACCSP, ASMFC, and NOAA Fisheries staff.

Contents

Goals of State Conduct of MRIP APAIS

- Build more cooperative ownership of recreational data and data collection program
- Support field data collection via state staff with vested interest in fisheries
- Maximize data quality and efficiency of data collection
- Maximize angler participation and minimize refusal rates
- Successful transition must maintain or improve data quality

Major Tasks, Responsibilities (Timeline in Appendix E):

MRIP / ASMFC / ACCSP

- Approval of concept, development of transition plan and administrative options for Atlantic States
- ASMFC/ACCSP/MRIP Coordinate options for agency roles, responsibilities and funding vehicles
- Recommend Timeline – consider January 1, 2016 for transition to state conduct
- Clarify options for funding & supervisory structure with expected state enrollment, including state conduct of FHS effort survey option (3 states currently conduct FHS effort).
- Determine logistics, budget and administration costs for central staff (ASMFC/ACCSP)
- Identify or develop performance measures for improved data
- Identify or develop process to modify base sample size/allocation
- Identify or develop process for additional state assignments, including central processing costs for data collected from assignments levels above base.
- Identify risks and contingencies identified with funding and state implementation capabilities
- Identify or develop training programs for supervisors and field staff
- ASMFC/ACCSP/MRIP – Define and execute Cooperative Agreement
- Set special survey conduct requirements and draft state implementation plans
- Consider options for Large Pelagics Survey (LPS) as methodology under review. MRIP/ASMFC/ACCSP acknowledges the need for further discussion of potentially including the LPS in terms of increased state conduct, but do not wish to include it in development of the 2016 options at this time

States (via RecTech Committee)

- Recommend Timeline – January 1, 2016 for transition to state conduct
- Clarify options for per-state staffing participation level (full, supervisors only, none) and compile states election into each participation level.
- Provide input on ASMFC, ACCSP, States, MRIP APAIS survey Roles and Responsibilities
- Provide input on FHS effort survey state conduct enrollment (which states want to conduct this?)
- Determine and provide actual state costs to perform base sampling (APAIS, HB, FHS validations, FHS effort).
- Recommend sample allocation level (transition base sampling at wave/mode or alternate options/needs). If different from historical base, a state's request to alter sample allocation would need to be justified. Those sample allocations could be evaluated when the MRIP PSE project and allocation models are completed.

Administration Alternatives (States identify interim transition and long-term)

A phased approach is possible under a cooperative agreement. While transition to central coordination should be on one date, a state may develop from option 2 through option 4 over time.

OPTION 1 (Status Quo): NOAA FISHERIES procures a vendor to conduct field data collection tasks of APAIS. Vendor acts as central data coordinator for Maine through Georgia. Some states sub-contract to conduct survey with state personnel. State compensation determined by vendor-state sub-contract negotiation. Contractor directly performs field survey for some states, and is responsible to NOAA FISHERIES for all data collected within the contract scope (2014: ME to GA and PR).

OPTION 2: Cooperative Agreement between NOAA FISHERIES-ASMFC. ASMFC/ACCSP is the survey administrator and central data collection coordinator for Maine through Georgia. Some states directly perform field survey funded through ASMFC statement of work. State compensation negotiated annually. Field data collection in some states accomplished via ASMFC/ACCSP procurement of an experienced contractor. This option would prevent defaulting to Option 1 (status quo) if all states cannot commit to the preferred option 4. The duration of the transition period would be negotiated among all parties.

OPTION 3: Cooperative Agreement between NOAA FISHERIES-ASMFC. ASMFC/ACCSP is the survey administrator and central data collection coordinator for Maine through Georgia. Some states directly perform field survey funded through ASMFC statement of work. Some states provide office space for supervisors and field staff hired by ASMFC/ACCSP. Remaining states hire state supervisors to actively run the field survey in their state. ASMFC/ACCSP hires field staff, housed and supervised locally within the state to accomplish data collection. State compensation negotiated annually.

OPTION 4: Cooperative Agreement between NOAA FISHERIES-ASMFC. ASMFC/ACCSP is the survey administrator and central data collection coordinator for Maine through Georgia. ALL states directly perform field survey with state supervisory and field staff funded through ASMFC statement of work. State compensation negotiated annually. This is the long term preferred option (GULFIN model)

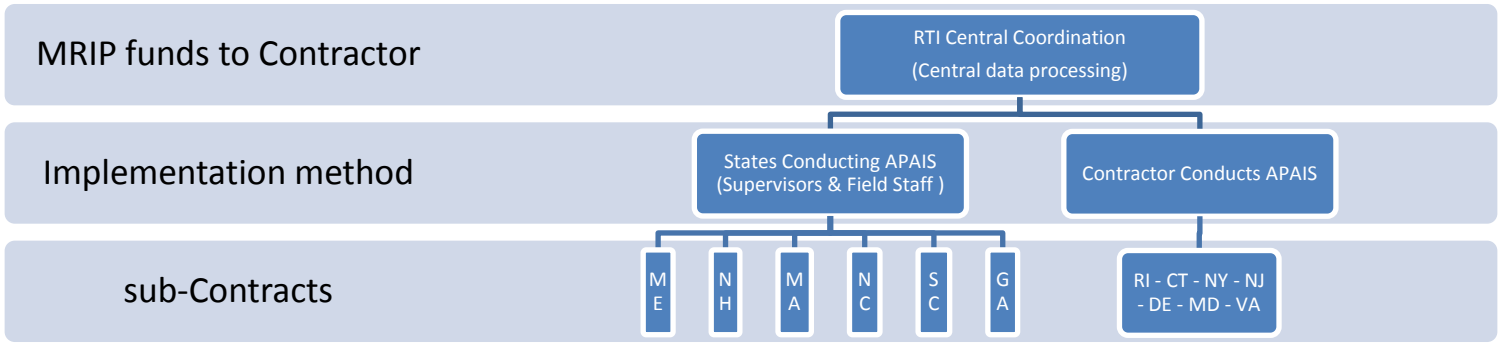
State Supervisory / Field Staffing Commitment Models.

X = model for 2015 based on 2012 State Directors Questionnaire. Green = state intent for budget planning based on December 2013 RTC conference call.

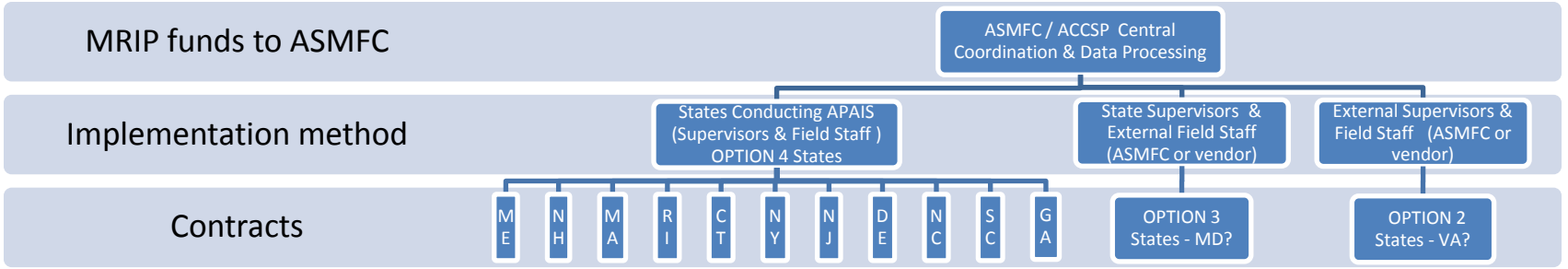
State	OPTION 4: State Supervisors and Field Staff (PREFERRED)	OPTION 3: State Supervisors with ASMFC/Contractor Field Staff	OPTION 2: ASMFC/Contractor Supervisors and Field Staff (least preferred)
ME	X - 2013 Activity Level		
NH	X - 2013 Activity Level		
MA	X - 2013 Activity Level		
RI	X - (based on survey)		2013 Activity Level
CT	X – Dec 2013 intention		2013 Activity Level
NY	X - (based on survey)		2013 Activity Level
NJ	X - (based on survey)		2013 Activity Level
DE	X – Dec 2013 intention	X - (based on survey)	2013 Activity Level
MD	X – Possible	X - (based on survey), INTERIM OPTION	2013 Activity Level
VA		X - (based on survey), Ck w/Director	2013 Activity Level, INTERIM OPTION
NC	X - 2013 Activity Level		
SC	X - 2013 Activity Level		
GA	X - 2013 Activity Level		

Funding and Supervisory Flow (relates to Administrative Options above):

Current funding Model (2013) – Administrative Option 1



Proposed model (2016): Administrative options 2, 3, 4 (with state participation identified)



NOTES:

- **Implementation method provides options for supervisory flow**
- **Proposed Contracts options identify states primary preference as indicated in December 2013 ACCSP RTC conference call**
- **States shall develop internal plans for desired supervisory structure and costs to conduct MRIP APAIS sampling**

PROPOSED Roles and Responsibilities: (needs agreement by all parties)

The MRIP Program consists of at least 3 major surveys: the intercept survey (APAIS) discussed here for state conduct, the Private boat / Shore angler effort survey (CHTS), and the For-Hire effort Survey (FHS). For Maine through Georgia, the roles and responsibilities are defined as the following:

Agency level Roles and Responsibilities:

NOAA Fisheries / MRIP

- Lead design of the survey(s) and protocols
- Maintain consolidated registries for anglers, sites, and vessels
- Perform central calculation of estimates, store and present data to the public
- Within Cooperative Agreement statement of work, direct funding to ASMFC for Recreational Data Collection Maine to Georgia

ASMFC/ACCSP

- Under Cooperative Agreement statement of work, coordinate recreational data collection Maine to Georgia, perform data processing and delivery to NOAA Fisheries.
- Execute sub-contracts & payments (to states & potentially contractor)
- Provide administration (hiring, pay, benefits, office space) to ASMFC/ACCSP staff, and to supervisors and field staff of states that request assistance.
- Operational contact for APAIS implementation
- Central coordinating body for Atlantic States (ME-GA)
- Perform data entry, QA/QC of intercept data
- Delivery of intercept data to NOAA Fisheries

STATE or Agent (State staffing of field survey variable, may include some contractor tasks)

- Develop budget for APAIS costs, with in-kind and requested support for actual implementation costs
- Contract with ASMFC for APAIS data collection tasks
- Provide office space, supervisory staff, field staff
- Manage staff assignments
- Procurement and storage of equipment
- Conduct data collection assignments according to MRIP Protocol
- Provide data to ASMFC/ACCSP for processing
- Participate in QA/QC of data

Survey / Staffing level Roles and Responsibilities

APAIS – Intercept Survey for Private-Rental Boat, Shore, Charter Boat, and Head Boat modes

- **NOAA Fisheries / MRIP**
    - Lead design of the survey(s) and protocols
    - Maintain intercept site registry web application, and perform site assignment draws
    - Perform central calculation of estimates, store and present the data to the public

- **ASMFC/ACCSP (central coordinator)**
    - Submits aggregate state add-ons to MRIP for site assignment draws
    - Receive site assignment draws from MRIP and distribute to States
    - Collects data forms from states and performs data entry
    - Performs data QA/QC (including fishdumps), and tracking of changes.
    - Submits data to NOAA Fisheries at schedule set by statement of work (currently monthly for data collection monitoring and QC, estimation by 2-month wave)
    - Tracking of assignment completion and field staff training/proficiency as necessary
    - Reimburse travel for state participation in data review meetings (1 person/state/meeting)
- **State Agency Personnel**
    - Provide add-on sample allocation requests to ACCSP for site assignment draws
    - Provide supervisors and field staff
    - Update data in Site Registry Web application
    - Data collection, initial QA/QC and submission to ACCSP
    - Participate in QA/QC (including fish-dumps) and data review meetings at schedule set by statement of work (currently 3 per year)
    - Training of samplers on procedures and fish identification
    - Provide For-Hire Vessel directory changes as identified by field staff
    - Conduct FHS prevalidation visits
- **Contractual Field Staff (where appropriate)**
    - Receive site assignments, collect and submit data to supervisor
    - Training of samplers on procedures and fish identification (shared for states using Agent)
    - Provide Vessel directory changes as identified by field staff
    - Conduct FHS prevalidation visits

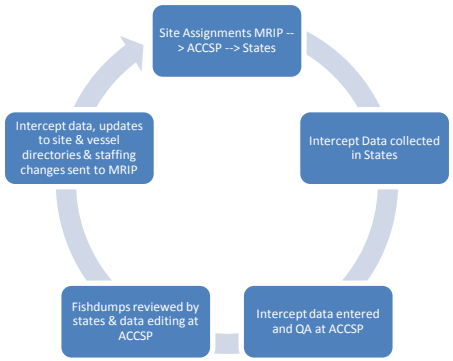
For Hire Effort Survey (FHS) – POSSIBLE CHANGE

- **NOAA Fisheries / MRIP**
    - Compile state vessel registries, Implement survey (via contractor, currently Quantech)
    - Calculate estimates, store and present the data to the public
- **ASMFC/ACCSP**
    - No role in design or implementation of the For-Hire survey
    - Provide secondary presentation of the effort estimate data
    - Direct funds to the states choosing to conduct FHS effort survey
- **State Personnel**
    - Conduct FHS effort survey (only those states choosing this)

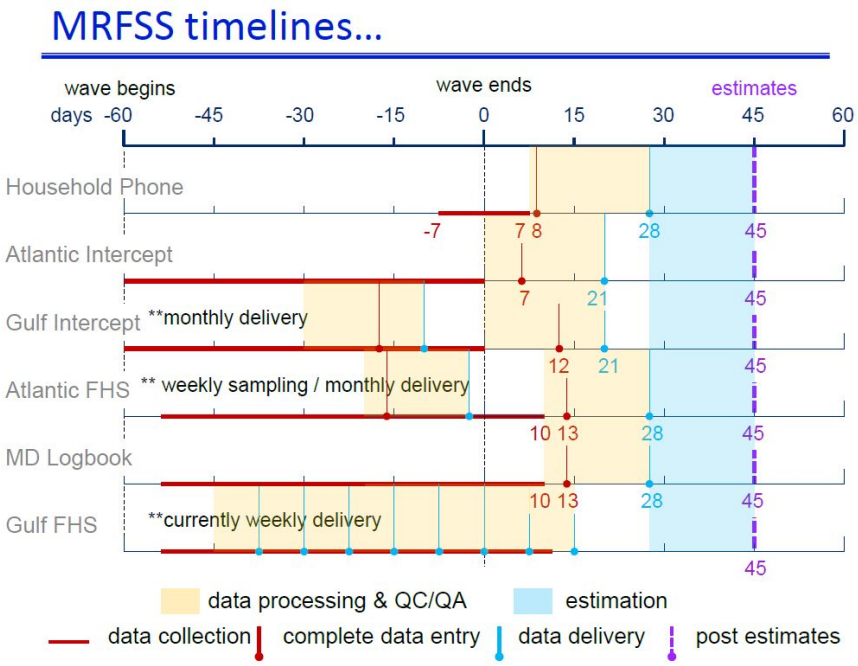
Private/Shore Angler Effort Survey - NO PLANS TO CHANGE ADMINISTRATION

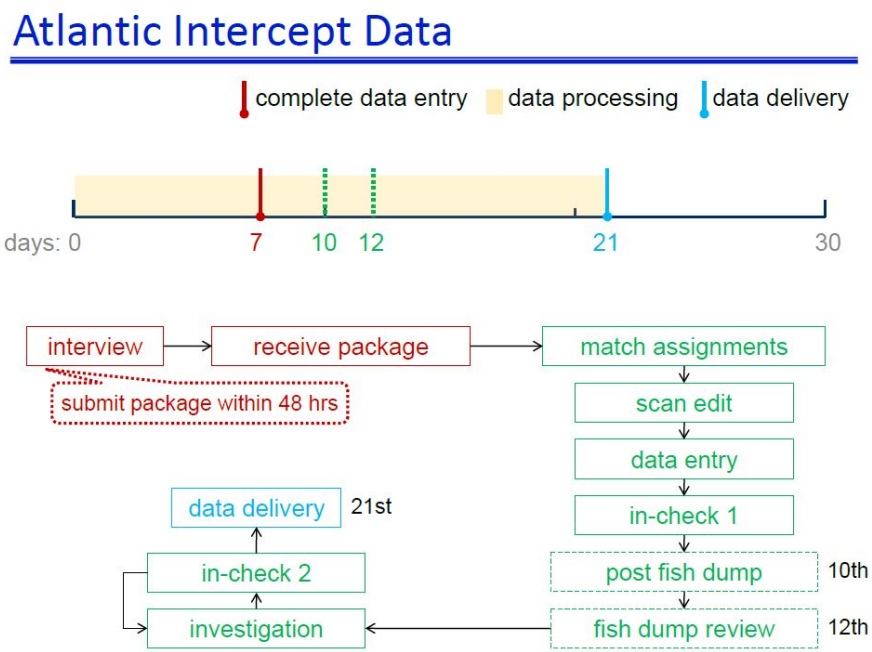
- **NOAA Fisheries / MRIP**
    - Compile state angler registries, implement Private boat / Shore angler survey (via vendor)
    - Calculate estimates, store and present the data to the public
- **State Personnel**
    - Maintain angler registry lists and submit to MRIP on appropriate timeline

APAIS Intercept Data Flow (by wave) and Data Collection Timelines:



- Generalized data flow diagram
- Details of deliverables identified in Cooperative Agreement statements of work to NOAA FISHERIES
- Timelines below from Workshop Presentation, March 2011





COASTWIDE BASE SAMPLING LEVELS

NOTE TO RTC: Estimated annual base assignments by wave as provided by MRIP Nov2013. Base site-assignment values are expected to be shifted (among mode, wave, state) in future years, and adjusted for improved precision as needed and funds are available.

2013 NMFS BASE SAMPLE SIZE

NUMBER OF ASSIGNMENTS TO BE DRAWN AND COMPLETED

	SHORE MODE						CHARTER BOAT MODE						PRIVATE/RENTAL BOAT MODE						HEAD BOAT # BOAT-Trips to Samp				
	WAVE						WAVE						WAVE						WAVE				
STATE	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	2	3	4	5	6
CT		23	34	23	19	18		12	15	21	23	21		24	50	65	50	47	0	6	8	6	0
ME		0	25	35	14	0		0	14	24	15	0		0	29	49	31	0	0	4	8	4	0
MA		26	54	40	33	32		11	20	29	34	32		37	108	113	86	80	0	12	20	12	0
NH		0	20	16	13	0		0	14	16	14	0		0	31	27	19	0	0	6	8	6	0
RI		24	32	25	21	20		14	14	21	18	17		20	38	44	37	35	0	8	12	8	0
DE		20	30	20	15	14		12	14	19	18	17		23	41	42	35	33	4	8	10	8	4
MD		33	45	35	25	23		16	20	29	27	27		48	93	97	82	77	4	10	14	10	4
NJ		52	68	53	40	37		15	24	38	38	36		51	149	160	143	134	6	14	16	14	6
NY		30	55	44	33	31		14	27	37	37	34		46	154	120	124	116	6	12	14	12	6
VA		30	41	29	25	23		12	14	23	27	25		53	133	96	73	68	4	8	10	8	4
GA		20	22	16	14	13		8	8	16	15	13		26	28	31	26	25	0	0	0	0	0
SC		22	33	21	18	17		12	13	20	17	17		33	48	41	35	32	4	6	8	6	4
NC-BB	20	26	39	41	35	42	10	12	15	18	11	11	30	34	76	83	57	59	8	14	16	10	8
NC-MM	25	26	44	40	31	14																	
TOTAL	45	332	542	438	336	284	10	138	212	311	294	250	30	395	978	968	798	706	36	108	144	104	36

NOTES: After the base sampling levels are set the discussion can be held on adjustments to sample size base or add-on levels.

APPENDIX A: GSMFC/MRIP Cooperative Agreement Statement of Work

Removed for document length, available upon request

APPENDIX B: ASMFC/ACCSP State conduct of MRIP APAIS costs

ASMFC/ACCSP shall identify the costs associated with transition to, and ongoing activities of central coordinating body for MRIP APAIS. Costs shall include staffing, planning, equipment, and data processing.

Goal Date: Jan 1, 2016 Funds needed: June 1, 2015

Budget for staff and equipment:

Item / Staff Position	**Quantity**	**Months**	**Cost**
ASMFC Finance + Admin	1	Jul-Dec	1*??K*25% benefits *.5yr = $ x
Rec Program Manager	1	Jul-Dec	1*??K*25% benefits *.5yr = $ x
Survey Coordinator(s)	2	Oct-Dec	2*??K*25% benefits *.25yr = $ x
Data Acquisition Tech	1	Oct-Dec	1*??K*25% benefits *.25yr = $ x
			Staff Subtotal for partial year: $ x
Staff computers	5	Various	$ 5,000
Server and Scanner	1 each	Jul	$ 20,000
OCR software	2 Licenses	Sept	$ 4,000 initial (2k annual support)
Form Printing and distribution	???	Nov-Dec	$???
ASMFC Overhead	X or XX % ??	???	$???
Administration	Partial time ACCSP/ASMFC	???	ASMFC / ACCSP in-kind
Systems administrator	1 ()	2	ACCSP in-kind
Network Scanner (determine if can use existing copiers?)	1-2 (use 1-2hr/day at 4-5d/week = 10hr/week)	2	ASMFC in-kind
Total Funds Transition			$???
Total Funds Annualized			$???

- Logistics of central staff (ASMFC/ACCSP)
  - ASMFC Grants admin: Manages cooperative agreement, state grants, and field staff hiring.
  - ASMFC/ACCSP Director (**x**% in kind): manages personnel, oversees the budgets and statements of work for each state, and participates in the MRIP management process
  - ACCSP SysAdmin (**x** % in kind): maintain servers, scanners, workstations
  - Recreational Program Manager (1): manages converting paper field sheets to electronic data, responsible for QA/QC of electronic data, provides clean data to NOAA Fisheries, signs off on subcontract deliverables (from states and contractors)
  - Recreational Survey coordinator(s): ensure daily aspects of survey run properly. 6-7 states per person
  - Recreational Data Acquisition/analyst(1): runs ICR scanner to convert paper field sheets to electronic data, performs initial validation, and raises issues to the program manager

APPENDIX C: Template for State Conduct Actual Costs

States shall develop budgets associated with the state conduct of the MRIP APAIS survey. Budgets shall cover actual costs, identifying transition and ongoing costs, as well as in-kind and requested support for survey implementation costs. Costs for field sampling of APAIS by mode, For-Hire validations and For-Hire effort survey conduct shall be included as separate items. These costs should represent base sampling levels (number of NOAA FISHERIES supported site-assignments in 2013/2014) and include number of supervisory staff, field staff, sample costs and in-kind contributions.

It is recognized that initial cost projections will need to be modified as sample sizes, agency roles, and staffing tasks are adjusted. However, identification of relative costs associated with major survey tasks to include implementation model, staffing levels, and budget needs will be necessary to provide realistic implementation plans to Agency Directors. Timelines for state hiring / ramp up should be included where necessary.

APPENDIX D: SUBCONTRACT STATEMENT OF WORK (Draft Template)

APPENDIX E: Timeline Requirements

State Conduct of MRIP – Transition Timeline Requirements (For 2016 Implementation….)

The draft timeline is presented to inform the discussion of the necessary steps to complete a smooth and accurate transition of MRIP APAIS survey conduct. Successful transition must maintain or improve data quality.

- Oct-Dec 2013 – ACCSP Coordinating Council Supports state conduct of MRIP APAIS, requests transition plan, ASMFC/ACCSP/MRIP Staff and RTC Chair/v-Chair develop initial draft of plan. RTC collects background information, modifies plan, provides options
- Jan/Feb 2014 – OPS & Coord. Council modifies transition plan & sends to ASMFC, ACCSP, MRIP for direction
- Jan-May 2014: Development of state implementation plans and Cooperative Agreement Statement of work (agreement by states on portions of survey to conduct, supervisory models, budget items, etc)
- June 2014: Draft State Budgets and implementation plans due to ASMFC/ACCSP. Initiate approval of Cooperative Agreement between NOAA FISHERIES-ASMFC with statement of work and budget. (5 months)
- Oct-Nov 2014: Finalize Cooperative Agreement between NOAA FISHERIES-ASMFC with statement of work.
- Jan-Mar 2015: Final state budgets due to ASMFC. Grant Package to NOAA FISHERIES (processing 3 months)
- May-Jun 2015: Grant Completed, funds available to ASMFC, ASMFC begins Hiring of central staff, creation of State/Survey contracts, states have funds available to begin hiring process as necessary.
- Jul-Oct 2015: Acquisition of staff, equipment, training of state supervisors and field staff as appropriate.
- Oct-Dec 2015: Training data collection and processing for state and central data staff. State field staff participates in wave 6 survey for training(as necessary), ACCSP staff perform data entry/processing test runs. Sample Draws done for NC Wave 1 2016
- Jan-Feb 2016: State Conduct of APAIS begins. NC begins data collection, ACCSP begins production data processing. Sample Draws for Wave 2 2016 distributed MA to GA
- Mar 2016: MA to GA begin fielding survey, ACCSP data processing and delivery to NOAA FISHERIES
- May 2016 forward: ME and NH begin fielding survey, Ongoing – State conduct of MRIP APAIS with ASMFC/ACCSP data delivery to NOAA FISHERIES according to schedule identified in statement of work.