Perspectives on the New England Fishery Management Council Process

Summary of input from members of the Council's management and science community

Prepared by:
Fisheries Leadership & Sustainability Forum

In support of:
The New England Fishery Management Council's Program Review and March 13-16, 2018 Program Review Meeting

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1. Introduction

1.1 Purpose

This summary was prepared by the Fisheries Leadership & Sustainability Forum (Fisheries Forum) to support the New England Fishery Management Council's Program Review. The perspectives and ideas presented are a compilation of input regarding strengths, weaknesses, and opportunities to improve the New England Fishery Management Council (Council) process, shared by individuals who are directly involved in the Council's management process. This summary synthesizes and organizes a wide range of ideas and input with the purpose of supporting discussion and reflection by the Review Panel, Council, stakeholders and the public.

The Fisheries Forum gathered input though informal interviews with 74 individuals closely involved in the scientific and management processes that support the Council. Interviewees spanned the following groups: current and former Council members, Council staff, National Marine Fisheries Service (NMFS) staff, Scientific and Statistical Committee (SSC) members, Atlantic States Marine Fisheries Commission (ASMFC) staff, and Mid-Atlantic Fishery Management Council (MAFMC) members and staff. The content of this summary is limited to the ideas and perspectives shared by the individuals who participated in voluntary interviews.

The Fisheries Forum is a small, policy-neutral organization, based at Duke University's Nicholas Institute for Environmental Policy Solutions that provides the U.S. regional fishery management councils with convening, facilitation and other services to support the federal fisheries management process (www.fisheriesforum.org).

1.2 Methods and organization

Interviews with managers, staff and scientists were informal and open-ended. Each interview began with an introduction to the Council's Program Review and a description of the process for gathering input from the management community. Conversations were responsive to each contributor's experience and the topics on which they were most interested to provide input. The Council's Program Review Terms of Reference (TOR) were also referenced and used as a loose guide to support reflection on the strengths, weaknesses and opportunities for improvement with the Council process. Most contributors did not provide input on the full range of topics outlined in the TOR.

The perspectives and ideas shared during interviews are anonymous. Input was synthesized and organized to summarize a wide range of input and respect the anonymity of contributors. Specific ideas or concerns are not attributed to individuals or groups of individuals. The purpose of this summary is not to analyze or quantify input, but to represent the range of views and ideas provided. Additionally, this document

summarizes a substantial volume of information in a way that is representative of the input provided but not comprehensive of every comment, perspective or detail.

This summary is organized into eleven sections, including this introduction. Sections of the summary focus on different aspects and characteristics of the Council process, and are similarly organized to show different perspectives on each topic. There is significant overlap between sections, which reflects the interconnected nature of the steps in the Council process. Specific ideas and recommendations suggested by contributors are provided throughout. These suggestions are not presented or intended as formal recommendations, or as a response to the range of challenges identified in each section. Broad suggestions are included in the narrative of this summary, and specific suggestions are noted with the following symbol. ❖

1.3 Interpretation

This summary, and the input gathered to support this work, was undertaken with the sole purpose of supporting discussion related to the Council's Program Review. This intent, and the nature of the information provided, should be considered in this context and within the limitations of reasonable interpretation.

- Perspectives: The input in this summary is presented as perspective, not fact. Contributors shared input from their personal perspective, based upon their personal knowledge and experience. The summary captures and communicates the ideas that were shared with reasonable interpretation but in keeping with the contributor's intent. Many contributors shared input regarding aspects of the management process that are not within their immediate responsibilities. Input was not vetted or verified and in some cases may not reflect an accurate understanding of the science or management process. Areas of strength and weakness represent opinion, and suggestions for improvement may not be feasible or appropriate, or within the Council's direct purview.

- Resolution and focus: The resolution, level of detail and focus of this summary is a reflection of the input provided. Contributors tended to talk in general terms and did not qualify or frame their perspective. For example, while a contributor's perspective may have been based on a specific experience, fishery or decision, comments were often framed in terms of the broader Council process or a general aspect of the process (e.g., stock assessments, consideration of impacts, etc.). Contributors generally shared significantly more input on weaknesses as opposed to strengths, and provided significantly less detail when communicating about things they felt worked well. This tendency is reflected in the level of detail and overall focus of the summary on areas for improvement. Additionally, contributors used broad terminology, such as "Council" and "Council process," sometimes referring to the Council as a body, a specific aspect of the process, or

more generally with regard to the federal fisheries management as a whole. The terminology used in this summary reflects this broad interpretation.

- Variable perceptions: Contributors expressed a wide range of perspectives, informed by their background, role and duration within the Council process. As reflected in this summary, contributors often had different and/or contradictory views on a topic. Perceptions may change over time and with experience and exposure to different viewpoints. Contributors were not presented with alternate viewpoints or the input provided by their colleagues, the presence of which could have shifted perceptions. Additionally, even within a single conversation, contributors often shared contradictory input, expressing opinions that they later refuted or refined.

- Quantification of input: The broad scope and volume of input collected does not lend itself to meaningful quantification. All of the ideas and perspectives in this summary are attributed generally to "contributors" (including "some," "others," etc.) and are not attributed to groups or types of contributors. The general use of the term "contributors" does not imply that all or a majority of contributors shared a particular perspective or idea. While areas of divergent perspectives are noted, it is not possible to assign a weight to each perspective. Interviews were not designed to collect point-counterpoint input and each contributor focused on different aspects of the process. The range of opinions and ideas shared are not comprehensive of all perspectives held by this group of contributors given the broad focus and limited duration of interviews. Additionally, the perspectives in this summary are not representative of all individuals involved in the management process.

More information about the Program Review is available on the Council's website (www.nefmc.org).

2. Council framework

2.1 Regional fishery management council process

Contributors described the New England Fishery Management Council (Council) process as a strong decision-making framework. They recognized the unique, democratic nature of the regional fishery management council framework and the involvement of states, stakeholders and communities in deciding how best to manage the region's fishery resources. Several contributors stated a fundamental belief in the process and an appreciation for the high level of difficulty in reconciling the complexity and diversity of perspectives to arrive at management decisions. Contributors also recognized the value of balancing the stakeholder driven process with independent scientific information.

Contributors felt that the strength of the council process lies in the transparent, participatory and inclusive nature of the process and the thoughtful, deliberate approach to decision making. They described that the council process allows any member of the public to engage and share their perspective. However, contributors noted that the public nature of the process comes at the cost of timeliness and efficiency (see section 9).

The regional fishery management council framework is complex. Contributors noted that while the complexity of this framework enables the Council to deal with the complexity of its decisions, it also makes the process harder to access and maneuver. They recognized that it can be difficult for managers and stakeholders to gain a thorough understanding of the nuances, processes and scientific inputs that guide the process. Some contributors emphasized the importance of training opportunities to support effective engagement in this complex process.

Contributors also emphasized the political nature of the regional fishery management council process. While they recognized that councils, by way of their design and appointment, are political bodies, some feel that the New England Council process is, or has become, too political.

2.2 Operating environment

Contributors reflected on factors that shape the management of federal fisheries in New England. The Council operates in a challenging political and social environment, and contributors felt that New England faces a higher degree of complexity and difficulty compared to other management regions. Contributors described the following factors that contribute to the controversy and complexity of the Council's management process.

- Wicked problems: Contributors felt that the Council faces several "wicked problems" that are complicated and overwhelming to the point that the Council and its stakeholders can feel paralyzed and unable to find a pathway forward.
- Status of fisheries: The Council manages a number of overfished stocks that are not rebuilding despite the Council meeting the requirements of the Magnuson-Stevens Act (MSA). Contributors felt that low catch limits for some stocks constrain access to other fisheries, compounding poor economic performance and loss of jobs and livelihoods for some fisheries.
- Political influence: The Council operates in a region that includes several states, a large population, and strong Congressional interest in the Council's actions.
- Industry pressure: Contributors felt the fishing industry in New England is generally highly organized, vocal, and well represented politically; all of which can exert intense pressure on the Council.
- Regional culture: New England has a long history and deep cultural ties to fishing. In addition, some felt that there is a culture of intensity and conflict in the New England region, particularly around fishing issues.
- Ecosystem change: Contributors felt the impacts of climate change are particularly acute in New England, and are projected to become more extreme.
- Number of species: The Council manages a large number of stocks, which increases the magnitude of the Council's management responsibilities and volume of work required.

2.3 National laws and policies

Contributors commented on the federal laws and policies that govern the Council's work. While the MSA, National Environmental Policy Act (NEPA) and other federal laws are at the forefront of the Council's responsibilities, the Council must also be responsive to policies established by the National Oceanic and Atmospheric Administration (NOAA) and the National Marine Fisheries Service (NMFS). Contributors felt that these policies can be difficult to keep track of and that the Council largely relies on support from the Greater Atlantic Regional Office (GARFO) to help make sure the Council understands and is complying with all relevant policies.

2.3.1 Regulatory complexity

Contributors commented on the regulatory complexity of the management system, and felt that the system is becoming increasingly complicated and constraining over time. They felt that new requirements are added on top of, rather than being incorporated into, existing requirements and processes, resulting in inefficiencies and unnecessary duplication.

Contributors also reflected on the NEPA process. While some appreciated the rigor and analytical framework that NEPA provides, others felt that some aspects of the NEPA process are not necessary and detract from the Council's ability to invest time in more

valuable work. They questioned whether there are ways to reduce the regulatory burden and complexity for Council actions (see section 5).

2.3.2 Magnuson-Stevens Act

Several contributors expressed significant frustration with the MSA, and felt that the mandates of the act are unachievable. They outlined the following challenges.

- Single species management: Contributors felt that the MSA's focus on single-species accountability requirements is challenging given the dynamic nature of the ecosystem and interactions between managed species.
- Maximum sustainable yield: Contributors felt that the MSA's focus on maximum sustainable yield (MSY) is problematic, and that it is not possible to manage all stocks at or near MSY simultaneously.
- Rebuilding: Contributors felt that the requirement to rebuild stocks within ten years is not achievable for all species. They felt that more flexibility is needed, and questioned how to address the possibility that some stocks that may never rebuild to target levels.
- Overfishing: Contributors felt that managing every stock so that it is not overfished or experiencing overfishing limits the New England region's ability to achieve optimum yield by constraining access to healthy stocks.

Contributors felt that the MSA establishes a science-based management framework that does not align with scientific capabilities. For example, they described a gap between the requirement to set annual catch limits (ACLs) and the region's ability to produce high quality stock assessments (see section 8). Contributors felt that the management framework demands a level of precision and accuracy that the science is not able to provide. Some also perceived fundamental challenges with how scientific inputs are translated to management targets, including the conversion between rates (e.g., fishing mortality) and overfishing limit (OFL) and acceptable biological catch (ABC), which are expressed as amounts or pounds of fish. A specific observation was that for overfished stocks, the scientific capability to project catch and mortality years into the future may not be accurate enough to support a well-informed rebuilding plan.

Contributors who commented on the MSA-related challenges in this section also commented that they would like to see a broad redesign and/or reconciliation of the MSA to better align the management requirements with the scientific capabilities and resources available to the Council.

2.3.3 National Standards

While some contributors felt that the National Standards and their implementing guidelines are clear, others felt that the guidelines are overly complex and difficult to understand. Many contributors felt that the ten National Standards are impossible to achieve simultaneously, and described the National Standards as contradictory and often at odds. Some felt the National Standards need to be prioritized, either nationally

or for each fishery management plan (FMP), while others felt that given the accountability requirements of the MSA, the courts and NMFS have already prioritized the fulfillment of National Standard 1. Some contributors felt that the prioritization of National Standard 1 is inconsistent with the Council's task of balancing all ten National Standards.

2.3.4 Ecosystem-based fisheries management

Several contributors discussed the need for the Council to move toward ecosystem-based fisheries management (EBFM). The Council has invested significant effort to move in this direction; however, contributors felt that meaningful progress toward implementation cannot be made until fundamental barriers are addressed.

Several contributors highlighted the lack of definition and understanding around the concept of EBFM. They felt that without a concrete and shared understanding of EBFM, it's difficult for the Council and its stakeholders to translate this concept into a management framework for the New England region. Contributors felt that there are also significant legal and scientific barriers to the implementation of EBFM, specifically in terms of reconciling the concept of EBFM with the single-species accountability requirements associated with National Standard 1. Some participants felt that the Council will be unable to move forward with EBFM implementation without clear guidance on how to address what they perceive as a fundamental incompatibility.

2.4 Role of National Marine Fisheries Service

Some contributors expressed concern about the role of NMFS in the Council's decision making. While contributors appreciated the Agency's guidance and professional support some also expressed concern about the Agency's level of influence. They felt that NMFS, through their role in conducting and reviewing stock assessments, providing analysis through plan development teams (PDTs), and sitting on the Council and Scientific and Statistical Committee (SSC), is involved in all aspects of the management system and wields significant influence in the Council process. Some contributors expressed specific concerns regarding the Agency's influence over the Council's decision-making. For example, they perceive that NMFS may not be forthcoming during the development of management actions and subsequently adopt a strong position later in the process. Contributors felt that in these instances, NMFS takes the decision making out of the hands of the Council.

Contributors also questioned the relationship between NMFS headquarters (HQ) and GARFO, and the role and level of influence of both HQ and GARFO with regard to final decision-making. Some contributors also expressed concern that NMFS may be strongly influenced by environmental groups and may take independent action on issues that impact the Council and potentially undermine the Council's authority.

3. Professional support and coordination

3.1 Staff support

Contributors praised the staff involved in the New England Fishery Management Council (Council) process, emphasizing that they deserve a lot of credit for their work and the valuable support they provide to the Council. Staff across the Council, National Marine Fisheries Service (NMFS), state agencies and other management partners were described as talented, hard working, knowledgeable, dedicated to the process, and committed to their work. Some contributors noted that there can be exceptions, and that some level of challenge can exist when people work together in groups. However, the strong sentiment expressed by contributors was that staff do a great job. Some emphasized that staff don't get enough credit for their work and the support they provide to the Council process.

3.1.1 Council staff

Many contributors shared praise and appreciation for Council staff. Several commended staff for their effective organizational management, and their ability to coordinate responsibilities within and across the Council's managed fisheries. Contributors who complimented Council staff commented on the following attributes.

- Performance: Contributors recognized that being a member of Council staff is a difficult job. Council staff were described as high-performing, hard-working, highly productive, and skilled at handling the many demands and responsibilities placed on them.
- Communication: Council staff were credited for their ability to prepare and present information objectively and comprehensively, communicate effectively with the Council and public, and help Council members and others stay informed and prepared.
- Talent: Council staff were described as intelligent, knowledgeable, skilled and bringing tremendous analytical and technical capabilities to their work.
- Professional demeanor: Council staff were acknowledged as being professional, principled, neutral, respectful and fair. However, some contributors perceive a lack of neutrality with respect to plan development teams (PDTs) (see section 6).
- Availability: Council staff were described as accessible, responsive to inquiries, and quick to turn around tasks and requests.

3.1.2 State and federal agency staff

Contributors recognized that NMFS and state agency staff contribute a lot to the Council process, and extended many of the compliments they made of Council staff. Agency staff were described as highly skilled, dedicated, and talented. Staff were also praised for their analytical and technical capabilities, their responsiveness and openness to questions, and their ability to communicate complex information clearly and objectively. In particular, contributors highlighted the valuable support provided by staff at the

Greater Atlantic Regional Office's (GARFO) Sustainable Fisheries Division (SFD) through their active engagement on the Council's PDTs. Contributors also praised the contributions of members of the academic research community who support the Council process.

Some contributors perceived a difference between how Council staff and agency staff are treated in the process, commenting that the Council tends to be appreciative of its own staff, but not place as much value on the contributions of staff from other organizations.

3.1.3 Coordination among staff

Many contributors described strong working relationships among the staff involved in the Council process, and observed that these relationships are essential to an effective management process. The attributes of good working relationships were described in terms of accepting and providing criticism, sharing new ideas and suggestions, and valuing the contributions of others. Contributors also emphasized the value of having shared priorities and a strong work ethic, and being grounded in a common expectations and accountability for the work at hand.

Some contributors noted that some staff relationships are strained, particularly between Council and NMFS staff, and observed that these relationships may be influenced by the relationships between their home institutions. Contributors also noted that personality conflicts may arise, and that at times there may be friction caused by misaligned expectations and different working styles.

Some contributors perceived a formality in the relationship between the Council and NMFS, which can carry through to staff relationships and inhibit problem solving, information sharing and collaboration. They felt these challenges may require staff to go through formal channels and/or involve leadership on relatively minor requests, which can create additional work and impede creative thinking and process improvement.

Contributors offered the following suggestions to support the ability of Council and NMFS staff to collaborate, coordinate, and carry out their responsibilities effectively.

- **Create positive situations**. Contributors suggested that Council and NMFS leadership could address staff relationship issues when they arise by helping to resolve issues or by moving staff to different positions. They also noted the import role of Council and NMFS leadership in nurturing good relationships among their staff, and carefully considering the composition of teams to promote positive dynamics.
- **Reduce formality.** Contributors suggested that the Council and NMFS could consider ways of reducing the formality of relationships in order to support better collaboration.

- ❖ **Increase informal interactions.** Contributors suggested that informal interactions among staff (e.g., in social settings and through creative working sessions) can promote cross-learning, provide staff with a greater appreciation for each parties' perspective, and build foundational relationships.

3.2 Support and coordination with GARFO and NEFSC

Several contributors expressed their appreciation for the partnership and close working relationships between the Council, GARFO and Northeast Fisheries Science Center (NEFSC). They commended the staff of all groups for their devotion and professionalism in support of the complicated science and management process. Others noted that there is room to improve the relationships and coordination between and across the three organizations. Contributors also emphasized the importance of leveraging the combined resources of the Council, GARFO and NEFSC efficiently.

Overall, contributors felt that the Council receives strong support from GARFO and NEFSC. However, several contributors noted that the level of support can vary depending on the alignment of the Council's priorities with those of GARFO and NEFSC, and their respective line offices. Contributors perceived that the Council is more likely to receive strong support when NMFS leadership values the Council's work.

3.2.1 Greater Atlantic Regional Office

Several contributors commented on improvements to the relationship between the Council and GARFO. They highlighted the influence of leadership at GARFO in supporting improved communication and collaboration, increased policy and analytical support, and a commitment to partnership and problem solving. While trust and teamwork have improved between the two groups, some contributors felt that additional improvements can be made. As described above, some perceive a formality in Council-GARFO relationships, which may inhibit efficiency and creativity. Contributors also noted that it will take additional time and leadership to overcome residual strain between the organizations and fully resolve problems and tensions that have built over decades.

3.2.2 Northeast Fisheries Science Center

Many contributors recognized the volume of work and support provided by NEFSC. However, some felt that the relationship between the Council and NEFSC is strained. Contributors offered several potential reasons for this tension.

- Criticism of stock assessments: Contributors identified the divergence between stock assessment outcomes and industry perceptions of stock abundance as a source of friction between the Council and NEFSC. Some contributors felt that scientists are vilified and criticized for their work on surveys and assessments, and are defensive and reluctant to engage as a result.
- Expectations of scientific capacity: Contributors felt there is a misalignment of the Council's expectations (particularly the volume and frequency of

assessments) with NEFSC's available resources and staff capacity. Contributors also noted that those involved in the Council process may not understand that Council support is only one aspect of the broader mission and responsibilities of NMFS and NEFSC.

- Lack of mutual appreciation: Some contributors felt that the Council does not value and appreciate the amount of time that NEFSC devotes to supporting the Council. Conversely, some felt that NEFSC may not appreciate the demands on the Council and the need for science to inform their decisions.
- Cultural and professional differences: Some contributors described what they perceive as an attitude of elitism among scientists. Contributors also recognized that the Council and NEFSC "speak different languages" and operate in different spheres.
- Alignment of priorities: As noted above, some contributors observed that the priorities of the Council and NEFSC may not be well aligned. Scientists may be pulled in different directions and have responsibilities that do not overlap with the Council's needs. Some also felt that the Council may be unrealistic in the extent to which NEFSC priorities can or should coincide with the Council's. Some also shared perceptions that power dynamic between the two groups is unequal and weighted toward NEFSC.
- Incentives for Council work: Some contributors noted that scientists may not receive professional recognition for Council related work, including stock assessments and participation in PDTs. They explained that within the scientific community, peer reviewed publications are perceived as most valuable for providing recognition and advancing scientists' careers.
- Point of contact: Some contributors felt there may be a lack of clarity regarding the process for engagement between the Council and NEFSC, and the appropriate points of contacts for questions and information requests.

Contributors expressed that they would like to see improved Council-NEFSC relationships. Some felt that direct engagement by NEFSC staff is currently centered among a small number of people who gravitate toward, and are comfortable working across, the science-management interface. Some contributors would like to see more broad engagement by NEFSC staff in the Council process. They believe that increased interactions would support NEFSC staff's understanding of the management process and the issues the Council is grappling with. Similarly, some contributors expressed a desire to increase opportunities for the Council to learn about NEFSC's work and the capabilities and limitations of the science being conducted. Contributors believe a better understanding of each group's operations and needs would help improve relationships and communication, and enhance the use of scientific information into the Council process.

Several contributors expressed appreciation for NEFSC participation on the Council's PDTs, and the value of continued investment in these responsibilities. They noted that the Council receives more PDT support from some NEFSC branches than others, and

that expanding interactions outside formal PDT commitments would help better position the Council to uptake relevant NEFSC work. In particular, some contributors noted the need for increased cross-pollination with the Social Sciences Branch to help translate new research from the science to management arena. *[For Example, the North Pacific Council has a Social Science Plan Team.]*

3.3 Regional and international coordination

3.3.1 Regional management bodies

Contributors shared a range of perspectives on the effectiveness of coordination between the New England Fishery Management Council (Council, NEFMC), the Mid-Atlantic Fishery Management Council (MAFMC), which manages fisheries in federal waters from North Carolina to New York, and the Atlantic States Marine Fisheries Commission (ASFMC), which coordinates the management of fisheries in state waters from Florida to Maine.

While some felt that coordination is sufficient, many felt that coordination is a significant challenge and that there is room for improvement. Contributors' perspectives may depend on their role in the management process, the fisheries they are involved in managing, and their involvement in coordination between bodies. Overall, contributors recognized that communication and coordination have improved and would like to see additional improvement in how the management bodies work together.

Relationships

Many contributors felt that successful coordination among management bodies rests in the strength of the relationships. Several respondents observed that relationships are strained, and felt that the three bodies may not be equally committed to coordination. Others felt that the relationships are generally good. It was noted that the Council (NEFMC), MAFMC and ASMFC have different legal requirements, practices, structures, and organizational cultures. Contributors expressed a desire for improved communication and coordination and more opportunities for collaboration between management bodies.

Staff level coordination

Many contributors noted the importance of coordination among staff of the different management bodies, and felt that effective coordination does occur. Coordination was identified as particularly important for jointly managed fishery management plans (FMPs), regional topics such as habitat conservation, regional initiatives, and for fisheries that have cross-jurisdictional issues or interactions. Contributors felt that staff coordinate, contribute information, and share responsibilities effectively. Several noted that cross-regional participation on technical teams is helpful.

- **In-person interaction.** Contributors suggested providing more opportunities for in-person staff interaction (for example, attending meetings) as a way to support coordination and foster good working relationships.
- **Technical staff coordination**. Contributors suggested increasing opportunities for coordination among technical staff to increase awareness of each entity's work.

Committee and Board membership

Many contributors felt that participation by Council (NEFMC) members on MAFMC committees and ASMFC management boards (and vice versa) can be a helpful pathway for communication and coordination. However, contributors also noted that committee and board membership does not necessarily help to ensure that all management partners' interests are reflected in decision making, particularly in the case of non-voting committee seats. Contributors felt that there can be tension associated with the level of representation on committees and boards, and with the voting status of those seats.

Liaisons

The Council (NEFMC) and MAFMC utilize Council liaisons that attend one another's meetings to share updates and information. Contributors viewed liaisons as helpful, but not sufficient for ensuring mutual representation of interests; and also felt that liaisons could take additional steps to keep their respective councils informed.

3.3.1.1 Coordination with the Mid-Atlantic Fishery Management Council

Joint management plans

Several contributors felt that joint Council (NEFMC) and MAFMC fishery management plans can be challenging to administer. The Magnuson-Stevens Act (MSA) mandates that jointly managed FMPs require a majority vote by members of both bodies to submit amendments for approval. Contributors felt that moving actions through two different councils can be challenging given that the two regions may have different needs and preferences. Contributors observed that when there is not alignment management actions can stall and not moved forward. They identified the Monkfish FMP as an example of how different perspectives between the two council regions can make management of joint plans somewhat intractable.

Shared management challenges

Contributors commented on the increasing level of interaction and overlap between fisheries managed by the two councils. Species managed by MAFMC are increasingly being encountered in New England waters, which can result in complicated management issues, particularly related to bycatch. Contributors also expressed frustration that decisions made by MAFMC can impact fisheries operating in New England waters. Contributors viewed changes in species distribution as a growing problem. They felt that cross-jurisdictional conflicts and challenges are likely to increase

in the future, and noted that there is not an established process for dealing with new conflicts as they arise.

3.3.1.2 Coordination with the Atlantic States Marine Fisheries Commission

Legal foundations and procedural differences

Contributors felt that the different legal foundations of the Council and ASMFC management processes can pose challenges to coordination. The Council is required to work within the bounds and requirements of the MSA, including the requirement to set annual catch limits and accountability measures, while the ASMFC process is governed by the Atlantic Coastal Fisheries Cooperative Management Act. Some contributors expressed concern that ASMFC may be stretching the bounds of what the MSA says about state management in federal waters and overstepping their jurisdiction.

Overlap of state agency seats

The directors of state marine resource agencies are represented on both the Council and ASMFC. In many cases the same state agency staff member serves as the representative to both bodies. Some contributors felt that this crossover participation can help support coordination between the Council and ASMFC. However, others felt that state agency participation is not a mechanism for coordination and should not be viewed as such. State agency representatives are serving in different capacities when sitting around a Council or Commission table. Contributors explained that the position or votes of state agency representatives on issues in the context of one management process may not be indicative of how they will respond to similar issues in another context. They noted that states may have different objectives for managing fisheries in state versus federal waters, and look at issues differently depending on the management context. State agency representatives are considering different legal frameworks, different groups of stakeholders, and different implications for decisions, such as state management measures and state allocations. Some contributors noted that the variance in state agency positions can makes it challenging to have consistency between state and federal waters and complicates coordination between the groups.

3.3.1.3 Ideas for improving coordination and communication

Several contributors shared the sentiment that increased coordination and communication leads to better management for all, and shared the following suggestions.

- **Share resources**. Contributors suggested that sharing resources, staff support and expertise could help all management bodies operate more efficiently.
- **Invest in relationships**. Contributors felt that opening communication channels and making a shared commitment to working through existing challenges could improve relationships.

- **Increase membership on committees and boards**. Contributors suggested that increasing representation on committees and boards could promote coordination while building on existing frameworks.
- **Create new venues for interaction**. Contributors felt that using forums outside of formal Council (NEFMC), MAFMC and ASMFC meetings could help to create opportunities for dialogue. Working groups and informal meetings among leadership were suggested as opportunities for more collegial, less formal interactions and a chance to work through issues.
- **Address shared challenges**. Issues such as offshore energy are shared challenges. Contributors felt that the three management bodies could be much more effective at protecting fishery interests if challenges are addressed as a united front.
- **Re-think coordination**. Contributors felt that particularly in light of fishery impacts related to climate change, it could be helpful to take a step back and comprehensively re-think coordination and the flexibility of the management system. They suggested it could be beneficial for management bodies to carve out the time to have these conversations proactively. The Northeast Regional Coordinating Council (NRCC) was suggested as one possible venue for these discussions. Others suggested that new opportunities are needed to address cross-jurisdictional issues and engage in difficult conversations.

3.3.2 Coordination with Canada

Contributors felt that the process for coordination with Canada works well. Following some difficult negotiations, a process improvement was undertaken for the Council's participation in the Transboundary Management Guidance Committee (TMGC). The new process outlines ground rules and operations, and allows for the Council's delegates to the TMGC to develop a unified position and a consistent negotiating approach.

3.3.3 Northeast Regional Coordinating Council

NRCC coordination and role

Contributors shared different perspectives around the use and value of the NRCC, which supports coordination among GARFO, NEFSC and the three regional management bodies they serve (the Council (NEFMC), MAFMC and ASMFC). Several contributors felt that the NRCC is an important forum for coordinating stock assessments and negotiating stock assessments schedules, and providing opportunities for leadership to discuss challenges and float new ideas.

Others felt that the NRCC process is not a particularly productive or efficient forum for coordination. Some contributors perceive that the NRCC puts the three management bodies at odds with each other over limited scientific resources. They also felt that the five entities involved are not equal partners in the NRCC and that the flow of information tends to be from GARFO and NEFSC to the Council, MAFMC and ASMFC. Contributors recognized that the NRCC has expanded to address a broader range of

coordination issues; however, the time allocated for meetings has not expanded which leaves some business unfinished. They also felt that the NRCC is not effective at following through on the decisions they make.

Several contributors felt that the NRCC is not being used to its potential as a platform for coordination and collaboration. They suggested that the NRCC should incorporate more forward looking and strategic thinking on current and upcoming challenges, such as climate change, allocation and ecosystem-based fisheries management. Contributors felt that the group should have an increased focus on how changes in species distributions and reductions in federal budgets will impact the ability of science and management entities to keep pace with and adapt to change. They explained that budget reductions will increase information gaps and that the region needs to be more proactive in prioritizing how best to use the region's limited scientific capacity. Contributors also highlighted the ongoing development of the NEFSC five-year science plan as a tool for helping the region better align science and management needs.

- **Clarify NRCC role and process**. Contributors suggested that the role and mission of the NRCC could be better defined. They felt the scope and process for NRCC meetings should be articulated clearly, as well as a process for implementing and following up on NRCC decisions.
- **Document NRCC decisions**. Contributors felt that the NRCC could do a better job of documenting and communicating the group's decisions to the public.
- **Create space for more discussion**. Contributors suggested creating more space for forward-looking discussion by front-loading stock assessment coordination, perhaps through offline conversations or a conference call preceding the NRCC meeting. They felt that less structured agendas could also facilitate more proactive dialogue.

Coordinating research and management priorities

Contributors also discussed challenges and opportunities with coordinating priorities between the Council, GARFO and NEFSC, and across the five groups in the NRCC. As described previously, some observed that alignment between Council and Agency priorities influences the scientific and policy support available.

Within the northeast region each entity develops priorities independent of the other, outside of the NRCC process. Contributors suggested the NRCC could support improved coordination of priorities and resources across the two councils, ASMFC, GARFO and NEFSC. However, some noted there are limitations to how closely priorities could and should be aligned given the different missions of the five entities involved and the additional responsibilities of GARFO and NEFSC beyond direct support to management bodies.

- **Coordinate priorities and support**. Contributors suggested coordinating priorities and timelines of the Council (NEFMC) and MAFMC and the support

they need from GARFO and NEFSC. For example, the NRCC could meet early fall to outline and compare their potential priorities before final decisions are made. Contributors suggested this could allow the groups to identify conflicts and balance timelines and support better planning and efficiency of regional resources.

4. Priority and workload planning

Contributors viewed the New England Fishery Management Council's (Council) process for setting and executing priorities as an important aspect of the process, and an area where the Council could make significant improvement. They felt that the setting of annual priorities contributes to an effective public process and promotes transparency by establishing shared expectations for the Council's work. However, some contributors also felt that the Council tends to prioritize some fisheries (e.g., scallops and groundfish) over smaller, less valuable fisheries. Some also perceived that some topics, such as habitat and recreational management issues, receive less attention.

4.1 Annual priority setting process

Many contributors felt that the Council's priority setting process works well. They felt that the process is comprehensive and structured, allows for broad input from the public and the Council's subsidiary bodies, and provides a clear pathway for managers and stakeholders to bring issues to the Council's attention and suggest priorities. However, the process was also described as difficult given the challenge of reconciling different perspectives on priorities, and balancing everything that the Council wants to accomplish with the time and resources available. Contributors also noted that the current priority setting process is an improvement over the previous, more ad-hoc approach, and that the individual ranking and collating of priorities is an effective aspect of the process.

4.2 Relationship of priorities to capacity

Contributors felt that there can be a significant lack of alignment between the Council's priorities and its capacity to conduct the work. They felt that while the priority setting process succeeds at identifying priorities, it falls short in terms of narrowing priorities to a manageable level. Contributors perceived that taking on too many priorities, and adding additional priorities throughout the year, can create strain on the management process.

- Decision-making capacity: Contributors emphasized that there is a limit to how many actions the Council and its committees can address in any given year without stretching the bounds of its decision-making capacity and the limited space available in the Council meeting schedule and agendas.
- Council members: Individual Council members have a limited amount of time to dedicate to their Council and committee duties. Contributors felt that a high volume of priorities and actions can stretch the limits of Council members. They also noted that overloading Council and committee members can impact their ability to prepare, understand the analysis and materials, and engage in thorough decision making.

- Council and PDT staff: Contributors felt that an overload of priorities and workload puts significant stress on Council, Greater Atlantic Regional Office (GARFO) and Northeast Fisheries Science Center (NEFSC) staff. Contributors felt the demand for staff and support often exceeds capacity and that additional responsibilities can be shifted to plan development teams (PDTs) and Council staff as the Council system becomes overloaded.

Contributors noted that there can be tradeoffs between the volume, quality and timeliness of the Council's work. They felt that spreading resources among a high number of priorities can come at the expense of quality and efficiency. Contributors felt that it can also be difficult for the Council to focus, leverage the necessary resources, and move actions through in a timely manner. Contributors noted that the Council may inadvertently erode trust with its stakeholders when it does not follow through on its priorities or when it makes ad-hoc changes to priorities.

Contributors highlighted a number of factors that may contribute to the challenge of setting, maintaining and completing priorities, and suggested opportunities to improve the Council's priority setting process and align workload with capacity.

Changing and adding priorities

Contributors observed that the Council's priorities are continually changing and expanding. While the flexibility to adapt and respond as new issues emerge was identified as an important aspect of the Council process, contributors also felt that the Council rarely removes existing priorities to make room for the additional actions.

- **Leave some breathing room**. Contributors suggested that beginning each year with a more manageable list of priorities would provide some flexibility for the Council to address new priorities as they inevitably arise throughout the year.
- **Consider a process for revising priorities**. Contributors suggested developing a more structured process for adding and revising priorities throughout the year. They felt this could help the Council consider whether it has the capacity to take on additional actions, and illuminate tradeoffs to existing priorities posed by the addition of new priorities.
- **Draw a firm line**. Contributors suggested setting a firm limit on how many priorities will be addressed each year, and focusing the Council's work on completing those priorities.
- **Increase the threshold for approving changes**. Contributors suggested that adjusting the threshold for approving a change to priorities, such as requiring more than a majority vote or requiring approval from the Council's Executive Committee, could limit mid-year additions and/or changes to priorities.

Addressing mandatory actions

Contributors explained that a high proportion of the Council's annual priorities relate to the fulfillment of federal mandates, limiting the amount of bandwidth available to

address other priorities. The Council's priorities and bandwidth can also be influenced by litigation.

- **Start with baseline capacity.** Contributors suggested the Council could be more realistic about what it can accomplish, and the limits to the human resources it has available. They felt that beginning with a clear understanding of routine and mandatory actions and the amount of time required could provide a good starting point for a more realistic discussion of priorities.

Understanding capacity and workload

Contributors perceived that the workload and time commitment associated with each priority is not well understood. While capacity may be easier to estimate for a single action or multiple actions within a single fishery management plan (FMP), they noted this can become increasingly difficult for more complex actions and those that span FMPs. Contributors also recognized that there are capacity constraints across the Council's priorities and bottlenecks within the system that can slow progress. Contributors emphasized that Council actions are only one aspect of the work that goes into supporting the process. Significant resources and time are dedicated to managing ongoing initiatives, research programs and coordination with other bodies.

- **Align priorities with capacity**. Contributors suggested that developing a better understanding of the constraints and capacity available at a system, Council, FMP and staff level could be helpful context for right-sizing priorities.
- **Outline staff capacity**. Contributors suggested evaluating capacity at the staff and PDT level. They felt that this could provide a better understanding of each staff's responsibilities, how actions may draw on staff across roles and FMPs, the range of time and effort required for various actions, and bottlenecks in capacity and information. Contributors suggested that increased project management at the individual staff level could help provide concrete information on staff capacity to support the Council's priority planning process. They also proposed that that increased planning and communication between PDTs and committees may provide a better understanding of available capacity and help prioritize work within existing priorities (see section 6).
- **Allocation of Council staff resources**. Contributors suggested that additional cross-training among Council staff could provide additional backup for executing actions and priorities and allow staff to shift between FMPs. They also felt that creating some level of redundancy could support a more responsive and balanced allocation of staff resources.
- **Enlist contractors**. Some contributors mentioned that enlisting contractors has been a valuable way for the Council to bring in additional capacity, and may be a helpful practice for the future. However, some noted that there are limits and costs associated with contracting. They felt that it can be difficult to find contractors with the knowledge and skill to augment staff capacity, and that it can take significant time to train contractors.

- **Increase coordination with partners**. Contributors suggested that increased engagement from GARFO and NEFSC early in the priority setting process, along with a clear articulation of the resources they are able to contribute, could help the Council in setting priorities, planning timelines and aligning information and staff availability.

Extending and expanding timelines

Contributors felt that completing priorities may take longer than initially expected and sometimes priorities may spill over into subsequent years. They explained that this can be particularly true of large amendments, controversial actions, and broad initiatives that have been slow or difficult to move forward. Contributors also acknowledged that there is a relationship between the Council's priorities and its approach for developing, analyzing and taking action on FMP amendments and framework adjustments (see section 5).

- **Link priorities across years**. Contributors suggested that grounding priority setting in the context of what was accomplished in the proceeding year could provide a helpful frame of reference. They also emphasized the need to account for open actions and multi-year efforts when planning priorities for the coming year.

Responding to industry needs

Contributors felt the Council has a difficult time "saying no" to issues that are important to stakeholders. They perceive that responding to stakeholder concerns and pressure can contribute to adopting too many priorities for the upcoming year and prompt the Council to add additional priorities throughout the year.

- **Prioritize based on impact and importance**. Contributors suggested considering overall fishery outcomes when setting priorities and focusing on the actions that are most important for achieving those outcomes. They felt this could help the Council align the time invested in an action with the relative importance of the action to the fishery.

Creating time for planning

Contributors felt that the rapid pace of the Council process can make it difficult to take a comprehensive approach to priority setting and workload planning, and to strategically revisit priorities throughout the year.

- **Prioritize priority setting.** Contributors felt the Council could benefit from recognizing the system-level challenges around priority and workload planning and devoting the time to reflect and improve its approach.
- **Prioritize toward a long-term vision**. Contributors suggested the Council could ground its priorities in a long-term vision and goals for its fisheries (see section

11). They felt this could help with identifying high priorities and filtering mid-year additions to the Council's priority list.

- **Reorganize priorities.** Contributors suggested that a coarser approach to ranking priorities may be beneficial. For example, defining priorities as high/medium/low or long term/short term may allow for a more focused approach without constraining priorities to a single year.
- **Take a systematic approach**. Contributors suggested exploring system-level and structural opportunities to improve its workload management and efficiency (see section 5).

5. Management through fishery management plans

Some contributors felt that the model and structure for the New England Fishery Management Council's (Council) fishery management plans (FMPs) works well. Others felt the organization of stocks into FMPs and the way these FMPs are managed can present challenges that may warrant reconsideration. However, contributors also noted the difficulty of transitioning away from a longstanding approach that is engrained in the Council process.

5.1 Fishery management plans

5.1.1 Considerations and challenges

Ecosystem-based fisheries management

Several contributors noted that as the Council continues to work toward ecosystem-based fisheries management (EBFM) the scope and structure of the Council's FMPs may need to evolve in step. They suggested that EBFM may be an opportunity for the Council to take a strategic approach to considering the organization of its FMPs.

Fishery management plan performance

Contributors felt that some FMPs tend to function better than others. The factors they perceive as influencing FMP performance include the availability of scientific and staff resources, the flow of information among and between the Council and its subsidiary bodies, and internal and external coordination. Contributors noted that FMPs that involve significant overlap with one another, and FMPs jointly managed with the Mid-Atlantic Fishery Management Council, can be particularly challenging to administer.

Overlapping issues

Contributors noted that the species-specific nature of FMPs can make it difficult to address cross-cutting issues. They felt that it can also be challenging to address issues at a regional level, and coordinate issues that span multiple fisheries. Another observation was that the structure of FMPs can create administrative and management "silos" that increase complexity.

- Bycatch interactions: Contributors felt that bycatch interactions across fisheries can pose a significant challenge. For example, groundfish and skates are target stocks as well as incidental catch in other fisheries. Some contributors expressed concern about the current approach of setting annual catch limits (ACLs) and making allocation decisions on sub-ACLs within the targeted fishery's FMP, and perceive that this can create conflicts among user groups and interests and result in inefficient resource use. They also felt that setting accountability measures (AMs) and monitoring requirements for sub-ACLs under a separate FMP was problematic. Some contributors recognized the burden this places on

stakeholders who have interests in multiple fisheries managed under different FMPs.

- Crosscutting issues: Contributors acknowledged that large-scale challenges with regional implications (e.g., climate change) can be difficult to address at the FMP level. Other topics and initiatives that span fisheries and FMPs (e.g., monitoring) can also be challenging to address in isolation. Contributors noted the importance of good communication across staff and FMPs for addressing crosscutting issues. They also highlighted the importance of using resources efficiently given the potential for overlap and/or duplication of efforts occurring at the regional and FMP levels.

- Administrative silos and complexity: Contributors felt that interactions across fisheries can create policy and administrative challenges. They described management silos created by fishery specific FMPs and the difficulty of addressing challenges in one fishery that would require the implementation of an action through another FMP that may not have an open framework or amendment. Contributors also felt that addressing issues and interactions within individual FMPs can increase management complexity and result in unintended consequences.

5.1.2 Ideas for changing fishery management plans

Several contributors felt that the Council's FMPs could be simplified and allow for greater flexibility, and shared the following ideas.

- **Rethink how FMPs work together.** Contributors suggested that the Council could explore the interactions between FMPs and the potential impacts of isolated management measures in order to consider a more holistic and efficient approach. They also proposed that this could include consideration of how the Council allocates ACLs across a series of sub-ACLs, and the associated tradeoffs with utilization, accountability and uncertainty.

- **Improve coordination mechanisms**. Contributors suggested that the Council could improve coordination through increased use of working groups and committees. They felt that crosscutting working groups could help address topics and issues that have relevance to more than one FMP*. [For example, the North Pacific Council has an electronic monitoring working group that includes agency and state staff, monitoring providers, and stakeholders.]* Contributors also suggested that forming new and/or better engaging existing Council committees could provide oversight and guidance to help bridge FMPs and topics. For example, contributors suggested that the Council's Observer Policy Committee could play a larger role in the development of the industry funded monitoring omnibus amendment.

- **Revise the approach for setting ACLs**. Several contributors recommended considering a different approach for setting ACLs. Contributors provided two specific suggestions.
  - **Inter-committee process.** Contributors suggested developing an inter-committee process to allow for broader consideration of ACL allocations across fisheries. They felt that this would allow for ACL decisions to be debated on even footing with all pertinent information available and all interests represented in the discussion.
  - **ACL management plan.** Contributors suggested developing an ACL management plan that sets catch limits and AMs for all stocks and allows for modification every year. They felt that an ACL FMP could allow the Council to take a comprehensive and explicit approach to allocating ACLs among directed and bycatch fisheries. They also suggested that ACL decisions could be made by the Council as a whole rather than through subcommittees to ensure a transparent process.

- **Move toward a simpler approach**. Contributors suggested reevaluating the Council's management plans with the aim of taking a simpler and more consistent approach. They proposed the Council could simplify its management by specifying management measures in less detail and delegating more responsibility, within certain parameters, to the industry and/or National Marine Fisheries Service (NMFS). Contributors felt this would reduce the amount of time the Council spends specifying the details of management measures and create more space to work on bigger issues. They also suggested that this would provide the industry and/or NMFS with more flexibility to respond to problems and update regulations.

- **Consider fewer and reorganized FMPs**. Contributors suggested reorganizing and reducing the numbers of FMPs the Council manages. In addition to addressing some of the challenges identified above, they felt this could reduce the number of committees and make the Council more efficient. Contributors proposed ideas that included combining the Skate and Monkfish FMPs; arranging species into demersal, pelagic and shellfish FMPs; forming regional FMPs (e.g., Gulf of Maine, Georges Bank, Southern New England); and managing habitat by ecosystem areas.

5.2 Amendments and framework adjustments

Contributors felt that having two different pathways (amendments and framework adjustments) available for making different types of changes is helpful. They recognized that making changes to FMPs takes a long time and that management can lag behind the needs of the fishery. Contributors suggested that finding ways to streamline the process for amendments and framework adjustments would help the Council to make decisions and have regulations implemented in a more timely manner.

5.2.1 Timing considerations

Tradeoffs in time and public participation

Contributors described framework adjustments as a quicker pathway for routine or less in depth changes, and amendments as a more robust pathway and longer process for working through more complicated and/or controversial issues. They acknowledged that there are tradeoffs in terms of timing, analysis and public process between these different pathways, and felt that amendments and framework adjustments offer the Council the ability to move different types of actions forward at an appropriate speed and level of analysis. Contributors also noted that while there are benefits to expediting the process it is important to ensure the Council doesn't move too quickly at the expense of public awareness and opportunities for public input.

ACL specifications and small changes

Contributors suggested developing a faster process for making small or routine changes. They felt that this could help align the timing and relative need for analysis for small actions, and make routine actions, such as ACL specifications, more responsive to new information.

- **Streamline the specifications process**. Contributors suggested using a streamlined process for ACL specifications. They felt that a strict focus on ACLs would make specification actions more efficient and could potentially allow for a streamlined National Environmental Policy (NEPA) process (see below).

Progress on large amendments

Contributors felt that it can be difficult to move larger amendments forward. They explained the difficulty in carving out time for larger amendments with a suite of other framework actions and routine measures, such as ACL specifications, continually underway. Contributors felt that juggling so many actions can make it challenging for the Council and its subsidiary bodies to maintain focus and move amendments forward in a timely fashion.

- **Prioritize time for amendments**. Contributors suggested finding ways to set aside time for larger amendments to ensure they are not delayed and that the development process is not unnecessarily protracted.

NEPA Requirements

Contributors reflected on the substantial time needed to fulfill NEPA requirements and suggested exploring way to streamline this process. They felt that plan development teams (PDTs), Council staff, and NMFS staff invest a substantial amount of time analyzing, drafting and reviewing sections required under NEPA, many of which do not appear to be relevant to the Council action.

NEPA analysis requires complicated, detailed documentation even for relatively minor actions. Contributors felt that these large documents are cumbersome, inaccessible to the public and may not even be used directly in decision-making. They noted that Council staff and PDTs often develop decision documents to make the information less overwhelming and help the Council focus on the analysis and information that is relevant to the decision at hand. Overall, contributors felt that NEPA requirements create a tremendous burden on staff at the expense of their ability to focus on other work.

- **Develop a programmatic EIS.** Contributors suggested developing a programmatic environmental impact statement (EIS) to facilitate a subset of Council actions (e.g., ACL specifications) and/or span all Council actions. This programmatic EIS could cover analysis and descriptions that pertain broadly to the region, compiled into a living document that could be updated as necessary. Contributors felt this approach would allow specific actions to tier off a broader EIS, make action-specific documents shorter and easier to understand, and free staff to work on other things. *[For example, the North Pacific Council uses a programmatic EIS for ACL specifications].*

5.2.2 Focus and objectives for management actions

Contributors noted that overall the process for developing, analyzing and taking action on frameworks and amendments works well. However, contributors identified some significant challenges with the way the Council approaches and moves actions through the process, and the way those challenges impact the broader system including timelines, analysis and efficiency.

5.2.2.1 Overloading actions

Contributors frequently commented on what they perceived as the Council's tendency to overload and continually add to its actions, particularly framework adjustments. While some felt this tendency is driven by good intentions to address as many problems as possible, they explained that taking on too many actions in a single framework or amendment can be counterproductive to the goal of addressing issues in a timely and efficient manner. They also noted that when issues are added in mid-stream, the process can become less linear and more difficult for the public to follow. Contributors felt that the tendency to overload actions can be particularly problematic for framework adjustments that include specifications, given the urgency of these actions.

Contributors also emphasized that overloading actions can impact the Council's ability to achieve their annual priorities. When actions are expanded upon, timelines may be jeopardized and PDTs may have to divert time from other priorities to complete the additional analysis. Contributors also noted that making additions can complicate the previously completed analyses of other actions contained within a framework or amendment.

- **Focus on completion**. Contributors suggested keeping frameworks and amendments limited in scope so that they can be completed in an efficient and timely manner. New actions could then be initiated to address additional issues.
- **Ground in priorities**. Contributors suggested considering any additions to frameworks and amendments within the context of the Council's priorities and the constraints of the existing timelines and bandwidth (see section 4).

5.2.2.2 Focus and commitment

Several contributors felt that the Council and its committees can lack focus during the development of actions and a commitment to following through on the actions that have been initiated.

Delaying action and indecision

Contributors perceived that the Council struggles to move forward with issues and actions that do not have clear support for resolution. They felt the Council can reach an impasse when there are strong voices who want to see an action completed and implemented, and strong vioces who want to see work stopped altogether. Contributors felt that this dynamic can play out in terms of starting and stopping work, changing directions, and creating delays; for example by moving other priorities ahead of a particular action. They described that this lack of direction and progress can consume a considerable amount of time and staff resources, potentially at the expense of other Council priorities. Some contributors felt that a perceived lack of commitment to completing actions can erode trust with the public, and can also makes public participation less constructive. For example, they felt that the public may become motivated to derail actions they do not support rather than working to find alternatives that they can support. Other contributors felt that the Council is wasting time and resources by continuing to work on actions that are not likely to gain clear direction or adequate support.

Contributors also felt that the Council may delay decisions that it doesn't want to make or "kick the can" on particularly controversial issues. Some perceived that the Council may make additions to the scope of actions or make adjustments to management alternatives as a way to buy more time before making a decision. Contributors also felt that the Council may continue to request more and more information and potentially become paralyzed by indecision when the issue at hand is poorly defined and/or bounded.

- **Follow through on commitments**. Contributors suggested that the Council would benefit by following through on the actions it has committed to, even if the Council ultimately arrives at a decision of "no action."
- **End unproductive actions.** Contributors suggested that the Council would benefit by reconsidering and potentially ending work on actions that do not have sufficient support and/or a clear path forward.

Council focus

Contributors felt that the Council can lack focus. They perceived that on larger projects the Council may initiate an action and over time lose interest or divert attention to other priorities. Contributors also felt that the Council can lose focus on the main issue at hand and spend too much time discussing the details of an action or considerations that are peripheral. They perceived that the Council and committee can "lose the forest for the trees," using time and resources to make relatively minor adjustments to actions at the expense of addressing more pressing issues.

5.2.2.3 Management alternatives

Contributors felt that, in addition to expanding frameworks and adjustments, the Council often expands the scope of its existing actions by adding and changing management alternatives. They perceive that this tends to occur when the Council is faced with a complex issue or hasn't clearly defined goals for the action. Contributors noted that making a significant number of changes, particularly last minute changes, to management alternatives can make it difficult for PDTs to provide additional analysis in time for the Council's final decision.

Contributors explained that as alternatives grow in number they can also grow in complexity, parsing out different approaches and measures at a very fine scale. They cautioned that this can increase the difficultly and time required for analysis, and that at times it may not be possible to differentiate impacts between alternatives with the available data. They also noted that the complexity and number of management alternatives can make it difficult for the public and the Council to fully understand the intent and implications of the different options. Contributors discussed the importance of effective collaboration between committees and PDTs to develop management alternatives that are likely to produce the desired result and can be analyzed effectively. They also noted the importance of the Council and its committees taking an active role in generating management alternatives to ensure that they are practical and likely to be considered.

- **Frontload thinking**. Contributors suggested dedicating more time and thought to the initial development of management alternatives. They felt this could help better outline the range of options and focus analysis and consideration on alternatives that are more likely to be considered and/or adopted.
- **Improve focus.** Contributors suggested bringing more focus to the development of management alternatives and limiting last minute additions, as a way to facilitate more efficient use of the Council's technical and analytical resources.

5.2.2.4 Goals, objectives and purpose

Purpose for actions

Contributors felt that the Council may be quick to respond to concerns and initiate actions without first identifying the underlying problem and articulating a clear purpose.

They noted this may be driven by the need to respond to stakeholder concerns and the emotion or conflict behind the problem. Contributors felt that when the Council does not articulate a clear purpose, the development of the action may be inefficient, and may ultimately result in an action that does not align with the Council's intention or the expectations of its stakeholders.

- **Define problem and purpose**. Contributors suggested that the Council could dedicate time up front to understand and define the problem at hand before making a commitment to initiate an action.

Goals and objectives

While some contributors felt that the Council's effort to set goals and objectives has improved, others identified this as a significant challenge. They felt that the Council does not always articulate clear goals and objectives, which can lead to frustration and different expectations for what the action is intended to achieve. Some also mentioned that when the objectives for an action are not articulated, the Council may "put the cart before the horse" in terms of developing alternatives for which the intent is not clear. Contributors noted that goals and objectives are important for guiding the development of management alternatives, providing clear metrics for analysis, and framing Council deliberations. Additionally, goals and objectives support transparency by providing an explanation for why and what the Council is doing and helps to focus public input.

- **Articulate goals and objectives**. Contributors suggested the Council could take additional steps to clearly articulate goals and objectives for its actions. They also highlighted the value of specific and/or quantifiable objectives to support decision-making and evaluation of the action.
- **Develop templates**. Contributors suggested developing templates that the Council could use when initiating and making decisions on an action. For example, a specific suggestion was that templates could help support the articulation of 1) problem statement (What is the problem we are trying to solve?), 2) goals (Why are we doing this?), 3) objectives (What are we trying to achieve?), and 4) rationale for the motion (How will this action address the problem and achieve the objectives?). Contributors felt this approach would support clear communication with the Council's subsidiary bodies, advisors and the public.

Articulating intent

Some contributors felt that public pressure and political strategy can influence how the Council selects and frames its actions. For example, they felt that the Council may choose to take up an issue in response to pressure without clearly defining the problem and the objectives for an action. Contributors noted that while there is strategy involved in the Council process, it can be frustrating to stakeholders and impact the efficiency of the process when Council members don't clearly articulate their position on an issue.

- **Represent intent accurately**. Contributors suggested the Council could think concertedly and place additional focus on accurately communicating the intent of their actions. They felt this could support trust with the Council's stakeholders and focus the Council's work and resources.

5.3 Agency approval of Council actions

Some contributors felt that the Agency's process and timeline for review and approval of Council actions is unclear. They noted that while upfront dialogue between the Council and NMFS on Council actions has improved, there are still times when the Agency's review results in surprises. Other contributors noted that there are times when the Council may not listen to Agency advice, which can result in some aspects of the action not being approved. Contributors felt that additional steps could be taken to ensure that issues are worked out and that submitted actions can be approved.

- **Clarify NEPA and review process**. Contributors suggested that improved communication about NEPA requirements and the process and timeline for Agency review and approval would be helpful to clarify and set common expectations for the process.

6. Structure and use of subsidiary bodies

Contributors felt that the New England Fishery Management Council (Council) structure and extensive use of subsidiary bodies, including committees, plan development teams (PDTs) and advisory panels (APs) for each of the Council's fishery management plans (FMPs), supports an effective and efficient management process. The Council is able to leverage the expertise of each body and its Scientific and Statistical Committee (SSC) to support a comprehensive process that allows for the thorough exploration of issues, options, and alternatives. The use of these groups also contributes to transparency and provides additional opportunities for stakeholder input.

Several contributors highlighted the management of the scallop fishery as an example of the effective interplay between these groups. They felt that the process does not always work smoothly for other FMPs, depending on the fishery and the individuals involved (e.g., advisors, decision-makers, and supporting staff). Contributors identified several factors that contribute to the effective functioning of each body, including strong chairmanship, effective communication, clear guidance, efficient use of expertise and time, and an understanding of each group's respective role in the process.

6.1 Committees

6.1.1 Introduction

Many felt that the Council's extensive use of committees is a strength, and that the committee structure enables the Council to work through issues thoroughly and efficiently. Committees were described as the "backbone" of the Council process. Contributors explained the role of committees as working through the details of actions, options, and alternatives; considering the information and input presented; and supporting thorough exploration of the issues at hand. They felt that committees bring focus to the Council's work, allow for close collaboration with PDTs and APs, and provide additional opportunities for public participation and comment during the development of management actions. Contributors explained that this process allows for robust deliberation and debate, and ensures that management alternatives are well crafted before the Council makes a final decision. Contributors also felt that committees do a good job of communicating their discussions and recommendations for the Council's consideration.

Some contributors noted that a drawback to the Council's use of committees is the potential to limit discussion of an issue by the full Council, which may perpetuate the perception that decisions are already made before the Council votes (see section 7). Some committees are perceived as functioning more effectively than others. Contributors identified several factors that may influence the functioning of the committee process.

- Size: Committees may be less effective when they are composed of too many Council members. The size of the committee may impact its efficiency.
- Staffing support: Committees are most effective when they have sufficient staff support. Contributors fell that some committees are well staffed while others have fewer staff to support their work. They also noted the value of neutral, well-informed and timely support by Council staff and PDTs.
- Representation of perspective: The composition and balance of perspectives among committee members can influence whether committees are able to identify compromises and produce recommendations that are supported by the full Council.
- Leadership: Committees work well when chairs are perceived as neutral, transparent, and committed to supporting a thorough and efficient process.

6.1.2 Additional considerations

Contributors shared additional input and observations regarding the effective use of committees.

Committee of the whole

Some contributors noted that when the Council is considering controversial topics, committees may struggle to generate recommendations that are amenable to the full Council. Spending time on issues that are re-debated with the full Council may not be an efficient use of committee time. Contributors noted that while there can be tradeoffs and inefficiencies associated with committees of the whole, this approach may be worth considering in some cases to support overall efficiency.

Committee composition

Contributors described that committees rely on the skill, experience and expertise of their members. However, they felt there is a tradeoff with this expertise in that committees can place Council members with the strongest interest in the outcomes in a position of influence. Committee composition can affect a group's consideration of issues and management actions, as well as the issues that are taken up as management priorities for each FMP. Contributors emphasized that balancing the interests represented on committees helps to support fair and evenhanded decision-making.

- **Balance participation.** Contributors suggested limiting committee membership by Council members with interests in the fishery and avoiding a majority composition of members who represent specific and/or direct interests.
- **Diversify Executive Committee.** Contributors suggested revisiting the composition of the Council's Executive Committee to diversify representation across states and different perspectives.

Committee meeting materials and preparation

Committee responsibilities require advance preparation. Some contributors commended committee members for reviewing materials and coming prepared for

discussion, while others noted that lack of preparation by committee members can been a challenge. Contributors felt that lack of advance preparation can slow down the committee process and require committees to use meeting time to bring members up to speed. Contributors acknowledged that committee members are balancing many duties, and that the committees are presented with a high volume of information, and may also receive meeting materials without sufficient lead time (see section 9).

- **Consider committee bandwidth**. Contributors suggested, given the substantial commitment that committee membership requires, considering the bandwidth of Council member and their ability to serve on multiple committees.
- **Manage committee workload**. Contributors suggested the Council and its committees could refine priorities and narrow the number of actions under consideration to help make committee workloads more manageable.

Investment and focus

While the committee process can be time-consuming, it promotes transparency and allows more opportunities for public involvement. Contributors felt that strong committee investment and engagement in the details of an action, particularly the development of management alternatives, allows the public to better engage in the idea-generating process. They noted that this also creates a clear line of tasking for the PDT and AP and better links their work and advice to the decision process. Contributors also described that a downside to the in-depth committee process is the potential for members to get overly caught up in details. They felt that committees may lose sight of their objectives and that the scope and focus of an action may wander. This can expand the scope of information and analysis requested of the PDT, and perhaps not focus their time efficiently.

6.2 Plan development teams

6.2.1 Introduction

PDTs are tasked with developing options and performing technical analyses with guidance from the Council and committees. Contributors generally felt that the PDT process works well, while noting several existing challenges and that the effectiveness of PDTs may vary by FMP.

Contributors recognized the high quality and volume of work produced by PDTs, often under tight timelines. They acknowledged the contributions of Council, National Marine Fisheries Service (NMFS), state agency and other staff who dedicate their time and technical expertise to the process and reiterated the praise shared in section 3. PDT members were commended for their understanding of the science and management processes, their communication skills and their responsiveness to questions and information requests.

6.2.2 Composition and staffing

Many contributors felt that PDTs are overextended and strain to keep up with Council's analytical and technical needs (see below). Despite these challenges, contributors shared positive personal experiences working for and with PDTs. In particular, they valued the strong collaboration among PDT members, and the ability of PDTs to leverage the expertise of their members to provide high quality analyses in support of the Council's work.

6.2.2.1 Staffing and capacity

Contributors felt that PDTs receive different levels of staff support. The groundfish and scallop PDTs are viewed as well staffed in comparison to PDTs for FMPs that are perceived as lower priorities (see section 4). Larger PDTs provide more opportunity to distribute the workload, while smaller PDTs can place more of a strain on individual PDT members.

Several contributors noted that the Greater Atlantic Regional Office (GARFO) and Northeast Fisheries Science Center (NEFSC) provide a significant level of investment and support for the Council's PDTs (see section 3). Others felt that the Council does not get consistent support from the NMFS and that the level of Agency engagement varies across FMPs. Contributors also acknowledged that NMFS has limited capacity to support the Council's work and that PDT participation may be unappealing for NEFSC staff who feel personally criticized for their work on stock assessments. Some felt that the level of support from state agency staff and academic researchers can also be inconsistent. Contributors also noted that participation by PDT members may also vary depending on how relevant the action is to their work and interests.

When PDTs have insufficient staffing, there are fewer individuals to share the workload. Contributors noted that Council staff often take on additional work when there are capacity shortfalls, which can be challenging when they do not have the expertise or capacity to fill the gap, particularly when capacity shortfalls become apparent at the last minute. Contributors emphasized that there is a mismatch between the volume of work PDTs are expected to accomplish and the level of support on which they can consistently rely.

- **Structured review of PDTs**. Contributors suggested the Council could undertake a structured review of the composition, expertise and engagement of its PDTs to ensure they have sufficient support and adjust membership as appropriate.
- **Create redundancies**. Contributors suggested that PDTs could benefit from some level of redundancy in capacity and technical expertise. They felt that including a vice-chair from Council staff for each PDT would also be helpful for providing additional backup.

6.2.2.2 Continuity and distribution of technical work

Contributors felt that the Council's use of standing PDTs (as opposed to teams convened to support a specific action) provides continuity that is beneficial to the process. They described that the shared knowledge and experience gained by PDT members is an advantage, but that staff turnover can be a challenge.

A few contributors also observed that Council staff serve on PDTs in different capacities. The Council provides technical staff for some PDTs, while Council staff may serve more of a generalist and/or coordination role on other PDTs. Contributors felt that while this ad-hoc approach has worked well to date, it can make it challenging to understand the division of responsibilities between NMFS and Council staff across PDTs.

Some contributors commented on the importance of dividing responsibilities and leveraging the expertise of PDT members strategically. In particular, they felt it is most efficient to task NEFSC and technical staff with technical and analytical work, and employ those with less technical expertise to conduct simple analyses and draft sections of documents. Contributors also noted that it can be difficult to get information and analyses from technical staff who are not formally members of the PDT.

6.2.2.3 Composition

Contributors emphasized the importance of having diverse representation of expertise on PDTs. They explained that diversity of expertise is helpful for balancing workloads and analysis and also facilitates a more robust consideration of biological, social, and economic impacts and considerations. Contributors noted that for some FMPs, the composition of PDTs tends to be heavily weighted to NMFS staff. Strong participation by NMFS staff is valued; they can provide access to information, conduct complex analysis and coordinate with different offices at the GARFO and NEFSC. However, several contributors noted that it would be helpful to diversify membership by including more PDT members from academic institutions, state agencies, and other groups with technical skill.

- **Incentivize participation**. Contributors suggested identifying opportunities to incentivize PDT participation and recognize the time commitment involved in PDT service.

Contributors provided the following suggestions for providing specific skill sets and expertise to the Council's PDTs.

- **Social science**. Contributors suggested that additional NEFSC social science support would be helpful for the Council's PDTs. They felt that this increased participation on PDTs could also facilitate the integration of work by the NEFSC Social Sciences Branch. Contributors also suggested that social science expertise is needed at GARFO to support PDTs.

- **Economics.** Contributors suggested that additional PDT staffing by NEFSC economists would help provide additional support and allow for a deeper exploration of economic tradeoffs, particularly long-term and short-term economic tradeoffs.
- **Recreational data**. Contributors suggested including staff on the groundfish PDT who are familiar with recreational data collection methods and the Marine Recreational Information Program. They felt this would help the PDT and Council to better understand the data and analysis used to develop recreational management measures (see section 8).

6.2.3 Internal coordination and workload

6.2.3.1 Leadership and coordination

Relationships among PDT staff

Effective working relationships among PDT staff are an important ingredient to success. While many contributors commented on good working relationships among PDTs, they also noted that there can be personality conflicts and different levels of effort and investment among PDT staff. Contributors noted that PDT staff relationships may reflect the organizational-level relationships between GARFO, NEFSC and the Council (see section 3).

Plan Development Team leadership

PDTs are chaired by Council staff, who are responsible for managing and coordinating the work of their teams. Several contributors highlighted the importance of effective PDT chairmanship for ensuring timely, high-quality analysis. Strong chairs were described as collaborative, impartial and transparent. PDT chairs help their teams work productively and efficiently by focusing the PDT's work, aligning bandwidth and priorities, and helping to keep the group on track. Contributors also acknowledged that PDT chairs have a particularly difficult job.

Management and accountability

Contributors described that while PDT chairs are ultimately responsible for the completion of their team's work, they are not in a position to hold PDT members accountable for providing the necessary support and completing their work on time. They noted that PDT members often have heavy workloads and competing priorities, and work at the direction of their supervisors. Contributors shared the following suggestions to improve performance and accountability on PDTs.

- **Clear Expectations**. Contributors suggested setting clear expectations for each PDT members' contributions.
- **Incentivize performance**. Contributors suggested establishing incentives to encourage PDT participation and recognize strong performance by PDT members.

- **Cross-institutional evaluation opportunities**. Contributors suggested providing opportunities for PDT chairs and PDT members to provide input into one another's performance evaluations.

6.2.3.2 Action plans

Contributors shared a range of perspectives on the use and value of action plans, which are used to outline and document activities, responsibilities, and timelines for supporting Council actions. Some contributors described using action plans routinely, while others use them in a limited capacity or not at all.

Benefits of action plans

Contributors felt that action plans can help facilitate good communication among PDT members and across partner organizations by aligning expectations, supporting timely completion of work products, and ensuring that supervisors understand the commitments of their staff. Action plans also outline the process and timing for Agency review and approval, which helps to communicate the steps involved in rulemaking. Contributors noted that actions plans can also be beneficial at a finer scale, such as coordinating data extraction and analysis and ensuring all PDT members agree on the approach being used.

Challenges with action plans

Some contributors felt that action plans are not always used effectively, and that despite the development of comprehensive action plans the execution and accountability to the plan are lacking. They described that this can leave PDTs, particularly Council staff, shorthanded and scrambling to complete the work. Some contributors noted that the work and timelines outlined in actions plans does not always align with the priorities and availability of NMFS staff. They felt this may be the result of supervisors not reviewing or being adequately engaged in the development of action plans.

Contributors felt that action plans are less meaningful for actions with open-ended timelines due to the difficulty of predicting and planning the workload. Contributors noted that the frontloading of work outlined in action plans is not occurring and that there is still a rush to meet deadlines. They acknowledged that it is difficult to carve out time for planning and adhering to those plans when staff are overextended.

Suggestions for action planning

Several contributors expressed a desire to use action plans more frequently and effectively to improve communication, align expectations, and provide accountability. Contributors noted the capacity constraints of the Council and NMFS, and suggested that better alignment between the Council's priorities and PDT bandwidth could alleviate some of the challenges with executing action plans (see section 4). Contributors suggested reviewing and improving the action planning process, but also felt the process should remain flexible to allow different groups to use them most

effectively. For example, some felt that the roles and division of labor are clear and that work is completed effectively without the need for an action plan.

- **Reinvigorate action plans**. Contributors suggested reflecting on the use of action plans to date and identifying opportunities to increase the value and use of action planning.
- **Coordinate across action plans.** Contributors suggested that Council staff could collectively review action plans for actions in progress to proactively plan workloads.

6.2.4 Analysis

Several contributors commented on the analytical work conducted by the PDT and expressed appreciation for the quality, volume and thoroughness of analysis they produce. Contributors also recognized some challenges to the PDT's analytical work.

Incorporating fishery expertise

Several contributors felt that PDTs should incorporate more applied knowledge of fishery operations. Contributors noted that measures that seem logical from a management or analytical perspectives may not be practicable on the water. They suggested that incorporating fishery expertise up front could help ensure workable solutions and improve the efficiency of the AP, PDT, and committee processes. Contributors also felt that fishery expertise could be valuable to help interpret and ground truth the data used in PDT analysis.

- **Acknowledge limitations.** Contributors suggested that PDTs could do a better job of acknowledging where there are gaps in their knowledge, and bringing in outside help.
- **Engage industry**. Contributors suggested that PDTs could engage industry as technical experts to ground truth their work and assumptions.
- **Spend time in the field**. Contributors suggested that PDT members, particularly PDT chairs, could invest time to improve their understanding of the industry and businesses within the fisheries and FMPs they support.

NEPA Requirements

Contributors felt that there may be differences of opinion regarding requirements for National Environmental Policy Act (NEPA) documentation. They commented that PDTs may be advised differently depending on who from GARFO is staffing the PDT. This can lead to confusion regarding NEPA requirements and make it difficult to reconcile analysis before documents are submitted and reviewed.

6.2.5 Public input at PDT meetings

Contributors shared different perspectives about the appropriate level of public engagement at PDT meetings. They noted that some PDTs chairs may be more open than others to allowing public comment. Some contributors highlighted the value of

public participation in PDT meetings and felt that PDT meetings should be more inclusive. Others felt that PDTs should maintain a strict focus on analytical work. They felt that public participation can verge into lobbying, and that the appropriate place for dialogue and input is at the committee level. Contributors also noted that PDTs need to be able to think creatively and that public participation can constrain discussion.

- **Brainstorming sessions**. Contributors suggested incorporating closed brainstorming sessions in advance of public PDT meetings to balance the value of open PDT discussion and public engagement.
- **Consider consistency across PDTs**. Contributors suggested that the structure of PDT meetings could be evaluated to provide more consistency in opportunities for public input and engagement.

6.3 Plan development team and committee interface

Contributors emphasized that effective coordination and communication between the committee and PDT is critical to the success of the Council process. They highlighted the value of leadership, strong working relationships, and regular meetings for supporting an efficient feedback loop and flow of information. Some contributors felt that committees and PDTs work together effectively, while others identified challenges and tensions, particularly regarding the appropriate role of PDTs.

6.3.1 Role of plan development teams

Contributors shared different perspectives on the role of PDTs, the relationship between PDTs and committees, and how these groups interface to support the Council. Some contributors felt that roles are not well defined and that clarifying roles and the PDT-committee relationship would be beneficial.

Technical role

Several contributors emphasized that PDTs work on behalf of their committee, and should focus on providing technical work while refraining from providing policy input. Some felt that at times PDT members may bring their personal opinions to their PDT work or cross the line into policy territory.

Contributors acknowledged the inherently tricky position of PDTs as the technical interface to the Council's committees. They described that, while PDTs are responsible for helping committees explore issues in a productive and efficient way, PDT members may be directed to work on actions they don't support, explore alternatives they don't think will work, or feel that the committee is not focusing on the appropriate questions. Contributors emphasized that PDTs need to remain focused on supporting committees, and support the process without influencing outcomes.

Responding to committee guidance

Some contributors felt that PDTs may also influence the process by determining how work is prioritized and conducted between meetings. For example, some contributors shared examples of times when they felt PDTs provided information that did not align with committee requests. They expressed frustration with the PDT's deviation from the committee's instruction and perceived that the PDTs may be steering the development of alternatives. Contributors also noted that PDT chairs can have significant influence on process.

Other contributors felt that disconnects between a committee's request and the PDT's work may result from miscommunication and not from an attempt to subvert the process. They noted that committees do not always provide clear guidance to the PDT, and felt that PDTs work hard to provide the best support they can to the committee. Contributors also highlighted that when committees ask open-ended questions or when data are not available, the PDT may be unable, rather than unwilling, to provide the requested analysis.

- **Provide PDT Oversight**. Contributors suggested that additional oversight of PDTs could be beneficial. They felt that increased supervision by the Council's Executive Director, the Council's Executive Committee, or the respective committee chair could help ensure PDT work remains aligned with committee requests.
- **Define PDT role**. Contributors suggested clarifying the role of PDTs and evaluating the composition of PDT members relative to that role.

Latitude of plan development teams

Contributors shared varying perspectives on the latitude that PDTs should have in performing their work and supporting committee requests. Some contributors felt the PDTs should constrain their work to tasks directly requested by committees. Others felt that the expertise on PDTs could be leveraged to more proactively generate ideas and support problem solving. They suggested that while workloads may be a constraining, PDTs are well positioned to add value beyond the scope of the current Council action. Others cautioned that the PDTs should be careful not to get ahead of committees.

Some contributors described a tension between the role of PDTs and the level of discretion they are provided. For example, some contributors felt that committees will engage the help of their PDT's to solve problems and then scold the PDT for providing their own ideas. Contributors noted that PDTs can be in a difficult position when they are not provided with adequate guidance and at the same time are discouraged from applying any interpretation to the committee's request. They felt these dynamics do not support good PDT morale or leverage PDTs in a way that best supports committees.

6.3.2 Workload and efficiency

Many contributors felt that the Council and its committees are not using their PDTs efficiently. The challenges identified in section 5 related to the development of amendments and frameworks influence the efficiency of PDTs and the effective coordination between PDTs and their committees.

6.3.2.1 Committee guidance to plan development teams

Committees provide PDTs with guidance on a range of parameters including the goals of an action, the alternatives to be developed, and the analysis to be conducted. Some contributors felt that committees do a good job of providing this guidance to PDTs, while many others identified this as an area for significant improvement. Contributors noted that this lack of direction may be the result of the committee itself not having a clear idea of what they are trying to accomplish, or not agreeing about how to direct the PDT's efforts.

Contributors felt that when committees do not provide sufficient guidance, PDTs spend significant time interpreting committee instructions and tasking. They described that this can negatively impact the efficiency of PDTs, for example if PDTs bring work back to the committee only to find that their work is off the mark.

- **Provide clear guidance**. Contributors suggested that committees could improve the clarity of their guidance. For example, they felt that clear articulation of the purpose, goals, objectives and rationale for each action (see section 5) would help to efficiently focus and guide PDT work.
- **Communicate between meetings**. Contributors suggested creating additional opportunities for dialogue between committees and PDTs, including communication between meetings to address questions and provide clarification.

6.3.2.2 Workload and timelines

Plan development team bandwidth

PDTs have limited bandwidth. Many contributors felt that PDTs are overextended given their workloads and the timeframe for Council actions, though they recognized that "the work always get done." The priorities established through the Council's annual prioritization process can stretch PDTs' limited capacity (see section 4). In addition, contributors felt that there may not be an accurate understanding of the staff time required to fulfill requests. Contributors noted that PDTs can get diverted to address short term priorities, making it harder to keep up with their other responsibilities.

Some contributors expressed frustration with the Council's expectations of PDT capacity. Specifically, contributors noted that the work of PDTs, by the nature of their cross-institution staffing, comes at a relatively low cost to the Council and that PDT capacity may not be viewed as a finite resource. They described that this may make the

incentives for using PDT time efficiently less clear. Contributors noted that there are opportunity costs to using PDTs inefficiently, in terms of capacity that could be used to support other Council priorities.

As noted in the section above, contributors felt that communication between PDTs and committees is valuable for aligning workloads and bandwidth, particularly with regard to resource and data limitations, and the amount of analysis that is possible in the given timeframe.

Workload planning

Contributors noted that it can be difficult for PDTs to adapt to changes in the scope of actions or respond to last minute changes. These mid-stream changes can throw off timelines and works plans and make it difficult to get the additional analysis and document writing completed on time.

Contributors also noted that when Council actions expand or are not well defined (see section 5), the volume of work requested of the PDTs expands accordingly. For example, contributors felt that when a committee has not clearly established the purpose of an action or management alternatives, PDTs may spend a significant amount of time performing analysis that is ultimately unproductive. Contributors also mentioned that when faced with particularly challenging or controversial topics, committees may continue to ask the PDT for more and more analysis on the finer details of the action.

- **Provide focused requests**. Contributors suggested that narrowing the focus of committee requests could enable their PDTs to utilize their time efficiently and support both short term and longer term Council priorities.
- **Refine alternatives.** Contributors suggested that refining and narrowing the scope of alternatives to those that are likely to be considered by the Council, PDTs could work more efficiently and focus on the highest priority issues.
- **Set expectations on bandwidth**. Contributors suggested that PDT members could take steps to manage committee expectations by communicating their capacity limitations, and by ensuring they have the necessary guidance to do their analysis efficiently.
- **Change deadlines**. Contributors suggested establishing deadlines after which alternatives cannot be changed to allow for analysis and documents to be completed to support the Council's final decision.

6.3.2.3 Availability of analysis and documents

Several contributors commented on timing for receiving documents and analysis from PDT and Council staff, and expressed frustration that documents are not always provided with sufficient lead-time prior to Council or committee meeting (see section 9). Contributors felt that this limits their ability to review and understand the information and hinders their ability to fully participate and make informed decisions. Several contributors acknowledged that PDTs face tight deadlines and heavy workloads,

and recognized the relationship between timely delivery of documents and the volume of analysis requested by the committee.

As described in sections above, effective coordination and communication is essential. Some contributors felt that committees need a better understanding of the PDT's workload and more dialogue on how committee decisions and requests will impact analytical timelines. They suggested that an honest assessment of the PDT's capacity, clear tradeoff decisions and more communication on when deliverables will be completed would help the committee to better plan and avoid delays in receiving documents.

- **Improve coordination**. Contributors suggested that improved communication and coordination between the committees and PDTs would help align and prioritize workloads and set expectations for when documents and analysis will be available.

6.4 Advisory Panels

6.4.1 Introduction

Contributors expressed broad recognition of the important role that APs play in the Council process. APs provide valuable information and insight, and are seen as an effective way for stakeholders to provide input and to engage throughout the management process. Many contributors felt that the Council uses their APs well while others thought that there was room for improvement. Contributors shared the following reflections on the role and contributions of APs.

Use of advisory panel input

Contributors felt that the input provided through APs is appreciated, communicated, and used by the Council and committee. Contributors noted that AP members are generally invested and engaged and provide good advice to the Council.

Efficiency and engagement

Contributors felt that the Council's use of APs, and the input they provide, helps to make the management process more efficient. They described APs as creating a venue to think through issues, work out compromises, improve buy-in and ultimately inform better management. Specifically, APs can help the Council understand different stakeholder opinions and needs, ground truth management measures with on-the-water insight, and help interpret scientific inputs. Contributors recognized that APs also provide an important link to stakeholders and support improved understanding of science and the Council process.

Function of advisory panels

Contributors noted that APs function and are used differently across the Council's FMPs, highlighting differences that include the frequency of AP meetings, the

overlap/interaction between the AP and its associated committee and PDT, and the ultimate role of the AP in informing the decision making process. Contributors felt a significant factor in the overall functioning of APs is the degree to which APs, as a body, are able to come to consensus. They described that when APs can reach agreement as a group, it can be easier for committees to respond to that advice; conversely, when there are competing interests and the AP is not able to come to an agreement, the committee has to weigh the diversity of input and the link between AP input and the Council's decision may be less apparent. Some contributors highlighted the scallop AP for its ability to reach consensus, and the effective flow of AP input in the decision-making process.

Direction and leadership

Contributors felt that APs can operate most effectively when provided with clear tasking and concrete questions to guide their discussions. They noted that committee guidance can help frame AP discussions before they get into the details of motions, and ensure that AP input is informative and responsive to the Council's work. Contributors felt that effective chairmanship is important for running professional and efficient meetings and supporting good working relationships with the PDT and committee.

6.4.2 Additional considerations

Contributors shared additional input and observations regarding the effective use of APs.

Representation of interests

APs, by their nature, are comprised of stakeholders with vested interests in particular fisheries. Contributors felt that while this it the intent of APs, committees need to keep this context in mind when considering the advice of APs. Additionally, they noted that APs reflect the interests of a subset of resource users and are not necessary representative of all stakeholders, or reflect a representative cross-section of input.

Management process and the advisory panel's role

Several contributors conveyed the concern expressed by AP members that their advice is not used. Contributors noted that APs are advisory in nature, and that the Council may ultimately choose to take a different direction that does not align with AP recommendations. They felt that some AP member may not understand the role of APs and have different expectations for how their input should enter into and inform management decisions. Contributors also observed that a times APs may not understand the management context and legal requirements under the MSA, for example by making recommendations that are not legally allowable or not supported by the scientific inputs on which the Council must base its decisions.

- **Provide training for advisory panel members**. Contributors suggested that a more formal training program for AP members could provide valuable education

and ground AP discussions in the requirements of the MSA and responsibilities of the Council.

- **Provide clarity on the role of APs.** Contributors suggested providing APs with additional clarity on their role as advisors to help to align expectations around how their input is used in the process.

Diversity of representation

While APs are structured with the intent of bringing a variety of stakeholder voices into the process, contributors noted challenges with participation and the composition of APs. Contributors perceived declining interest in AP participation, and felt APs include strong representation by staff of organizations and advocacy groups, with less participation by active fishermen who contribute valuable on the water experience. They felt that the composition of APs may be unevenly weighted toward more profitable sectors that can support the participation of staff and lobbyists, which leaves some parts of the fishery underrepresented in the process. Contributors also expressed that they would like to see the types of stakeholders on APs expanded to include other groups such as consumers and crew members.

Representation of recreational interests

Several contributors felt that recreational interests and issues are not well represented or prioritized within the Council. They suggested restructuring the Council's use of recreational advisors to better support management of recreational fisheries.

- **Joint recreational committee.** Contributors suggested forming a recreational committee comprised of Council members and industry (similar to the enforcement committee) that would report o the full Council.
- **Council oversight committee for recreational fisheries**. Contributors suggested establishing a separate recreational oversight committee to which the existing recreational advisory panel would report.

Advisory panel and committee coordination

Contributors emphasized the importance of good communication and coordination between the Council's committees and advisory panels. They noted the value of aligning committee and AP meetings, either through back-to-back or joint meetings (see section 9). Contributors explained that this alignment helps to generate new idea, fosters cooperation, and supports the committee in coming to decisions that have more buy-in with industry and stakeholders.

Advisory panel and plan development team coordination

Some contributors expressed an interest in having more joint meetings between APs and PDTs. This was suggested as a way of bringing in industry experience, particularly for topics that need to reflect a detailed understanding of fishing operations (e.g., monitoring). Other contributors felt that while joint meetings between PDTs and APs

may be helpful in some instances, it's important to think carefully about the dynamics of convening groups with very different purposes.

6.5 Scientific and Statistical Committee

Contributors shared perspectives on the role of the Council's SSC, the process for setting acceptable biological catch (ABC) levels, the information inputs considered by the SSC, and the scope and quality of advice provided by the SSC. Perspectives on the overall effectiveness of the SSC process varied. For example, some felt that the ABC-setting process works well, while others felt there has been a break down in the application of control rules. Some contributors credited the SSC for providing good, unbiased, scientifically based advice, while others think the perspectives of SSC members may inappropriately influence the SSC's advice.

Many contributors emphasized the expertise and quality of SSC members. Scientists serving on the SSC were described as highly qualified in terms of their technical and research expertise, as well as hard working, thoughtful, and deliberate in their decisions. Contributors also recognized the importance of the SSC chair to ensure a fair process and efficient meetings. Some expressed concern about turnover on the SSC and challenges with retaining social scientists.

6.5.1 Role of the SSC

Contributors felt that there is a lack of clarity regarding the appropriate scope and role of the SSC. Some view the SSC as an integral part of the Council process, while others questioned how well the SSC is integrated into the process.

6.5.1.1 Scope of advice

Contributors had different perspectives about the appropriate scope of advice from the SSC, and felt that the current scope is not well defined. Some felt that the SSC should focus solely on recommending ABCs, and that it is not appropriate for the SSC to weigh in on other aspects of the Council's decision making and discuss topics that are outside the SSC's terms of reference. Others felt that the SSC is underutilized. They believe the process would benefit by better leveraging the expertise of the SSC on a broader range of topics. Contributors felt that it is unclear whether the Council supports the SSC in taking a more proactive role in identifying issues and initiating work to explore potential solutions. Contributors also noted that the relationship between the Council and its SSC may be overly formal, and that more informal discussions could be valuable for engaging the SSC in problem solving and addressing big-picture, forward-looking topics.

- **Clarify SSC role**. Contributors suggested that developing clear guidance on the SSC's role could be helpful, including the scope and parameters for their work and the types of advice they are intended to provide.

6.5.1.2 Science – policy handoff

Some contributors shared concerns that SSC discussions may cross the boundary between science and policy. They highlighted a lack of clarity among all parties involved regarding what the SSC is and is not allowed to do when recommending ABCs, the types of information that the SSC should be receiving (see below) and whether the SSC should consider factors beyond those outlined in the SSC's terms of reference. For example, some felt the consideration of social and economic impacts is appropriate, while others believe these are policy considerations and not within the SSC's purview.

Some contributors also commented on the SSC's strengthened role in setting ABC recommendations, as mandated by the reauthorized MSA. For example, some felt that the Council and committees should have a chance to review stock assessments prior to the SSC's ABC setting process. Others felt that the SSC process is becoming increasingly politicized, and felt that pressure from industry and other groups may be influencing the SSC's decisions and the way in which risk is interpreted and considered. They emphasized that the SSC is intended to be a purely scientific body and that decisions should be responsive to science and not politics.

- **Clarify science-policy handoff**. Contributors suggested clearly defining the roles of scientists and managers and establishing clear lines between scientific and policy advice.

6.5.2 Information inputs

Contributors recognized the link between the SSC's task of recommending ABCs and the information they have available to complete that task. In particular, they described that the SSC's work can be directly impacted by the stock assessment challenges described in section 8. Contributors noted that the SSC must work with the information provided, and that SSC members (individual or as a body) may be put in the position of making a decision based on information that they feel does not provide an adequate basis for decision-making.

6.5.2.1 Review of stock assessments

There are diverging perspectives on whether the SSC should play a role in reviewing stock assessments. Some contributors felt that given the expertise of the SSC, conducting an additional peer review of the assessments, and/or identifying problems is appropriate. Others felt that the role of the SSC is solely to use the information provided in stock assessments to inform ABC recommendations. Contributors expressed concern that the SSC may overstep its bounds by acting as an additional layer of review and scrutinizing or potentially rejecting assessments. They felt that the SSC serving in this capacity may undermine belief in the science and peer review process, and makes it difficult for the public to understand and follow the flow of information and process for setting catch limits. Contributors also noted that the SSC may apply different levels of scrutiny to assessments depending on whether the assessments provide good or bad news.

6.5.2.2 Stock assessment research recommendations

As part of its work recommending ABCs, the SSC also provides research recommendations for improving stock assessments. Some recognized these recommendations as an important contribution by the SSC, and felt that this advice is valuable. However, some contributors conveyed frustration with the Council's the lack of acknowledgement and response to these recommendations. They felt the SSC is not informed about whether their advice is considered, and whether or how the Council and/or NEFSC act upon the recommendations. Some contributors emphasized that given the SSC's reliance on stock assessments for providing ABC recommendations, the SSC has a vested interest in addressing challenges and improving assessments.

- **Improve feedback loops.** Contributors suggested that improving feedback-loop communications between the SSC, Council and NEFSC could be helpful to support consideration of research recommendations and align research priorities to better support the SSC's decision-making needs.

6.5.2.3 Additional information inputs

Some contributors expressed a need for additional information to support the SSC's work. Particularly when there are challenges with stock assessments and an ad-hoc or empirical approach is used, they felt the SSC needs more data and analysis to apply control rules and arrive at ABCs. For example, projections and discard information can be used as information inputs. Some contributors noted that the SSC receives some social, economic and ecological information in the risk matrices that are presented at the time of ABC consideration. Other contributors felt that not enough social, economic and ecological information is made available to the SSC. They felt this information is important for considering risk and uncertainty and adjusting buffers for scientific uncertainty. Contributors noted that ecosystem information is also valuable to provide a broader context for decision-making and can help the SSC to understand and interpret problems with assessment models and retrospective patterns. Some perceived that the flow of this information may be constrained to align the SSC's advice with the peer review and PDT recommendations and avoid overcomplicating the ABC setting process.

6.5.3 Allowable biological catch recommendations

6.5.3.1 Consistency and application of ABC control rules

A strong theme among contributors is that the SSC is not consistent in its approach to setting ABCs and applying the Council's Risk Policy and control rules. They described that this can make it difficult for the Council and public to understand how and why the SSC arrives at their decisions.

Contributors identified several factors may contribute to this perceived lack of consistency including the quality of stock assessments, the range of information available, the SSC's workload, and any political factors at play. Contributors felt that the application of control rules breaks down when assessments do not provide clear quantitative outcomes. They described that when assessments fail peer review,

incorporate ad hoc adjustments, or otherwise do not provide information that is perceived as reliable, the SSC has to develop a customized approach. Contributors noted that the SSC devotes a lot of time to addressing these situations, and trying to evaluate, incorporate and translate available information to support ABC recommendations.

Some contributors also felt that the SSC's approach to ABC recommendations does not adequately consider the performance of past decisions. Where ABCs are not performing as expected (e.g., by supporting effective rebuilding) or catch is routinely exceeding the OFL, they felt the SSC should consider its track record and link its current decision making with what can be learned from past experience.

Contributors suggested that while they understand the need for flexibility in some circumstances, they would like to see the SSC take a more consistent, rigorous and systematic approach for its decisions. Contributors shared the following ideas.

- **Review Control Rules**. Contributors suggested evaluating the Council's control rules to determine whether or not they are appropriate. They felt that subsequent revisions could include making control rules more consistent across fisheries and assessments, and ensuring that they can be consistently applied.
- **Provide focus.** Contributors suggested that Council staff could provide additional assistance in helping to keep the Council's ABC control rules and Risk Policy at the forefront of the SSC's deliberations and facilitate a more consistent application of these policies.

6.5.3.2 Integration of social and economic information

Contributors had different perspectives on whether social and economic considerations should be taken into account by the SSC when recommending ABCs. Some felt that these considerations are extremely important given the impact of ABC decisions on people's livelihoods. Some felt that SSC members do consider social and economic implications of their recommendations, while others felt that there is not enough discussion during the SSC's deliberations despite the social science expertise on the SSC.

Other contributors questioned whether it is appropriate for the SSC to consider social and economic factors given their task of considering scientific uncertainty and providing ABC recommendations. For example, some felt that when the scientific inputs suggest lower quotas the SSC may be motivated and/or pressured to consider the economic impacts of setting ABCs. They felt social and economic factors are management considerations and are not within the purview of the SSC.

6.5.4 Meeting process and format

6.5.4.1 Meeting format

Contributors reflected on the process for SSC meetings and whether the SSC should operate by consensus or voting. They felt the process would be best served by engaging the expertise and opinions of the entire SSC, and that a more structured approach, such

as through Roberts Rules of Order, may help support open dialogue and ensure the public can follow the SSC's decision making process.

6.5.4.2 Coordination with other subsidiary bodies

Some contributors noted that there is a good flow of information between the NEFSC, PDT, committee and SSC, while others noted challenges above with availability of information. It was also noted that there may be timing challenges when the SSC takes a different approach than laid out in the PDT's recommendations. The PDT then has to revise alternative and analysis before recommendations are presented to the committees.

- **Reinstate SSC liaison**. Contributors suggested reinstating the use of a SSC liaison to the PDT to assist in coordination with the PDT and allow for the expertise for SSC expertise to be utilized by PDTs.

6.5.4.3 Public input

Contributors noted that the SSC is inconsistent in when it allows participation and comment by the public. They recognized that public input can be valuable for interpreting scientific inputs, but cautioned that input from stakeholders can bring policy and political factors into the discussion. Some contributors noted that public input is not vetted or may not have a scientific basis, however, they felt it can carry significant weight and influence decisions.

- **Provide more balanced fishery overview.** Contributors suggested considering more structured ways to provide information to the SSC on the performance and needs of fisheries. They felt that providing a more thorough and balanced overview may help to reduce the potential political pull of public input in the SSC process. *[For example, the Mid-Atlantic Council published fishery performance reports to provide information on the status and trends in the fishery.]*

7. Public Participation

7.1 Introduction

A strong theme among contributors was the strength of the New England Fishery Management Council (Council) process for creating opportunities for public participation and input (see section 2). They felt the New England Fishery Management Council process is among the most open and transparent processes of all regional fishery management councils. Contributors conveyed that the Council genuinely wants strong public engagement and input, and that the process benefits from a diverse range of stakeholder perspectives and ideas. They felt public input is strongly considered during Council and committee deliberations and decision-making.

Contributors described the variety of pathways that the Council provides for stakeholder input, including opportunities to provide verbal and written comments on council actions, comment on every Council motion, and participate in scoping meetings and public hearings. They felt the Council's structure of committee, advisory panel (AP), plan development team (PDT), and Scientific and Statistical Committee (SSC) meetings expands opportunities for input beyond meetings of the full Council. Contributors also highlighted that the Council's "town hall" meeting style is unique and ensures those attending have the opportunity to be heard.

7.2 Challenges

Contributors identified a number of challenges to engaging and supporting participation by stakeholders and offered suggestions for improvement.

Understanding the Council process

Contributors recognized the complicated nature of the Council process and the difficulty that stakeholders may face in understanding, following and engaging in the Council's work. Some felt that the public may not understand the overall framework, including the legal requirements that guide the Council's work and the respective roles of the Council, Greater Atlantic Regional Office (GARFO) and Northeast Fisheries Science Center (NEFSC). They also perceive that the flow and timing of decision-making may not be well understood. Contributors acknowledged that the Council process can be intimidating and difficult to navigate, and that effective participation requires a substantial investment of time and effort.

Contributors noted that there are a number of resources available to help the public learn about the process, including comprehensive trainings such as the Marine Resource Education Program (MREP), and discrete resources such as Council documents and user guides.

- **Education opportunities**. Contributors suggested creating additional educational opportunities and resources to support increased engagement and participation. In particularl, they felt that additional resources describing how information and

input is considered at each stage in the process would be helpful. Contributors also suggesting developing a range of resources to reflect different levels of desired engagement by stakeholder and align the level of information accordingly.

Following Council actions

Contributors felt that the complicated nature of the Council process and the number of actions under development can make it particularly difficult for individual stakeholders to stay informed and provide input. They also noted the difficulty of following along during meetings, and tracking the linkages between previous discussions and decisions, and understanding the documents currently being referenced. Some contributors felt the Council could improve the way that information is presented to make it more manageable for stakeholders to follow the process.

- **Improve clarity**. Contributors suggested improving the way that agenda items are introduced and discussed to provide additional context and clarity for the public. For example, they suggested introducing agenda items by reviewing the purpose and objectives for the item under discussion, and providing a summary of work to date. Contributors also suggested providing clear explanations for the motions being proposed and discussed, and explaining the nature of alternatives and analysis being referenced rather than using shorthand or referencing a numbered section of the document.
- **Draft summary documents**. Contributors suggested developing a companion summary document for amendments and frameworks to clearly explain the purpose and likely outcomes of an action.
- **Provide additional visuals**. Contributors suggested improving the visual aides used during meetings, for example by changing the size and type of fonts used, and adding an second screen positioned closer to the audience.

Level of public participation

Some contributors felt that participation by the public and stakeholders in the process is not particularly strong at this point in time. They noted low attendance at meetings, particularly by individual fishermen. Contributors suggested a number of factors that may influence stakeholder attendance, including the timing of meetings, the cost and time associated with attending, and a sense of frustration and lack of trust in the Council process (see below). They recognized that some fishermen may also participate in fisheries managed by states and other management bodies, which can make the number of agencies and meetings related to their interests overwhelming.

Contributors observed that participation has shifted toward trade and interest groups, and that fishermen are increasingly reliant on industry organizations to engage on their behalf and communicate information about the Council's activities. They recognized the challenges to individual fishermen of personally participating in the Council process and the value of the representation provided by organized groups. However, some

contributors perceived that consistent participation by a limited number of interest groups may not fully communicate the range of input from their constituents and the perspectives of stakeholders not represented by one of these organizations. Several contributors expressed a desire to see more engagement and representation from individual fishermen and stakeholders in the process.

- **Increase outreach**. Contributors suggested developing new tools to reach individuals who are active in the Council's managed fisheries. For example, conducting webinars or conference calls before each meeting could provide an additional venue to provide information to the public and accept comments. Advance comments could be summarized and presented during meetings.
- **Expand stakeholder universe**. Contributors noted the increasing diversity of stakeholders with an interest in marine resource management. The Council's interests and management decisions are likely to become more relevant to new groups of stakeholders (e.g., aquaculture, energy). They suggested the Council could explore how to engage new groups and interests in the Council process.

Timing for public input

Contributors felt that stakeholder input is most meaningful when provided at the appropriate time in the process, and that the public may not understand how and when to engage. They described input as being most effective and constructive when provided early in the development of an action, and through the respective committee and AP process. Some felt that the process and timing for providing input is not intuitive to the public and that it is not always clear what sort of input the Council wants relative to each item. Contributors also recognized that while input can be most informative during the early stages of developing an action, the details of management alternatives and analysis of the corresponding impacts may not be known until later in the process. They felt that it can be difficult for stakeholders to understand how actions will impact them until actions are well underway, at which point it can be difficult for the Council to change course.

- **Encourage earlier engagement**. Contributors suggested taking additional steps to help stakeholders better understand the management process and the most appropriate and effective times for providing input.
- **Develop cheat sheets.** Contributors suggested providing cheat sheets at meetings that outline the organization and flow of the agenda, and when public comments will be accepted. They felt this could help the public better track discussion and prepare their comments.
- **Facilitate public comment.** Contributors suggested that employing a public comment facilitator during meetings could be helpful. For example, providing access to Council staff or another individual in the audience could help stakeholders identify the appropriate time in the agenda for their input and understand the process for providing comment (e.g., how to get recognized, use the microphone, time limits, etc.).

- **Encourage AP participation**. Contributors suggested encouraging more public participation on advisory panels (APs) and attendance at AP meetings to facilitate increased involvement in the development of management actions.

Structure of public comment opportunities

Some contributors perceived that the Council's process for accepting public input may not always feel welcoming to stakeholders. They explained that stakeholders may find the time limits on public comment frustrating, particularly given the time, effort and expense required to attend meetings and provide input. Contributors appreciated that providing comment in front of the Council and/or committee may be intimidating and felt that the traffic light system for timekeeping may convey a lack of value being placed on the input being provided. Contributors also recognized the need balance the time spent accepting comment with the work the Council needs to accomplish during the meeting. Some contributors also felt that the time allocated for open comment, and its position within the Council's agenda, may not be ideal. They perceived that public comment periods that break up an agenda item or immediately follow the lunch break may not facilitate strong attention.

- **Engage during public comment**. Contributors suggested the Council could improve acknowledgement of input by increasing engagement during public comment. For example, they felt that Council members could ask follow-up questions and attempt to address questions posed by stakeholders during their comments.
- **Increase open comment opportunities**. Contributors suggested including open public comment periods on each day of the Council meeting and positioning those opportunities before lunch and between agenda items.
- **Consider a more flexible approach**. Contributors suggested a more flexible and personable approach to keeping public comments on track, and allowing some flexibility with time allowances.
- **Acknowledge written comments**. Contributors suggested the Council could improve its approach to acknowledging written comment letters. For example, they suggested Council staff could summarize the written comments received since the previous meeting during their reports to the Council and committee.

7.3 Stakeholder perceptions

Contributors reflected on perceptions that they have heard from stakeholders regarding the use of public input in the Council process.

"Public input is not considered."

Contributors conveyed the perception among some stakeholders that the Council does not consider public input. They felt that this criticism is misplaced and that this perception may be the result of stakeholders not understanding the process or legal requirements that constrain the Council's decision making. Contributors also perceived

that this sentiment may result from stakeholders providing comment too late in the process or being displeased with the outcome of a decision.

"Decisions are already made."

Contributors conveyed the perception among some stakeholders that the Council has already made up their mind prior to taking action. They felt that the Council does consider public input and that this input does influence the decisions of Council members. Contributors explained that the Council develops and considers actions over a long time period and receives public input at each step in the process. They felt that, as a result of thoroughly considering the action, Council members should have a sense of their support or opposition to an action before the final vote. Contributors also noted that the Council's selection of preliminary preferred alternatives, while designed to focus discussion and public input, may also contribute to the perception that decisions are made in advance.

"Back room deals are being made."

Contributors reflected on the perception of some stakeholders that Council members have discussions outside of the Council meeting context that influence their votes. Some contributors acknowledged that Council members may have conversations among themselves to discuss and process the issues at hand; however, they felt the on-the-record debate, motions and rationale for Council decisions captures and conveys the points of view discussed offline. Other contributors felt that email and text communications among Council members and constituents during formal Council sessions may increase this perception among stakeholders and may not support a level playing field for providing input to Council members.

7.4 Council communications

Contributors felt the Council understands the importance of communication and works hard to communicate and share information with stakeholders and the public. They highlighted meeting summaries, press releases, webcasting of meetings, and the array of information on the Council's website as helpful for supporting good communication. Contributors recognized that fishery stakeholders are a challenging group to reach and engage given time spent on the water and varying preferences for electronic communications. They felt that despite the Council's efforts and mail/email lists there are still stakeholders the Council is not reaching.

Contributors provided the following ideas for continuing to improve its communications.

- **Online meetings.** Contributors suggested conducting more online meetings and broadcasting committee and plan development team (PDT) meetings in addition to full Council meetings.
- **Transcribe meetings**. Contributors suggested transcribing meeting audio recordings and making written minutes available.

- **Organize website**. Contributors recognized the Council's recent improvements to its website and suggested that additional changes could make it easier to navigate. For example, they suggested making navigation more intuitive and providing short descriptions to outline the contents of larger documents.
- **Prepare meeting summaries**. Contributors suggested developing meeting summaries for all Council and subsidiary body meetings.
- **Focus on engaged stakeholders**. Contributors suggested that investing in communications with actively engaged stakeholders may be efficient and support the ability of those individuals to share information with their networks.
- **Use consistent vocabulary.** Contributors suggested using consistent vocabulary and units of measurement in Council communications. For example, they suggested describing changes to catch limits in pounds and percentages.
- **Provide helpful facts**. Contributors suggested providing information or linking to information sources that the industry can use to help communicate about their fishery.

8. Science, assessments and data

Contributors shared a variety of perspectives regarding the scientific and data inputs available to support the New England Fishery Management Council (Council) in its decision-making. Many observed that the availability and quality of information varies across fisheries, and that some fisheries have better information inputs than others. In particular, contributors felt that the scallop fishery is supported by sufficient data, information and stock assessments, due in part to the Research Set Aside program and industry funded research. In contrast, contributors highlighted the difficulty of managing groundfish stocks due to a perceived lack of data and known challenges with stock assessments. Where limitations and inadequacies were identified (below), contributors recognized that these challenges span a complicated system of data collection, catch accounting, fishery dependent and independent research, and stock assessments.

8.1 Alignment of scientific inputs and Council decision making

Contributors shared divergent views on the adequacy of the information available to support Council decision-making. Many contributors expressed that the scientific information available to the Council is not sufficient to support the management system and the decisions the Council needs to make. Several expressed that the Council's decisions are only as good as the science they have to work with; without better data, the Council is unable to make better decisions.

Others contributors felt that the scientific inputs are strong and timely, and that the Council has adequate information to support their work. They felt that that criticisms may result from unrealistic expectations regarding the accuracy, precision, and volume of information that can realistically be provided.

Reflecting on the science and management system as a whole, some contributors commented on what they view as a fundamental misalignment between the Council's management framework and the scientific inputs available. The requirements of the Magnuson-Stevens Act (MSA) to set annual catch levels (ACLs) and accountability measures (AMs), and the considerations and tradeoffs associated with the National Standards, create an information-intensive management system. Additionally, contributors explained that the Council has chosen management systems for some species that may demand more rigorous and timely scientific advice than is available and perhaps possible. Thus, contributors felt that the overall management framework for the Council's managed fisheries requires a responsiveness and resolution that sets unrealistic expectations and outstrips the quantity, accuracy and precision of the science.

8.2 Stock assessments

Some contributors felt that issues and inadequacies with the quality, quantity and timeliness of stock assessments are one of the most critical challenges facing the Council. They felt that stock assessment challenges result in a system that is weighed down by uncertainty, which undermines the Council's ability to manage effectively and contributes to stakeholders losing faith in the Council and the management system. Contributors expressed frustration that challenges related to data and assessments are largely out of the Council's control.

Other contributors felt that the Council receives quality stock assessments and that criticisms may be unjustified, particularly given that many frustrations arise from factors that are out of scientists' control or reflect unrealistic expectations. Some mentioned that there is a good process in place for stock assessments, regardless of the final results.

8.2.1 Challenges with stock assessments

Contributors perceived several challenges with stock assessments, recognizing that the quality of information inputs and the attributes of fisheries can impact the assessment process. For example, contributors noted that assessments can be particularly challenging when stocks are at low levels, for stocks that may be impacted by environmental factors, and when there are problems with the quality of data inputs. They highlighted that these challenges make stock assessments particularly problematic for some groundfish stocks.

Disconnect between stock assessments and on the water observations

Many contributors emphasized that they, as well as stakeholders, lack confidence in some stock assessments and perceive a profound disconnect between assessment results and on-the-water observations. Several contributors felt that this discrepancy between perceived abundance and assessment outcomes can go both ways, with assessments underestimating biomass for some stocks and overestimating biomass for other stocks. They explained that this discrepancy can translate into quotas that are either not conservative enough, or overly conservative to a point where they are compounding issues with choke stocks and restricting fishing opportunities.

- **Enhance transparency**. Contributors suggested enhancing the transparency of the assessment process and support dialogue about what stakeholders are seeing on the water.

Retrospective patterns in groundfish stock assessments

Many contributors remarked on the significant challenge posed by retrospective patterns in groundfish stock assessments. They emphasized that there are many potential reasons for this pattern, including natural mortality, unreported landings and discards, trawl survey data, and environmental changes, including changes to the

productivity and distribution of species. These potential explanations are not mutually exclusive.

Retrospective patterns are systematic inconsistencies in stock assessments that can result in overestimating stock size, underestimating fishing mortality and potentially translate into setting catch limits too high. Retrospective patterns may also cause stock assessments to fail peer review and necessitate the use of more ad-hoc and/or empirical approaches for setting allowable biological catch (ABC) limits (see section 6). Some contributors questioned whether these alternative approaches result in the best scientific advice, and noted that empirical approaches make it difficult to take a comprehensive view of long-term trends and rebuilding timelines.

Transparency in the stock assessment process

Some contributors felt that the stock assessment process lacks transparency and is not inclusive. Some perceive the Northeast Fisheries Science Center (NEFSC) tightly controls the process and has not been receptive to feedback from the Scientific and Statistical Committee (SSC) and others about challenges with assessments. Contributors also questioned the way that precaution may be applied to stock assessments and the subsequent recommendations on catch levels, particularly when corrections are applied to assessments or ad-hoc approaches are used. Some feel the injection of precaution into the scientific inputs is not transparent, and that those decisions should be made at a policy level, in accordance with the Council's Risk Policy.

Contributors shared the following ideas to improve the stock assessment process.

- **Consider a more inclusive process**. Contributors suggested considering a process similar to the Southeast Data Assessment and Review (SEDAR). The SEDAR program, administered through the South Atlantic Fishery Management Council, is a cooperative process through which the National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center, the three southeast regional fishery management councils, and other management partners coordinate and conduct stock assessments. The SEDAR process is seen as more inclusive and incorporates a broader representation of perspectives in the process.
- **Compare with National Standard 2 guidance.** Contributors suggested NEFSC could review the stock assessment process to ensure it is meeting the guidance outlined in National Standard 2.
- **Improve communication**. Contributors suggested improving communication around stock assessments and assessment models to facilitate better public participation and increase transparency. The use of facilitators was also suggested to help translate the scientific information in the process to the public.

Creating the space to address problems

Several contributors expressed frustration that despite broad recognition of the challenges described above, there is a lack of effort to address these issues head on. The lack of time and bandwidth is seen as a central constraint. Contributors acknowledged that there is a tradeoff between keeping up with the demands for individual assessments, and devoting time to improving stock assessment models and the assessment process. However, contributors felt that without taking time to diagnose and address challenges, stock assessments and the scientific advice they support will not improve. Contributors felt that the challenges with stock assessments are indicative of broader scale problems, and that it would valuable to take a holistic view of the stock assessment process and opportunities for improvement by taking into account the data system, assessment approaches (including data-limited approaches), changing environmental conditions, and ABC control rules.

Contributors shared the following ideas to pinpoint challenges and improve the quality of stock assessments.

- **Increase dialogue**. Contributors suggested creating opportunities for open dialogue between the Council, assessment scientists and stakeholders to find a shared pathway forward.
- **Prioritize improvements**. Contributors suggested creating the space for scientists to work on problematic stock assessments and models. For example, they proposed that adjusting assessment schedules and workloads could prioritize process improvements to stock assessments.
- **Engage new partners**. Contributors suggested engaging more partners in the process, including academic scientists who could provide additional bandwidth and expertise.

Environmental considerations

Several contributors stressed the influence of environmental factors and climate change on the performance of stock assessments. They highlighted a growing body of work on climate and ecosystem science, and the need to incorporate more environmental information into stock assessments. Contributors emphasized that climate change needs to be at the forefront of discussions regarding stock assessment challenges and opportunities for improvement.

8.2.2 Timing, quantity and quality of stock assessments

Demand for stock assessments

Many contributors felt that the Council needs more frequent stock assessments to support management needs. The time between assessments is seen as problematic given how quickly stocks and the marine environment are changing, and given the assessment-based management system through which the Council sets ACLs. Contributors felt the need for timely assessments is compounded by the information

needs of managing stocks that are under rebuilding plans and/or that are constraining harvest of other stocks. Some contributors observed that the demand for stock assessments exceeds NEFSC's limited capacity, and noted the need to set realistic expectations.

Timeliness of stock assessments

The stock assessment process is time-intensive. Contributors discussed tradeoffs related to the type and frequency of stock assessments that can be conducted, given limited time and resources. Operational assessments and assessment updates can be completed more quickly but are limited in the scope of changes that can be made to the models and the types of new information that can be incorporated. Benchmark assessments allow for the consideration of new information inputs and/or modeling approaches, but take longer to complete. Contributors noted that there is also a tradeoff between the speed at which assessments can be conducted, the opportunities provided for public participation, and the level of oversight and review desired in the assessment process.

Several contributors noted that there may be a misalignment between expectations of stock assessments, stock assessment capacity, and more generally the limitations of fisheries science, that contribute to unwarranted criticism of stock assessments. They explained that scientific uncertainty is a difficult concept to convey and that some may expect a level of certainty that the science is incapable of providing. For example, contributors felt that stakeholders in particular may always be looking to the next stock assessment to provide clarity or answers to problems, when that might not be a realistic expectation. In addition, contributors perceive that the Council and the public may struggle to understand the complicated stock assessment process, particularly when the outcomes do not align with what stakeholders are seeing on the water. They felt that the technical nature of the stock assessment process contributes to the lack of buy-in and unrealistic expectations for the science.

- **Create new learning opportunities**. Contributors suggested the Council and NEFSC could consider expanding opportunities for Council members and stakeholders learn about fisheries science, the process and inputs for stock assessments, and the work being conducted at NEFSC.

Politicizing stock assessments

Contributors noted that a lack of trust in stock assessments is particularly pronounced when assessments do not align with on the water observations of fishermen and perceptions of abundance, and/or result in reduced catch limits. They felt that in these instances the science can become political in relation to the advice it supports and with regard to the outcomes resulting from management decisions. As a result, contributors felt that stakeholders and some Council members may question scientific advice and try to discredit the stock assessments.

Contributors felt that while dialogue on the quality of assessments and surveys is reasonable, it is more productive when deliberately focused on the science. They felt that when the Council contributes to or is perceived as accepting the politicization of science, they can perpetuate a culture of mistrust between stakeholders and scientists. Contributors noted that the Council is part of a science-management enterprise, and felt that it would be best served by working in support of rather than in opposition to the science that supports its process.

- **Support constructive dialogue.** Contributors suggested that it would be beneficial for the Council to take an active role in supporting constructive conversations and improving the relationships of its stakeholders and science partners as a way help build trust, improve science and foster collaboration.

8.2.3 Assessment data inputs

Several contributors noted that the stock assessment challenges described above often derive from underlying problems with data inputs.

NEFSC trawl survey

Contributors identified several aspects of the NEFSC trawl survey that they feel impact stock assessments and contribute to the discrepancies between assessment results and stakeholder observations. Specifically, they questioned the effectiveness of the survey methodology and gear used, and expressed frustration with the challenge of calibrating the new survey vessel for consistency and the gaps in time series resulting from the reliability of the vessel. Contributors proposed several ideas regarding opportunities for industry collaboration to help improve the trawl survey (below). There was also recognition that funding is a limiting factor to expanding and improving the survey.

Catch data and monitoring

Many contributors expressed concern about the adequacy of catch and monitoring data used to support stock assessments. They felt that inaccurate information on catch and discards significantly contributes to the retrospective patterns in the groundfish stock assessments and is an underlying reason why assessment results may not mirror on-the-water observations. Several contributors described a “garbage in, garbage out” relationship between catch data and assessments.

Accurate information about catch and discards is critical for informing stock assessments, setting catch limits, and implementing successful rebuilding plans. Many contributors felt that the pressure of constraining stocks creates incentives for misreporting. They also described an “observer effect” where fishing behavior differs between observed and non-observed fishing trips, and felt that this discrepancy can lead to underestimation of actual discards. Contributors expressed the fear that if these challenges are not addressed, the New England region may never see the benefits of rebuilt stocks.

Contributors acknowledged that there are constraints to the region and the industry's ability to support monitoring costs. Some noted that as the Council moves forward with the Industry-Funded Monitoring Omnibus Amendment, it needs to ensure that data collected are of the highest possible quality and used in science and management.

Contributors also pointed out that there may be factors other than cost inhibiting improvements to catch and monitoring data. For example, some suggested that the industry may not be incentivized to support increased monitoring or catch reporting that could indicate ACL overages or higher discard rates than currently assumed. Others pointed out that the lack of robust catch data contributes to, and may perpetuate, a cycle of uncertainty and politicization of science. For example, they felt that uncertainty related to stock assessments and information inputs may be viewed as justification to set catch limits at higher levels.

Improvements to assessment models and data inputs

Contributors commented on several factors that influence the speed of assessments, and offered suggestions for improvement. They noted that there are improvements underway to streamline the database systems that provide inputs for stock assessments. However, the workload required to support management actions limits the resources available to dedicate to this work. Another challenges is that the current stock assessment process couples data and model review in benchmark assessments, which limits the speed at which assessments can move through the process. Finally, contributors noted that because stock assessment scientists are fully subscribed, they have little capacity to incorporate or consider new stock assessment methods, models and data sources. They also felt that the peer review process can be a hindrance to incorporating new information.

- **Separate data and model review.** Contributors suggested that the data and model review processes could be separated, drawing on experience from the west coast. For example, this could involve using older data in a new stock assessment model to begin the assessment process. Issues identified in peer review could then be addressed while waiting to receive and enter new data into the system. Contributors felt that this would help make assessments timelier.
- **Revisit peer review policy**. Contributors suggested revisiting the policy for peer review of information to consider opportunities for faster uptake of new information. For example, it was suggested that plan development teams (PDTs), given their expertise, may be able to certify new information.

8.3 Stakeholder involvement in science

Contributors emphasized the importance and value of involving stakeholders in the scientific process. For example, they identified the scallop fishery as a good example of partnering with fishermen and fishing vessels to collect data and support assessments. This collaboration and investment by industry is seen as one of the reasons why the

scallop fishery is supported by robust data inputs and supports a productive and successful fishery.

In other examples, contributors observed an adversarial relationship between fishermen and scientists and conveyed the industry perception that NEFSC is not open to collaboration or interested in the insights they can provide. Contributors expressed frustration with the time and money invested in cooperative research when it is rarely considered in stock assessments or management. Some also felt that cooperative research is held to a higher standard than other information inputs and assessments, and that an adequate peer review process for cooperative research is lacking.

Contributors emphasized that improving collaboration with stakeholders and improving the utilization fishery dependent data would lead to better data overall and increased buy in from stakeholders. They noted that improving collaboration is a responsibility shared by the Council, NEFSC, and stakeholders. Some recognized that there have been positive developments toward relationship-buildings and supporting more collaboration between stakeholders and NEFSC. For example, contributors felt that the Northeast Trawl Advisory Panel provides a good forum for discussing stock assessment challenges. The collaborative approach among NEFSC, Council and industry is a positive step toward increasing stakeholder involvement with surveys and data collection.

Contributors noted that it takes time, genuine investment, and ongoing dialogue to build trust and increase collaboration. They also emphasized the importance of communicating up front about how stakeholder involvement and inputs will be used, and setting realistic expectations regarding the potential for cooperative research to contribute to stock assessments. Contributors also noted that diversifying the partners and perspectives involved in research can affect the pace of research.

Specific ideas for increasing stakeholder collaboration included the following.

- **Increase cooperative research.** The Council could encourage increased cooperative research through funding opportunities.
- **Encourage collaboration.** The Council could encourage and support improved relationships and collaboration between scientists and fishermen, particularly by encouraging NEFSC to engage stakeholders in data collection, surveys and assessments.
- **Use industry vessels as survey platforms.** Supplementing the trawl survey with industry vessels could allow for broader coverage at specific sampling time points and provide a better picture of what's going on in the ocean.

8.4 Other data considerations

Recreational data

Many contributors expressed frustration with the quality and timeliness of information available to support the Council's management of recreational fisheries. They felt that data provided through the Marine Recreational Information Program (MRIP) is severely flawed. While ongoing efforts to improve MRIP will help support the Council's decision making, adjustments to the program can result in catch estimates that are constantly changing. Contributors emphasized that it is hard for the Council to make good decisions for its recreational fisheries when the available data is so poor, and offered the following suggestions.

- **Prioritize improvement of recreational data**. Contributors suggested that the Council, along with the other regional fishery management councils, Atlantic States Marine Fisheries Commissions (ASMFC), and NMFS would be well served by rolling up their sleeves to either fix recreational data collection or consider a different approach for managing recreational fisheries.
- **Compare MRIP estimates**. Contributors suggested using party/charter vessel trip report (VTR) data to compare with MRIP estimates.

Economic and social data

Contributors felt that there are challenges with the availability and accuracy of economic and social data in some fisheries. In particular, cost and employment data was seen as insufficient. Contributors observed that existing analyses can be outdated and lack the resolution and transparency to understand what data is being used and how the analysis was conducted. Confidentiality requirements can also impact economic data availability and the resolution and transparency of analyses. Contributors felt that some of the economic and social information that is considered confidential could enhance the Council's ability to assess the economic impacts to the fishery and determine whether measures intended to provide flexibility and mitigation are working. Contributors also noted that sometimes the Council may ask for economic information that is not currently available. It was noted that the Council has the authority to make data collection and reporting mandatory, which would in turn allow NEFSC to provide the Council with that information.

Habitat and ecosystem information

Contributors recognized the value of ecosystem and habitat information, both qualitative and quantitative, for providing context and supporting decision-making. However, this information does not necessarily have an established entry point through the stock assessment process, which can make it difficult to bring into the management process. Some contributors felt that when ecosystem and habitat information is used to support decisions on habitat and evaluate impacts of an action, the information may not be given sufficient weight due to the less concrete nature of the information the qualitative context in which it is being used. They explained that the absence of a clear

process for interpreting and using this information appropriately can make it difficult to bring new types of information into decision-making.

- **Develop a vetting process**. Contributors suggested developing a vetting process that provides the flexibility to draw on a wide variety of habitat and ecosystem information sources, while enhancing the strength of the information in the decision making process.
- **Create frameworks**. Contributors suggested creating frameworks for better incorporating ecosystem and habitat information through, and in addition to, the stock assessment process.

Relationship between data and information

Contributors pointed out the relationship between data and information, and that the ability to use the available data to inform management is linked with how the Council sets priorities and allocates the workload of its technical staff. They felt there may be times when the data are not the limitation, but rather the human resources to help extract and understand those data.

Data to support novel or complicated decisions

It was noted that while the data may be available to support routine decision-making, there are challenges to providing the Council with information and analysis to consider new challenges and complicated tradeoffs. One issue cited as an example of complicated tradeoffs was considering the impacts (e.g., biological, social, economic) of different bycatch reduction levels. Contributors also highlighted that the spatial resolution of data may not be at a sufficiently fine scale to address the management questions at hand.

Complicated data collection systems

Contributors felt that complicated management systems have resulted in complicated data systems for New England fisheries, and that the data being collected may not all be used or fully leveraged. They observed that the combined nature of the individual data and monitoring requirements in place may create a cumulative administrative burden to managers and industry members. Contributors felt that taking the time to collect and analyze data from these systems may result in a less than efficient use of resources or available funding, and may not provide the best information.

- **Review data collection**. Contributors suggested conducting a comprehensive review of data collection relative to how the data will be used and prioritize strategically based upon the most useful information. They noted this would need to be done through a collaborative process between the Council and NMFS, including the different line offices involved.

8.5 Alignment of data and decision-making timelines

Timing of data inputs relative to management needs

Contributors shared several considerations related to the timing and timeliness of data inputs. They felt that when data does not arrive in a timely manner from NEFSC or other sources, the Council and its support staff have to scramble to get management actions prepared and analyzed, while also allowing time for public comment and notice. Similarly, the timing of data availability may not align well with the timeline for decision-making. Contributors noted that there is a tradeoff between using older data to facilitate more timely decisions and delaying actions to incorporate new information.

Contributors expressed concern about the alignment of data and ACLs and the impacts of not having regulations in place before the beginning of the fishing year. They suggested several ideas to improve data-management alignment.

- **Adjust management cycles**. Contributors suggested adjusting the timing and cycle of Council decisions to allow more time for analysis and preparation in response to data, for example by setting specifications on a 2-3 year basis. However, it was noted that this approach would further exacerbate the problem of working with out-of-date information
- **Change fishing year**. Contributors suggested changing the fishing year for recreational and commercial fisheries to align with the timing of information inputs and ensure that the rules are in place before the start of the fishing year.
- **Align Council priorities**. Contributors suggested improving the alignment of Council priorities so that there is available bandwidth to be more responsive when data and scientific information is received.

Timely use of data for management decisions

Contributors noted that there can be a significant window of time between the most recent data and when an action based on that data is implemented. This is in large part due to the time it takes to move through the system, and can result in data being out of date by the time the Council makes its decision. Contributors explained that there are limitations in turnaround time from data collection to use in management given the level of rigor and review demanded of the data and the need for a public decision making process.

- **Explore timing improvements.** Contributors suggested exploring opportunities for using more up to date information while still accommodating the necessary steps in the process.

9. Council decision making process

9.1 Council as a decision making body

Contributors recognized that serving on the New England Fishery Management Council (Council) is a difficult task, and that the dedication of individual Council members strengthens the process. For example, they described the Council as being comprised of robust, knowledgeable and hard working individuals. Council members were commended for their sincerity, fairness and service to the Council's constituents. Contributors also commented on the respectful tone of the Council and its members' willingness to listing and understand different points of view. Some contributors noted, however, that the Council is highly political and that the pursuit of particular interests and outcomes can detract from the demonstration of these qualities.

Contributors explained that the composition of the Council has changed over the years, and that Council appointments can affect the priorities and direction of the Council. They also noted that the Council "culture" can change over time. Some felt that the Council has become a more casual and welcoming environment, while others felt that the tone is serious or confrontational. It was noted that while there are benefits to a more collegial meeting environment, the Council should be mindful of maintaining a high level of professionalism to demonstrate that it is taking its work seriously.

9.1.1 Council composition and voting

Several contributors felt that the success of the Council process largely depends on Council membership and the factors that influence their decisions. They felt that membership leans toward the general representation of industry interests, and the interests of particular groups and sectors. Some contributors perceived that the Council has lost focus on the broader goal of managing a public resource for the "greatest benefit of the nation" and its service to the full array of stakeholders and interests. They felt that a lack of balance can result in decisions that are focused on avoiding short term impacts rather than on supporting long-term goals. Another observation was that the limited term of Council appointments can contribute to a near-term focus and lack of accountability for decision-making.

Some contributors felt that Council members may not always be thinking and voting independently. They perceived that Council members may approach issues and actions as voting coalitions and industry or economic alliances. Contributors who shared this concern felt that this dynamic can weaken the Council's ability to function as a body of independent thinkers and detracts from the robust consideration of scientific information and impacts. Some contributors also noted that the recusal process for Council members is not clear, and felt that more attention needs to be paid to this process.

- **Conduct a national process evaluation**. Contributors suggested that a national evaluation of regional fishery management council composition and industry influences in membership may be helpful.
- **Employ roll call votes**. Contributors suggested using roll call votes for final voting on major actions to support independent thinking and a better articulation of the rationale for decisions.

9.2 Meeting preparation, scheduling and timing

9.2.1 Timing of meetings

Several contributors commented on the timing of Council and subsidiary body meetings. Some remarked on the efficiency and communication opportunities that could be created by holding concurrent or consecutive meetings, as is the practice of the Pacific Fishery Management Council over their week-long meetings. Others preferred the New England Fishery Management Council's approach to spacing out subsidiary body meetings before the full Council meeting. They felt that this approach provides participants more time to process information, and provides additional opportunities for stakeholder participation and input. However, contributors identified several challenges with the number and timing of meetings.

Meeting scheduling

Some contributors felt that the number of committee, Scientific and Statistical Committee (SSC), plan development team (PDT) and advisory panel (AP) meetings for all of the Council's fishery management plans (FMPs) can be overwhelming. They also noted that it is challenging and time consuming to schedule this volume of meetings according to the availability of each group's members and avoid overlap. Contributors also noted the importance of scheduling Council meetings around the other meetings its members and partners need to attend.

- **Strategic meeting planning.** Contributors suggested developing a strategic approach to determining each group's availability and scheduling meetings between each Council meeting. This could also be helpful for prioritizing meetings when there are conflicts.

Committee and advisory panel meetings

Some contributors felt that back-to-back or joint meetings between committees and APs are valuable for collaborating and exchanging ideas, and supported the attendance of AP members at committee meetings. Others felt that consecutive AP and committee meetings are challenging due to the lack of time to reflect on AP input before the committee meets. For example, they felt that providing more time between meetings would allow committee members to fully review AP recommendations and ask follow up questions. They also noted that this lack of time may contribute to AP perceptions that committees are not considering their input.

Committee and Council meetings

Contributors noted that having committee (and other subsidiary body meetings) in close proximity to the full Council meeting can be challenging. They described that it can be challenging for staff to turn materials around quickly, and for the Council and public to absorb all of the information, particularly if meetings occur after the full Council meeting briefing book deadline. Contributors also felt that the close proximity of committee meetings to Council meetings can limit the committee's ability to make changes and request additional analysis, and constrains the Council's decision to the options previously analyzed. Some contributors also noted the relationship between meeting schedules and the Council's priority setting process (see section 4), and that timelines and meeting schedules can be particularly compressed toward the end of the calendar year.

9.2.2 Materials and meeting preparation

Contributors commented on the volume of information before Council members and the difficulty of being able to review and absorb all of the information and analysis, particularly when materials are provided at the last minute. Many noted that Council members work very hard to be prepared despite the other demands on their time. Others felt that Council members are not always prepared, and emphasized the importance of preparation for enabling the Council to support complex decisions, advance issues, consider feedback, and generally support robust decision-making.

Contributors highlighted the value of information and communications provided by Council staff in helping them prepare, and the importance of having materials provided with sufficient lead-time. Some also noted the need to strategize, given heavy workloads.

- **Plan around information availability**. Contributors suggested that it may be helpful to plan Council and committee meetings around PDT timelines and workload to ensure that information and analysis is available in advance of these meetings (see section 6).
- **Think strategically about materials.** Contributors suggested thinking strategically about the volume of information provided to the Council and committees, and how materials could be simplified and streamlined to best support decision-making. With additional feedback, staff may be able to further tailor how information is compiled and presented.
- **Provide advance briefing**. Contributors suggested incorporating advance opportunities to help Council members prepare for meetings. For example, hosting an optional webinar prior to Council and committee meetings could provide members with an introduction and summary of the materials they need to review. This advanced context could help Council and committee members navigate and prioritize the materials.

9.3 Timeliness of Council actions

9.3.1 Timeliness of Council actions

Contributors recognized that the Council process moves slowly. The complex and participatory nature of the process, the legal requirements, and the many scientific, analytical and policy steps involved create a system that is cumbersome and time intensive given limited resources. While contributors would like to see improvements to timeliness, they recognized that the pace of management reflects a deliberately public and transparent process, which comes at the cost of speed.

Contributors noted that the slow pace of management has benefits and drawbacks. A protracted process can work well for big decisions that benefit from a slow pace and robust public input. However, contributors also felt that a slow process can inhibit responsiveness and create an extended timeline even for smaller actions. Perceptions of timeliness can also be a matter of perspective.

Contributors highlighted several factors that influence timeliness. The Council and National Marine Fisheries Service (NMFS) have limited bandwidth, which limits the pace at which work can be conducted across all of the Council's actions and priorities. Contributors also felt that the timeline and timeliness of the Council process is heavily influenced by the availability of scientific inputs (see section 8). The nature of Council actions can also influence the speed that they move through the Council process. For example, some contributors felt that actions that are perceived as urgent or having economic benefits are moved through quickly, while actions that are seen as less urgent can be de-prioritized or delayed.

Some contributors felt that the Council and NMFS do the best they can to be timely and responsive within a system that is not designed to move quickly. Others felt that the Council could do more to ensure that regulations are in place on time, particularly annual catch limit (ACL) specifications.

- **Right size priorities**. Contributors felt that improvements to the priority setting process could help to facilitate timeliness. For example, identifying fewer priorities each year could allow the Council to focus its efforts and move actions through more quickly (See section 4).
- **Focus actions**. Contributors suggested that keeping actions bounded and limiting additions to open frameworks and amendment could allow for more timely actions (See section 5).
- **Prioritize ACLs**. Contributors suggested that the Council could prioritize the timeliness of setting ACLs and not allow these actions to be delayed. The Council could also consider changing the fishing year to better align ACL specifications with the availability of stock assessments.

- **Calibrate expectations**. Contributors felt the Council does a good job of managing expectations, but that there is room to further clarify the process and set expectations for timeliness.

9.3.2 Timeliness of implementation

Some contributors felt that Greater Atlantic Regional Office (GARFO) is timely in its review and implementation of Council actions, particularly given the steps involved in this process. They noted that the timing and legal constraints of the Agency need to be taken into account and that timelines may need to be adjusted to accommodate this step. Others felt that the timeline between Council action and Agency implementation is opaque and takes too long. When Agency approval is not timely, other Council actions can be delayed, particularly those that are contingent upon the approval or disapproval of the action under review. Contributors felt that the Agency's review can be faster for those actions seen as a priority and slower for actions without a clear deadline.

9.4 Transparency

Contributors felt that the Council works hard to maintain a high level of transparency. This transparency is seen as a fundamental aspect of the Council process and also one that contributes to the slow nature of actions.

9.4.1 Transparency of the Council process

Contributors explained that the structure of the Council's process supports strong transparency. All meetings, including Council, AP, PDT and SSC meetings are open to the public, and there are many opportunities for public input throughout the process (see section 7). Contributors felt that while some stakeholders may not like the outcome of a particular Council decision, everyone has the opportunity to follow and provide input into the process.

Contributors felt that the Council and Council staff do a good job of making the process accessible and setting expectations for the flow and timing of decisions. However, they also noted that stakeholders' perceptions of transparency may be influenced by their understanding of the process. It can be difficult to communicate the complex legal requirements, technical analysis and decision-making process to the public. Contributors also noted that the volume and pace of Council actions may make it difficult for the public to keep up and follow along.

Many contributors highlighted the transparency provided by Council documents and the Council's website. They felt that all of the Council's documents are available to the public, though some also recognized that the length and complexity may make it difficult to find and access the information. Contributors also noted that Council staff are accessible and responsive to providing information and helping people find resources.

9.4.2 Transparency of Council decisions

Contributors had different perspectives on the transparency of Council decisions. Many felt that the Council does a good job of articulating the rationale for their decisions, both through its on-the-record deliberation and decision making, as well as through the purpose and need sections of documents. Council staff also facilitate transparency by helping to communicate the flow of information and the rationale for Council decisions.

Other contributors felt that the transparency of the Council's decisions and the transparency of individual Council member's decisions is sometimes lacking. For example, some perceived that the factors driving Council decisions are not always clear, and felt that sometimes the Council makes a decision and justifies the rationale later. Contributors also noted that when the Council must make decisions with little information and does not provide a clear rationale, it can create the impression that the decision was already made before final action was taken.

- **Provide training**. Contributors suggested providing additional training to Council members for how to explain and document the rationale for their decisions.

9.5 Additional aspects of Council decision-making

9.5.1 Council Policies

Some contributors felt that the Council's internal policies are intended to reflect how the Council currently operates, rather than to guide or constrain the Council's decision-making into the future. Some contributors felt that the Council could do a better job of referencing Council policies during decision-making, particularly the Council's Risk Policy. Some also felt that while they rely on GARFO to help the Council in applying national policy, additional Council attention to national policies (e.g. allocation and catch share policies) would be helpful.

- **Provide reminders**. Contributors suggested the Council could take steps to reflect on relevant policies during their discussions. For example, incorporating slides outlining relevant policies during staff presentations would help to bring policies to the forefront of deliberations.

9.5.2 Risk and risk policy

Communication of risk and uncertainty

Contributors felt that the Council could benefit from additional focus on risk and clarification of the Council's Risk Policy. Some perceived that there can be misunderstanding regarding the concepts and relationship between risk and uncertainty. Some contributors also felt that the Council and its supporting bodies would benefit from increased information and evaluation of risk.

- **Improve communication on risk.** Contributors suggested the Council could benefit from improving communication around risk and uncertainty, and provide

a better understanding of the information and/or risk assessment the Council would like to receive to support their decisions.

Council Risk Policy

Several contributors commented on the effectiveness and use of the Council's Risk Policy. Some acknowledged the time and effort invested in the development of the policy, but felt that it may be applied inconsistently. They described a lack of clarity with how the Council intends to operationalize the policy through allowable biological catch (ABC) specification and other decisions, and were also not clear on how the Council defines risk. Some contributors felt that, in an effort to avoid a prescriptive approach, the Council's Risk Policy does not provide meaningful direction. They also questioned how adherence to the Council's Risk Policy could be determined.

Some contributors emphasized the importance of flexibility in the Council's approach to risk and its application of the Risk Policy. They cautioned against applying risk at multiple steps within the process and felt that this could result in overly precautionary decisions. Contributors also felt that the Council's consideration of risk should be tailored to each fishery and decision, explaining that the characteristics of a particular fishery and the quality of the scientific information provided may warrant different buffers for risk.

- **Evaluate Risk Policy**. Contributors suggested that the application and performance of the Council's Risk Policy could be evaluated to support potential revisions to the policy and the Council's approach to risk.

9.5.3 Responsiveness to scientific advice

Setting catch limits

Contributors had mixed perspectives regarding the Council's responsiveness to scientific advice. It was noted that when setting catch limits the Council is bound by stock assessments and ABC recommendations from the SSC, even when there are concerns regarding scientific inputs. However, some perceived that the Council tends to set risk-tolerant ACLs. Some felt that the Council is slow to respond when assessments provide "bad" news. Others had the opposite perception and felt the Council is swift to implement reductions in catch but slow to respond to "good" news and increase catch limits. Some contributors felt that more stability in catch levels is needed to minimize drastic swings in response to new data and assessments.

Contributors also reflected on the process for setting ACLs for groundfish. They felt that the approach of setting catch limits for all stocks concurrently can make this process rushed and hinders a robust consideration of ABCs and ACLs, particularly given the challenges with groundfish stock assessments.

- **Spread out ACL specification**. Contributors suggested spreading out the assessment schedule, workload, and subsequent ABC and ACL decisions for the nineteen groundfish stocks.

Data-driven decision-making

Some contributors felt that Council members may not always make decisions objectively in response to the data and analysis provided. They perceive that the Council and/or its members may at times disregard scientific information and analysis and/or the advice of their PDTS. Some contributors suggested this may occur when information has not been reviewed or understood, when the Council or committee wants to take a different direction than they did at the time they requested the analysis, and/or or when decisions are influenced by public comment. Contributors had different perspectives on whether or not this is problematic. Some acknowledged that the process is set up to vest discretion with the Council, while others felt the Council should be more responsive to scientific information and more clearly articulate how its decisions are or are not supported by science.

9.5.4 Last minute changes

Some contributors commented on the challenges that can result from last-minute input and public pressure late in the decision making process. They expressed that changes during the final decision stages can make it difficult for staff to respond and provide analysis and may jeopardize timelines. Some felt that the Councils' rationale can be seen as less transparent when Council members alter their positions in response to late public input. Contributors emphasized the value of stakeholder input early in the process when it can be considered during the Council's analysis and deliberation.

- **Create a deadline for public comment**. Contributors suggested setting a deadline for public input (e.g., before the Council meeting) so that all public comment is received before the Council enters its final decision making stages.

10. Consideration of impacts and decision outcomes

10.1 Consideration of impacts

10.1.1 Evaluating the consideration of impacts

Contributors felt that evaluating the New England Fishery Management Council's (Council) consideration of impacts is challenging, given the complexity of management decisions and the volume of analysis. In general, contributors felt the Council makes a strong effort to consider the impacts of management decisions, but also identified some significant areas for improvement.

Some contributors felt the Council does the best possible job of considering impacts and makes sound decisions based on this information. They described that the Council, through committees and the full Council, undertakes a thorough exploration of issues, analyses and impacts. Contributors felt that the multi-layered Council process, while cumbersome, supports a robust consideration of impacts and helps the Council reach practical decisions. They also felt that the diversity of perspectives represented on the Council and in the Council process leads to well-balanced decisions.

Other contributors felt the Council needs to do a better job considering the full suite of impacts to support better decision-making. Some perceived that Council members may vote according to the outcomes they want to see and the pressure exerted by stakeholders, rather than in response to the impacts and scientific analysis. Some contributors felt that the Council and its members tends to overlook impacts that are less easily quantified and weights its decisions toward short-term rather than longer term impacts and benefits. They view the Council as placing significant emphasis on the avoidance of economic impacts to the industry, perhaps at the expense of biological, ecological and cumulative impacts.

Contributors had varying perspectives on whether adequate information is available for the Council to fully consider the impacts of its decisions. Some felt the Council has the information it needs, while others felt that the information is not sufficient in quality and quantity. Contributors highlighted the following factors that can influence the Council's consideration of impacts.

- Volume of information: Several contributors commented on the volume of information and analysis presented to the Council. While the availability of information is seen as a strength, some questioned whether too much analysis can be difficult to digest and make it challenging for Council members to focus on key points and takeaways. They felt that Council members can experience information overload and paralysis. Contributors also noted that there is a constant push for more and more information, and that waiting for new information may also lead to inaction.

- Interpretation of impacts: Contributors noted that individuals may interpret analysis very differently. An individual's consideration of and willingness to accept impacts may depend on their experience and perspective.
- Quantification of impacts: Contributors described an asymmetry in the ability to quantify different types of impacts. Contributors felt that some types of impacts, such as impacts to habitat and ecosystem resilience, are not easily quantified or lack clear performance metrics and are therefore weighted less heavily. Some also felt that the Council struggles with, and may disregard, scientific information (particularly qualitative information) that is not integrated through the allowable biological catch (ABC) setting process.
- Consideration of uncertainty: Some contributors felt that uncertainty leads the Council to make precautionary decisions, while others felt that uncertainty can support the Council in making riskier decisions.

10.1.2 Cumulative impacts

Contributors felt that the Council could more effectively consider the cumulative impacts of its decisions, within the context of each fishery and across the management system. They described that the Council addresses individual actions in turn, making decisions in response to specific problems and selecting the measures that it believes best address that problem. Contributors commented that this approach can support reasonable decisions in the short term, but recognized that risk and impacts can compound across individual actions over time. Contributors acknowledged that cumulative impacts are hard to analyze, quantify and predict, but expressed a desire to see more discussion of cumulative impacts reflected in the Council's decisions.

10.1.3 Short term v. long term impacts

Several contributors felt that the Council has a hard time balancing the short-term and long-term impacts of its decisions, and that the Council tends to weigh short-term impacts and benefits more heavily. They recognized the difficulty of quantifying long-term benefits, and the uncertainty in how results translate over longer timeframes, as contributing factors. Contributors felt that the Council places particular focus on the short term when decisions are likely to have immediate impacts to fishermen or communities.

10.1.4 Social and economic impacts

10.1.4.1 Social and economic information

Some contributors felt that the social and economic analysis available to the Council is sufficient to support the consideration of impacts. Others felt that the Council does not have sufficient information, and that lack of economic and social information is a significant impediment to the Council's ability to consider social and economic impacts. Those who felt that information is lacking would like to see improvements in the economic and social data and analysis provided to the Council, and more transparency around the data currently provided and used in analysis (see section 8). They explained that it is difficult for the Council to make informed decisions without a clear

understanding of who is participating in the fishery and how they will be impacted by the decision. Contributors also commented on the value of the Northeast Multispecies Performance Reports published by the Northeast Fisheries Science Center's (NEFSC) Social Sciences Branch, but noted the several year gap between updates to this report.

Some contributors felt that more work needs to be done on social impacts, citing community and social health impacts as specific opportunities for improvement. Contributors suggested prioritizing these areas of research and investing in the staff capacity and expertise to increase social analysis.

- **Conduct baseline studies**. Contributors suggested taking a foundational approach to generate more information on social impacts, for example by contracting periodic studies to "take the pulse" of fishing communities over time.
- **Update performance Reports**. Contributors suggested that more frequent updates to the Northeast Multispecies Fishery Performance Reports would be valuable.

Contributors also commented on the value of incorporating market impacts into Council decision-making. For example, they suggested considering how different management alternatives translate into market factors (e.g., demand, price, timing), and how markets impact fishing behavior.

10.1.4.2 Consideration of social and economic impacts

Contributors expressed a variety of perspectives regarding the Council's consideration of social and economic impacts. Some felt that the Council, both individually and as a group, pays significant attention to social and economic impacts; some felt the Council pays too much attention to these impacts; and some felt the Council needs to enhance its consideration of social and economic impacts.

Economic impacts

Several contributors expressed concern about the way in which the Council considers economic impacts in its decision-making. They perceive that the Council considers economic information in a reactive way, primarily by considering short-term negative impacts, rather than looking to economic information and objectives to guide decision making. For example, contributors felt that the Council takes economic impacts into account in the context of specific decisions, such as setting annual catch limits (ACLs), but does not use economic information more routinely as a basis for broader decision-making. Contributors also felt that the Council considers economic impacts where there are tradeoffs with the decision at hand, usually to justify a decision that minimizes short-term economic impacts perhaps at the expense of impacts to other aspects of the system (e.g., biological, ecological) or to long-term economic gains.

Social impacts

Several contributors felt that the Council's consideration of social impacts is lacking. They felt that the analysis provided to the Council is not given enough explicit consideration during Council discussions. Some contributors also felt that the Council defines the social component of its fisheries too narrowly, omitting the range of stakeholders in addition to fishermen and fishing communities who are impacted by the Council's decisions.

10.1.5 Biological impacts

Some contributors felt that the Council does a good job of considering biological impacts to its managed stocks. They felt that the mandate for the Scientific and Statistical Committee (SSC) to recommend ABCs that constrain the Council's specification of ACLs provides a good starting point for addressing biological impacts. However, some contributors felt that the Council's consideration of biological impacts is lacking. They perceive that the Council weighs risk and uncertainty differently across the factors that inform its decision-making, and leans toward accepting potential biological impacts in order to avoid potential short-term economic impacts. Contributors felt that the Council has a tendency to set ACLs at or close to the ABC despite significant uncertainty and has a record of overestimating biological performance.

10.1.6 Opportunities for improvement

Contributors provided the following suggestions to improve the Council's consideration of impacts.

- **Increase discussion**. Contributors suggested that the Council could devote additional attention to acknowledging and discussing impacts on the record. They noted that stakeholders' perceptions of whether the Council adequately considers the impacts of its decisions may depend on decision outcomes. Nevertheless, contributors felt that additional discussion of impacts around the Council table could help the public see where and how these impacts are considered.
- **Balance consideration**. Contributors offered the general suggestion that the Council could take a more balanced approach to considering impacts, risk, and uncertainty.
- **Develop procedures for responsiveness**. Contributors suggested developing a process to identify and evaluate past decisions that have performed poorly, as a way to better address cumulative impacts. They felt that this process may help the Council consider a different approach for balancing impacts and risks moving forward.

10.2 Outcomes

10.2.1 Factors that inform consideration of outcomes

Contributors noted the difficulty of evaluating outcomes from the Council's decisions. They observed that the nature of managing a dynamic resource for a range of

competing objectives, and controlling human behavior through complex regulations, does not facilitate a direct linkage between the Council's management decisions and the outcomes of the human, biological and ecological systems. Contributors shared a number of factors they believe should be taken into account when considering outcomes from the Council's decisions.

- Operating environment: Contributors noted that the Council operates in a challenging political and social environment and faces a high degree of complexity in its managed fisheries. In addition to the legal requirements that guide the Council's decision making, litigation, and the avoidance of litigation, is also a driving factor.
- Environmental change: Contributors observed that climate change introduces additional complexity and uncertainty to the Council's management decisions. They felt that environmental change can complicate the relationship between the Council's scientific inputs, management decisions, and biological outcomes.
- Management framework: Some contributors felt that the Magnuson-Stevens Act (MSA) requirements are particularly challenging to the New England region given challenges related constraining "choke" species, the potential difficulty of rebuilding stocks under climate change, and the stock assessment challenges identified in section 8. They perceived that some stakeholders may misplace blame on the Council for unfavorable outcomes when they don't understand the Council's legal requirements and the limits of its discretion in decision making.
- Information availability: Contributors felt that the outcomes of decisions should be evaluated in light of the information available at the time of the decision. Some stated the Council does a good job of making the best possible decision given information available at the time.
- Controversy and compromise: Contributors observed that there will always be people who do not like the outcomes of a Council decision. Some contributors felt that "good" decisions reflect a compromise, which may result in people on either side of an issue not getting the outcome that they wanted. They also emphasized that the controversial nature of a particular outcome is not necessarily indicative of a "bad" decision.
- Management system: Contributors emphasized that while the Council may be perceived as ultimately responsible for the outcome of decisions, the entire management system needs to be taken into account when evaluating outcomes, including scientific inputs, SSC recommendations, analysis of impacts, Council deliberations and Agency approval and implementation.
- Perspective: Whether the outcomes from a decision are perceived as a success or failure can depend on an individual's frame of reference and how they are impacted. Contributors noted that people may also have different perspectives on what an action was intended to achieve.

10.2.2 Perspectives on outcomes

Contributors shared diverse perspectives on how well the Council's management decisions translate into desired outcomes. Some perceived that outcomes have been generally positive or negative, but many also recognized that the Council has achieved some "successes" in addition to experiencing some challenges. Perceptions of success varied across fisheries and decision points. Some contributors felt the Council's decisions do a good job of balancing different objectives and viewpoints in an effort to achieve positive outcomes. They felt that the Council is unfairly criticized and that people may focus on what they believe to be failures without acknowledging successes. Other contributors felt the Council does not always make decisions that support a high likelihood of success. Some contributors also perceive a lack of accountability for the ultimate results of the Council's decisions.

10.2.2.1 Same system – different results

Several contributors reflected on how fishery outcomes relate to the Council's decision-making process. Many shared, in blunt terms, that they perceive management of the scallop fishery as a success and view management of the groundfish fishery as largely a failure. Contributors recognized that these two fisheries are managed under the same process yet produce very different outcomes. Some observed that even within the groundfish FMP, some stocks are performing poorly, such as Gulf of Maine cod, in contrast to healthier stocks including haddock and pollock. Contributors pointed to the scallop fishery as an example of the Council's capacity for success and questioned how management decisions under the purview of the same laws and using the same process can result in such different results.

Contributors largely discussed outcomes in terms of economic and biological performance. They described "good" economic outcomes primarily in terms of economic returns to fishery participants, and "good" biological outcomes in terms of maintaining stocks at levels that support high yields and rebuilding overfished stocks. Contributors noted that the perception of "good" and "bad" outcomes can be relative; for example, when a fishery is already not performing well economically, even minor impacts to economic performance can be perceived as significant.

10.2.2.2 National Standard 1

Some contributors felt that the Council's decisions do not perform well relative to National Standard 1. They felt the Council has not been successful in preventing overfishing and achieving optimum yield from each of its managed fisheries. Contributors described a pattern of managing overfished stocks, failing to effectively rebuild those stocks, and continually constraining healthy fisheries to avoid overfished stocks. They felt the Council's tendency to minimize short-term economic impacts does not support management for the long-term benefit of the nation. Some believe the Council needs to be held accountable for failing to end overfishing and rebuild stocks.

Other contributors recognized the steps the Council has taken to rebuild stocks. They felt that rebuilding performance does not reflect a lack of effort on the Council's part, but results from the challenge of translating management measures into biological outcomes. Contributors questioned why stocks are not rebuilding and suggested factors that include changing environmental conditions, insufficient science, lack of enforcement, industry pressure and insufficiently conservative catch limits.

10.2.2.3 Groundfish

Several contributors felt that the Council has failed in managing groundfish. They point to poor biological, social and economic outcomes and the significant short-term and long-term costs of this failure. Contributors felt the Council was slow to respond to problems as they arose and has not prioritized conservation and rebuilding in its decisions. They felt there has been a lack of acknowledgement and ownership over the problems by the Council, Greater Atlantic Regional Office (GARFO) and NEFSC and that these underlying problems need to be fixed. Other contributors felt that the Council may be unfairly blamed for the problems in the groundfish fishery. They noted that the Council has always adopted catch limits within the advice of the SSC and makes reasonable decisions in response to the information they have to work with. Additionally, some contributors felt that stakeholders may blame the sector program for challenges in the fishery, and felt that the low abundance of some stocks and the MSA's requirement for ACLs and accountability measures is the underlying problem.

10.2.3 Evaluation of outcomes

Contributors felt that the Council does not do a good job of evaluating the success of its management actions. They identified a number of impediments to evaluating outcomes that are inherent in the Council system including workload, priorities, and change in membership. Contributors felt that the Council lacks the time and resources to look back when there are other issues waiting to be addressed. The responsive nature of the Council's management system also makes it difficult to assess outcomes, as regulations and management strategies may change before it's possible to determine the effect of the previous action.

10.2.3.1 Performance metrics

Contributors felt that it would be beneficial for the Council to review the outcomes from its decisions, both individually (i.e., are the goals of the specific action realized?), and comprehensively (i.e., are the cumulative measures in place producing the desired outcome?). However, they noted the lack of quantifiable performance standards and monitoring as significant impediments to evaluating the results of Council decisions. Contributors felt that this is particularly true for decisions related to habitat and ecosystem objectives. Contributors also noted that specifying and quantifying objectives up front could support the Council's decision-making and the subsequent evaluation of outcomes.

- **Articulate measurable objectives**. Contributors suggested that the Council could better articulate measurable objectives for evaluating its management decisions (i.e., we're taking x action with the intention of y result).
- **Align monitoring and performance standards**. Contributors suggested increased efforts to better align monitoring programs (particularly for habitat and ecosystem) with performance standards.

10.2.3.2 Data streams

Contributors described challenges with the ability of data streams to support evaluation of outcomes. The Council's management decisions and the pace at which changes are made may impact the meaning of the data being collected. For example, contributors mentioned that fluctuating ACLs and the avoidance of constraining stocks make catch per unit effort (CPUE) a less meaningful metric for tracking abundance. Contributors felt that the link between the Council's decisions, the data streams being collected, and the evaluation of outcomes is lacking.

- **Improve management-data link.** Contributors suggested that more up front consideration be given to the data needed to evaluate performance and how the management measures being considered and/or implemented will influence the value of data streams, including those that inform stock assessments.

10.2.3.3 Reasons for failure

Contributors felt that when an action results in undesirable and/or unintended consequences, it is important to understand why. They noted that poor outcomes can result from scientific failures (e.g., overestimating stock size), management failures (e.g., setting ACLs too high), enforcement failures (e.g., noncompliance), and failure to correctly predict human behavior (e.g., loopholes and incentives). Contributors expressed that these reasons are not mutually exclusive and that management failures may occur in response to science failures. Additionally, contributors felt that enforcement of regulations is insufficient and that lack of compliance may have a significant impact on performance of management measures and outcomes.

11. Looking ahead

11.1 Best practices

Contributors shared a range of perspectives on the New England Fishery Management Council's (Council) incorporation of best practices and lessons learned from other regions. Some felt the Council does try to use lessons and practices from other regions, while others felt the Council is not particularly strong in this regard. Contributors recognized that some cross-pollination is occurring at the Council staff level through collaboration with the Mid-Atlantic Fishery Management Council (MAFMC) and Atlantic States Marine Fisheries Commission (ASMFC) and informal peer networks and working groups. They also highlighted the Council Coordination Committee as an opportunity for learning and identifying best practices, but acknowledged that the nature of this group, which convenes leadership of the National Marine Fisheries Service (NMFS) and the eight regional fishery management councils, does not necessarily facilitate a close reflection on regional processes.

Contributors discussed the limitations of applying practices from other regions, given that different regional fishery management councils have very different fisheries, needs, and relationships with their management partners. They questioned how best practices would be defined and cautioned against making assumptions about what constitutes "best," or how well practices might translate across regions. Some also felt that while the Council is open to new approaches, certain aspects of the New England Fishery Management Council process, particularly the use of committees and approach for public input, are a good fit for the region.

Other contributors thought the Council would be well served by exploring the practices and lessons of other management bodies. They felt the Council could explore ways to improve efficiency and identify new approaches and innovations.

- **Support staff-level exchange**. Contributors suggested that increased opportunities for Council staff to learn from their colleagues in other regions could be a helpful and effective way to consider new approaches and leverage lessons learned.
- **Form a working group**. Contributors suggested that the Council could consider forming a working group or committee to explore the processes used by other councils and identify potential improvements or new approaches.

11.2 Collaboration

Contributors reflected on the attributes they believe make the Council process work effectively. They felt the process works well when there is strong collaboration, balanced and active participation, and when those involved in the process share clearly defined goals. Contributors described the management process for scallops as a good

example of a collaborative process in which the different groups (committees, plan development teams (PDTs) and advisory panels (APs)) work in concert and support a high level of stakeholder involvement. They also recognized that the fishery's profitability and unified stakeholder base helps facilitate these outcomes. In contrast, contributors described the Council process as more challenging when there is a lack of collaboration and compromise, when there are not clear solutions, and when stakeholders are polarized.

Contributors felt that the Council process, despite good intentions, does not always create a conducive environment for collaboration. They described that the separation of responsibility and work into groups (committee, PDT and AP) and the sequence and formality of meetings does not allow the individuals involved to work through issues together. Additionally, they felt that the formality of public comment and the public's interaction with these groups, does not effectively engage stakeholders in creative problem solving. Contributors also felt that there is a lack of trust and willingness to work together. Some described that different groups in the process (Council, NMFS, scientists, and different stakeholder interests) look at each other as "others" rather than as partners, and may not empathize with one another's needs.

- **Build collaborative relationships.** Contributors suggested that investing in relationships among the individuals and groups involved in the process could help build a collaborative atmosphere.
- **Create new opportunities for interaction.** Contributors suggested creating new opportunities and venues for more dynamic conversations and problem solving among all groups involved in the process. For example, they felt workshops and other informal settings could help support innovation and compromise.
- **Establish a common goal.** Contributors suggested additional up front investment and careful consideration in the development of goals and objectives for an action. They felt this would support a common understanding and clear purpose that could help support improved collaboration.
- **Engage AP and stakeholders early.** Contributors suggested engaging the Council's APs and stakeholders early in the development of management actions to facilitate more up-front and creative thinking. They felt this would better position stakeholders to be more involved in the development of potential management alternatives, rather than responding to measures once they have been developed.

Management strategy evaluation

Contributors reflected on the Council's recent experience conducting management strategy evaluation (MSE) to develop control rules for the herring fishery. They articulated the following benefits of MSE.

- Engagement: Contributors felt the MSE process brings stakeholders into the process in different way than the traditional Council process. They described that

the MSE process integrates stakeholder input in a transparent way that allows stakeholders to understand how and where their input is being used.

- Understanding: Contributors felt that an additional benefit of MSE is that it helps stakeholders to better understand the linkages between the science and the management process, and see how data is used.
- Information: Contributors felt that the MSE process facilitates the incorporation of new science and data sources that may not otherwise be available or apparent.
- Collaboration: Contributors felt that the MSE process is a good framework for increasing collaboration and consensus building in the Council process. They explained that participants are exposed to different ideas and perspectives and gain a better understanding and appreciation for different points of view.

Contributors also noted some limitations with the MSE process. They felt that a fundamental ingredient to MSE is the willingness of participants to compromise and accept the outcomes from the process. Some perceived that in the herring MSE stakeholders were largely unwilling to move from their positions. Contributors also described a tradeoff between openness and transparency and the ability to reach compromise. While making the MSE process inclusive and open to the public allows for broad participation and buy-in, they felt a smaller group of stakeholders who are committed to the MSE process would be more likely to reach compromise. Contributors also felt that the MSE process needs to be iterative and requires a long-term investment to see the full benefits.

- **Increase use of MSE.** Contributors suggested that it could be valuable to bring MSE into the Council process more often. Some felt that it would be valuable to conduct MSEs for all stocks. Others questioned how MSE relates to the current Council process (i.e. as an addition or substitution) and suggested incorporating certain aspects of the MSE process into the Council process.

11.3 Long term vision and planning

Many contributors commented on the Council's frame of reference for its work, and what they viewed as a significant need to be more proactive and long-term focused. Contributors felt that the Council is in a cycle of crisis management, reacting to symptoms of larger problems and focusing on short-term tasks and goals (e.g., setting annual catch limits (ACLs) and minimizing economic impacts). They felt that the complex regulatory structure and the operating environment in New England (see section 2) make it difficult for the Council and its management partners to keep up with near term requirements and pressures, let alone create the space to think more strategically.

Several contributors felt strongly that the Council needs to find a way out of crisis management. They felt that the Council and its partners need to focus on addressing the large, overarching issues in the region, which they perceive to be climate change,

groundfish management and stock assessments, data collection (including recreational data) and monitoring. In particular, contributors felt that the Council's challenges with the groundfish fishery need to be addressed. They noted that the Council spends a significant amount of time reacting to challenges in this fishery and that the challenges with groundfish ripple into other fisheries. Contributors described the need to directly address the challenges with stock assessments and develop a realistic goal for the fishery. They perceive that the Council is perpetually responding to overfished stocks, constraining healthy fisheries and still not achieving rebuilding.

Contributors provided the following suggestions for ways the Council could create the capacity to address these large problems and consider longer-term priorities.

- **Improve efficiency.** Contributors suggested that improving the efficiently of the process could create the space for more strategic thinking and investment in ongoing challenges. They described opportunities for efficiency throughout the process, including through prioritization, development of management actions, and efficient use of Council and NMFS staff resources.
- **Prioritize strategically**. Contributors suggested that taking a focused and strategic approach to setting annual priorities could help the Council move toward longer-term goals (see below).
- **Simplify management**. Contributors suggested that simplifying the Council's management approach could create the space to tackle big challenges and reduce the burden on industry and managers. For example, they provided specific suggestions (included throughout this summary) for simplifying fishery management plans, data system and regulatory requirements.

Climate change

Contributors emphasized the significant current and future impacts of climate change to the New England region. They described changes to productivity and distribution of stocks, implications to the time frame and potentially even the possibility of rebuilding certain overfished stocks, and the movement of stocks into and out of New England waters. Contributors also explained the implications of climate change for the scientific inputs that support the Council process. Specifically, they described that scientific inputs will reflect an environment that has shifted from previous conditions and assumptions, and reflect increasing uncertainty. Contributors also explained that federal budget reductions will reduce the region's scientific capacity at a time when management decisions will demand more scientific information. They felt that the Council and its underlying management framework may not be prepared to manage under increasing change and uncertainty, and with declining levels of investment in science.

Contributors offered the following suggestions for preparing for, and adapting to, climate change.

- **Increase coordination**. Contributors suggested increasing coordination with the Council's partners and other management bodies. They felt that the Northeast Regional Coordinating Council (NRCC) could be used as a platform for addressing jurisdictional issues resulting from changing species distributions and to collaboratively prioritize the region's scientific needs.
- **Incorporate climate science**. Contributors felt that the pace at which climate science is incorporated into stock assessments and other scientific inputs needs to be increased.
- **Plan for change.** Contributors suggested reflecting on the Council's decision framework and proactively outlining an approach for decision-making in light of increased uncertainty and change.
- **Prioritize climate issues**. Contributors suggested keeping climate change issues at the forefront of planning and prioritization efforts, including the Council's annual priority setting process and the region's science and research priorities.

Competing ocean interests

Contributors reflected on the implications of competing ocean uses and noted the particular concern that offshore energy and aquaculture will compete with fisheries for ocean space. They also observed that habitat impacts and protected species interactions are likely to impact the Council's responsibilities. Contributors expressed concern that the interests of New England fisheries could be overshadowed and constrained by the expansion of other interests and users of ocean space.

- **Increase regional coordination**. Contributors suggested that improved regional coordination with the Greater Atlantic Regional Office (GARFO), Northeast Fisheries Science Center (NEFSC) and the NRCC could help the Council understand and track these activities and issues, and provide a unified front to advocate for New England's fisheries and fishery resources.

Vision

Contributors emphasized the need for the Council to develop a strategic, forward looking approach to management in order to address current and future challenges, and move beyond crisis management. They encouraged the Council to invest in the future of its managed fisheries by articulating a long-term vision and facilitating innovation and problem solving to achieve that vision. Contributors recognized the difficulty of creating the time and space to reflect on the big picture and develop a long-term vision. However, they felt that articulating a holistic long-term goal, and taking a strong stance and steps toward achieving that goal, is the only way to move from a reactive to a proactive management regime.

Contributors suggested the following ideas to support the Council's consideration and development of a longer-term management approach.

- **Facilitate creative dialogue.** Contributors felt that the current Council system is not structured in a way that facilitates big-picture dialogue. They suggested creating new opportunities and venues to encourage forward-looking discussion and develop a shared vision for New England fisheries.
- **Embrace EBFM**. Contributors suggested that the Council more fully embrace ecosystem-based fisheries management (EBFM) to acknowledge the interactions between climate change, habitat and species productivity. They felt that the Council needs a dynamic management framework to reflect a dynamic and changing environment.
- **Think strategically**. Contributors suggested that developing a long-term strategy in response to an articulated long-term vision would help the Council to prioritize its work, improve efficiency and maintain focus.
- **Anticipate emerging issues**. Contributors suggested that as part of a forward-looking approach, the Council and its partners should be proactive in anticipating and responding to emerging issues such as climate change and other ocean interests. They felt that this is essential to protecting the interests of the Council's managed resources and the interests of stakeholders.