



New England Fishery Management Council

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MEMORANDUM

DATE: January 7, 2019
TO: Executive Committee
FROM: Tom Nies, Executive Director
SUBJECT: Allocation Review Triggers

1. NMFS Policy Directive 01-119 assigns responsibilities and defines the general process for the review of allocations. One of the Council's responsibilities is to identify the criteria that will be used to trigger an allocation review. The criteria are supposed to be developed by 2019, if practicable. Three general criteria identified by the Council Coordination Committee (CCC): public-interest based, time-based, and indicator based. These are discussed in more detail in NMFS Procedural Directive 010-119-1, a document developed with the assistance of the CCC. A second directive, NMFS Procedural Directive 01-119-2, provides guidance on how to conduct an allocation review.

2. The Council wrestled with allocation triggers is issue at the June and September 2018 Council meetings. There was a wide range of opinions expressed by members. Some said that triggers should be individually developed for each fishery management plan (FMP). Others supported developing criteria that could be used to both evaluate allocations and trigger a more thorough review. The only consensus was to have the Executive Committee bring back a proposal for the Council's consideration.

3. Attachment (1) is a proposed Council policy, based in large measure on a policy adopted by the North Pacific Fishery Management Council. While allocations for catch share programs would be reviewed as part of the five-year reviews, other allocations would be reviewed primarily on the basis of time, and secondarily when public-interest suggests a review is necessary. Rather than commit to a specific time period, the policy creates a window so other Council priorities can be considered.

Attachments: (1) Draft Fishery Allocation Review Policy
(2) NMFS PD 01-119
(3) NMFS PD 01-119-1
(4) NMFS PD 01-119-2

Draft Fishery Allocation Review Policy

In general, a fisheries allocation is a “direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete user groups or individuals” (50 CFR 600.10). Allocations are designed to help achieve the goals and objectives of a fishery management plan (FMP). As such, periodic review of allocations is important to ensure that the allocations are accomplishing their purpose. The National Marine Fisheries Service (NMFS) and the Council Coordination Committee (CCC) combined to develop policy and procedural guidance for the frequency and performance of periodic review of fisheries allocations. Three documents summarize the results of that effort:

- NMFS Policy Directive 01-119: Fisheries Allocation Review Policy (February 23, 2017). This policy directive assigns responsibilities and defines the general process for the review of allocations.
- NMFS Procedural Directive 01-119-1: Criteria for Initiating Fisheries Allocation Reviews. Council Coordinating Committee Allocation Workgroup Guidance Document (July 27, 2016). This procedural directive identifies criteria that can be used to determine when an allocation review should be performed.
- NMFS Procedural Directive 01-119-2: Recommended Practices and Factors to Consider When Reviewing and Making Allocation Decisions (July 27, 2016).

NMFS PD 01-119 outlines the general steps for the management of allocations. The need for an allocation review is determined based on criteria adopted by a Council (see PD 01-119-1). If the conclusion is a review is necessary, a review is performed as outlined by PD 01-119-2. The review could determine that no changes are needed to existing allocations or may determine that changes should be considered. At this stage, in depth analyses are not required; however, to ensure transparency, a clear articulation of how the objectives are or are not being met, and a clear rationale on relevant factors considered should be included in the record. This fisheries allocation review informs whether or not a consideration of new allocation alternatives is warranted. The latter conclusion could lead to a Council action addressed during the normal prioritization process.

This Council policy identifies the criteria that will be used to trigger the review of allocations. This policy covers only allocations that distribute specific quantities to identifiable, discrete user groups or individuals (see PD 01-119 for additional discussion). This narrower definition means that this policy does not apply to days-at sea allocations or allocations of access to an area, for example, since they are not a specific quantity of fish. The criteria that will be used by the Council are:

- 1) Catch share programs: Allocations will be reviewed as part of the review of catch share or LAPP programs.

- 2) Time-based: The primary trigger criteria for review of non-catch share allocations will be at eight to ten years after initial implementation. This range of years is selected so that the allocation review can be coordinated with other competing Council priorities and the availability of data. When allocations are created in a management action, the Council may specify a more frequent review period.
- 3) Public interest: The secondary trigger for review will be public interest as developed through the existing Council input process. A key element of this process is the annual setting of priorities. Public interest in an allocation review will be considered as part of this process.

As of January 2019, the relevant NEFMC allocations and the expected review period are listed in the following table.

| FMP | Allocation | Date Established | Most Recent Update/Review¹ (as of 1/1/2019) | Planned Review Date |
|------------------------|---|--------------------------|---|----------------------------|
| Northeast Multispecies | GOM Cod: Rec/Comm Split | 2010 | 2010 | 2018-2020 |
| | GOM Haddock: Rec/Comm Split | 2010 | 2010 | 2018-2020 |
| | Commercial Sector PSC | 2010 | 2010 | 2018-2020 |
| | GOM and GB Haddock: MWT Sub-ACL | 2006 (2010) ² | 2017 | 2025-2027 |
| | GB YTF: Scallop Fishery Sub-ACL | 2010 | 2013 | 2021-2023 |
| | GB YTF: Small-Mesh Fishery Sub-ACL | 2013 | 2013 | 2021-2023 |
| | SNE/MA WINP: Scallop Fishery Sub-ACL | 2013 | 2013 | 2021-2023 |
| | GOM/GB WINP: Scallop Fishery Sub-ACL | 2017 | 2017 | 2025-2027 |
| | SNE/MA WINP: Large-Mesh Fishery Sub-ACL | 2013 | 2013 | 2021-2023 |
| | SNE/MA YTF: Scallop Fishery Sub-ACL | 2010 | 2018 ³ | NA ⁴ |
| Atlantic Sea Scallops | LA with LAGC ITQ Allocations | 2007 | 2017 | 2025-2027 |
| | LAGC ITQ Allocations | 2007 | 2017 | 2022 |
| | NGOM Allocation | 2007 | 2018 | 2026-2028 |
| | LA Access Area Trips and Trip Limit | 1999 | 2018 | NA ⁴ |
| Atlantic Herring | River Herring/Shad Catch Caps | 2014 | 2016 | NA ⁴ |
| | Fixed Gear Set Aside | 2006 | 2016 | NA ⁴ |

¹ Update refers to allocation of sub-ACL, not measures related to an AM. In some cases, changes to the AM effectively modify the sub-ACL on a short-term basis.

² Adopted as a catch cap for haddock in 2006, converted to a stock-specific sub-ACLs in 2010.

³ Value is calculated each time scallop specifications are set, as established in 2010.

⁴ Allocation is reviewed when specifications are set.

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| <i>NATIONAL MARINE FISHERIES SERVICE POLICY 01-119</i> Effective on: February 23, 2017 | |
| To be reviewed on: October 1, 2023 | |
| Fisheries Management | |
| Fisheries Allocation Review Policy | |
| NOTICE: This publication is available at: https://www.fisheries.noaa.gov/national/laws-and-policies/policy-directive-system | |
| Author name: Wendy Morrison Office: Sustainable Fisheries | Certified by: Alan Risenhoover Office: Sustainable Fisheries |
| Type of Issuance: Renewal, September 2018 | |
| <i>SUMMARY OF REVISIONS:</i> Renewed in June 2018. The policy was revised in February 23, 2017, and initially put into effect on July 27, 2016. | |

I. Introduction

The National Marine Fisheries Service (NMFS) and the Council Coordination Committee (CCC) have discussed what type and/or level of guidance is needed for fisheries allocation decision-making as well as what factors should be considered. In May 2014, the CCC voted to split the tasks of writing the guidance into two sections. The CCC tasked a subcommittee (the CCC allocation working group) with drafting guidance on *when* to make fisheries allocation decisions and NMFS was asked to draft guidance on *what factors* should be considered when making fisheries allocation decisions. Both groups agreed that answers to these questions should be based on the concept of adaptive management and thus should be tied to fishery management plan (FMP) and fisheries allocation objectives. In June 2015, the CCC agreed that NMFS would create a policy on fisheries allocation (this document) that would explain how the CCC trigger document (Procedural Directive 01-119-01) and the NMFS fisheries allocation factors document (Procedural Directive 01-119-02) complement each other. These guidance documents do not modify or supersede any guidance associated with the National Standards, other provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) or other applicable laws; rather, they are intended to help the Councils and NOAA review and update allocations under the MSA.

II. Objective

The objective of this policy is to briefly describe the fisheries allocation review

process collaboratively developed by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) Office of Sustainable Fisheries and the CCC (see Figure 1). This policy will provide a mechanism to ensure fisheries allocations are periodically evaluated to remain relevant to current conditions. In addition, it will improve transparency and minimize conflict for a process that is often controversial.

Use of adaptive management - The allocation of fishing access should follow an adaptive management process. Adaptive Management is the on-going process of evaluating if management objectives have been met and adjusting management strategies in response. This process includes periodic re-evaluation and updating of the management goals and objectives to ensure they are relevant to current conditions and needs.

III. Authorities and Responsibilities

This policy directive establishes the following authorities and responsibilities. Regional Fishery Management Councils (Councils)¹ will be responsible for determining what triggers are applicable for each of their fishery management plans (FMPs) that contain a fisheries allocation, including allocations across jurisdictions (e.g., state, regional), across sectors (e.g., commercial, recreational, tribal, research), and within sectors (e.g., individual fishermen, gear types)². These triggers should be identified within three years (or as soon as practicable) from the finalization of this policy. When identifying triggers, if the trigger is indicator-based, councils must also clarify their process for periodically determining if a trigger has been met. The process could be part of already existing analysis which resides in annual or periodic reports (i.e., 5/7 year catch share reviews, stock assessments, economics of the US). Councils will determine the appropriate method to identify triggers, such as a policy document or an FMP amendment.

NMFS Regional Administrators and Science Center Directors will be responsible for engaging with the Councils to support the development of triggers and thresholds for each FMP. If a trigger or threshold is hit, NMFS Regional Administrators and Science Center Directors will support the Councils' review of the relevant fisheries allocation decision.

The recommended three step process is briefly described below and diagramed in Figure 1.

Step One: A trigger is met. There are three main categories of triggers: public input, time, or indicator-based. For example, a significant change in landings (e.g., an increase/decrease greater than one to two standard deviations within a three-year timeframe, etc.) may be identified as an indicator-based trigger for initiating a review of an allocation decision. Triggers are discussed in more detail in the CCC trigger

¹Includes Atlantic High Migratory Species Secretarial actions.

² See CCC trigger document (Procedural Directive 01-119-01) for a detailed description of triggers.

document (Procedural Directive 01-119-01). If the trigger is indicator-based, or time-based, then proceed immediately to step 2: fisheries allocation review. If the trigger is based on public input to the Councils, then a check for changes in social, ecological, or economic criteria is required (step 1a in Figure 1) to ensure assessment of the fisheries allocation is an appropriate use of Council resources. At this stage, in depth analyses are not required.

Step Two: Fisheries Allocation Review. Councils should complete a review of the fisheries allocation in question. This review will assist the Councils in determining whether or not the development and evaluation of allocation options is warranted, and is not, in and of itself, a trigger to initiate an FMP amendment (or framework adjustment, if appropriate) to consider alternative allocations. This step is discussed in more detail in the CCC triggers document (Procedural Directive 01-119-01) and overlaps with the NMFS fisheries allocation factors document (Procedural Directive 01-119-02). The review should consider the FMP objectives³ along with other relevant factors that have changed and may be important to the fisheries allocation. Relevant factors are described in the NMFS fisheries allocation factors document (Procedural Directive 01-119-02). At this stage, in depth analyses are not required; however, to ensure transparency, a clear articulation of how the objectives are or are not being met, and a clear rationale on relevant factors considered should be included in the record. This fisheries allocation review informs whether or not a consideration of new allocation alternatives is warranted.

Step Three: Evaluation of Fisheries Allocation Options for an FMP amendment⁴. Based on step two, if a Council decides that development of allocation options is warranted, a Council will proceed with formal analyses, and follow its amendment process for identifying alternatives, soliciting public input, etc. If the Council determines that the FMP objectives are not up-to-date, then the Council should discuss, evaluate, and if necessary, revise the objectives⁵. During the identification of alternatives, Councils should consider the factors in the Procedural Directive 01-119-02. All of the factors do not need to be analyzed for each fisheries allocation decision. If a factor is not relevant for a given decision, no formal analysis for that factor is needed; however, the record should clearly document the rationale for that determination.

Definitions

Adaptive Management is the on-going process of evaluating if management objectives have been met and adjusting management strategies in response.

Fisheries Allocation (or “allocation” or “assignment” of fishing privileges) is defined

³ As noted in the CCC triggers document (PD 01-119-01): “recommendations... are based on the assumption that a Council’s management goals and objectives ... are relevant and/or contemporary at the time of consideration for triggering an allocation review, of conducting an allocation review, and of taking a reallocation action.”

⁴ A framework adjustment, if appropriate, could also be used.

⁵ Councils can choose to update FMP objectives at the same time they are evaluating fishery allocation options.

by NMFS as a “direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete user groups or individuals.” 50 CFR 600.10; *see also* National Standard 4 Guidelines, 50 CFR 600.325(c)(1) (further describing the scope of this definition and providing examples of allocations of fishing privileges under National Standard 4)⁶. The scope of allocations covered by this Policy is narrower than the scope of allocations under the National Standard 4 guidelines. This Policy covers only allocations that distribute specific quantities to identifiable, discrete user groups or individuals. This is true regardless of how the discrete user groups or individuals are managed under the FMP.

Fisheries Allocation Review is the evaluation that leads to the decision of whether or not the development and evaluation of allocation options is warranted, but is not, in and of itself, an implicit trigger to consider alternative allocations.

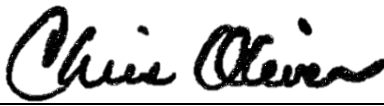
Evaluation of Fisheries Allocation Options for an FMP amendment – if the allocation review determines a reallocation may be warranted then the full analysis and evaluation of allocation options should be initiated. The goal will be an FMP amendment (or framework adjustment) that either updates the allocation or retains the status quo.

IV. Measuring Effectiveness

Three years after the publication of this policy, NMFS will work with the Councils to determine whether or not trigger mechanisms have been established for FMPs that contain a fisheries allocation. For those fisheries without a trigger, NMFS will work with the Councils to identify as soon as practicable the appropriate trigger(s). Once a Council confirms a trigger has been met, NMFS will work with the Council to support and advance the review and analysis.

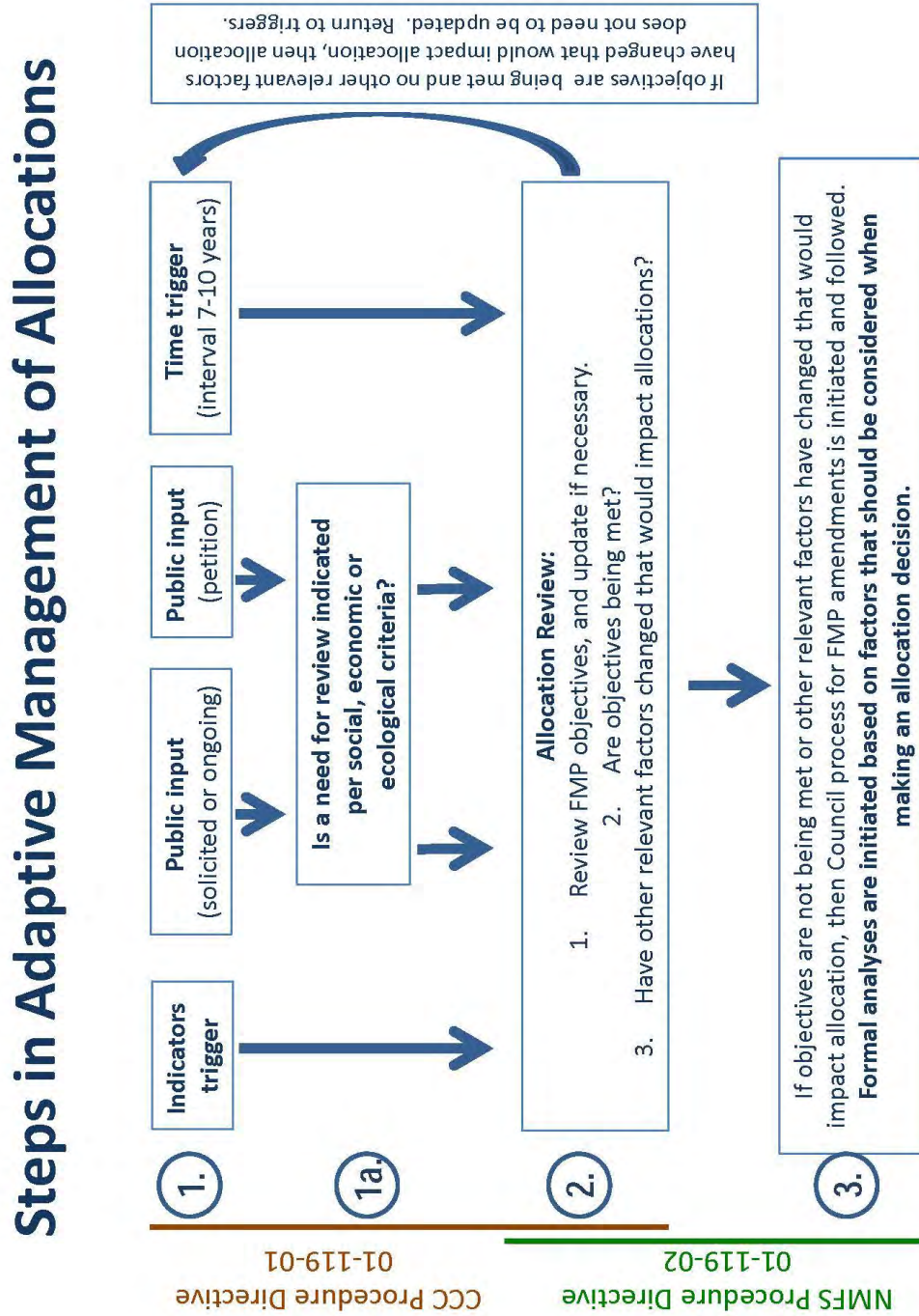
V. References

Two Procedural directives will be issued and revised as needed to implement this policy.

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|--------|---|-----------|
| Signed |  | 9/27/2018 |
| | Chris Oliver | Date |
| | Assistant Administrator for Fisheries | |

⁶ www.nmfs.noaa.gov/sfa/laws_policies/national_standards/documents/national_standard_4_cfr.pdf

Figure 1.



Department of Commerce · National Oceanic & Atmospheric Administration · National Marine Fisheries Service

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| <i>NATIONAL MARINE FISHERIES SERVICE PROCEDURE 01-119-01</i> Effective on: July 27, 2016 | |
| To be reviewed on: October 1, 2023 | |
| Fisheries Management Fisheries Allocation Review Policy, 01-119 | |
| Criteria for Initiating Fisheries Allocation Reviews Council Coordinating Committee Allocation Workgroup Guidance Document | |
| NOTICE: This publication is available at: https://www.fisheries.noaa.gov/national/laws-and-policies/policy-directive-system | |
| Author name: CCC Allocation Workgroup Office: Sustainable Fisheries | Certified by: Alan Risenhoover Office: Sustainable Fisheries |
| Type of Issuance: Renewal, October 2018 | |
| <i>SUMMARY OF REVISIONS:</i> Renewed in October 2018. This initial directive was approved by the Council Coordination Committee June 24, 2015, and put into effect by NMFS on July 27, 2016. | |
| Signed _____ Alan Risenhoover Director, Office of Sustainable Fisheries | |
| Date _____ | |

I. Introduction

Fishery allocations can occur at a variety of levels: among countries, communities, sectors within a fishery, gear types within a sector, across seasons, and among individual participants. While allocations between commercial and recreational sectors often figure prominently in fisheries allocations, this guidance document is intended to apply to any type of allocation review. Regional Fishery Management Councils (councils) may consider. This Council Coordination Committee (CCC) working group report explores several potential mechanisms for allocation reviews, including criteria based on fishery indicators, time, or public interest. Although the alternatives are not mutually exclusive, the effective implementation of one alternative may ameliorate the need for others.

U.S. marine fisheries and the human interactions with those fisheries are dynamic. Populations in U.S. coastal shoreline counties increased by 34.8 million from 1970 through 2010 (stateofthecoast.noaa.gov). Despite the dynamic nature of these interactions, fisheries allocations are difficult to review and amend.

At the same time, demands for fishery allocation reviews have been increasing. Consider that the ten highest priority recommended actions to improve saltwater recreational fisheries management at the 2014 NMFS Recreational Fisheries Summit included two council-related priorities relevant to the review of allocations: 1) Achieving more equitable council representation, and 2) Readjust recreational and commercial allocations.

A number of factors contribute to the challenges in allocation review. Allocation reviews are demanding with respect to the technical work necessary to analyze complex social and economic tradeoffs associated with existing or prospective allocations. In addition, while fishery resources are public trust resources, allocation discussions are inherently politically challenging since they are viewed in zero-sum terms by stakeholders. Despite these challenges, careful consideration of allocation decisions is necessary to meet the mandates of the Magnuson Stevens Fishery Conservation and Management Act (MSA).

The MSA defines optimum yield as “the amount of fish which: “(A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities...” Allocation is immediately relevant to achieving optimum yield.

Allocation review mechanisms should provide transparent processes for adequate reviews of allocations to ensure that U.S. fisheries are managed to achieve National Standard 1. While the demographic composition of some regional councils closely mirrors that of the commercial and recreational fisheries within a specific region, some councils do not have significant recreational representation among their political appointees. Asymmetrical council compositions further underscore the need for well-defined and transparent processes to ensure fairness and responsiveness to the issue of allocation.

Regardless of the mechanism ultimately used to trigger an allocation review, councils may benefit from developing and maintaining a prioritized schedule for review of allocation issues. Such an effort could provide for a more orderly consideration of this topic and help manage expectations among stakeholders and managers.

II. Objective

In order to address the above issues the CCC Allocation Working Group proposes a protocol based on adaptive management consisting of three separate steps: (a) Triggering an allocation review; (b) the allocation review; (c) and if deemed necessary by the review, a reallocation action to amend the FMP. Critical aspects are the decision threshold for initiating an allocation review and the subsequent reallocation action. The focus of the CCC working group’s exploration is the first of those steps – triggering an allocation review. Therefore, the remainder of this document is organized as follows:

A. Adaptive Management

1. Introduction
2. Establishment of management goals and objectives
3. Goals and objectives of the allocation decision as criteria for triggering allocation review

4. Defining the management action for potential review
 5. Monitoring the achievement of management goals and objectives and the effects of the allocation
 6. Evaluating the achievement of management goals and objectives and the impacts of the allocation
 7. Adapting in response to evaluation and learning
 8. Reconsidering management goals and objectives
- B. Definitions
1. Statement of Purpose
 2. What are the steps involved in adaptive management of allocation decisions?
 3. What is an allocation review?
 4. What is a reallocation action?
- C. Three approaches to triggering allocation reviews
1. Public interest-based criteria
 - a. Ongoing public input on fishery performance
 - b. Solicitation of public input on fishery performance
 - c. Formal petitions
 2. Time-based criteria
 3. Indicator-based criteria
 - a. Economic criteria
 - b. Social criteria
 - c. Ecological criteria
- D. References

III. Guidance

A. Adaptive Management

1. Introduction

The concept of adaptive management –evaluating successful attainment of management objectives and adjusting strategies in response - has been thoroughly explored in natural resource management literature. While the discussion of requiring a review of allocation decisions by councils has emerged more recently, it is one that contemplates an adaptive approach to one of the most challenging and controversial aspects of federal fisheries management. This section characterizes important considerations in identifying the need to review allocation decisions in the context of adaptive management and its process components.

The working group notes the importance of a common understanding regarding what is meant by “review.” To this end, the working group clarifies that “review” is the evaluation described in the preceding paragraph that leads to the decision of whether or not the development and analysis of new alternatives is warranted, and is not, in and of itself, an implicit trigger to consider new alternatives. Instead, the identification of purpose and need for an action and the development of action alternatives (re-allocation) should occur in response to allocation review

findings that a re-allocation is warranted.

2. Establishment of management goals and objectives

The foundation of the active adaptive management process described in this section is the articulation of management goals and objectives upon which management measures are based, monitoring is designed and implemented, and analysis is focused. This assumes, however, that the goals and objectives on which the original allocation decision was based remain relevant and that ecological, social, and economic conditions do not indicate consideration of different goals and objectives.

A council should consider the contemporary relevance of previously stated goals and objectives and revise its goals and objectives for the fishery and the allocation as appropriate. New goals and objectives or significant revisions to existing ones may necessitate an allocation review, even if those identified at the time of the original action have been met.

It should be made very clear that updating and maintaining contemporary fishery management plan objectives is essential and will likely require considerable effort. The selection of the proper management objectives is critical because they are the “indicators” that are to be used when ascertaining that the current allocation is appropriate. This is important for two reasons. First, it will ensure that the proper criteria are used to judge success and it will narrow the range of inquiry that staff will have to focus on to support the decision. To be specific, the material in both the CCC document and the NMFS document on possible indicators to consider will be very useful in framing the discussion on the selection of management objectives but they should not be viewed as a mandatory list of needed research. The research should focus on the indicators relevant to the selected fishery including its management objectives.

3. Goals and objectives of the allocation decision as criteria for triggering allocation review

Clearly articulated goals and objectives for an allocation action as informed by broader FMP goals and objectives are the foundation upon which to base allocation decisions and serve as essential criteria for evaluating whether or not a review of such decisions is warranted. The original record of a council decision should therefore be closely examined and thoroughly understood by a council considering an allocation review, as should any expression of expected outcomes (improvements or changes in the social, economic, and ecological performance of the fishery) resulting from the allocation. To the extent that the original record does not include a description of expected outcomes of the allocation decision, the council should consider identifying potential outcomes that logically flow from the action for use as criteria in reviewing the need for an allocation review.

It is important to note that a council’s goals and objectives associated with an allocation decision may reach beyond the simple intent to make an orderly division of access to the resource and could reflect or reinforce broader management objectives as detailed in an FMP. Management objectives could include issues such as achievement of optimum yield, maintaining equity among states, providing for the sustained participation of coastal communities, etc., that can be

addressed through allocation.

4. Defining the management action for potential review

When considering the need for allocation review it is important to clearly identify the action or actions that represent the “allocation decision.” In some cases this may be straightforward, as with an action that allocates percentages of a resource to two or more long-established fishery sectors.

More often it is the case that allocation actions include multiple decision points - rather than a single, well-defined action - such as identifying and defining specific fishery users or sectors, limiting access to other fisheries by allocation recipients, managing effects of incidental bycatch on other sectors or fisheries, and other measures intended to support implementation of the allocation and mitigate unintended impacts. In these instances, councils should carefully consider the scope of decision elements that comprise the “allocation” for which a review is being considered. A failure to address the appropriate scope of management components and to ensure that the set of included decision elements represent “the allocation” could result in misguided conclusions regarding the need to review an allocation.

Impacts and outcomes of allocation decisions can be observed at a variety of levels within the fishery, from individual participants, to subsets of participants and stakeholders, to sectors, communities, states, etc. For purposes of establishing indicator and public interest-based criteria for allocation review, careful attention should be given to the scope of consideration or standing; triggering review of an entire allocation decision in response to an isolated or small-scale challenge may prove destabilizing to a fishery at large.

Many management actions have, indirectly, some allocative impacts and effects. Closure of near shore fishing grounds to protect habitat may, for example, constrain access to a fishery by small vessels while favoring access by larger vessels capable of fishing further from shore. While such outcomes should come under review by councils and may warrant a management response, these indirect effects are not the focus of this document.

5. Monitoring the achievement of management goals and objectives and the effects of the allocation

Active adaptive management requires the design and use of monitoring systems that will collect data useful for evaluating the outcomes of management decisions. The quantity and quality of data available for analysis to inform the review of an allocation decision should be carefully assessed and is an important criterion for triggering an allocation review; it is challenging at best to evaluate the achievement of management goals and objectives without reliable data from the fishery and communities. To the extent that existing data collection programs are not contributing to the monitoring of allocation decision outcomes and impacts, efforts should be made to design and implement an effective monitoring system.

6. Evaluating the achievement of management goals and objectives and the impacts of the

allocation

In the multi-step process described in this document, this evaluation is achieved through the consideration of indicators to trigger an allocation review and, if indicated, the allocation review itself. Evaluating the extent to which allocation and broader FMP goals and objectives have been met through an allocation's implementation and ecological, social, and economic impacts associated with the action is the critical component of an adaptive approach to management and of any consideration of the need for allocation review. It is the process through which a council might identify the need to initiate a formal review of an allocation decision or find that implementation of an allocation was successful in meeting its goals and did not result in unanticipated negative impacts.

7. Adapting in response to evaluation and learning

This component of active adaptive management would be the potential result of an allocation review and would therefore occur only if previous analytical steps indicated the need for such a review. It represents the consideration of reallocation alternatives when indicated by an allocation review.

It is important to note that the recommendations contained herein are based on the assumption that a council's management goals and objectives as related to an FMP, specific management actions, or otherwise, are subject to periodic review and adaptation and are relevant and/or contemporary at the time of consideration for triggering an allocation review, of conducting an allocation review, and of taking a reallocation action.

B. Definitions

1. Statement of purpose

In order to keep to keep allocation policy and decisions responsive to social, economic, and ecological change it is necessary to consider those policies and decisions from time to time.

2. What are the steps involved in adaptive management of allocation decisions?

Adaptive management of allocation decisions is a sequence of up to three steps consisting of (a) triggering an allocation review according to time-based, public interest-based, or indicator-based criteria; (b) an allocation review; and (c) if the results of the review so indicate, an reallocation action. The working group addressed (a), the criteria for triggering an allocation review.

3. What is an allocation review?

An allocation review is a structured review of current allocations based on adaptive management (i.e., evaluating successful attainment of management objectives) to determine if further action is required. The purpose is to determine if current management objectives are being achieved through the existing allocation, with the caveat that management objectives are up to date and address the relevant operational, economic, social and ecological aspects of the fishery, including

new and expected changes in such things as climate, demography, technology, etc. If it is determined that minimum threshold criteria for meeting management objectives are not being achieved under the existing allocation, then a Reallocation Action should be initiated and new allocation alternatives identified. Otherwise, no further action is required until an allocation review is triggered once again.

4. What is a reallocation action?

A reallocation action is a formal procedure to amend a FMP to allow for a reallocation of access to fishery resources that follows normal amendment procedures such as scoping, developing a statement of purpose and need for action, developing alternatives (one of which is a no action alternative), assessing the effects of implementing different alternatives, and selecting a preferred alternative.

C. Three approaches to triggering allocation reviews

This document identifies considerations associated with the design and application of three types of allocation review triggers: 1) public interest-based triggers; 2) time-based triggers; and 3) indicator-based triggers. It is important to note that while this document offers guidance on what aspects of fishery indicators might be considered in triggering an allocation review, monitoring, evaluating, and responding to fishery performance is foundational to adaptive management and the council process. Use of public interest or time-based criteria for triggering allocation review is not mutually exclusive to ongoing formal and informal evaluation of fishery performance and outcomes. This points out as well some inter-relatedness among review trigger criteria options. For example, some forms of public interest criteria are driven and informed by the public's perception of fishery performance.

It is unlikely that one type of criterion serves as the best allocation review trigger for all fisheries. Councils should carefully consider the attributes, dynamics, and relationships of and among various trigger criteria and choose approaches that best fit a specific fishery. Councils may choose to establish different criteria at the species, fishery, or FMP level. This includes species that are managed internationally, but for which a council may have authority for a domestic quota allocation. When applying time-based criteria to a number of fisheries, intervals between reviews of specific allocations may reflect prioritization for review based on specific fishery attributes where the size, variability, or inter-sector dynamics of a fishery may indicate more or less frequent review.

It should be noted that in some instances review trigger criteria are complementary. This is a particularly important dynamic when considering the use of some public interest-based trigger criteria. When considering the use of ongoing or council initiated public comment, the elements identified in the indicator-based criteria may be useful in the council's determination of need of an allocation review.

Within three years of the issuance of this guidance, or as soon as practicable, it is recommended that councils establish transparent criteria for triggering allocation review for all fisheries that have allocations between sectors (e.g. commercial, recreational, for-hire, gear-specific,

international, etc.). In the case of fisheries managed under catch shares, councils may choose not to review allocations made to individual fishery participants, but rather consider review of allocations between sectors.

In addition to determining the trigger or triggers that a council will use for initiating review of specific allocations, councils should also develop a structured and transparent process by which allocation reviews will be conducted, including consideration of current council priorities, other actions under deliberation, and available resources.

Steps in the Adaptive Management of Allocations

| Trigger basis | | Timing | Decision Criteria | Outcome | Source of Guidance | Comments |
|--|--|--|---|---|--------------------------|--|
| Step 1: What triggers an allocation review? | | | | | | |
| Public interest | Ongoing public input on fishery performance | Ongoing – decision to initiate review may occur at any time | See indicators – is review indicated? | If indicated, allocation review initiated. If not, continue Step 1. | CCC Working Group Paper | From a timing standpoint, this approach is similar to status quo. |
| | Solicitation of public comment regarding allocation review | Ongoing – decision to solicit public comment may occur at any time | See indicators – is review indicated? | If indicated, allocation review initiated. If not, continue Step 1. | CCC Working Group Paper | Public comment regarding the need for allocation review may be triggered by early indicators that FMP or management objectives are not being met. |
| | Public interest: Formal petitions | Ongoing – public may submit petition at any time | Does public petition have standing? | Public petition with standing may trigger review. | CCC Working Group Paper | This approach requires an allocation review without consideration of timing or indicators. |
| Time | | Specific time intervals (7 -10 years) | None – response to scheduled review non-discretionary | Allocation review automatically triggered | CCC Working Group Paper | This approach requires an allocation review without consideration of indicators. |
| Indicators | | Ongoing – Indicators may be evaluated at any time | Is review indicated per social, economic, or ecological criteria? | If indicated, allocation review triggered. If not, continue Step 1. | CCC Working Group Paper | From an evaluation standpoint, this approach is similar to status quo. |
| Step 2: Allocation Review: Is consideration of new allocation alternatives justified? | | | | | | |
| See above | | See above | Are the FMP and allocation objectives still relevant? Are they being met? What's changed? | <div>If objectives not being met, then a reallocation is initiated</div> <div>If objectives are relevant and are being achieved, then no further action. Continue Step 1.</div> | NMFS Working Group Paper | It is assumed that that a council's management goals and objectives are current at the time of consideration for triggering an allocation review, of conducting an allocation review, and of taking a reallocation action. |
| Step 3: Initiating consideration of new allocation alternatives: should there be a reallocation and what needs to be considered? | | | | | | |
| Conclusion through allocation review that reallocation is warranted | | See above | What alternatives will meet FMP and allocation objectives? | Selection of a preferred alternative | NMFS Working Group Paper | |

1. Public interest-based criteria

If a council develops effective indicator or time-based allocation review mechanisms, then a public-interest review trigger mechanism may not be necessary. However, if those review mechanisms are not established, or if they are not responsive to changing conditions within a fishery, then a public-interest review mechanism could be used to trigger an allocation review.

The U.S. regional fishery management council system is transparent and open to public input throughout the process. Councils implement extensive work plans throughout the year, and manage some regulatory initiatives, including plan amendments, over the span of several years. Managing to meet the councils' statutory requirements and other competing priorities requires effective planning, which typically includes an annual priority-setting process. Ideally, public input on the need to review a specific fishery allocation would feed into this process to enable an orderly consideration of the question, in the context of competing priorities and organizational resources.

This guidance addresses the solicitation or consideration of statements of public interest at three different levels within the regional fishery management council process:

a. Ongoing public input on fishery performance

As noted above, the council process is open, transparent, and offers frequent opportunities for public comment and input. This dynamic establishes a feedback loop between the council and the public in regard to both the specific issues under the council's consideration and broader indicators of fishery performance. Given the extent to which the impacts of allocation decisions are associated by the public (both through direct observation and perception) with fishery performance, public interest in allocation review is likely to be expressed at many points within the council process and in reference to a variety of fisheries management issues.

This feedback loop of ongoing public comment is a valuable opportunity for the public to express interest in allocation review, and for the council to gauge how effectively allocation objectives are being met. It also serves as an opportunity for the council to understand and evaluate the extent to which allocation lies at the root of fisheries management challenges, and the need to initiate allocation review may be indicated through this process.

b. Solicitation of public comment regarding allocation review

Councils may choose to engage in allocation review "scoping discussions" with stakeholders and other interested parties. Unlike the collection of feedback through ongoing public comment described above, this process is deliberate and specifically targets public input on the need for allocation review. Councils rely on outreach and information-gathering mechanisms to achieve public input including the solicitation of written comments, scoping discussion at council meetings, and port meetings and other community engagement strategies.

One of the benefits of this approach to consideration of triggering allocation review is that it is focused directly on the allocation and the necessity for potential review rather than on the secondary and tertiary impacts of the allocation. An additional benefit to this strategy is the council's ability to dictate a schedule. While more demanding of time and resources than identification of allocation review triggers in the course of ongoing public comment, the process for soliciting, receiving, and considering public input can be designed by the council and scheduled in a manner that does not conflict with other council initiatives and priorities.

When considering the solicitation of public input regarding allocation review, councils should be aware of, and sensitive to, the expectations among stakeholders that could develop as a result of the council indicating interest. The council should carefully consider its ability (resources and capacity) and willingness to follow through with an allocation review if warranted before reaching out to the community for focused input.

c. Formal petition mechanism

The first two approaches to gathering, evaluating, and responding to public input are already possible within the current regional fishery management council system. In both cases, the decision to initiate the review would rest with the council. A stronger public-interest review mechanism could include a provision for a stakeholder request or petition requesting review, together with a requirement for a council to initiate an allocation review within a reasonable period of time. Such a provision would have more potential to impose a cost on a council's established work plan and priorities but would provide another mechanism to ensure that allocations receive due consideration in response to public concern. If such a mechanism is established, it may be appropriate to incorporate indicator-based criteria to establish a minimum threshold for initiating review.

Any petition-based review process should establish requirements that identify specific conditions or outcomes upon which such requests may be based. In addition, councils should include establishment of guidelines for petitions. While a council has discretion to determine whether or not to move forward with an allocation review as per the requirements it establishes under a petition-based process, it should at least respond to the *request* for a review under this process. This response could be as simple as a letter to the petitioner(s), explaining the council's rationale for its decision (e.g., petition did not meet conditions for consideration, lack of standing by petitioners, etc.).

2. Time-based criteria

Establishment of a time-based trigger has figured prominently in recent discussions regarding allocation review, including provisions for periodic allocation review in several MSA re-authorization drafts. In several respects periodic allocation review on a set schedule is the most simple and straightforward criterion for triggering an allocation review; the approach is unambiguous and less vulnerable to political and council dynamics. That said, the attributes of simplicity and the mandate of a strict schedule render time-based criteria less sensitive to other

council priorities and the availability of time and resources to conduct an allocation review.

Time-based triggers for initiating allocation review might be most suitable for those fisheries or FMPs where the conflict among sectors or stakeholder groups make the decision to simply initiate a review so contentious that use of alternative criteria is infeasible. In such a situation, a fixed schedule ensures that periodic reviews occur regardless of political dynamics or specific fishery outcomes. Given the inflexible nature of time-based triggers, however, it is recommended that they be used only in those situations where the benefit of certainty outweighs the costs of inflexibility.

The inflexible nature of time-based triggers can impact both the work and effectiveness of the council as well as the outcomes of the allocation process itself. As noted above, fixed, time-based triggers for review may conflict with other council priorities. To the extent that those priorities include consideration of actions to mitigate significant social, economic, or conservation concerns, adherence to a fixed review schedule may prevent a council from achieving significant and beneficial management outcomes while achieving at best marginal improvements through allocation review. Given the fact that there is potentially no relationship between the pace at which fishery performance evolves and a fixed schedule for allocation review, use of such a trigger creates the potential of a significant expenditure of council time and resources with little need for review or likely improvement in fishery performance.

Time-based triggers for review may impede stability in subject fisheries. To the extent that reviews are conducted on a regularly scheduled basis, there is an incentive for sectors receiving allocations to continuously employ operational and political tactics to improve their allocation at the next review. The assurance of a “new” allocation review may as well encourage speculative entry into subject fisheries. When considering the adoption of a time-based review trigger, care should be taken to identify if and to what extent the process is likely to be manipulated or “gamed”, and measures to minimize that activity should be considered.

The selection of review intervals using time-based triggers should be informed by fishery characteristics, data availability, and council resources. Newly developed or rapidly changing fisheries may warrant more frequent review, while established fisheries with stable participation and performance can likely be reviewed less frequently. Whether following an initial allocation or a re-allocation, the timing of further review should accommodate the collection and analysis of a data series from which meaningful and accurate review and analysis can be achieved. The five-year initial review and subsequent reviews every (up to) seven years of limited access privilege programs (LAPPs) as required under Section 303A of the MSA may indicate a desirable minimum interval between reviews. Similarly, the 10-year durability of LAPP permits may suggest a maximum interval for time-based review triggers.

3. Indicator-based criteria

The MSA requires that fisheries be managed for Optimum Yield (OY), which is Maximum Sustainable Yield (MSY) as reduced by relevant social, economic and ecological factors. In defining OY, the NSI guidance provides that these factors should be “quantified and reviewed in historical, short term and long term contexts.” Furthermore, it recommends that each FMP

should contain a mechanism for periodic review of the OY specification, in order to respond to changing conditions in the fishery. In establishing indicator-based metrics for review of allocations – whether among sectors (e.g., commercial, recreational, for-hire, gear, international, etc.), within a sector (e.g., among catch share recipients), or for purposes such as bycatch accounting – it is logical to apply similar parameters to an allocation review as to an OY review, particularly if the goals and objectives of an FMP specifically address these items. In support of such an approach, the NS4 guidance states that allocation decisions should be “rationally” linked to attaining OY, and/or to the objectives of an FMP. It follows that selection of indicator-based criteria to trigger an allocation review should inherently be linked to those same objectives. In the interest of public transparency and clarity, councils may even consider establishing an objective that is specific to allocation within an FMP.

A time component is inherent in any indicator-based criteria for review of allocations, whether explicitly included (e.g., achieving a desired economic efficiency within XX years) or not. Evaluating a criterion used in establishing an allocation, particularly if it requires the addition of ensuing years of data to a quantitative analysis, indirectly applies a timeframe for review. There are several categories of indicator-based criteria to consider as triggers for initiating review of allocations, all stemming from the definition of OY: social, economic and ecological. Ideally, the rationale for an initial allocation decision would consider a mix of criteria from all categories, although data limitations may preclude quantitative consideration. This could impact the ability to set an objective, specific review trigger for a particular criterion.

It follows that use of several criteria, either singly or in combination, and across multiple categories, may be optimal when using indicator-based criteria as a trigger for an allocation review. For example, a council may select one social, one ecological and one economic criterion as indicators, and define the “trigger” for review as any two of the three criteria meeting predetermined limits. This clearly defines the minimum threshold to trigger an allocation review. Taking this example to Step 2 (as per Table 1), consideration of allocation alternatives may occur if the selected indicators meet established limits within a particular timeframe, effectively combining indicator- and time-based triggers in order to ensure an adaptive management approach. As noted above, it may be difficult to set measurable values as triggers for indicator-based criteria, and use of quantitative thresholds is likely to be more the exception than the norm. In such cases, qualitative triggers should be considered to ensure that FMP goals and objectives are addressed.

In selecting indicator-based criteria, it is important to recognize there are factors that are not in and of themselves measurable metrics for a particular criterion or set of criteria; however, they may impact selected criteria and thus influence the “triggering” of a review. These factors may include acquisition of new data, natural disasters, etc. that are not necessarily measurable on their own, but can impact measurable criteria from any of the three categories.

Finally, while there is overlap in the discussion of indicator-based criteria in this document with the NMFS guidance document, the purpose of the two documents is different. The latter document refers to the indicators below as “factors” (in addition to many others) to be considered by councils in the context of establishing initial allocations, or if a re-allocation action is undertaken. The CCC document discusses their use as one of three possible types of

triggers for an allocation review. While some overlap is inevitable, the context in which that overlap occurs is important.

a. Economic Criteria

While the quality and quantity of fisheries economic information has improved over the years, there may be instances in which a disparity exists in the available data for one or more industry sectors, user groups or communities impacted by an allocation decision. This should be explicitly noted and accounted for should quantitative economic criteria be selected by councils as a trigger for allocation review. Because economic outcomes are often closely tied to social outcomes, links between economic and social triggers should also be acknowledged (Jepson and Colburn 2013).

The NS5 regulations prohibit the establishment of allocations for economic purposes alone, however, economic efficiency “shall” be considered where practicable. Multiple economic tools are available to assist in establishing indicator-based triggers for review: cost-benefit analysis, economic impact analysis, and economic efficiency (Edwards 1990; Plummer et al. 2012). However, public understanding of the differences between and proper use of these tools is often limited¹. Whatever the economic triggers for allocation review, it will be of utmost important to explain the tool(s) used in plain language that stakeholders can understand. Although not all sectors of the public may agree with the criteria or trigger value, public understanding of the tool is critical to its acceptance as a means of informing both an initial allocation decision and its subsequent review. Failure to achieve a desired economic efficiency within a particular timeframe, and unanticipated or greater than anticipated/analyzed costs (e.g., outside of a certain error level) are examples of triggers for initiating a review of allocation decisions.

b. Social Criteria

As noted above, social and economic impacts are often linked, and changes in social criteria may lead to changes in economic criteria and vice versa. National Standard 8 requires that management measures account for social and economic impacts to communities, as well as provide for “sustained participation.” This is defined in the NS8 guidelines as “continued access” to the resource, depending on resource condition.

A number of studies and technical memoranda have been published detailing the development and measurement of social metrics such as community resilience, vulnerability and well-being. Jepson and Colburn (2013) describe categories of indices -- social, gentrification, fishing dependence-- that can be used to estimate social impacts of management decisions at the community level. Councils may choose to select several indices among the above categories or an entire category of indices as indicator-based criteria to trigger an allocation review. The methods used in Jepson and Colburn provide

¹ For example, constituents often cite the results of economic impact analyses as justification for allocation of resources to a particular user group. However, the peer-reviewed economic literature clearly states that cost-benefit analyses, not economic impact analysis, are the appropriate tool for informing allocation decisions.

a quantifiable means of tracking the potential social impacts of an allocation decision. As alluded to earlier, setting a minimum threshold (e.g., a 0.5 standard deviation change in a social index score, etc.) or a timeframe (e.g., every three or five years) for undertaking a review of selected criteria will ensure that a fishery is not in a constant state of “allocation flux,” again illustrating the inter-relationship of the various criteria discussed in this document. While councils may lack a quantitative means of developing social criteria, use of public-interest based criteria may provide a means for doing so (e.g., public input regarding loss of processing capacity or tackle shops in a community), or for establishing qualitative criteria.

Finally, for many communities, social change can be closely linked to ecological change (i.e. a sudden harvest moratorium as a result of a stock assessment; Jepson and Colburn 2013). While ecological criteria for allocation review are addressed in the following section, this relationship is worth noting as it further demonstrates that the categories of indicator-based criteria do not exist independent of one another.

c. Ecological Criteria

Ecological criteria may be considered some of the most self-evident criteria for triggering an allocation review. Changes in fishery status resulting from a stock assessment, undocumented sources of mortality (fishing or otherwise), increases in discards, and changes in species distribution and food web dynamics are all examples of factors that may influence an allocation review. However, as noted previously, not all of these factors are necessarily measurable, indicator-based metrics that the councils have any control over. Measureable criteria that could be considered are failure to end overfishing within a specified timeframe, failure to achieve or rebuild to a certain level of abundance, a significant increase in discard mortality from a particular sector, significant changes in landings (e.g., an increase/decrease greater than one to two standard deviations within a three-year timeframe, etc.). As with social metrics, public-interest based criteria may at least provide a means of establish qualitative ecological criteria (e.g., anecdotal evidence of changes in distribution, discards, size of fish, etc.).

D. References

Edwards, Steven F. 1990. An Economics Guide to Allocation of Fish Stocks Between Commercial and Recreational Fisheries. U.S. Dept. of Commerce, NOAA Technical Report NMFS 94, 29 p.

Jepson, Michael and Lisa L. Colburn 2013. Development of Social Indicators of Fishing Community Vulnerability and Resilience in the U.S. Southeast and Northeast Regions. U.S. Dept. of Commerce., NOAA Technical Memorandum NMFS-F/SPO-129, 64 p.

Plummer, M.L., W. Morrison, and E. Steiner. 2012. Allocation of fishery harvests under the Magnuson-Stevens Fishery Conservation and Management Act: Principles and practice. U.S. Dept. Commerce, NOAA Tech. Memo. NMFS-NWFSC-115, 84 p.

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| To be reviewed on: October 1, 2023 | |
| Fisheries Management Fisheries Allocation Review Policy, 01-119 | |
| Recommended Practices and Factors to Consider When Reviewing and Making Allocation Decisions | |
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| Signed _____ Alan Risenhoover Director, Office of Sustainable Fisheries | |
| Date _____ | |

I. Introduction

Allocation of fishery resources is a complex issue facing fishery managers. Because fisheries management and the conditions surrounding fisheries are not static, allocation decisions need to be considered in the context of adaptive management. This document provides recommended practices and guidance on allocation factors that a regional fishery management council should consider when making allocation decisions. The Council Coordinating Committee created a companion document that describes triggers that can be used to determine when to review allocation decisions. NMFS is committed to working with the Councils to assist them in their allocation decisions.

II. Objective

An allocation (or assignment) of fishing privileges is defined by the National Oceanic

and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) as "a direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete user groups or individuals" 50 CFR 600.325(c)(1)¹. The Magnuson-Stevens Fishery Conservation and Management Act (MSA)² as well as other guidance or policy documents written by NOAA or NMFS include provisions, guidance, or information relevant to allocation decisions (see Appendix A for details). The guidance provided here does not modify or supersede any guidance associated with the National Standards, other provisions of the MSA or other applicable laws; rather, it is intended to help the Councils and NOAA review and update allocations under the MSA. Allocation can be across jurisdictions (e.g., state, regional), across sectors (e.g., commercial, for-hire, private anglers, tribal, research), and within sectors (e.g., individual fishermen, gear types). Allocation of fishery resources is a complex issue facing fishery managers because of the history and tradition of access to fishery resources, the perceptions of equity that arise with allocation decisions, and differences in the economic and social values competing user groups place on those resources. In addition, fisheries management is not static and should be adaptable as environmental, ecological, social, and economic influences change. Therefore, allocation decisions need to be considered in the context of adaptive management³.

In 2011, NMFS issued a contract for an outside entity to interview stakeholders about allocation issues. The report (Lapointe 2012)⁴ is the first comprehensive compilation of fisheries allocation issues. NMFS commissioned the report to facilitate a productive discussion about allocation decisions and socio-economic objectives for fisheries management. It summarizes input from discussions with a wide range of stakeholders and suggests five steps NMFS can take to address allocation issues: 1) increase stakeholder engagement in allocation decisions, 2) increase biological and social science research and data, 3) periodically review allocation decisions, 4) compile a list of past allocation decisions, and 5) create a list of factors to guide allocation decisions.

This document addresses the fifth recommendation by providing a summary of recommended practices and guidance on allocation factors that a Regional Fishery Management Council (Council)⁵ should consider when making allocation (initial or reallocation) decisions. The factors are drawn from, or are relevant to, MSA provisions and other legal mandates and thus should already be considered in the fisheries management process. The recommended practices are ideas that could

1 www.nmfs.noaa.gov/sfa/laws_policies/national_standards/documents/national_standard_4_cfr.pdf

2 www.nmfs.noaa.gov/sfa/laws_policies/msa/documents/msa_amended_2007.pdf

3 We describe adaptive management as the on-going process of evaluating if management objectives have been met and adjusting management strategies in response. We do not include large scale scientific manipulations aimed at answering scientific questions.

4 Lapointe, GD. 2012. Marine Fisheries Allocation Issues: Findings, Discussions and Options. George Lapointe Consulting LLC. 58 pgs. External Assessment Completed for NMFS (December 2012). Available: www.nmfs.noaa.gov/stories/2013/01/docs/lapointe_allocation_report_final.pdf

5 Throughout this document, guidance for Fishery Management Councils also pertains to Atlantic High Migratory Species Secretarial actions.

improve the allocation process by increasing transparency and minimizing conflict. The Council Coordinating Committee created a companion document⁶ that describes triggers that can be used to determine when to review allocation decisions, addressing the Lapointe report's third recommendation. For the other three recommendations, NMFS has published two technical memorandums that contain a list of past allocation decisions^{7, 8} and is continuing to work to increase stakeholder engagement and biological and social science research.

III. Guidance

Recommended Practices When Reviewing and Making Allocation Decisions

Several recommended practices would improve the allocation process by increasing transparency and minimizing conflict. A list of recommended practices is below, although it should not be considered comprehensive and may not be applicable to all circumstances.

a. Evaluate and Update Council and Fishery Management Plan (FMP) Objectives.

Council fishery management decisions often involve trade-offs (e.g., between management objectives within a fishery, or between two fisheries under the Council's jurisdiction). For example, maintaining employment may be in conflict with improving economic efficiency. Similarly, long-term goals related to rebuilding stocks may also be in conflict with short-term goals of minimizing impacts on fishery-dependent communities. Updated and measurable objectives help clarify decisions about these trade-offs within and between FMPs. If FMP objectives are not current, clear, or measurable, a Council should re-assess the FMP objectives prior to or concurrent to initiating the allocation discussion.⁹ In addition, the Council should use a transparent process for analyzing and determining trade-offs between FMP objectives and/or FMPs.

b. Identify User Needs.

The specific needs and interests of the different types of fishery participants or sectors within a fishery may vary. For example, recreational fishermen may be

⁶ NMFS Procedural Directive 01-119-01, Criteria for Initiating Fisheries Allocation Reviews, Council Coordinating Committee Allocation Working Group Document. <http://www.nmfs.noaa.gov/op/pds/documents/01/119/01-119-01.pdf>

⁷Morrison, W.E., T.L. Scott. 2014. Review of Laws, Guidance, Technical Memorandums and Case Studies Related to Fisheries Allocation Decisions. U.S. Dept. of Commerce. NOAA Technical Memorandum NMFS-F/SPO-148, 32 p. www.nmfs.noaa.gov/sfa/laws_policies/national_standards/documents/morrison_scott_nmfs_f_spo_148.pdf

⁸ Plummer, M.L., Morrison, W., and E. Steiner. 2012. The Allocation of Fishery Harvests under the Magnuson-Stevens Fishery Conservation and Management Act: Principles and Practice. U.S. Department of Commerce, NOAA Tech. Memo NMFS-NWFSC-115, 84 p. www.nmfs.noaa.gov/sfa/laws_policies/national_standards/documents/plummer_allocationfishharvests_tm115_web_final.pdf

⁹ For general information on FMP objectives in the National Standard Guidelines, *see* 50 C.F.R. § 600.305(b): http://www.fisheries.noaa.gov/sfa/laws_policies/national_standards/documents/national_standards_general_cfr.pdf.

more interested in stable fishing opportunities than absolute numbers of fish retained. Therefore, articulating the needs of each type or sector should be completed near the beginning of the allocation discussion to facilitate identification of alternatives, which may reduce conflict. Once user needs are identified through a public process, those needs should be communicated and publicly available.

c. Minimize Speculative Behavior.

To limit situations which may lead to speculative behavior or practices¹⁰ whenever allocations are being considered, the Council should consider announcing a control date for a given fishery, by sector as appropriate, which is published by NMFS as an advance notice of proposed rulemaking. The control date provides notice that, if an allocation decision is made in an FMP or FMP amendment, there is no assurance that any entrance or increased effort into a fishery beyond said date will be used to determine allocations. Announcing a control date is common practice when creating limited access and catch share programs, but could also be used for allocation decisions between gear types, sectors, or groups.

d. Plan for Future Conditions.

To plan for future conditions, Councils may consider adopting in an FMP or FMP amendment mechanisms for implementing actions in an expedited manner, where appropriate and as consistent with the MSA, Administrative Procedure Act, National Environmental Policy Act, Executive Order 13653, and other applicable law.¹¹ For example, the Bering Sea and Aleutian Islands FMP includes pre-arranged “if/then” allocations for yellowfin sole between two sectors depending on the total allowable catch (TAC). If the TAC for the two sectors is greater than 125,000 metric tons (mt), then the first sector is allocated 60 percent; if the TAC for the two sectors is less than 125,000 mt, then the first sector receives an increasing apportionment.¹² The Mid-Atlantic bluefish FMP provides an example of a mechanism that incorporates more discretion than the example provided above. The Mid-Atlantic bluefish allocation is currently set as 83% recreational and 17% commercial.¹³ However, the FMP states that if the

¹⁰ For example, if fishermen expect future allocations to be based on catch history, they may decide to increase catch in order to improve their catch history, etc.

¹¹ Some of these types of mechanisms are referred to by regions as “frameworks”. See Appendix 3 of the NMFS Operational Guidelines at p. 3 at http://www.fisheries.noaa.gov/sfa/management/councils/operational_guidelines/og_append.pdf. As the Guidelines explain, frameworking is not intended to circumvent standard FMP/amendment and rulemaking procedures, and must be done consistent with the MSA and other applicable law. To the extent that MSA and other statutory requirements can be addressed up front when establishing such a mechanism, this may result in less analysis and process being needed when individual actions are executed under that mechanism. What analysis and process (including public comment) is required for each individual action will depend on the specific facts and circumstances of that action. *Id.*

¹² Northern Economics, Inc. *Five-Year Review of the Effects of Amendment 80 to the Bering Sea and Aleutian Islands Groundfish Fishery Management Plan*. Prepared for North Pacific Fishery Management Council. April 2014.

¹³ Amendment 1 to the FMP for the Atlantic Bluefish Fishery, 65 FR 45844 (January 26, 2000).

recreational sector is not projected to land its harvest limit for the upcoming year, then the commercial catch limit may be increased for that year as long as the combination of the projected recreational landings and the commercial quota does not exceed the total allowable landings.

A pre-arranged management response may be one option for allocating catch of a species that is expected to rebuild or shift distribution due to climate change, for example. Identifying, upfront, specific conditions that may result in changes in allocations could decrease controversy. We note that not all circumstances may be amenable to pre-arranged responses. For example, if external factors change significantly, the original analysis of impacts may no longer be considered adequate because the analysis would not capture the complete range of potential impacts or outcomes.

Factors to Consider When Reviewing and Making Allocation Decisions

Typically allocation decisions are closely aligned with historical use of the resource because the government¹⁴ is hesitant to limit historically established privileges and access (Rolph, 1983).¹⁵ While historical use may (or in some instances, shall) be taken into consideration when reviewing and making an allocation decision,¹⁶ the MSA requires achieving on a continuing basis the optimum yield (OY) from each fishery, which encompasses a broader range of considerations.¹⁷ Recognizing this, below is a list of different factors to consider when reviewing and making an allocation decision.

The list of factors is not all-inclusive, as there may be other appropriate factors to consider. The factors do not prescribe any particular outcome with respect to allocations, but rather, are intended to provide a framework for the allocation analysis. Factors should be compared between groups for which an allocation decision is relevant. The priority and weight afforded each factor will vary depending on the time horizon of the decision,¹⁸ the objectives of the allocation

14 Rolph includes a wide range of resources in his analysis (forests, air waves, etc.). However, in most marine fisheries, Councils and Commissions in coordination with federal and state governments make the allocation decisions.

15 Rolph, E.S. 1983. Government allocation of property rights: Who gets what? *Journal of Policy Analysis and Management* 3:45-61.

16 For example, for limited access privilege programs, historical harvests and historical participation of fishing communities are among the required considerations for establishing procedures for allocations. 16 U.S.C. § 1853a(c)(5)(A).

17 16 U.S.C. § 1851(a)(1) (National Standard 1). “[O]ptimum’, with respect to the yield from a fishery, means the amount of fish which— (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems; (B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor; and (C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery”. 16 U.S.C. § 1802(33).

18 For example, factors may be weighed differently when considering in-season allocation changes versus longer term changes such as decisions that last years.

decision, the objectives of the FMP, and the overarching Council¹⁹ goals. If a factor is determined not applicable or unimportant for the allocation decision in question, the Council should clearly document its rationale for the determination for the record. Such documentation is necessary to produce a strong record demonstrating that the factor has been considered. Analysis of an allocation decision under these factors is not a substitute for documenting compliance with MSA mandates, although there may be overlap between certain factors and MSA mandates. Of particular note, National Standard 4, discussed under Social Factors below, has explicit requirements pertaining to allocations of fishing privileges.

1. Ecological Factors

Weakened or damaged marine ecosystems support a lower abundance and diversity of fish species, and may have a harder time adjusting to acute (e.g., hurricane) or long-term (e.g., climate change²⁰) impacts than healthy ecosystems. Because different fishing practices (locations fished, gear types used, etc.) can have varied impacts on the marine ecosystem, decisions that determine the allocation between different sectors or groups should take into consideration the potential ecological impacts of allocation alternatives. When making allocation decisions, relevant ecological questions could include, but are not limited to:

a. What are expected ecological impacts on target species?

Sectors can differ in their impacts on the target species. For example, sectors may target different stocks, sizes, or age classes, which could impact the productivity, distribution, yield, and/or recovery potential of the species.

b. What are the expected ecological impacts on other fisheries? What is the status of non-target species²¹? What are the expected impacts on bycatch and bycatch mortality of both non-target species and protected species?

Ecological impacts can overlap among fisheries.²² Some ways ecological interactions occur are through bycatch, habitat, predator-prey dynamics, etc. For example, target species in one fishery can be incidental catch or bycatch in another. In addition, if the allocation of one species decreases, fishermen may increasingly target another species. Managers should assess the potential ecological impacts of a change in allocation to other fisheries when making allocation decisions. For example, if reducing bycatch is a priority then lowering allocations to sectors or gear types that have high bycatch could be considered.

¹⁹ Whenever Fishery Management Councils are mentioned, this guidance also pertains to Atlantic High Migratory Species Secretarial actions.

²⁰ Climate change impacts could be positive or negative for individual species or systems.

²¹ For the purpose of this document, non-target species are the species that were retained but were not the primary target species.

²² See 16 U.S.C. §§ 1853(a)(7) (requiring that FMP measures minimize, to the extent practicable, adverse effects on essential fish habitat caused by fishing) and (9) (requiring fishery impact statement) and 1851(a)(9) (requiring under National Standard 9 that FMP measures minimize to the extent practicable bycatch and bycatch mortality).

c. What are the impacts on the marine ecosystem?²³ What are the impacts on habitat? What are the impacts on the ecological community (e.g., relevant predator, prey, or competitive dynamics)?

Fishing can change an ecosystem through both direct and indirect effects. Direct effects include mortality of target and non-target stocks, interactions with marine mammals or other protected species, and disturbance of marine habitat. Indirect impacts to the ecosystem include removal of predators, prey, competitors, or structure that could result in shifts in the ecological community. Managers should consider the direct and indirect impacts of different allocation alternatives to the ecosystem when making allocation decisions. For example, decreasing allocations to gears that have high impacts on biotic hard-bottom habitats could be considered.

2. Economic Factors

Allocation of a fishery resource has economic consequences for affected user groups that should be considered. Councils should be very specific in articulating what economic questions they want to consider when making allocation decisions. When making allocation decisions, relevant economic questions could include, but are not limited to:

a. Can economic efficiency be improved?

Councils should consider if the current or preferred allocation results in the most economically efficient²⁴ use of resources. Cost-benefit analyses should be used to estimate how a proposed allocation would change consumer and producer surplus (i.e., net economic benefits). From an economic analysis perspective, economic efficiency refers to how well resources are utilized in production and consumption²⁵; economic efficiency is achieved when all resources are allocated to their most productive use.²⁶ Analyses that estimate the monetary value individuals or sectors place on the marginal value of their share of the harvest (i.e., “willingness to pay”) can inform how allocation changes could improve economic efficiency. However, if use within each sector is not allocated according to those who value the resource most, then information about access to

²³ See *supra* note 22.

²⁴ See 16 U.S.C. § 1851 (a)(5) (requiring under National Standard 5 that FMP measures “shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.”). According to the National Standard 5 Guidelines, “[t]his standard prohibits only those measures that distribute fishery resources among fishermen on the basis of economic factors alone, and that have economic allocation as their only purpose.” 50 C.F.R. § 600.330(e). “Given a set of objectives for the fishery, an FMP should contain management measures that result in as efficient a fishery as is practicable or desirable.” 50 C.F.R. § 600.330(b)(1).

²⁵ *Op. Cit.* Plummer et al. 2012.

²⁶ The National Standard 5 Guidelines explain: “In theory, an efficient fishery would harvest the OY with the minimum use of economic inputs such as labor, capital, interest, and fuel. Efficiency in terms of aggregate costs then becomes a conservation objective, where ‘conservation’ constitutes wise use of all resources involved in the fishery, not just fish stocks.” 50 C.F.R. § 600.330(b)(2). The Guidelines further explain that “[a]n FMP should demonstrate that management measures aimed at efficiency do not simply redistribute gains and burdens without an increase in efficiency.” 50 C.F.R. § 600.330(b)(2)(i).

the resource in each sector may also be necessary to determine the efficient allocation among sectors (Holzer and McConnell, 2014)²⁷. Methods for estimating the economic efficiency of an allocation decision are being continually improved.²⁸

b. What are the economic impacts of potential changes in allocation?

Changes to sales, income, and employment levels as measured by economic impact analyses (i.e., input-output models) should only be used to understand the potential short-term distributive effects of allocation decisions on the affected communities²⁹, states, or regions (see social impacts below). Analyses should be completed at the finest scale possible, given available data and models. Unlike economic efficiency, economic impact – from an economic analysis perspective – does not measure social welfare. An allocation that maximizes economic impacts could reward the highest spender or highest cost producer, and thereby promote inefficient practices and processes and reduce economic efficiency relative to alternative allocations. Additionally, those affected by a change in allocation will likely adjust their behavior in response to a different allocation. For example, when recreational fishermen spend money on other recreational alternatives under a reduced allocation, it is difficult to determine whether the economic impacts of an alternative allocation on the economy will be positive or negative after those behavioral adjustments have occurred.

3. Social Factors

Allocation of a fishery resource can have social consequences on individuals and communities. For example, updating geographically-based allocations could impact the surrounding community by changing the demand for processing facilities, boats, and supplies such as bait and ice. When making allocation decisions, relevant questions on social factors could include, but are not limited to:

a. Is an allocation fair and equitable?

Equity is an important issue in fisheries management. National Standard 4 requires, in relevant part, that if an allocation is made “among various United States fishermen, such allocation shall be...fair and equitable to all such fishermen...”³⁰ Methods exist to gather information on the impacts of an allocation alternative, though assigning labels of “fairness” will remain subjective and the perception of “fair and equitable” will vary among individuals and

27 Holzer, Jorge, and Kenneth McConnell. 2014. "Harvest Allocation without Property Rights." *Journal of the Association of Environmental and Resource Economists* 1: 209-232

28 NMFS is developing technical guidance on best practices that will clarify emerging issues and the appropriate implementation and use of economic impact and economic efficiency analyses.

29 See 16 U.S.C. §§ 1851(a)(8) (requiring under National Standard 8 that FMP measures take into account the importance of fishery resources to fishing communities and, to the extent practicable, minimize adverse economic impacts on such communities) and 1853 (a)(9) (requiring fishery impact statement).

30 16 U.S.C. § 1851(a)(4). See National Standard 4 Guidelines, 50 C.F.R. § 600.325(c) (addressing analysis of allocations and factors to be used in making allocations, including fairness and equity).

sectors.³¹ Social impact analyses can point to potential disproportionate impacts of allocation decisions. Relevant sectors and sub-groups may include, among others, vessels of different size categories, target species, or gear; communities of different sizes and different levels of social vulnerability and fisheries dependence; large versus small businesses³²; or groups of fishermen from different states.

“Well-being” can also inform equity. Two broad principles of equity may be considered: vertical equity and horizontal equity. The former refers to different treatment of entities that are not alike while the latter refers to equal treatment among equal entities. Horizontal equity means that the distribution of well-being before and after a change in allocation is preserved. This might be the case for allocations that are primarily based on historical landings records. Vertical equity means that the distribution of well-being before and after a change in allocation has changed. Creating set-asides for entities that may have been disadvantaged by history-based allocations is an example of a measure that would affect vertical equity. In this case, vertical equity would become more even as a result of the set-aside.

b. Are there disproportionate adverse effects on low income and/or minority groups?

Consistent with Executive Order 12898 and guidance from the Council on Environmental Quality³³, NEPA analyses should continue to assess proposed actions for disproportionate and adverse effects on low-income and/or minority groups, including federally recognized tribes. Environmental justice assessments should include a review of impacts on both directly and indirectly affected entities³⁴ (e.g., minority processing workers whose jobs might change due to fisheries allocation decisions that impact the amount and/or timing of fish processing).

c. What is the importance of fishery resources to fishing communities?

National Standard 8 requires that “[c]onservation and management measures shall, consistent with the conservation requirements of this Act..., take into account the importance of fishery resources to fishing communities...in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities”.³⁵

31 Op. cit. Lapointe 2012.

32 See 5 U.S.C. §§ 601 et seq. (requiring agency to review impacts of proposed regulations on small businesses and entities) and Executive Order 13272 (setting forth requirements for agencies when considering impacts on small businesses and entities).

33 See Council on Environmental Quality, Environmental Justice Guidance Under the NEPA (Dec. 10, 1997): http://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-EJGuidance.pdf (providing guidance to Federal agencies on considering environmental justice in the NEPA process).

34 Op.cit. Council on Environmental Quality, Environmental Justice Guidance Under the NEPA, page 8; see also 40 C.F.R. § 1508.8 (defining “effects” under NEPA to include direct and indirect effects).

35 16 U.S.C. § 1851(a)(8). See also id. § 1802(17) (defining “fishing community”) and 50 C.F.R. § 600.345 (setting forth requirements for analyses under National Standard 8 Guidelines).

When making allocation decisions, relevant fishing community questions could include, but are not limited to:

i. What is the individual, local, and regional dependence and engagement in each sector^{36, 37}?

What is the current dependence and engagement and how are these expected to change in the future (both under the status quo and under the allocation alternatives being considered)? Fishing dependence and engagement analyses should include potential impacts to commercial, for-hire, private angler, and subsistence fishing, as well as shoreside support industries, and should consider impacts at the local level (and could expand to regional/national level) if data are available. For example, dependence and engagement may decrease locally based on decreased opportunities in a particular fishery, but increase on a regional level based on greater opportunities in a different fishery. In addition, the importance of a given species or fishing activity to a culture should be considered when making allocation decisions.

ii. What is the community's vulnerability and adaptive capacity?

Some communities may be more negatively impacted by changes to fishing production or fishery access than others. Social indicators have been developed that describe the vulnerability of a fishing community to “disruptive events” (Jepson and Colburn 2013)³⁸, such as a change to a group or sector's access to a fishing resource. For example, a community's current and historical dependence on a fishery can suggest a community's vulnerability and possible response to a change in commercial or recreational fishing access.³⁹ Similarly, understanding a community's ability to adapt to changes may be useful (e.g., the adaptive capacity metric developed by Mathis et al. 2014⁴⁰).

iii. Are there other social impacts?

Changes to how fisheries are managed can have other social impacts. For example, reducing an allocation may decrease safety if access to a fishery is restricted to a limited number of days (e.g., shortened season) and fishermen must decide whether to fish despite unsafe conditions or miss

36 NMFS, Guidance for Social Impact Assessment:

www.nmfs.noaa.gov/sfa/laws_policies/economic_social/index.html

37 Sepez, J., K. Norman and R. Felthoven. 2007. A quantitative model for ranking and selecting communities most involved in commercial fisheries. NAPA Bulletin 28, 43-56. 160.

38 Jepson, M., and L. L. Colburn 2013. Development of Social Indicators of Fishing Community Vulnerability and Resilience in the U.S. Southeast and Northeast Regions. U.S. Department of Commerce, NOAA Tech. Memo NMFS-F/SPO-129, 64p, available at spo.nmfs.noaa.gov/tm/TM129.pdf.

39 Ibid.

40 Mathis, J. T., S. R. Cooley, N. Lucey, S. Colt, J. Ekstrom, T. Hurst, C. Hauri, W. Evans, J. N. Cross, R.A Feely. 2014. Ocean acidification risk assessment for Alaska's fishery sector. Progress in Oceanography.

the year's landings of that fishery (referred to as "derby" fishing).⁴¹ Another example is potential impacts to non-consumptive uses of the resource, such as tourism or the intrinsic beauty of the ecosystem. Will other groups (e.g., beach goers, whale watchers, birders) be negatively impacted by a change in allocation?

4. Indicators of Performance and Change

Councils should assess the current conditions of a fishery and document changes to the fishery that may indicate the need for updated allocations. When making allocation decisions, questions on performance and change could include, but are not limited to:

a. What are the trends in catch/landings?

Historical and current catch and landings data⁴² can provide important information about demand, after accounting for changes in annual catch limits and quotas. Past overages or underages should not be used to penalize or reward a group or sector; however, short-term, in-season adjustments based on expected underages could be used to ensure full utilization of resources. Paybacks (reducing a catch limit in a subsequent year to account for an overage in the previous year) have been instituted as a mechanism to account for the biological impacts of overages; however, similar to in-season adjustments, they represent short-term fixes and not long-term changes to the allocations specified in fishery management plans. If there is a perpetual need for paybacks, this could indicate the need to reassess and change allocation, recognizing that there could also be monitoring or other management changes that need to be addressed. Caution should be exercised to avoid creating a perverse incentive system in the fishery and in its management. It is important to consider the reasons behind the overages or underages, such as lag time between catch and reporting, poor prediction of catch, ineffective effort controls, misreporting by fishermen, or intentional underages (e.g., for the purpose of maintaining higher catch rates).

b. What is the status of fishery resources?

A Council should consider the status of a stock (e.g., stock is undergoing overfishing, not undergoing overfishing, overfished, approaching an overfished condition, rebuilding, or rebuilt)⁴³ when determining allocations. The MSA clarifies that harvest restrictions and recovery benefits must be allocated "fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery"⁴⁴; therefore, the costs and benefits to individuals and/or sectors should be considered when updates to stock status result in increases or

41 See 16 U.S.C. § 1851(a)(10) (requiring under National Standard 10 that FMP measures shall, to the extent practicable, promote the safety of human life at sea) and 50 C.F.R. § 600.355 (National Standard 10 Guidelines).

42 See 16 U.S.C. § 1853 (a)(13) (requiring that FMP describe sectors which participate in the fishery and, to the extent practicable, quantify trends in landings of the managed fishery).

43 See 16 U.S.C. § 1853 (a)(10) (requiring that FMP specify objective and measurable criteria for identifying when fishery is overfished) and 50 C.F.R. § 600.310(e)(2) (providing under National Standard 1 Guidelines for specification of criteria for determining overfishing and overfished status of stock or stock complex).

44 16 U.S.C. § 1853 (a)(14).

decreases in allocations.

c. Has the distribution of the species changed?

The distributions of species alter over time for reasons such as climate change (Nye et al., 2009)⁴⁵ or natural fluctuations in abundance (Bell et al., 2014)⁴⁶, among others. This may create jurisdictional disputes when the distribution crosses international, state, or council boundaries. Where the spatial distribution of the species does not match the spatial distribution of the allocation or geographic location of the fishermen, the allocation may need to be updated, recognizing that there could also be other management changes that need to be addressed.⁴⁷ If a stock moves and it is financially viable for fishermen to follow the stock/species, then there can be conflict because fishermen in an area who are historically dependent on the stock will catch fish as well as fishermen new to the area, creating potential for overfishing and reducing the sustainability of the stock. Conversely, if a stock moves and it is not financially viable to follow the stock, there may be less potential for conflict if allocations can be updated to match the new distribution. For stocks expected to change geographic distribution, determining pre-arranged management responses is recommended (see above, “Recommended Practices When Reviewing and Making Allocation Decisions,” Section d – Planning for Future Conditions).

d. What is the quality of information available for each sector or group?

In order to properly manage a fishery, scientists need information on stock specific catch rates, abundance, and biology (age, growth, mortality, etc.), as well as data on social and economic aspects of the fishery⁴⁸. Information can be compiled through fishery-dependent and fishery-independent data sources. Fishery dependent data may be collected through use of dockside monitors, at-sea observers, logbooks, electronic monitoring and reporting systems, telephone surveys, and vessel-monitoring surveys. Fishery-dependent data collected varies between sectors. Improvements in the data collected through a fishery can result in a better understanding of the species and the appropriate management actions.⁴⁹

Councils should consider the quality and availability of fishery dependent data

45 Nye, J. A., Link, J. S., Hare, J. A., and Overholtz, W. J. 2009. Changing spatial distribution of fish stocks in relation to climate and population size on the Northeast United States continental shelf. *Marine Ecology Progress Series* 393: 111-129.

46 Bell, R.J, J.A. Hare, J.P. Manderson, and D. E. Richardson. 2014. Externally Driven Changes in the Abundance of Summer and Winter Flounder. *ICES Journal of Marine Science*. doi: 10.1093/icesjms/fsu069.

47 Changes in stock distribution implicate other MSA mandates, such as National Standards 1 (preventing overfishing and achieving optimum yield) and 3 (management of stocks as a unit, to extent practicable). For example, reference points and catch targets may need to be updated if stock productivity changes with the shifting distribution.

48 See 16 U.S.C. § 1853(a)(5) (requiring that FMP specify pertinent data to be submitted to agency with respect to commercial, recreational, charter fishing, and fishing processing in the fishery).

49 For example, due to scientific uncertainty, data poor stocks are often managed more conservatively than data rich stocks. Increasing an allocation to a group or sector that provides better biological information may allow for higher retainable catch (due to less of a buffer for uncertainty) in the future.

collected through each sector when making allocation decisions. Lack of detailed data should not be used to penalize a sector or a group; however, increased allocations could be considered as an incentive to improving data quality. Where appropriate, allocation decisions which incentivize cooperative research or improvements in self-reported data could also be considered in data poor situations, consistent with relevant MSA requirements.