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

NATIONAL MARINE FISHERIES SERVICE PROCEDURAL DIRECTIVE 01-119-01
July 27, 2016

Fisheries Management

Criteria for Initiating Fisheries Allocation Reviews. Council Coordinating Committee Allocation Workgroup Guidance Document.

NOTICE: This publication is available at: http://www.nmfs.noaa.gov/op/pds/index.html

OPR: F/SF (CCC Allocation Workgroup) **Certified by: F/SF (A. Risenhoover)**
Type of Issuance: Initial

SUMMARY OF REVISIONS:

Signed _____
Alan Risenhoover
Director, Office of Sustainable Fisheries

Criteria for Initiating Fisheries Allocation Reviews Council Coordinating Committee Allocation Workgroup Guidance Document Approved by the CCC June 24, 2015

Introductory Comments

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.

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

3. Defining the management action for potential review
4. Monitoring the achievement of management goals and objectives and the effects of the allocation
5. Evaluating the achievement of management goals and objectives and the impacts of the allocation
6. Adapting in response to evaluation and learning
7. 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

Adaptive Management

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.

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.

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.

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.

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.

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.

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.

Definitions

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 polices and decisions from time to time.

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.

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.

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.

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.

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?	If objectives not being met, then a reallocation is initiated	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.
				If objectives are relevant and are being achieved, then no further action. Continue Step 1.		
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	

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:

1. Ongoing public input on fishery performance
2. Solicitation of public comment regarding allocation review
3. Formal initiatives

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.

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.

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 a 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).

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.

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 NS1 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.

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 limited[1]. 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.

[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.

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 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.

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, 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.).

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.

Filename: CCC Allocation Procedural Directive 7.27
Directory: G:\SF3\National Standard 4\Workgroup - Policy\Final Versions
Template: C:\Users\tara.scott\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Wendy_Morrison
Keywords:
Comments:
Creation Date: 7/27/2016 4:31:00 PM
Change Number: 4
Last Saved On: 7/27/2016 5:27:00 PM
Last Saved By: Tara_Scott
Total Editing Time: 12 Minutes
Last Printed On: 7/27/2016 5:38:00 PM
As of Last Complete Printing
Number of Pages: 16
Number of Words: 6,385 (approx.)
Number of Characters: 36,401 (approx.)