ABC Control Rule Modifications

Discussion Document III

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SAFMC Review Draft – September 2017

I. Background and Timeline

- 2008: The initial ABC Control Rule (CR) was developed. It includes "Dimensions" that address uncertainty parameters; "tiers" within each dimension provide scores based on assessment information such as uncertainty, stock status, and risk. The sum of the scores is used to adjust the probability of overfishing, or P*, for defining ABC. The CR was intended to be comprehensive and applicable to all stocks, including those assessed and those not assessed, and all FMPs.
- 2010: The CR was modified, by addenda to the CR, to include a higher level "Tier" system, with the first Tier addressing assessed stocks (for which the initial rule applies), two intermediate Tiers addressing data limited evaluations developed at the time (DCAC and DBSRA), and a final Tier addressing stocks for which only catch information is available. Note that the word "tier" is used differently in 2 places in the CR. For now, lower case "tier" will be used to refer to the categories of Dimensions in the original CR, and the upper case "Tier" to refer to the higher level divisions created in 2010.
- April 2011: The fourth Tier (catch only) was modified by another addenda adding a decision tree approach intended to provide a consistent and objective means to evaluate data and stock conditions. At this time, the Tiers created through the 2010 modification began to be called "Levels" in some circumstances, to reduce confusion caused by the use of the term tier in two different ways in the CR.
- November 2011: The SSC proposed a process for including the ORCS (Only Reliable Catch Stocks) workgroup recommendations for addressing unassessed stocks. The ORCS approach was added as another option for evaluating Tier 4 (or Level 4) stocks, initially categorized as "catch only".
- 2015: The ORCS approach was implemented through Amendment 29 to the Snapper Grouper FMP. Due to implementation in a SG FMP, the ORCS method is available for stocks in that FMP but not to stocks in other FMPs.
- October 2014: The SSC held an ABC Control Rule Workshop to evaluate performance and application of the CR. Objective evaluation of performance was hindered by a lack of assessments that provide status determinations during times when fishing levels based on the CR were in effect.
- April 2015: The SSC reviewed the report of the October 2014 Workshop. The SSC did not recommend any CR modifications at the time, although suggestions were made to add flexibility that would allow consideration of individual stock situations. An ABC Control Rule Workgroup (Workgroup) including a subset of SSC members is formed to pursue the topic.

- May 2016: A Workgroup was formed to update the evaluations and consider if changes were necessary. The Workgroup reported preliminary findings to the SSC in May 2016, noting limited progress in evaluation information. The group recommended removing the stock status dimension from the assessed stocks Tier (Level) because status determination is made by the NMFS. Because the agency determination is not made until the SSC makes its recommendations on an assessment, the final status determination is not available when the SSC reviews the assessment and applies the CR.
- June 2016: The Council recommended that the SSC consider removing status from consideration in the CR. The Council cited two considerations in support of this request. The first is the fact that status determinations are made by the agency, not the SSC, as noted. The second is because status is an assessment output and not a characteristic of the assessment approach or data that contributes to the underlying assessment uncertainty that is supposed to be addressed by the CR. The Council considers that stock status is more appropriately considered when it, the Council, considers its risk tolerance for a stock.
    - *Council Recommendation to remove status from the uncertainty consideration.*
- October 2016: The SSC reviewed proposed revisions to the ABC control rule and provided the following recommendations:
    - *Stock status is determined by NMFS, and is a factor that the SSC considers appropriate for the Council to consider when determining the acceptable risk of overfishing. As such, the SSC recommends removing stock status from the ABC control rule.*
    - *The Productivity and Susceptibility Assessment (PSA) information is also a factor that the SSC recommends the Council should consider when determining the acceptable risk of overfishing. The SSC recommends removing the PSA consideration from the ABC control rule. However, the SSC recommends that the current PSA information should be updated and reviewed by the SSC if the Council wishes to use it to establish risk levels.*
    - *Modifications to the ABC control rule as a result of the above recommendations will require changes to the overall scoring system. The SSC requests that staff work with the SSC leadership to develop some possible options for modifying scores to maintain the range of adjustments.*
    - *The SSC recommends that P* values based on the existing ABC control rule be compared to recommendations based on the modified ABC control rule.*
- April 2017: The SSC was provided a draft of this document to review. The draft built upon the principles proposed in the October 2016 ABC Control Rule Decision Document reviewed by the SSC. It included recommendations from the Council and SSC based on earlier discussions. Because an FMP amendment, or amendments, will be required to implement ABC control rule changes, the alternatives and issues were presented in the FMP format of "ACTIONS" with various "ALTERNATIVES". Specific values and criteria were proposed for illustration and example purposes. Recommendations from the April 2017 SSC review addressing the actions and alternatives are included under each in this draft.
    - *The SSC recommended that ABC control rule changes should be implemented through a comprehensive amendment to ensure consistency across FMPs.*

FUTURE

Timeline & Ongoing Actions

- Dolphin Wahoo 10: carry over (Action 7). Initially scheduled for approval in late 2017; placed on hold, March 2017, until revised MRIP estimates are available due to the large recreational component in these fisheries.
- Snapper Grouper 45 (Tilefish overfishing): Council risk tolerance specification (Actions 2 & 3); placed on hold, March 2017, pending assessment update request.
- Comprehensive ABC Control Rule Amendment: Consideration as a future approach. There was discussion at the March 2017 Council meeting that a comprehensive amendment may be more efficient and best avoid inconsistencies in applying control rule provisions across FMPs.
  - *The SSC recommended taking a comprehensive approach during its review in April 2017.*
- Council Review – Guidance and recommendations, September 2017
- SSC Review – October 2017
- Council Review – December 2017

II. Summary of Potential Actions:

1) Simplified control rule with 3 stock categories

2) Allow Council to establish risk tolerance

3) Criteria for establishing risk tolerance

4) Assessment uncertainty evaluation approach

5) Multi-year ABC specification

6) ABC phase-in

7) Carry-over of unused ABC

8) Rebuilding stocks clarification

9) Deviation allowance

Actions 1 – 4 are related, and provide a revision of the overall ABC control rule.
Actions 5 – 7 are general provisions addressing flexibility allowed under the NS1 guidelines. These actions can be applied to the existing rule or a modified rule.
Actions 8 and 9 clarify existing practices and flexibility.
The Council can consider adding additional actions to address other issues that arise.

III. Proposed Purpose and Need

PURPOSE: Revise the ABC Control Rule

NEED:

- Rule is overly prescriptive and formulaic with regard to assessed stocks, Tier 1, thus preventing the SSC from adequately addressing uncertainty differences across stocks or from responding to new methods and techniques.
- Rule is too prescriptive with regard to Tiers 2 and 3 (unassessed stocks), calling upon specific methods, which have in some cases been surpassed by recent developments.
- Some assessment information factors of Tier 1 (assessed stocks) are not appropriate for the stocks addressed under the current rule's Tier 1, and overlap with stocks assigned to other tiers (e.g., includes an adjustment for 'scarce or unreliable catch records' that is inappropriate now that the rule includes tiers addressing catch-only stocks)
- The current rule mixes uncertainty evaluation (an SSC responsibility) with risk tolerance (a Council responsibility); and relies upon the SSC to make recommendations with regard to both components.
- The current rule considers both overfishing and overfished status as a factor in determining risk tolerance
- The current rule relies heavily on a PSA analysis for establishing risk levels, conducted by an outside body (MRAG), which is becoming out of date; aware of no plans to update.
- Rule is becoming out of date. In particular, it does not recognize advances in data limited methods and is not flexible enough to address future advances
- The rule has become inconsistent and potentially contradictory, due to several addenda over the years to address advancements and emerging science.
- Language and definitions have become unclear over time, particularly with multiple use of the word "Tiers".

IV. Potential Actions and Alternatives

Action 1. Modify the ABC Control Rule to include Categories based on the available information and uncertainty evaluation.

Alternative 1: No Action
Alternative 2: Establish 3 categories: data rich, data moderate, and data poor based on information available and uncertainty evaluation.
Alternative 3. Establish a fourth category: Ecosystem Component stocks.

Discussion

This Action will make a major change in the control rule by simplifying the approach and making it more adaptable to future analytical and data developments. It will bring the various changes added over the years into a single comprehensive framework.

Alternative 2: recommended categories

1. Data Rich, Quantitatively assessed stocks: Comprehensive, peer-reviewed, data-rich, catch-based assessments are available, including ancillary data such as length, age, and survey information. Examples of model categories for this tier are catch-age, catch-length and surplus production. Assessments provide estimates of mortality rates, MSY reference points, stock productivity, and uncertainty.
2. Data Moderate, Qualitatively assessed stocks: Includes stocks with reliable catch and some auxiliary or biological information, that are assessed through a structured process including peer review, using models which can provide a estimates or reasonable proxies for ABC or OFL but do not provide uncertainty evaluations (i.e., PDF) of those parameters.
3. Data poor, unassessed stocks. This category encompasses all remaining stocks, ranging from those addressed through the ORCS approach to those having unreliable landings records. ABC is typically based on the expert judgement of the SSC.

SSC Recommendation

- *Supported Alternative 2.*
- *Recommended Alternative 3 for "considered but rejected" since EC stocks do not require OFL and ABC specification, they are not appropriate to include within the ABC control rule context.*

Action 2: Modify the control rule to enable the Council to determine risk tolerance and acceptable probability of overfishing (P*) for determining ABC.

Alternative 1: No Action
Alternative 2: Council will specify its risk tolerance and provide an overfishing level (P*)

Discussion

This action is consistent with prior discussion and recommendations of the SSC and Council.

SSC Recommendation

- *The SSC supports this action.*

Action 3. Establish criteria for determining risk tolerance and acceptable probability of overfishing (P*)

Alternative 1. No Action
Alternative 2: Specify risk tolerance using the existing ABC control rule provisions (Tier 1, Dimensions 3 and 4) addressing stock status and a PSA analysis.
Alternative 3: Specify risk tolerance that declines along a sloped line for biomass levels below Bmsy.
Sub-alternative 3a: Range 0 to 0.5
Sub-alternative 3b: Range 0 to 0.45
Sub-alternative 3c: Range 0 to 0.40

Alternative 4: Specify default risk tolerance levels that vary based on biomass levels relative to Bmsy and MSST. .

Sub-alternative 4a: P* = 0.5 if B>Bmsy, and 0.4 if Bmsy>B>MSST

Sub-alternative 4b: P* = .45 if B>Bmsy, and .35 if Bmsy>B>MSST

Sub-alternative 4c: P* = .4 if B>Bmsy, and .3 if Bmsy>B>MSST

Sub-alternative 4d: base the accepted risk tolerance on the PSA analysis classification of stocks as high, medium or low risk.

Sub-alternative 4e: Allow the Council to deviate from the default risk levels by 0.1, based on its expert judgment, new information, or recommendations by the SSC or other expert advisors.

Alternative 5: Specify risk tolerance for each stock directly.

Alternative 6: Specify risk tolerance for all stocks at 75% FMSY

Discussion

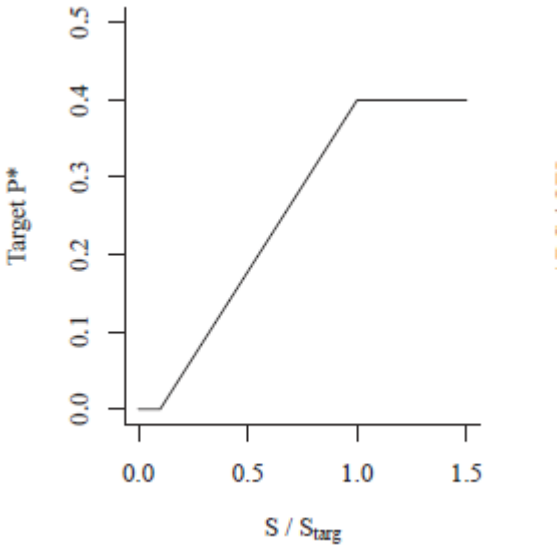
There are many approaches to establishing the risk level and numerous decisions that can be made to address flexibility within each approach.

Alternatives 1 and 2:

These alternatives are not recommended because they do not address the purpose and need. Both the SSC and Council have identified issues with, and suggested changes to, the control rule.

Alternative 3

This alternative is based on the approach used by the MAFMC and best described with the following picture, showing a target P* and relative biomass, shown as target stock size (S/Starg):



A number of decisions are required to define this approach, including the maximum target P* (0.4 in the example), the point of downward deflection (S/Starg=1 in the example), the minimum target P* and the biomass level at which P* reaches its minimum. During SAFMC SSC deliberations it was noted that a schedule of this type may not be useful for biomass levels below MSST, since management will be guided by

a rebuilding plan. This approach may also become complex or tedious when stock biomass is varying along the sloped portion of the line, as even small changes in estimated biomass will lead to small changes in the target P*. The sub-alternatives provide a few ways the line can be described based on varying the maximum target P*.

Alternative 4

Alternative 4 is conceptually similar in that the target P* (risk tolerance) varies with biomass, while offer a slightly simpler implementation that varies the risk tolerance for discrete biomass categories rather than continuous biomass values. The table below summarizes each of the sub-alternatives:

Alternative 4 examples.

Sub-alternative	Risk of overfishing for biomass categories		sub-Alt 4d rating
	B>BMSY	Bmsy>B>MSST	
4a	.5	.4	low risk
4b	.45	.35	medium risk
4c	.4	.3	high risk

These levels are provided as examples; the Council could choose additional alternatives. Sub-alternative 4d provides a method of incorporating PSA[1] rankings in the risk decision process. Alternative 4 was not developed or described to this extent for the SSC review. However, it was developed in response to SSC recommendations and discussion.

Alternative 5

Alternative 5 provides maximum flexibility and minimum guidance. Providing appropriate and consistent risk level may prove difficult and time consuming.

Alternative 6

Alternative 6 is a simpler approach that avoids setting explicit risk tolerance levels for individual stocks, and instead sets a fishing mortality target (75% Fmsy) that would be used to define ABC. This approach has been used in rebuilding plans and is generally simple to understand and analyze. A recent article[2] suggested this fishing level is robust to preventing overfishing, but could result in some foregone yield over the long term.

SSC Recommendation

- *The SSC supports establishing risk tolerance that varies with biomass levels and considering the PSA risk categories.*
- *The existing PSA analysis should be updated if it is used in the ABC control rule in the future, and further consideration should be given to the NMFS PSA approach.*

Action 4. Modify the approach used to evaluate and quantify assessment uncertainty.

[1] PSA = Probability-Susceptibility Analysis. In developing the original control rule the SSC considered PSA documents provided by the MRAG consulting firm and NMFS, and decided to use the MRAG approach for determining PSA scores when applying the control rule.

[2] Wiedenmann, J., M. Wilberg, A. Sylvia, and T. Miller. 2016. An evaluation of acceptable biological catch (ABC) harvest control rules designed to limit overfishing. Can. Jour. Fish. Aquat. Sci.

Alternative 1. No action, retain the existing criteria for assessed stocks (Tier 1, Dimensions 1-4).

Alternative 2. Modify the existing criteria for assessed stocks (Tier 1, Dimensions 1-4).

Alternative 3. Evaluate uncertainty based on the CV and probability distribution function (PDF) of OFL, estimated by a stock assessment.

Sub-alternative 3a: Use the CV & PDF directly, as estimated by the stock assessment.

Sub-alternative 3b: Allow the SSC to modify the CV based on its expert judgement of the extent to which the CV adequately captures all sources of uncertainty.

Sub-alternative 3c: apply a base or default CV based on a meta-evaluation of SAFMC or regional assessments.

Sub-alternative 3d: use the greater of the CV estimated across SAFMC assessments or estimated in a particular assessment.

Alternative 4. For stocks lacking an assessment that provides a PDF and associated CV of OFL or biomass, the SSC will apply its expert judgement to characterize uncertainty based in the Best Scientific Information Available.

Sub-alternative 4a. Retain the SSC decision tree for these stocks.

Sub-alternative 4b. Retain the ORCS approach for these stocks.

Alternative 5. Use assessment CVs to evaluate uncertainty and derive percentage buffers between OFL and ABC, with modified CVs or default buffers for unassessed stock categories.

Discussion

Like Action 3, there are many approaches that could be considered here. The existing control rule is very prescriptive and limits judgement as well as resolution. Other Councils are increasingly moving toward approaches such as Alternatives 2 and 3 which give the SSC leeway to apply its judgement to each assessment and to use tools from the assessment, such as the OFL PDF and CV, to characterize uncertainty.

Alternative 1: No Action

This alternative does not change the approach to evaluating and quantifying uncertainty for determining the buffer between ABC and OFL and therefore does not resolve the many issues experienced with the existing rule.

Alternative 2: modify the existing scoring used for the ABC Control rule Dimensions.

This alternative retains the general concept of modifying the P* by preset criteria and values. ABC would be provided by an F-based P* analysis. Because the SSC has recommended that substantial changes are needed to the control rule, Sub-alternatives considering modifications to the existing dimensions are not pursued.

Alternative 3: determine ABC from the probability distribution function of the OFL.

This alternative provides a different approach to OFL-ABC separation that is based on the SSC using, and possibly modifying, the uncertainty around the overfishing level to account for assessment uncertainty. Note that this approach can only be applied to Category 1 (assessed stocks) since it requires a PDF of OFL. ABC is determined directly from the PDF of OFL, based on the probability of overfishing, and this method could be combined with other approaches to address unassessed categories. The sub-alternatives

allow flexibility to adjust the CV, or specify alternative CV values, when the SSC does not consider that a CV estimated in an assessment adequately reflects uncertainty.

A similar approach is used in the MAFMC control rule. In that rule, assessments are classified based on the extent to which they characterize assessment uncertainty (as included here for Sub-alternatives 3a – 3c). Due to concerns that existing assessments do not fully characterize uncertainty, the MAFMC SSC initially applied a default CV of 100% to all assessments. Recently this was lowered to 60% for summer flounder, due to improvements in addressing uncertainty. The MAFMC uses expert judgement to address unassessed stocks, and is working on criteria for evaluating uncertainty and CV adequacy.

Alternative 4: Uncertainty evaluation for stock lacking an OFL PDF.
This alternative clarifies that the SSC will apply its expert judgement to evaluate uncertainty for the data poor and data moderate stocks (as defined in Action 1). The sub-alternatives clarify that the ORCS and SSC Decision Tree methods in the existing control rule would be retained in the modified rule. Flexibility in addressing uncertainty for stocks covered here is desirable, given the rapid developments in data limited techniques.

Alternative 5: CVs translated into percentage buffers
This alternative differs from Alternative 3 by converting the uncertainty (as defined by a CV and PDF) into a specific percentage buffer that is used to determine ABC from OFL. It is based on the approach outlined in the PFMC groundfish FMP. A percentage buffer is derived by translating OFL uncertainty to a range of P* values, and each P* is mapped to its corresponding buffer percentage. Different buffer and CV assumptions are applied for different stock data and assessment categories, as shown in the table below. One advantage of this method is higher buffers between OFL and ABC are assured for the unassessed stock categories. Another is that specifying both a buffer and CV provides flexibility for dealing with potential data poor-data moderate analysis, which may not provide outputs compatible with the CV approach. On the other hand, such categorizations can be limiting and hinder expert judgement.

Alternative 5 examples.

Stock Category	Buffer	assumed CV
data rich-assessed	derived from biomass PDF	greater of the CV across all assessments or estimated for a specific assessment
data moderate	25%	2x data rich
data poor - unassessed	50%	3x data rich

SSC recommendation

- *The SSC recommendation is to reject Alternatives 1 and 2 due to the issues noted previously with the current ABC control rule.*
- *The SSC supported Alternative 3 and requested specific examples. Noted that MAFMC has used assumed CVs, based on concerns that estimated CVs do not capture the true assessment uncertainty. The base CVs have been 100% and some (summer flounder) are now set at 60%.*

- *Although this alternative did not exist as shown here during SSC review, the SSC supported the concept of Alternative 4, and its sub-alternatives, during discussions.*
- *The SSC did not discuss Alternative 4 in detail.*

Action 5. Allowing multi-year specification with a fixed ABC.

Alternative 1. No action.

Alternative 2. Provide multi-year ABC specifications when requested by the Council.

Sub-alternative 2a: provide fixed ABC for 3 years.

Sub-alternative 2b: provide fixed ABC for 4 years.

Sub-alternative 2c: provide fixed ABC for 5 years.

Alternative 3. Provide multi-year ABC specifications for all stocks.

Sub-alternative 3a: provide fixed ABC for 3 years.

Sub-alternative 3b: provide fixed ABC for 4 years.

Sub-alternative 3c: provide fixed ABC for 5 years.

Discussion

This action addresses a provision in the revised National Standard 1 guidelines. Both the SSC and Council support this change.

Alternatives 2 and 3

These alternatives both propose multi-year specifications from 3-5 years. They differ by whether such specifications are provided by request or in all cases. While the SSC could take the average of annual projections to provide a multi-year ABC, this would not achieve the target P* in each year. The preferred approach is to include the fixed ABC in the projections.

SSC recommendation

- *The SSC supported this action for periods of 3-5 years.*

Action 6. Allow phase-in of ABC changes based on revised ABC recommendations.

Alternative 1. No action.

Alternative 2. Allow phasing-in of ABC reductions through a 4 step process:

1. Year 1: modified ABC equals a percentage of OFL (as specified in Alternative 4).
2. Year 2: modified ABC equals one-half the difference between the new and existing ABC.
3. Year 3: modified ABC equals the original recommended year 3 ABC (based on the projections and analyses that triggered the phase-in).
4. Year 4 and beyond: ABC is based on revised projections that account for the phase-in during years 1-3.

Alternative 3. Establish criteria for when phase-in is allowed.

Sub-alternative 3a: Allow phasing-in of ABC reductions only when the new ABC is less than 80% of the existing ABC.

Sub-alternative 3b: Only allow phase-in if the stock is not overfished.

Alternative 4: Specify the initial reduction of Step 1 during year 1 of the phase-in.

Sub-alternative 4a: Year 1 modified ABC = OFL
Sub-alternative 4b: Year 1 modified ABC = 95% of OFL
Sub-alternative 4c: Year 1 modified ABC = 90% of OFL

Discussion

This action addresses a provision in the revised National Standard 1 guidelines. Both the SSC and Council support this change to provide greater flexibility to address economic and social impacts from unexpected, major harvest level changes. Phased in reductions may not exceed the OFL. A 3-year phase in period is proposed, based on SSC recommendations. Implementing the phase-in will require first determining a new ABC and deciding if the ABC change justifies phase-in. If so, the Council could specify a modified ABC for years 1 and 2, based on the criteria in this portion of the control rule. In year 3, management would be based on the new ABC recommendation.

Some iteration will be necessary to implement the phase-in when based on assessment projections, as the harvest taken in one year affects the available harvest in later years. Therefore, if the Council decides to apply a phase-in, updated projections will be required to evaluate the phase-in and estimate an appropriate ABC once the phase-in period ends.

Alternative 2

Alternative 2 address the details of the approach. The general concept is to first reduce to some percentage of OFL, then reduce to half the difference between the existing and the new ABC, then reduce to the new year 3 ABC, and finally to an ABC obtained from new projections addressing the phase-in.

The fourth step was added to avoid a do-loop of changing ABCs that could result once projections are revised to address the phase-in, and to make it clear that the original projections that triggered the phase-in process will not be valid once the Council sets modified ABCs through phase-in. In all likelihood, the year 4 ABC after phase-in will be lower than the original year 4 ABC that triggered the phase-in. This approach also allows time for preparing updated projections.

Alternative 3

Alternative 3 proposes limitations on when phase-in is allowed.

Alternative 4

Alternative 4 proposes levels for the initial, first year reduction to be applied during phase-in.

SSC recommendation

- *The SSC supported allowing phase-in.*
- *The SSC commented that percentages of OFL and ABC may have different implications for different stocks due to the wide range of ABC and OFL values observed across SAFMC stocks.*
- *The SSC also suggested that phase-in only be allowed if a stock is above MSST.*

Action 7. Allow carry over of unused or unharvested catch (catches are below ACL).

Alternative 1. No action.

Alternative 2. Allow carry-over of unused ACL if a stock is neither overfished nor overfishing.

Alternative 3. Allow carry-over of unused ACL for a fishery sector that has experienced a regulatory closure due to catch exceeding the ACL at least once in the previous 3 years.

Alternative 4. If the OFL is known and defined, the ABC can be revised upwards to accommodate a temporary increase in ACL based on carrying over unused ABC from the previous year. The revised ABC will remain in place for no more than one year and may not exceed:.

Sub-alternative 4a: 85% of the OFL.

Sub-alternative 4b: 90% of the OFL.

Sub-alternative 4c: 95% of the OFL.

Alternative 5. If the OFL is unknown, then the ABC can be revised upwards to accommodate a temporary increase in ACL based on carrying over unused ABC from the previous year. The revised ABC will remain in place for no more than one year and may not exceed:

Sub-alternative 5a: 102.5% of the original ABC.

Sub-alternative 5b: 105% of the original ABC.

Sub-alternative 5c: 110% of the original ABC.

Discussion

This action addresses a provision in the revised National Standard 1 guidelines. Both the SSC and Council support this change for ensuring full use of ABCs. Overfishing restrictions are not nullified by carry-over so modified ABCs may not exceed the OFL. Existing rules allow a Council to increase the ACL in a year up to the ABC, but this may often be inadequate to offset a prior ACL underage, particularly if ACL=ABC. Changing the control rule to allow the Council to specify a temporary, revised ABC will increase flexibility and the ability to carry over additional unused catch.

Alternatives 2 and 3

These alternatives propose conditions under which revising ABC for ACL carry-over is allowed. They are based on SSC discussion indicating that stocks for which a carry-over would be allowed should not be overfished or overfishing, and that carry-over should not be used if there is a large difference between catch and the annual catch limit because this could indicate problems such as reduced abundance.

Alternative 4
This alternative provides for carry-over when OFL is known, and bases the amount that can be carried over on the OFL level. This ensures overfishing does not occur as a result of carry-over.

Alternative 5
Alternative 5 provides for carry-over when OFL is unknown, and bases the carry-over amount on a percentage increase in the ABC.

SSC recommendation

- *The SSC supported this action if applied to stocks that are neither overfished nor overfishing, and have catch close to the ACL.*

Action 8. Clarify ABC control rule application to rebuilding stocks.

Alternative 1. No action.

Alternative 2. ABC values for overfished stocks will be based on the Council's approved rebuilding strategy, and OFL values will be based on the annual yield at MFMT.

Discussion

This action clarifies how the Council and SSC approach rebuilding plans. The existing ABC control rule provides a means to develop an alternative probability of rebuilding success for consideration by the Council. It does not clearly state how ABC is derived for rebuilding stocks. In practice, ABCs for rebuilding stocks have been based on the rebuilding strategy chosen by the Council, which is based on a chosen rebuilding period, rebuilding approach, and probability of success.

Alternative 2
Alternative 2 simply reflects the approach used by the Council and SSC, since the ABC control rule was put in place, to define rebuilding plans and ABCs during rebuilding periods.

SSC recommendation

- *The SSC supported this action to clarify practices.*

Action 9. Clarify that the SSC may deviate from the ABC control rule

Alternative 1. No action.

Alternative 2. The SSC may deviate from the specified ABC control rule when necessary, based on its expert judgement.

Discussion

This action clarifies a provision that is allowed in the National Standards. The SSC recommended including this action to make it clear that deviations are allowed.

SSC recommendation

- *The SSC supported this action to clarify practices.*