



Comprehensive ABC Control Rule Amendment

August 2022

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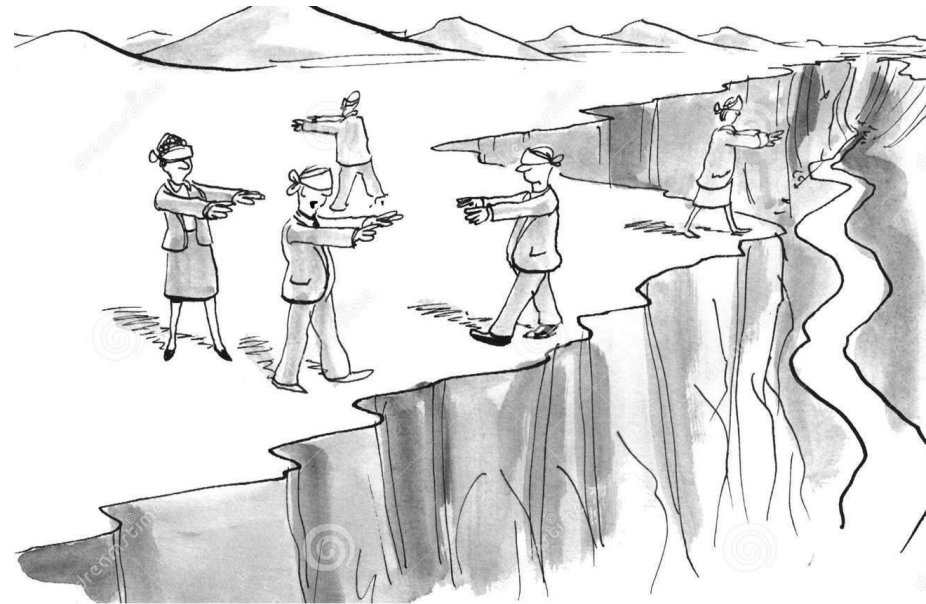
Timeline Summary

- 2018-2019 – Amd initiated, drafted, scoping conducted, put on hold awaiting NMFS guidance
- July 2020 – NMFS guidance on carry-overs and phase-ins
- Sept 2020 – Council direction to resume Amd development
- SSC input and amendment development
- June 2022 – Council approval for public hearings
- **Aug-Sept 2022 – Public Comment/Hearings**
- Dec 2022 – Council consideration for final approval



Definitions

- Risk: Used to denote management risk (risk of overfishing – probability and effects; cost/benefit) and is the purview of the Council
- Uncertainty: Used to denote scientific uncertainty (of bio information, assessment results, projections, etc.) and is the purview of the SSC



“I hope our spending does not go over the edge.”

<https://www.dreamstime.com/stock-illustration-spending-business-cartoon-showing-blindfolded-business-people-walking-edge-cliff-hope-does-not-go-over-edge-image94528115>



ABC Control Rule

- **ABC:** SSC-recommended max amount of fish that can be annually harvested after accounting for scientific uncertainty and management risk tolerance
 - Basis for fed fisheries management
- **ABC Control Rule** – Bridge between science and management
 - Defines how risk and uncertainty are evaluated and used to estimate ABC
 - $OFL - \text{sci uncertainty/mgmt risk buffer} = ABC$



Current ABC Control Rule (Assessed stocks; Level 1)

1. Stock assessment completed
2. SSC reviews assessment to determine if BSIA
3. SSC evaluates 4 tiers of assessment characteristics: Assessment Information, Uncertainty Characterization, Stock Status, PSA
 - Based on evaluation, P^* (accepted probability of overfishing) is reduced from initial value of 50%
4. Adjusted P^* applied to assessment/uncertainty information to estimate ABC



Current ABC Control Rule (Unassessed stocks; Levels 2-4)

2. Unassessed, DBSRA (reliable landings and life history)
3. Unassessed, DCAC (data deficient for DBSRA)
4. Unassessed, ORCS (Only Reliable Catch Stocks; SG only)
- 4/5. Unassessed, Decision Tree (No reliable catch)



What is this amendment doing?

- Considering revision of the ABC Control to address concerns from the SSC and Council since the last revision, including:
 - Clarification of Council's role in determining management risk
 - Inability for SSC to adjust assessment uncertainty when applying ABC CR
 - Limited number of allowable data-limited methods in current ABC CR
 - Incorporate additional flexibility allowed through NS 1 guidance on phase-ins and carry-overs



ABC CR Amendment Process Overview

- Considers 3* general actions:
 1. ABC Control Rule Modifications
 2. Phasing in ABC Changes (previously reviewed; not scheduled for discussion today)
 3. Carry-over of Unharvested Catch
 - Eligibility (Action 3) and implementation (Action 4) addressed in separate actions



Photo credits: Richard DeLizza,
Don DeMaria, Kate Quigley



Plan for Today

1. Present each action and alternatives developed to date
2. Clarifying Questions
3. AP Chair/Vice Chair Comments and Recommendations
4. Other AP Comments (as time allows)
5. Rinse, Repeat



Action 1

Modify the Acceptable Biological Catch Control Rule

Alt 1. Status quo ABC CRs for Dolphin/Wahoo, Golden Crab, and Snapper Grouper (**Table 1** for assessed stocks)

- **Risk Tolerance:** P^* adjusted by SSC's ABC CR criteria
- **Overfished Stocks:** Application not specified in an FMP or amendment (Comp ACL Amendment did not specify)



Action 1. Modify the ABC Control Rule

Alt 2. Categorizes assessed stocks based on info used to evaluate and characterize assessment uncertainty (**Table 2**)

- **Risk Tolerance:** P^* specified by Council using biomass and stock risk rating (**Table 3**); additional Options (2a-c) may be considered
- **Overfished Stocks:** Rebuilding plan takes precedence
- **Other Difs from Alt 1:**
 - Different structure/terminology
 - SSC can adjust or derive OFL uncertainty as part of CR
 - SSC will evaluate best data-limited method to get ABC for unassessed stocks (not restricted to a set group of methods)



Action 1. Modify the ABC Control Rule

Alt 2: Addressing Management Risk (P*)

Table 3.

Stock Risk Rating	Council's Default Risk Tolerance: accepted risk of overfishing (P* values)		
	High Biomass Biomass exceeds B_{MSY} (or 110% B_{MSY} per Sub-Alternative 2a)	Moderate Biomass Biomass is ABOVE the midpoint between B_{MSY} and MSST	Low Biomass Biomass is below the midpoint between B_{MSY} and MSST
Low	45%	45%	40%
Medium	45%	40%	30%
High	40%	30%	20%

- **High Biomass or Lower Risk Rating -> Higher P***
- **Higher P* -> Greater Accepted Risk -> Higher ABC**

Sub-Alt 2a. Adjusts the boundary between high and moderate biomass to 110% B_{MSY} and between moderate and low biomass to the midpoint between 110% B_{MSY} and MSST.



What is the Stock Risk Rating based on?

3 Categories of Attributes:

Biological	Human Dimension	Environmental
Estimated natural mortality	Ability to regulate fishery	Ecosystem importance
Age at maturity	Potential for discard losses	Climate change
	Annual commercial value	Other
	Recreational desirability	
	Social concerns	



How will Stock Risk Ratings be updated and used for assessed stocks?

- **USE OF STOCK RISK RATINGS WOULD BE PROSPECTIVELY APPLIED; NO CURRENT ABCS WOULD BE CHANGED THROUGH APPROVAL OF THE ABC CR AMENDMENT**

Before Operational Assessment:

- Preliminary attribute scores provided to SSC and AP
- SSC and AP (**FPR**) recommend any changes; Council considers recommendations and determines the risk rating



Action 1. Modify the ABC Control Rule

Alt 2. Categorizes assessed stocks based on info used to evaluate and characterize assessment uncertainty (**Table 3**)

Sub-Alt 2a. Change biomass boundaries $110\% B_{MSY}$ (H-M) and the midpoint between $110\% B_{MSY}$ and MSST (M-L)

Sub-Alt 2b. Allow the Council to deviate from the default accepted P^* by up to 10% for an individual stock, based on advisement or new information; P^* may not exceed 50%

Sub-Alt 2c. The Council can ask the SSC to specify ABC for up to 5 years as a constant value and as annual values



Action 1. Modify the ABC Control Rule

Alt 3. Similar to current CR with Tiers 3 (Stock Status) and 4 (PSA) replaced by Council setting initial P^* between 30% and 50% and Levels 2 through 5 replaced by SSC's recommended method for deriving ABCs for unassessed stocks. Tier 1 (assessment) revised per SSC recommendation.

- **Risk Tolerance:** Council specifies initial P^* of 30-50%; adjusted according to SSC Tiers 1 and 2 (uncertainty) adjustments (**Table 4**)
- **Overfished Stocks:** Rebuilding plan takes precedence

Sub-Alt 3a. When requested by the Council, the SSC will specify ABC for up to 5 years as both a constant value across years and as individual annual values.



Action 1. Modify the ABC Control Rule

Alt 3. Similar to current CR with Tiers 3 (Stock Status) and 4 (PSA) replaced by Council setting initial P^* between 30% and 50% and Levels 2 through 5 replaced by SSC's recommended method for deriving ABCs for unassessed stocks. Tier 1 (assessment) revised per SSC recommendation.

- **Other Notes:**

- Data-limited stocks handled same as Alt 2 (SSC Working Group)
- Council more involved in P^* than Alt 1 by setting initial value, but adjustments still made by the SSC
- Similar to Alt 1 and unlike Alt 2, SSC does not have ability to adjust/derive assessment uncertainty



Questions?



Comments/Recommendations

IF RECOMMENDING PREFERRED ALTERNATIVE 2 OR ALTERNATIVE 3, SHOULD ANY SUB-ALTERNATIVES BE PREFERRED AS WELL?



Action 1. Modify the ABC Control Rule

Summary of Alternatives

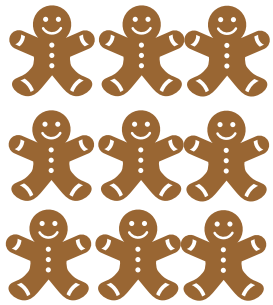
- Alt 1.** Status quo ABC CRs for Dolphin/Wahoo, Golden Crab, and Snapper Grouper (**Table 1** & surrounding description)
- Alt 2.** Categorizes assessed stocks based on info used to evaluate and characterize assessment uncertainty (**Table 2**) (uses stock risk rating; **Table 3**)
 - Sub-Alt 2a.** Change biomass boundaries
 - Sub-Alt 2b.** Council can deviate from default P^* by up to 10%
 - Sub-Alt 2c.** Constant and annual ABC recommendations
- Alt 3.** Council sets initial P^* ; removes Tiers 3 & 4; revises Tier 1; unassessed stocks handled by SSC (**Table 4**)
 - Sub-Alt 3a.** Constant and annual ABC recommendations



Action 2. Phase-ins

Phase-in: The gradual adjusting to a new ABC over multiple years

Current Diet/Harvest



/day

Assessment



Scientific Review & Recommendation

Too many cookies.
Recommend 3, but no more than 5 per day



Day 1



Cookie Diet Phase-In Plan

Week 1	5 cookies
Week 2	4 cookies
Week 3	3 cookies
Week 4+	2 cookie



Action 2. Phase-ins

Sub-Action 2.1. Phase-in criteria

Phase-in: The gradual adjusting to a new ABC over multiple years
(Multiple alternatives may be preferred)

Alt 1 (No Action). No phase-ins.

Alt 2. Phase-in of increases allowed. Phase-in of decreases allowed only if new ABC is less than:

Sub-Alt 2a. 60% of existing ABC

Sub-Alt 2b. 70% of existing ABC

Sub-Alt 2c. 80% of existing ABC

Alt 3. Phase-in of increases allowed at any stock biomass level. Phase-in of decreases allowed only if stock biomass exceeds:

Sub-Alt 3a. MSST (a.k.a. not overfished)

Sub-Alt 3b. midpoint between B_{MSY} and MSST



Action 2. Phase-ins

Sub-Action 2.2. Phase-in Timeframe

Alt 1 (No Action). No phase-ins.

Alt 2. Phase-in of decreases over no more than 3 years

Alt 3. Phase-in of decreases over no more than 2 years

Alt 4. Phase-in of decreases over no more than 1 year

- Numbers of years denote “transition years” when the ABC in effect is not the new, long-term ABC
- Flexibility: Alt 2 > Alt 3 > Alt 4 (years are MAXES)
- All alternatives: phase-ins of increases can be any timeframe
- After phase-in period, long-term ABC will be a revised projection that accounts for revised ABCs during phase-in



Action 2. Phase-ins

Sub-Action 2.2. Phase-in Timeframe

	3-Year Schedule (Alternative 2 max)	2-Year Schedule (Alternative 3 max)	1-Year Schedule (Alternative 4 max)
Year 1	Temporary ABC \leq OFL	Temporary ABC \leq OFL	Temporary ABC \leq OFL
Year 2	Temporary ABC \leq midpoint between OFL and recommended ABC	Temporary ABC \leq midpoint between OFL and recommended ABC	NA
Year 3	Temporary ABC \leq recommended ABC	NA	NA
Subsequent Years	Long-term ABC based on revised projections that account for the phase-in during years 1-3.	Long-term ABC based on revised projections that account for the phase-in during years 1 and 2.	Long-term ABC based on revised projections that account for the phase-in during year 1.



Shadow Shark Phase-In Example

Current ABC: 50,000 lbs

Projection: F rate

Phase-in time shown is the maximum allowed under each alternative

Year	Recommended OFL (lbs)	Recommended ABC (lbs)	Alt 2 Effective ABC (lbs)	Alt 3 Effective ABC (lbs)	Alt 4 Effective ABC (lbs)	Notes
2023	28,000	25,000	28,000	28,000	28,000	Temporary ABC ≤ OFL
2024	32,000	29,000	30,500	30,500	28,000	Temporary ABC ≤ OFL-recommended ABC midpoint
2025	35,000	31,500	31,500	29,500	30,500	Temporary ABC ≤ recommended ABC
2026+	38,000	35,000	30,500	33,000	34,000	

REVISED PROJECTIONS ACCOUNTING FOR PHASE-IN



Questions?



Comments/Recommendations

SHOULD PHASE-INS BE ALLOWED TO BE USED UNDER EACH OF THE FMPS?

IF PHASE-INS ARE ALLOWED, WHAT SHOULD BE THE CONSTRAINTS ON WHICH STOCKS ARE ELIGIBLE (SUB-ACTION 2.1) AND THE MAXIMUM PHASE-IN TIME PERIOD (SUB-ACTION 2.2)?



Action 2. Phase-ins

Summary of Alternatives

Sub-Action 2.1. Phase-in Criteria (Multiple may be preferred)

Alt. 1 (No Action). No phase-ins.

Alt 2. Phase-in of increases allowed. Phase-in of decreases allowed only if new ABC is less than: 60% (**2a**), 70 % (**2b**), or 80% (**2c**) of existing ABC

Alt 3. Phase-in of increases any biomass level. Phase-in of decreases allowed only if biomass exceeds: MSST (**3a**) or B_{MSY} -MSST midpoint (**3b**)

Sub-Action 2.2. Phase-in Timeframe

Alt. 1 (No Action). No phase-ins.

Alt 2. Phase-in decreases ≤ 3 years.

Alt 3. Phase-in decreases ≤ 2 years.

Alt 4. Phase-in decreases ≤ 1 years.







Actions 3 & 4. Carry-Overs

Carry-over: Increasing ACL in one year based on underharvest of the ACL in the previous year.

Recommend 3,
but no more
than 5 cookies
per day



Day 1	
Day 2	
Day 3	
Day 4	
Day 5	



Action 3. Carry-Over Eligibility

Sub-Action 3.1. Criteria for Eligibility

Carry-over: Increasing ACL in one year based on underharvest of the ACL in the previous year.

Alt 1 (No Action). No carry-over.

Alt 2. Allow carry-over if stock status is known, not overfished & not overfishing, OFL is defined, AND (Multiple sub-alt's may be preferred)

Sub-Alt 2a. Biomass exceeds the B_{MSY} -MSST midpoint.

- Closer to B_{MSY} than to being overfished

Sub-Alt 2b. Sector carrying over has had regulatory closure due to landings being projected to exceed the ACL at least once in the previous 3 years.

- Potential early closure

Sub-Alt 2c. Sum of total landings the previous 3 years < sum of total ACLs.

- Long-term underharvest

Sub-Alt 2d. ABC decreases are not being phased-in.

Sub-Alt 2e. Both in-season AND post-season accountability measures.



Action 3. Carry-Over Eligibility

Sub-Action 3.2. Amount

Alt 1 (No Action). No carry-over

Alt 2. ABC and total ACL can be increased for carry-over up to the OFL or total ACL plus carry-over, whichever is less.

Alt 3. ABC and total ACL can be increased for carry-over up to the OFL, total ACL plus carry-over, or total ACL plus 25% of the carrying-over sector's ACL, whichever is less.

- **Alts 2 & 3**, if both sectors carrying over in the same year and OFL is the limiting amount, difference between OFL and total ACL will be allocated using sector allocation percentages



Action 4. Carry-Over Implementation

- 3 Sub-Actions; same language, one for each FMP (SG, DW, GC)
- When specifying an ABC and ACL, the Council would determine whether carry-over will be authorized, if **annual conditions** cause a stock ACL or sector ACL to qualify for carry-over
 - Carry-over written into the amendment
 - Carry-over would happen automatically in every year when annual conditions from Action 3 are met (not overfished, not overfishing, etc.)



Action 4. Carry-Over Implementation

- 3 Sub-Actions; same language, one for each FMP (SG, DW, GC)
- When specifying an ABC and ACL, the Council would determine whether carry-over will be authorized, if **annual conditions** cause a stock ACL or sector ACL to qualify for carry-over
 - Council IS ABLE BUT NOT REQUIRED to approve carry-over during the amendment process (if not in an amendment, carry-over not allowed)
 - IF the Council approves carry-over via an amendment, that approval is for carry-over to occur automatically in ALL years that a stock/sector qualifies (until changed by a future amendment)



Action 4. Carry-Over Implementation

Step-by-Step

1. SSC gives ABC recommendation with carry-over eligibility
2. Council passes amendment with new ABC AND allowing carry-over.
3. One or both sectors underharvest the ACL, AND all criteria for eligibility under Sub-Action 3.1 are met.
4. ABC and applicable sector ACL(s) are automatically increased per Sub-Action 3.2 in the next fishing year
5. When sector is no longer eligible, ACL goes back to value specified in the FMP
 - If no sectors eligible for carry-over, ABC goes back to value in the FMP



Shadow Shark Carry-Over Example

- **Shadow Shark Stock Status:** Not Overfished and Overfishing Not Occurring
- **OFL:** 12,000 lbs
- **Via amendment, Council has approved:**
 - **ABC = Total ACL = 10,000 lbs**
 - **Sector Allocation: 50/50**
 - **Both sector ACLs will carry-over when eligible**
- **Criteria for annual eligibility:** Not overfished and not overfishing status, **underage of the sector ACL** (Action 3-Sub-Action 3.1-Alternative 2 [No Sub-Alternatives])
- **Amount eligible for carry-over:** **Temporary revised ABC and total ACL may not exceed OFL** (Action 3-Sub-Action 3.2-Alternative 2)



Shadow Shark Carry-Over Example

OFL: 12,000 lbs

Year	Effective ABC (lbs)	Commercial ACL (lbs)	Commercial Landings (lbs)	Commercial Carry-Over	Recreational ACL (lbs)	Recreational Landings (lbs)	Recreational Carry-Over
2023	10,000	5,000	4,000	1,000 lbs to 2024	5,000	5,200	None
2024	11,000	6,000	5,200	None	5,000	4,500	500 lbs to 2025
2025	10,500	5,000	5,500	None	5,500	4,500	500 lbs to 2026
2026	10,500	5,000	3,000	1,000 lbs to 2027	5,500	3,500	1,000 lbs to 2027
2027	12,000	6,000	2,500	2,000 lbs to 2028	6,000	6,500	None
2028	12,000	7,000			5,000		



Questions?



Comments/Recommendations

SHOULD CARRY-OVERS BE ALLOWED TO BE USED UNDER EACH OF THE FMPS?

IF CARRY-OVERS ARE ALLOWED, WHAT SHOULD BE THE CONSTRAINTS ON WHICH STOCKS ARE ELIGIBLE (SUB-ACTION 3.1)?

IF CARRY-OVERS ARE ALLOWED, WHAT SHOULD BE THE CONSTRAINTS ON THE MAXIMUM CARRY-OVER AMOUNT (SUB-ACTION 3.2)?



Action 3. Carry-Over Eligibility

Summary of Alternatives

Sub-Action 3.1. Criteria for Eligibility

Alt 1 (No Action). No carry-over.

Alt 2. Allow carry-over if stock status is known, not overfished & not overfishing, OFL is defined, and (Multiple sub-alts may be preferred) biomass exceeds the B_{MSY} -MSST midpoint (2a), regulatory closure within the previous 3 years (2b), last 3 years of total landings > last 3 years of total ACLs (2c), no ABC decrease phase-in (2d), or in-season and post-season AMs (2e).

Sub-Action 3.2. Amount

Alt 1 (No Action). No carry-over.

Alt 2. ABC and total ACL can be increased for carry-over up to the OFL or total ACL plus carry-over, whichever is less.

Alt 3. ABC and total ACL can be increased for carry-over up to the OFL, total ACL plus carry-over, or total ACL plus 25% of the carrying-over sector's ACL, whichever is less.



Action 4. Carry-Over Implementation

Summary of Alternatives

Sub-Action 4.1. Modify Snapper Grouper FMP Framework Procedures

Alt 1 (No Action). Do not modify.

Alt 2. Modify to allow implementation of carry-over via framework procedures.

Sub-Action 4.2. Modify Dolphin Wahoo FMP Framework Procedures

Alt 1 (No Action). Do not modify.

Alt 2. Modify to allow implementation of carry-over via framework procedures.

Sub-Action 4.3. Modify Golden Crab FMP Framework Procedures

Alt 1 (No Action). Do not modify.

Alt 2. Modify to allow implementation of carry-over via framework procedures.

