



Comprehensive ABC Control Rule Amendment

April 2021

Mike Schmidtke, SAFMC Staff

ABC Control Rule Amd Process Overview

- 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
- Oct 2020 and Apr 2021 – SSC review of phase-in and carry-over actions & preliminary review of control rule alternatives
- **Oct 2021 – SSC review of control rule (Action 1) alternatives**



ABC Control Rule Amd 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 (previously reviewed; not scheduled for discussion today)
 - Eligibility (Action 3) and implementation (Action 4) addressed in separate actions



Photo credits: Richard DeLizza,
Don DeMaria, Kate Quigley



Goals for Today

1. Review Action 1 alternatives and recommendations
 - Explanation and understanding of alternatives
 - Review Risk Tolerance Analysis spreadsheet (**Act 1-Alt 2**); recommend preferred method for determining stock risk ratings
 2. Review example P* values for stocks using different ABC Control Rule (**Action 1**) alternatives
 3. Revise SSC recommendations for **Action 1** as necessary
- IPT will edit action/alternative language following the SSC meeting
 - **Draft Amendment to be considered by Council for public hearings in June 2022**
 - Outside of additional (other than Apr/Oct) meeting, this is the last meeting for the SSC-recommended changes to be incorporated into amendment language; future meetings can still be used for preferential recommendations or appended information





Definitions

- Risk: Used to denote management risk and is the purview of the Council
- Uncertainty: Used to denote scientific uncertainty (of assessment results, projections, etc.) and is the purview of the SSC



<https://ecotalker.wordpress.com/2019/07/02/cartoon-for-the-day/>

Current ABC Control Rule

- (Tables 1 & 2) Based on assessment category
- Organized into assessment Levels:
 1. Assessed using age, length, or biomass-based model
 2. Unassessed, DBSRA (reliable landings and life history)
 3. Unassessed, DCAC (data deficient for DBSRA)
 4. Unassessed, ORCS (Only Reliable Catch Stocks; SG only)
 5. Unassessed, Decision Tree (No reliable catch)
- Inflexible, couldn't add new data-limited methods



Current ABC Control Rule – Level 1

- Initial P^* is 50% (OFL); tiers are evaluated and P^* reduced by up to 10% for each tier
- Tiers:
 1. Assessment Information
 2. Uncertainty Characterization
 3. Stock Status
 4. Productivity and Susceptibility Analysis (PSA)
- Adjusted P^* is then applied to assessment projections to determine ABC



Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 1. Status quo ABC CRs for Dolphin/Wahoo, Golden Crab, and Snapper Grouper (Tables 1 & 2)

- **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 Acceptable Biological Catch Control Rule

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

- **Risk Tolerance:** P^* specified by Council using biomass and stock risk rating (Table 4); additional Options (2a-c) may be considered
- **Overfished Stocks:** Rebuilding plan takes precedence



Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 2: Addressing Scientific (Assessment/OFL) Uncertainty

- Assessments categorized based on how well uncertainty is evaluated and incorporated
- Categories (**Table 3**):
 1. Stock is assessed; scientific uncertainty is adequately incorporated
 - P* applied to assessment information to derive ABC
 2. Stock is assessed; uncertainty not adequately evaluated
 - SSC **adjusts** uncertainty measures from assessment before applying P*
 3. Stock is assessed; uncertainty not adequately evaluated and cannot be addressed through adjustment of available measures
 - SSC **develops** uncertainty measures before applying P* OR SSC applies a direct buffer to OFL (or proxy) to derive ABC
 4. No formal stock assessment
 - ABC addressed through SSC Working Group



Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 2: Addressing Management Risk (P*)

- P* determined by **Stock Risk Rating** and relative biomass

Table 4.

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%

Sub-Alternative 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.

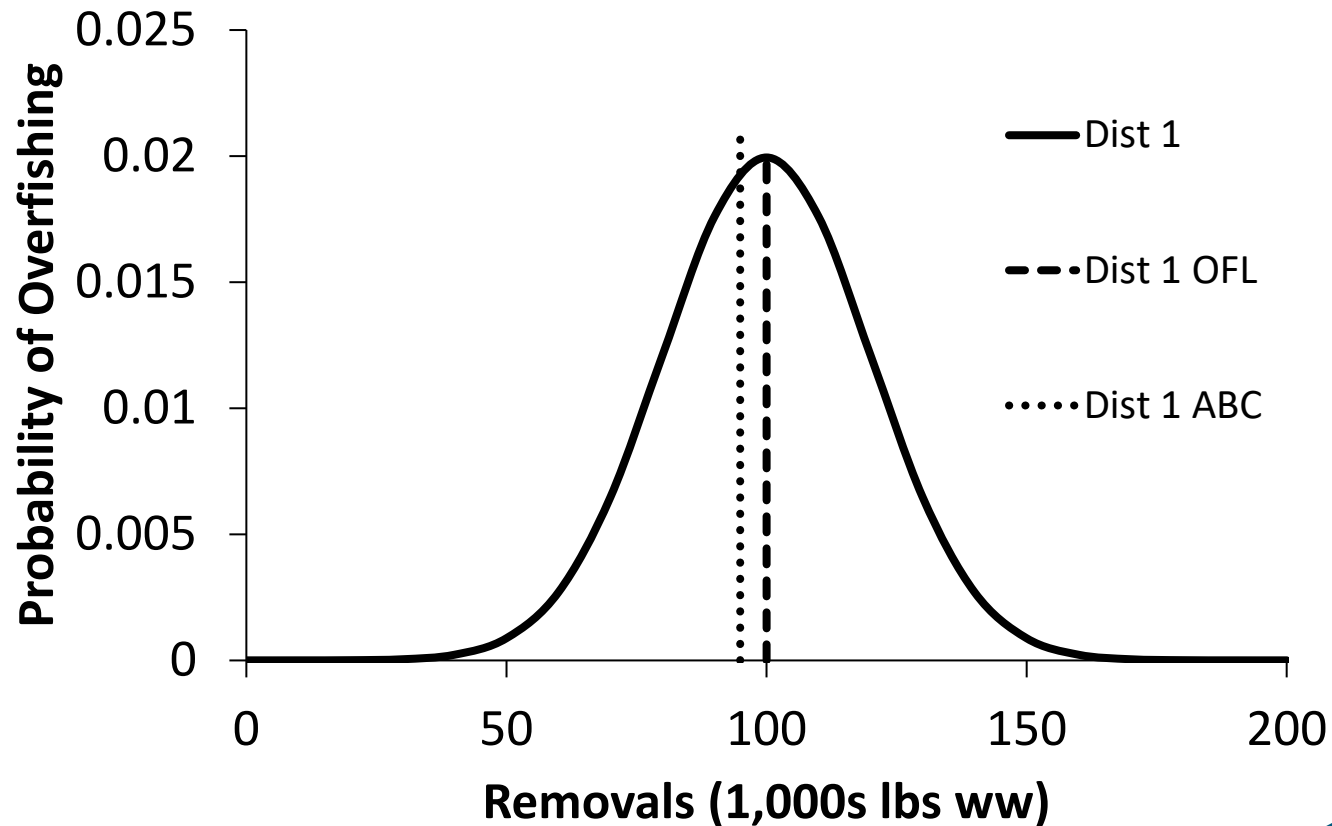


Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 2: Risk and Uncertainty to Derive ABC (EXAMPLE)

	Dist 1
Std Dev	20
OFL	100
P*	0.4
ABC	94.9

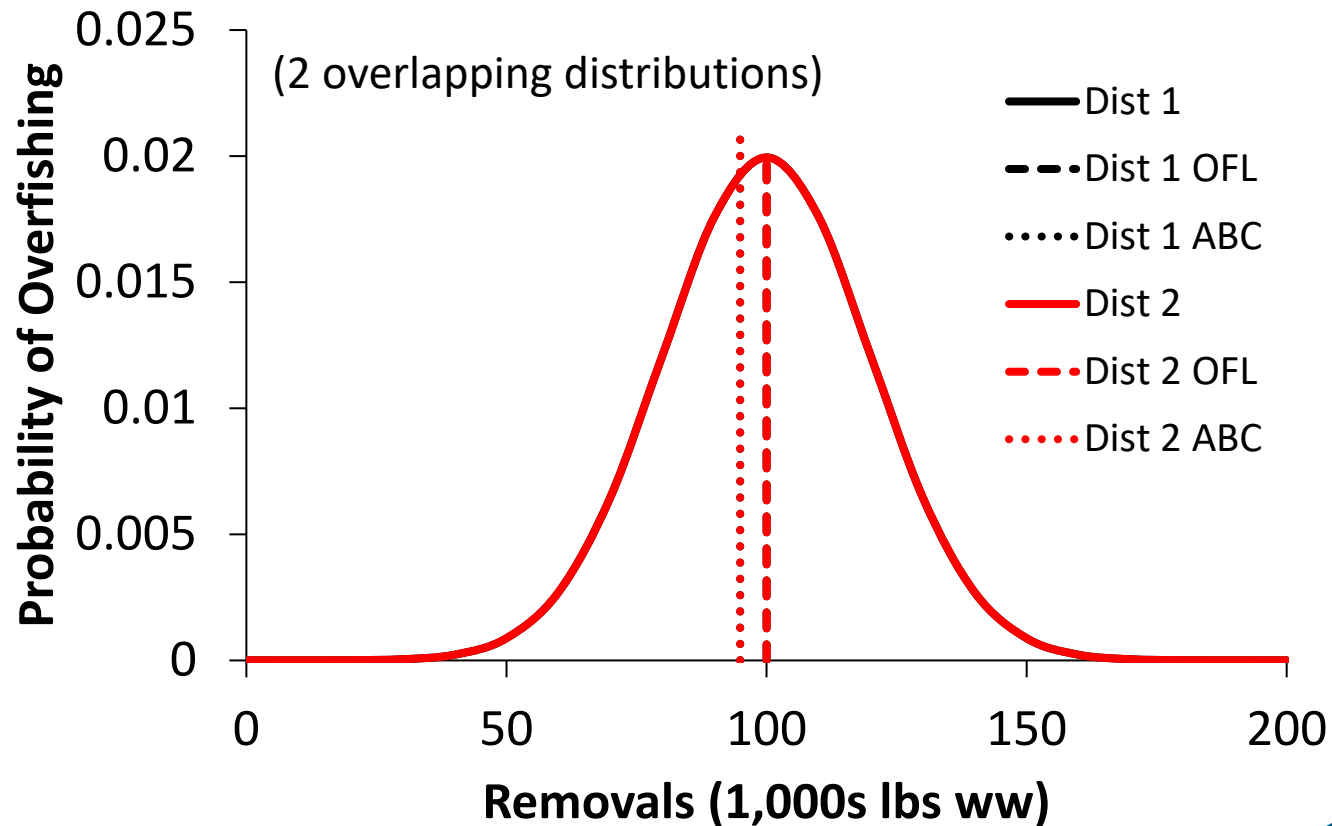


Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 2: Risk and Uncertainty to Derive ABC (EXAMPLE)

	Dist 1	Dist 2
Std Dev	20	20
OFL	100	100
P*	0.4	0.4
ABC	94.9	94.9



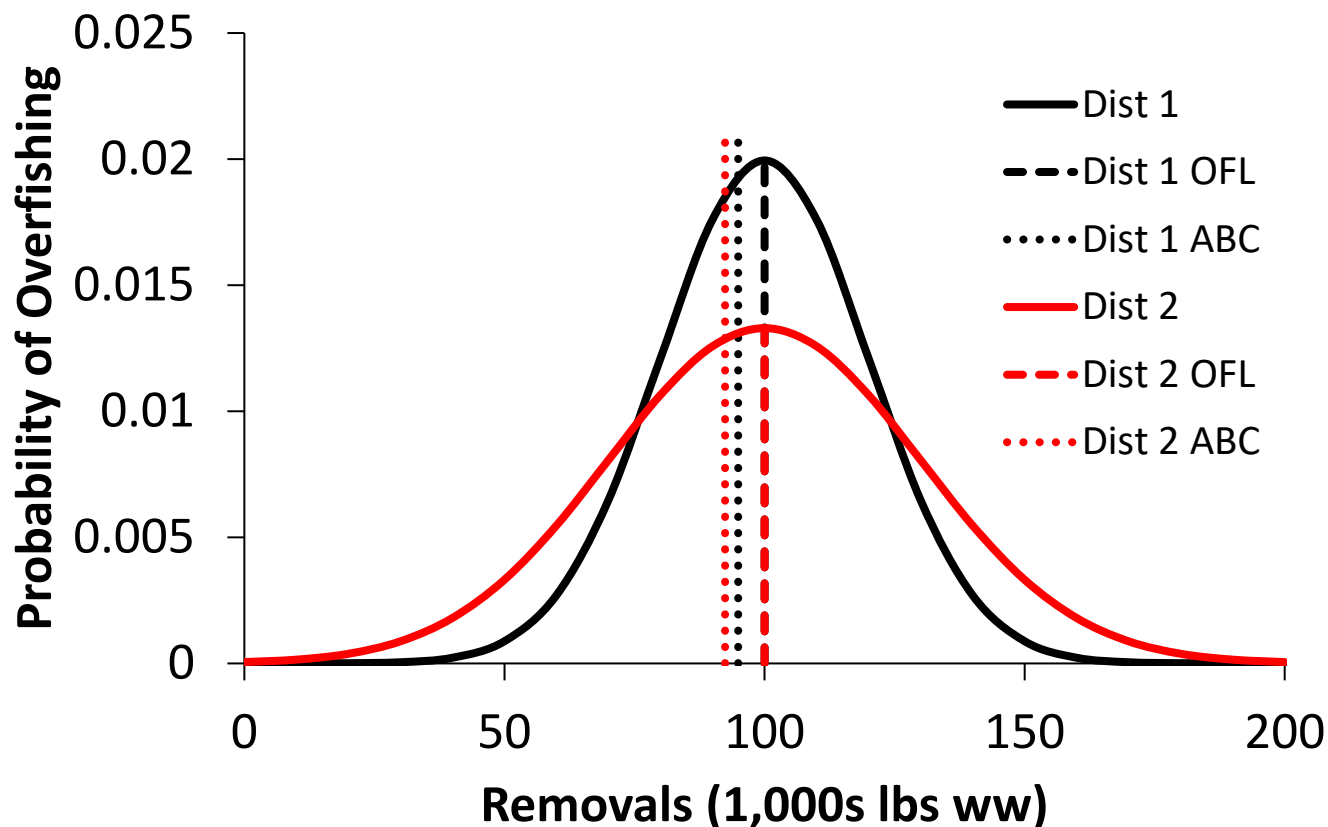
Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 2: Risk and Uncertainty to Derive ABC (EXAMPLE)

	Dist 1	Dist 2
Std Dev	20	30
OFL	100	100
P*	0.4	0.4
ABC	94.9	92.4

Assessment determines OFL distribution location.
SSC/assessment determines OFL distribution shape.



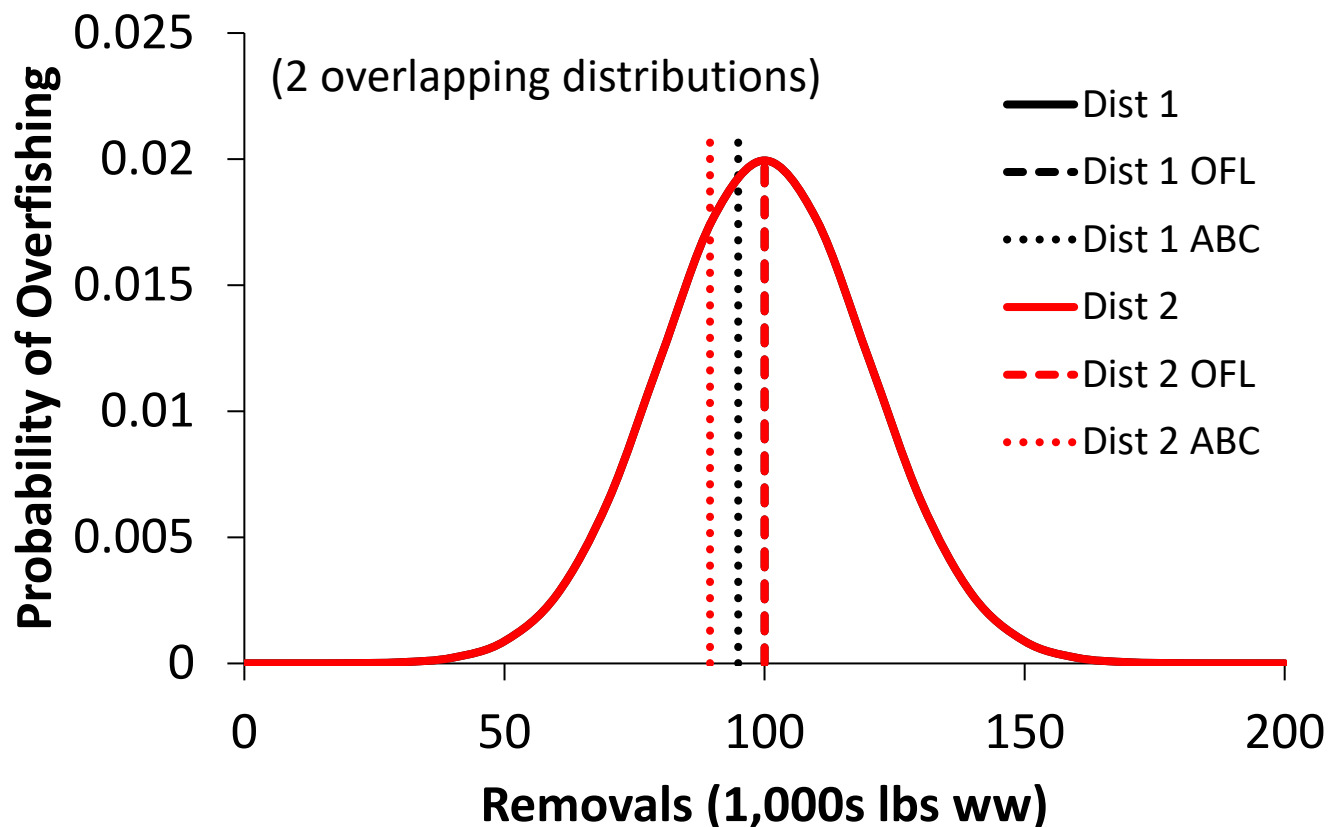
Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 2: Risk and Uncertainty to Derive ABC (EXAMPLE)

	Dist 1	Dist 2
Std Dev	20	20
OFL	100	100
P*	0.4	0.3
ABC	94.9	89.5

P* is Council decision;
SSC helps develop
rationale and objective
decision-making
method (stock risk
rating & biomass)



Action 1

Modify the Acceptable Biological Catch Control Rule

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

Sub-Alternative 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.

Sub-Alternative 2b. Council can deviate from default P^* (from table) by up to 10%, as long as P^* does not exceed 50%.

Sub-Alternative 2c. Category 4 stocks assigned moderate biomass level unless SSC recommends and justifies otherwise.

Sub-Alternative 2d. 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.

QUESTIONS?



Action 1

Modify the Acceptable Biological Catch Control Rule

Alt. 3. Current CR with Tiers 3 (Stock Status) and 4 (PSA) replaced by Council setting P^* between 30% and 50% and Levels 2 through 5 replaced by SSC's recommended method for deriving ABCs for unassessed stocks.

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

Sub-Alternative 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 Acceptable Biological Catch Control Rule

Alt. 3. Current CR with Tiers 3 (Stock Status) and 4 (PSA) replaced by Council setting P^* between 30% and 50% and Levels 2 through 5 replaced by SSC's recommended method for deriving ABCs for unassessed stocks.

- Council risk incorporated by setting initial P^* between 30% and 50% (OFL); tiers are evaluated and P^* reduced by up to 10% for each tier
- Tiers (same as current Tiers 1 & 2):
 1. Assessment Information
 2. Uncertainty Characterization
- Adjusted P^* is then applied to assessment projections to determine ABC
- Unassessed stocks (Level 2) addressed in same manner as Category 4 from **Action 1-Alt 2**

QUESTIONS?



Action 1-Alternative 2

Stock Risk Rating Spreadsheet

SSC Discussion Questions:

- 1. What scoring system should be used for stock risk ratings?**
- 2. Does the SSC want to evaluate preliminary attribute scores within this meeting or through a work group ahead of April 2022?**



Action 1

Example P* Spreadsheet

SSC Discussion Questions:

1. Are there any clarifications needed on how control rule alternatives would work?
2. Review previous recommendations and update as necessary (Disc Doc), including any additional recommendations for Action 1 alternatives.

