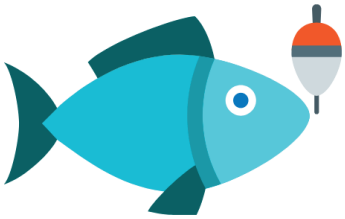
Supplemental Infographics to the Draft Addenda/Framework on the Harvest Control Rule

This is a supplement to the Quick Reference Guide for the Draft Addenda/Framework on the Harvest Control Rule. Please refer to the Quick Reference Guide (Section 3.1) when viewing these infographics. The Draft Addenda/Framework can be found at http://www.asmfc.org/files/PublicInput/HCR_DraftAddenda_PublicComment_March2022.pdf.

Current Process



This is the current process used to set recreational measures for summer flounder, scup, black sea bass and bluefish.

New Harvest Limits are Set

Recreational harvest limits (RHLs) are set based on the most recent stock assessment, considerations about scientific and management uncertainty, commercial & recreational allocations, and assumptions about discards in upcoming years.

Harvest Data Reviewed

Harvest estimates from recent years are used to generate an estimate of expected harvest in the upcoming year under status quo measures.

Determine Changes Needed

If the estimate of expected harvest is similar to the upcoming RHL, then no change in measures is needed. If it is higher or lower than the RHL, then a percentage liberalization or reduction in harvest is agreed upon to allow harvest to meet but not exceed the upcoming RHL.

Set Management Measures

State and federal waters management measures are set based on the agreed upon percentage liberalization or decrease in harvest, or no change.

Percent Change Option

1 → RHL compared to MRIP estimate

Determine if the RHL for the upcoming management period is above, below, or within the confidence interval of the most recent MRIP time-series estimates.

2 → Compare biomass to target level

Compare the biomass estimate from the stock assessment to the biomass target level. Biomass categories are as follows:

- 150% above biomass target
- Between 100% and 150% biomass target
- Below biomass target

3 → Find percent change in measures

The RHL and biomass comparison determines the appropriate percent change in harvest needed (if any).

4 → Set Management Measures

Management measures are either liberalized, restricted, or maintained at status quo to acheive the percent change determined through step 3.

Fishery Score Option

STEP 1

Stock Assessment Results

An updated stock assessment is completed and approved for management use.

STEP 2

Calculate Fishery Score Factors

Fishing mortality, biomass, recruitment, and fishery performance metrics are drawn from the stock assessment and recent MRIP estimates.

STEP 3

Use Formula to Calculate Fishery Score

Fishery score factors are entered in the Fishery score formula to produce a value ranging from 1 to 5. On this scale, 1 is the lowest possible score and 5 is the highest possible score.

STEP 4

Determine Management Step Based on Fishery Score

Based on the calculated fishery score, the stock is placed into one of four bins. Each bin has a pre-determined set of management measures (see below)

STEP 5

Determine Management Measures

Pre-determined management measures from the relevant bin are implemented.

Fishery Score bins and the associated stock status, fishery performance outlook, and measures that are associated with each bin.

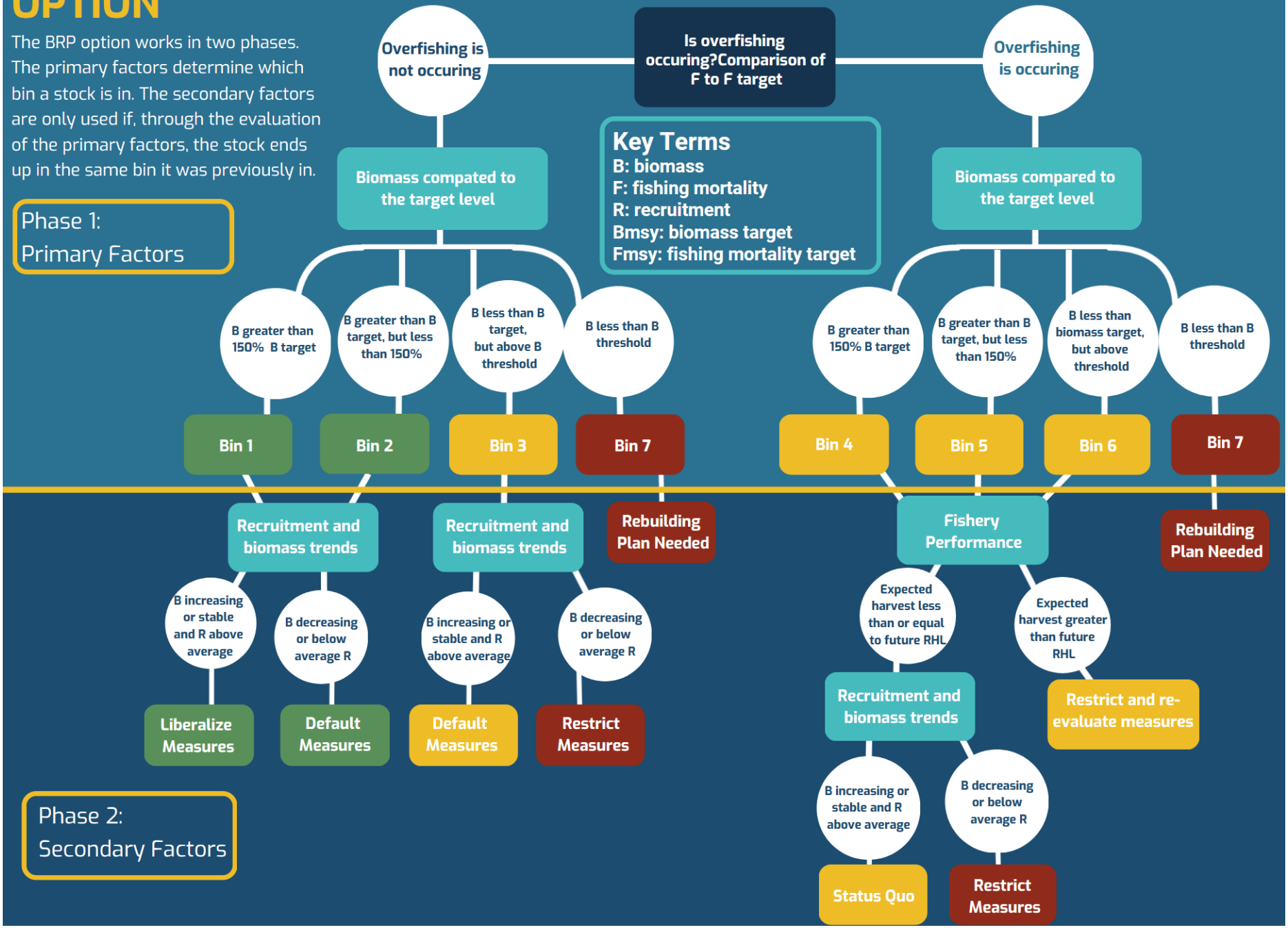
Bin	Fishery Score	Stock Status and Fishery Performance Outlook	Measures
1	4-5	Good	Most Liberal
2	3-3.99	Moderate	Liberal
3	2-2.99	Poor	Restrictive
4	1-1.99	Very Poor	Most Restrictive

BIOLOGICAL REFERENCE POINT OPTION

The BRP option works in two phases. The primary factors determine which bin a stock is in. The secondary factors are only used if, through the evaluation of the primary factors, the stock ends up in the same bin it was previously in.

Phase 1: Primary Factors

Phase 2: Secondary Factors



Biomass Based Matrix Approach

Stock Status is determined

Based on the relationship of biomass to the target level, biomass is categorized as either very high, healthy, below target, or overfished.

Biomass Trend Evaluated

A stock's biomass trend is considered increasing, stable, or decreasing.

Bin Determined

Based on biomass level and biomass trend, stock is placed in one of 6 bins: Bin 1 (optimal conditions) and Bin 6 (worst conditions).

Determine Management Measures

Pre-determined measures from the determined bin are implemented. If the bin is the same as in the prior years, measures remain status quo.

Recreational management measures matrix under the Biomass Based Matrix Approach

Stock Size (i.e., biomass compared to target level)	Trend in stock size		
	Increasing	Stable	Decreasing
Very High: At least 150% of target stock size	Bin 1		
High: Above the target, but below 150% target stock size	Bin 1	Bin 2	
Low: Below the target stock size, but more than 50% of the target stock size	Bin 3	Bin 4	
Overfished (Too Low): Less than 50% of the target stock size	Bin 5	Bin 6	