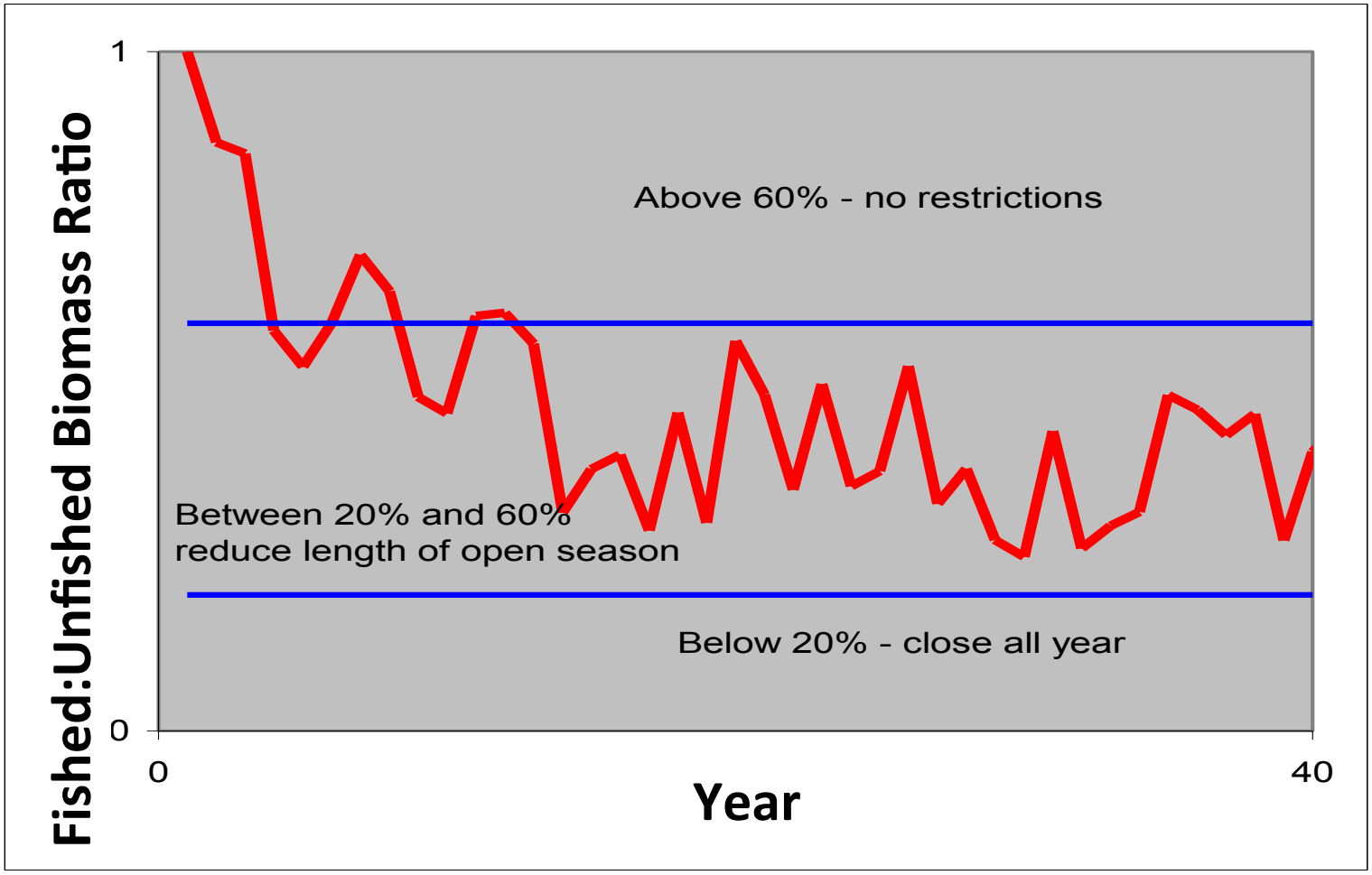
AFAM Step 4: Determining Harvest Control Rules

What are Harvest Control Rules?

- Guidance on how to adjust fishing mortality
  - Increase or decrease?
  - How much?
- Triggered by performance indicators relative to reference points
  - Above target reference point
  - Between target and limit reference point
  - Below limit reference point


Fished:Unfished Biomass Ratio
1
0
0
40
Year
Above 60% - no restrictions
Between 20% and 60%
reduce length of open season
Below 20% - close all year

General HCR

- Step 4a
  - Develop HCRs for all combinations of performance indicators relative to reference values
  - Consult Tables for examples

Define harvest control rules

Scenario	Fishing Mortality	Biomass Ratio	Likely Interpretation	Harvest Control Rule
1			A	A
2			B	B
3			C	C
4			D	D

Define harvest control rules

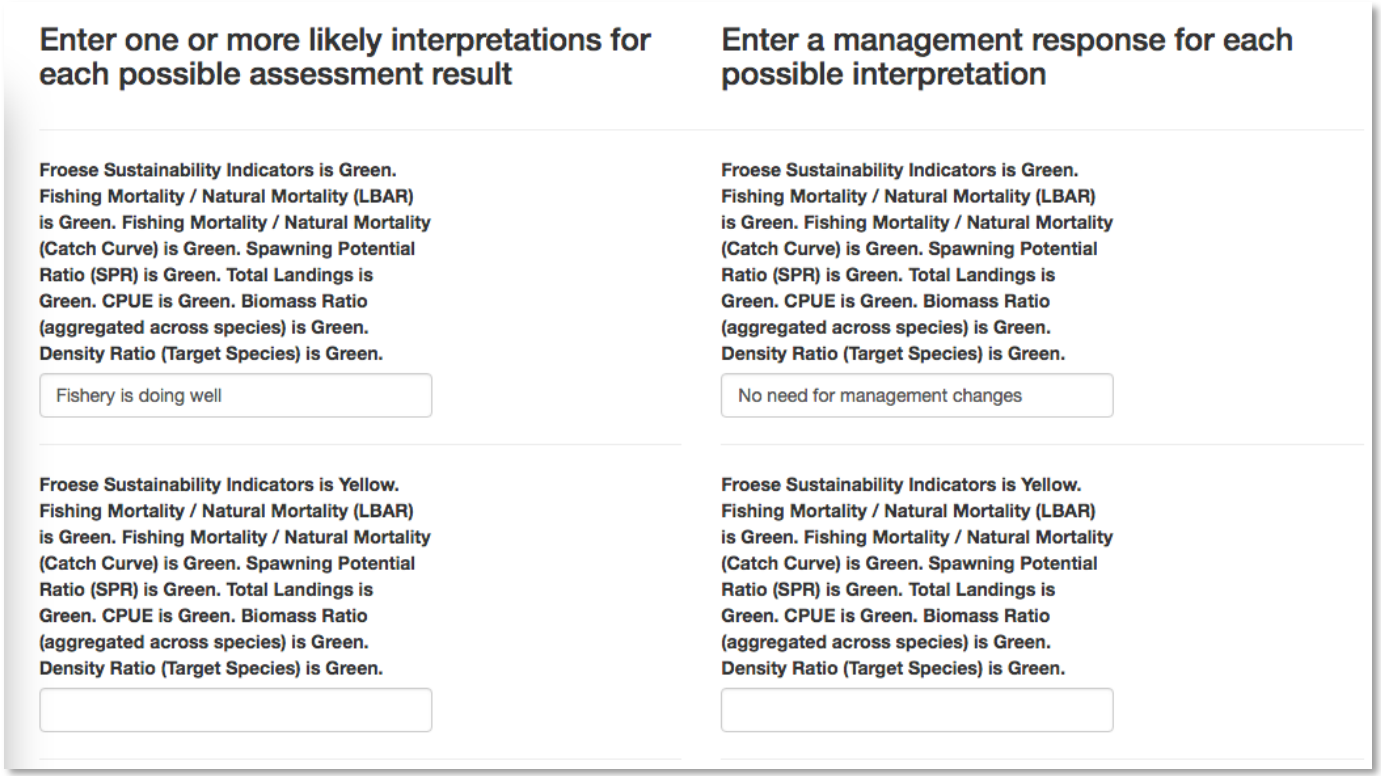
Scenario	CPUE	Fishing Mortality	Biomass Ratio	Likely Interpretation	Harvest Control Rule
1				A	A
2				B	B
3				C	C
4				D	D
5				E	E
6				F	F
7				G	G
8				H	H

Add specificity to HCRs

- Step 4b
  - Be as specific and quantitative as possible (e.g., PI X% below target, reduce allowable catch by Y%)
- Considerations
  - Productivity
  - Feasibility
  - Enforceability, expected Compliance
  - Uncertainty and risks
  - Risk tolerance
  - Size of no-take zone, if applicable

Define harvest control rules

- Dashboard has system for recording HCRs



Group Breakout Activity

- Using AFAM Guidance Document, look through instructions and references for Step 4

- Create harvest control rule table and record results in Your AFAM Toolkit Worksheet

- Record table using AFAM Toolkit Online Dashboard

Thank you!