

#4b



NOAA
FISHERIES

Implementing an Assessment Prioritization Process

Briefing for CCC

Feb 19, 2014



NOAA FISHERIES

Assessment Goal

- Assessment goal is to provide scientific information needed to prevent overfishing (through forecast of annual catch limits), rebuild overfished stocks and achieve optimum yield
- How good does each stock's assessment need to be to achieve this goal?
- How frequently must it be updated?
- These stock-specific assessment objectives allow us to consider priorities among stocks to achieve the overall goal of the assessment enterprise



Assessment Prioritization History

- Currently, stock assessment scheduling is region-specific under a national umbrella. Each region has a process (e.g. Southeast's SEDAR) involving the local NMFS Science Center(s) and Fishery Management Council(s);
- OMB requested that NMFS develop a prioritization system for fish stock assessments
- Some regions, particularly NE and SE, have worked on assessment scheduling and prioritization in recent years
- A NMFS working group was formed in 2011 to develop a prioritization system
- In 2013, call for prioritization appeared in Congressionally requested GAO review of stock assessments, and in an introduced bill on improved science for MSA



Prioritization Overview

- Among stocks that never have been assessed:
 - *Identify those OK with baseline monitoring, and*
 - *Those needing priority for first-time assessment*
- Among previously assessed stocks, set medium-term assessment goals
 - *target assessment level for each stock; this drives the data requirements*
 - *Set target assessment update frequency for each stock*
- Annually update priorities for conducting assessments
 - *Do benchmark assessments for stocks for which new data or methods will allow resolving uncertainties or advancing to higher level*
 - *Do update assessments for stocks that are at or exceed their target update period.*

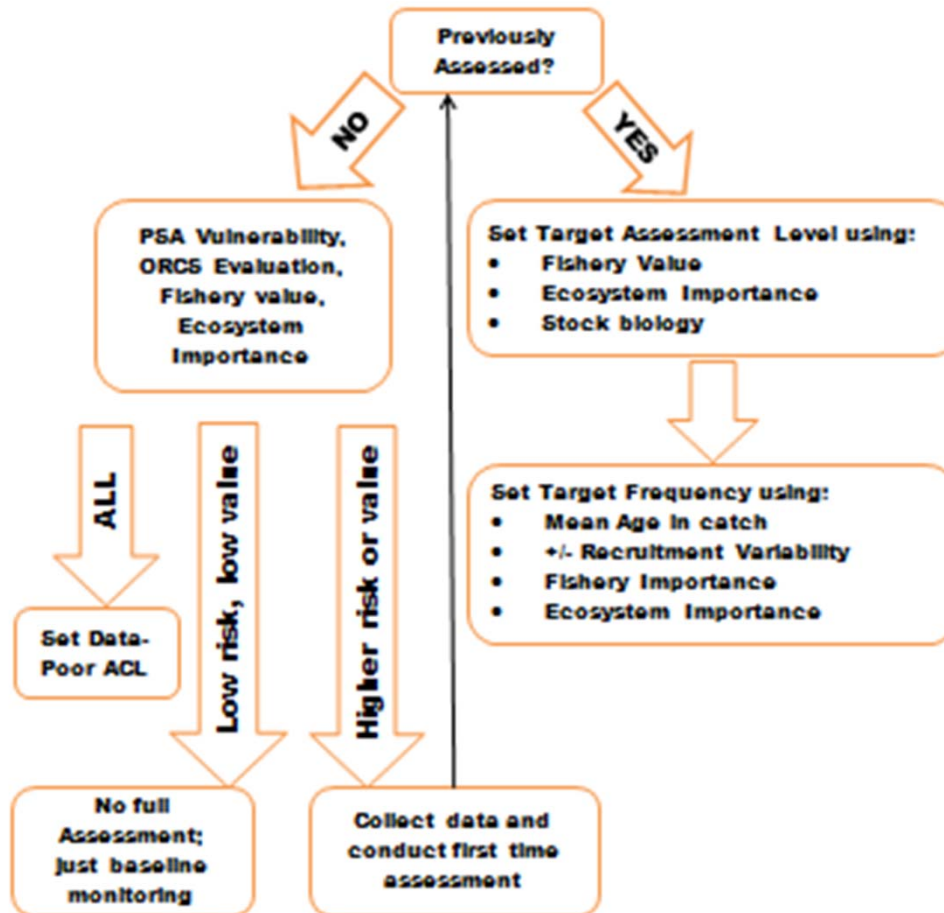


Data Needed for Prioritization

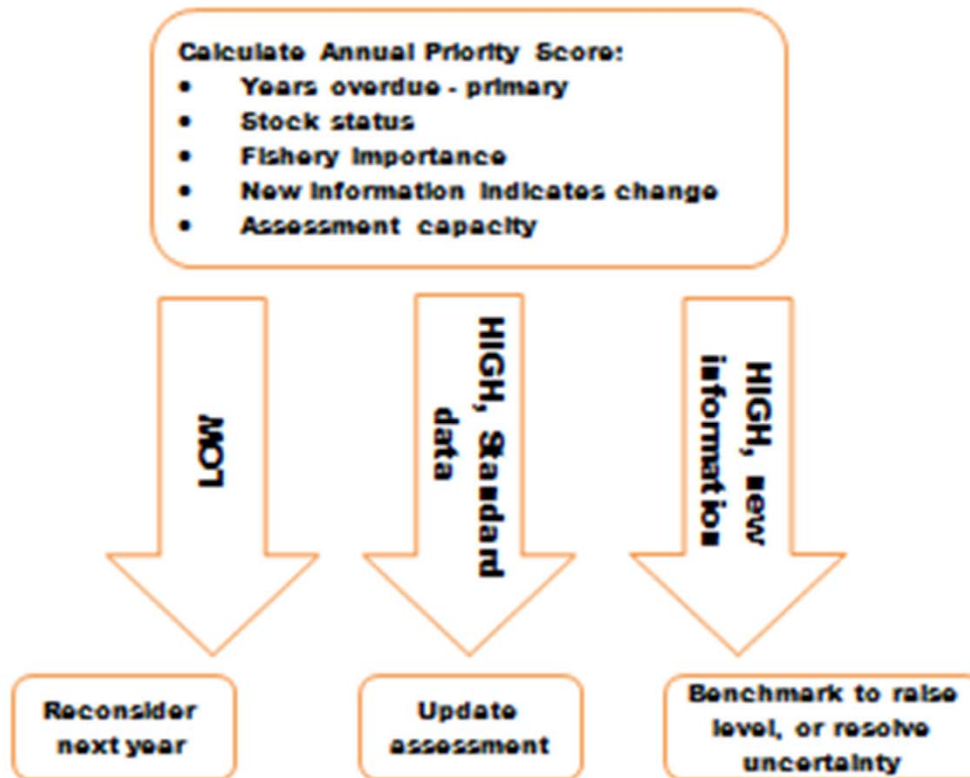
- Commercial Fishery Importance
- Recreational Fishery Importance
- Ecosystem Importance
- Stock biology (principally: natural mortality rate and recruitment variability)
- Stock Status info from previous assessments
- Assessment history, unresolved uncertainties



Flowchart of Prioritization Process



Setting Priorities



Prioritization Outcome

- The whole portfolio of assessment needs will be transparent to all participants in assessment process;
- Important assessments will get done when they need to get done, not sooner and not a lot later;
- This “right-sizing” of the assessment frequency for important tocks may help release some assessment effort for currently under-assessed stocks.



Implementation Steps

1. Distribute draft to Fishery Management Councils, NMFS Regional Offices, Fishery Commissions and to public via website – February 2014;
2. Create database of needed information as an added table in the Species Information System – begin winter 2014;
3. Receive comments from Council by May 1, 2014 and summarize to the May CCC;
4. Each region begins work on comprehensive Productivity-Susceptibility Analysis and Only Reliable Catch Analysis to serve as baseline for determining which stocks need assessments – begin spring 2014;
5. Test prioritization system to determine if adjustments to scaling factors are needed to achieve reasonable results – summer 2014;
6. Make database available to regional coordinating committees charged with setting priorities for regional assessments – fall 2014; Create access through SIS public portal;
7. Commission Management Strategy Evaluations to test the expected performance of this prioritization system over time – 2015;
8. Explore Decision Support System facilitators to guide regional coordinating committees through application of the prioritization process – 2016.

Challenges for Prioritization

1. Workload in getting initial information generated and organized;
2. Unsure that system will result in good balance of baseline monitoring for all and highest quality assessments for some;
3. Does not address prioritization of surveys and expanded scope to include ecosystem considerations;
4. May not get more assessments done, but can help identify needs;
5. Some constituents may be expecting a between region prioritization, rather than a national facilitation of within region prioritization;
6. Review processes and fishery management systems may also need tweaking to take best advantage of prioritized assessments.



Why do we Assess Fish Stocks and Monitor Fisheries?

- Assessments provide a measure of how much can be caught, while monitoring determines how much has been caught
- Lack of good assessments creates high uncertainty, which can lead to either inadvertent overfishing or decreased yield due to large buffers
- Updated assessment are necessary for identifying when changes in fish stocks occur (due to ecosystem, environmental, or fishery factors)

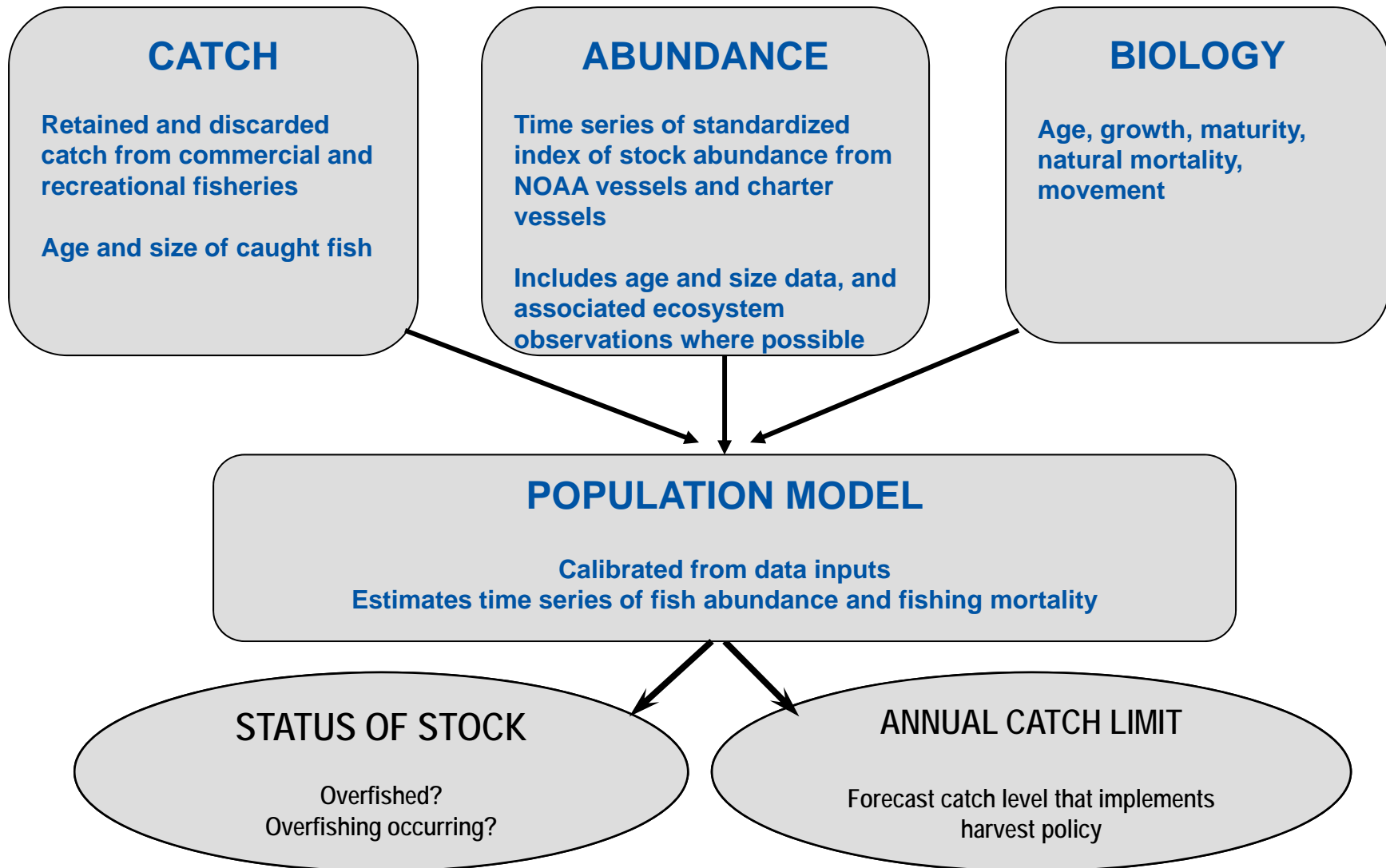


Assessments Calculate:

- Long-term stock productivity and sustainable harvest rate
- Current stock abundance
- Current harvest rate
- Forecast of future stock abundance and available yield (OFL)
- Indicators of changes in ecosystem productivity



Stock Assessment Process



Linking Investments to Assessments

- Each stock's assessment uses data from many sources, as just shown
- Most data sources simultaneously provide data for many species
- This many-to-many relationship confounds accounting the cost per assessment
- Investments build regional assessment capacity, not individual assessment updates



Recent Assessment Frequency

	ASSESSMENT AGE														none	All	
	0	1	2	3	4	5	6	7	8	10	11	12	15	17			
Alaska	31															4	35
Cal. Current	5	9		4	1	6		7							1	12	45
Caribbean																8	8
Gulf of Mexico	6	5	1	1	2							1				7	23
International - Atl	2	2	4														8
International - Pac	5	5		1	1											6	18
Northeast	18	2	6	2												20	48
Pacific Islands	2	1														4	7
Southeast	6	4	3	2	6		1		1	1	1		1		12	38	
Grand Total	75	28	14	10	10	6	1	7	1	1	1	1	1	1	73	230	

As of April 2012; Includes assessments at level 3 or higher

"none" includes some assessments done at lower levels