

Agenda Item I.7.a  
Supplemental NMFS PowerPoint  
Electronic Only  
November 2015



**NOAA**  
**FISHERIES**

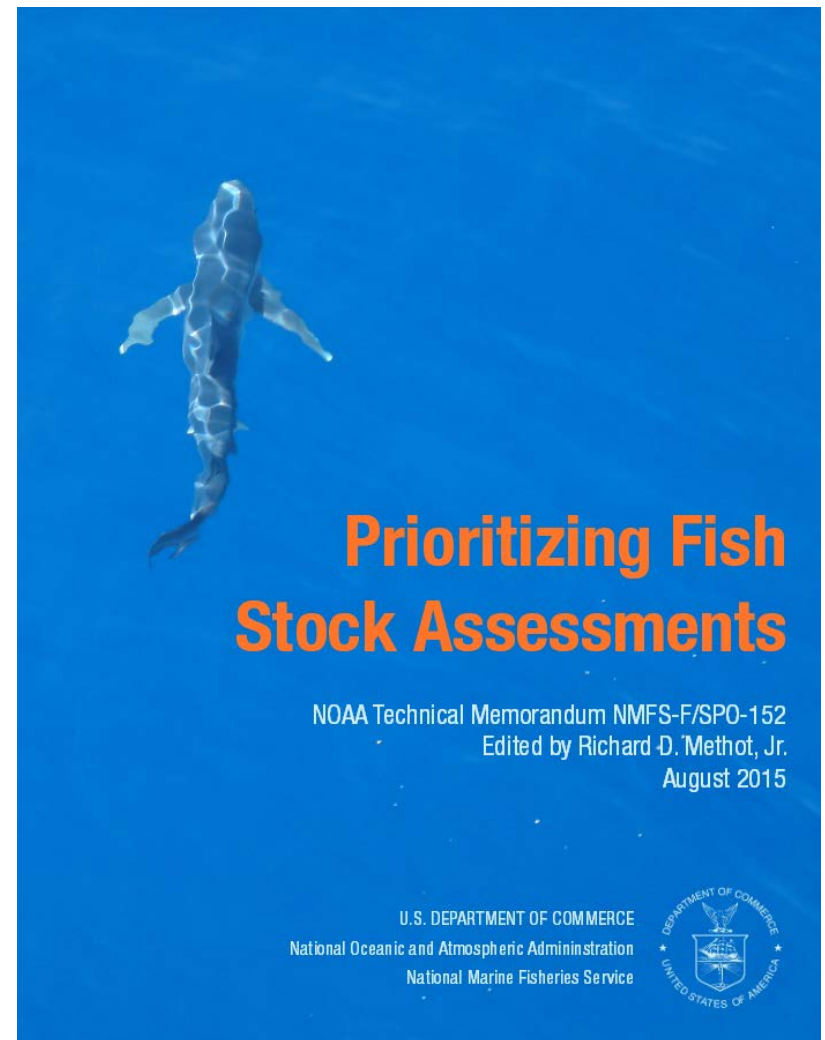
# Prioritizing Fish Stock Assessments

Implementing the Process for PFMC  
Groundfish Stocks

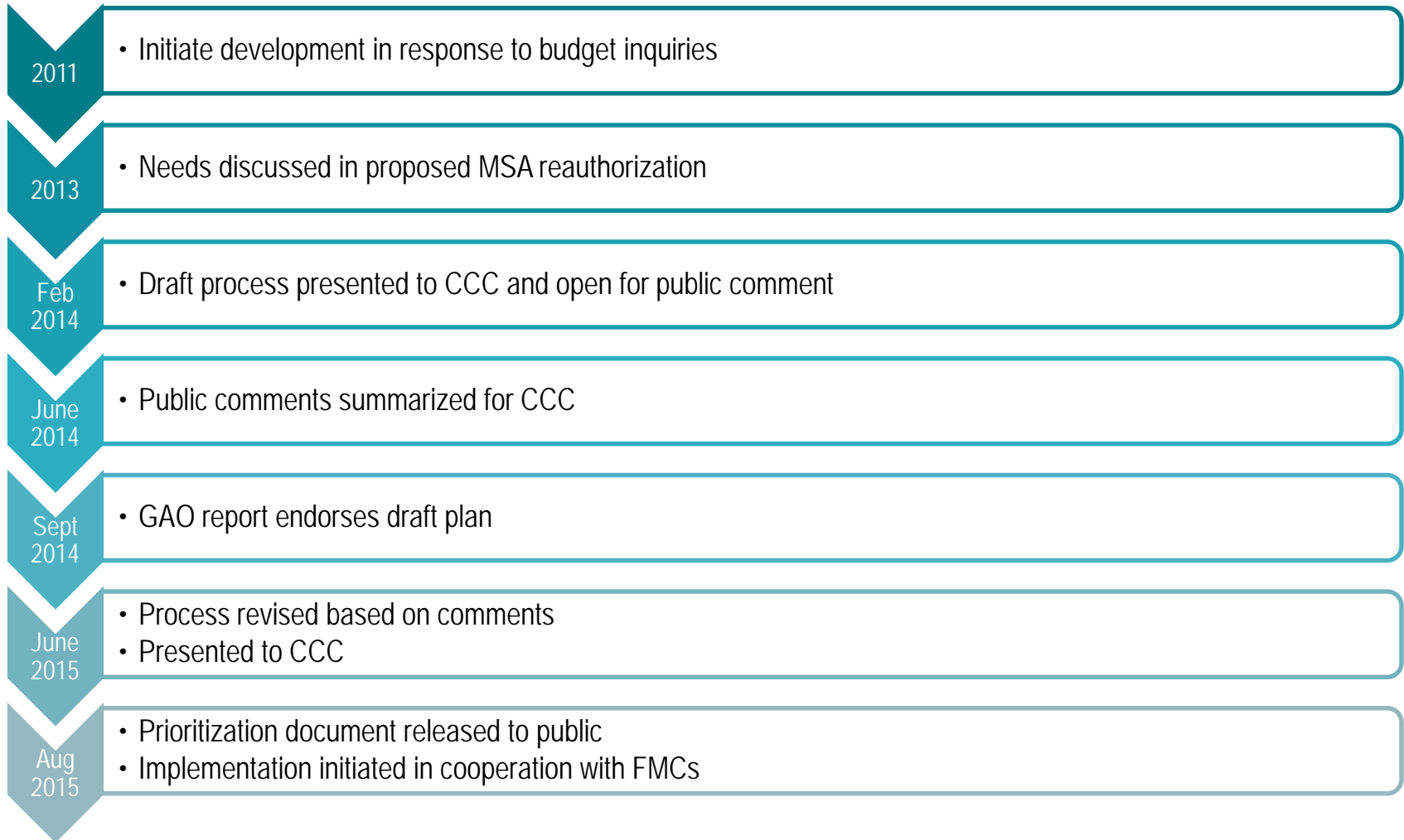
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# Overview

- History of prioritization
- Prioritization goals
- Process overview
- Role of the PFMC
- Timeline for groundfish



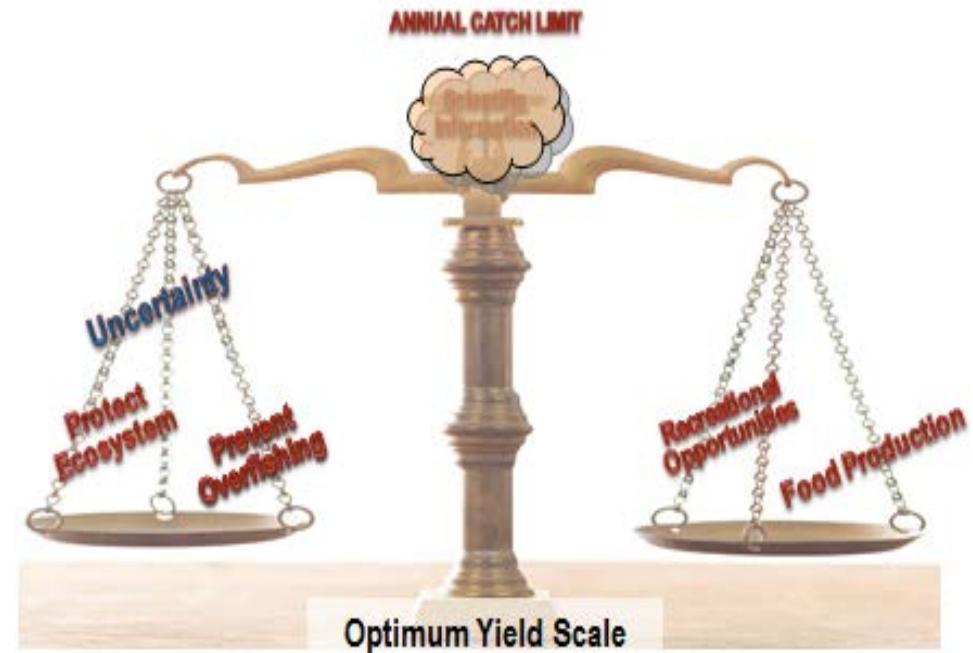
# Prioritization History



# Supporting Sustainable Fisheries

- Limited number and complexity of assessments that can be completed each year
- How complete does a stock's assessment need to be to provide management advice?
- How frequently should assessments be updated?

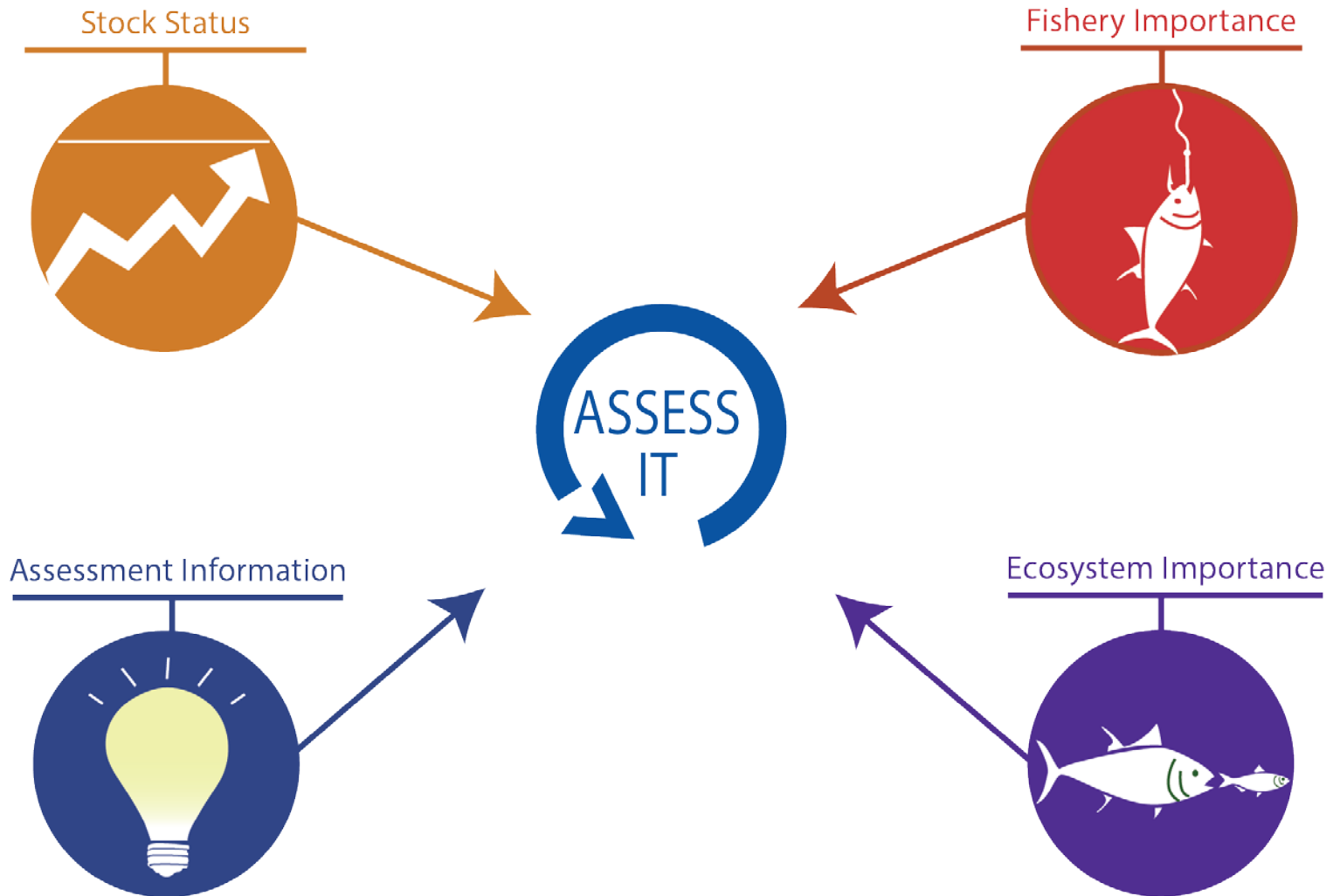
## Balance Conservation and Utilization



# Why Prioritize?

- All managed stocks need some level of assessment
- Some stocks need higher level or more frequent assessments, and/or ecosystem/climate linkages
- Costs may exceed benefits for some low-value stocks
- Goal is a prioritized portfolio of right-sized assessments for each stock
- Achieved through facilitated and standardized regional prioritization processes
- Nationally, gaps in capability will be more visible and can be considered for future investments

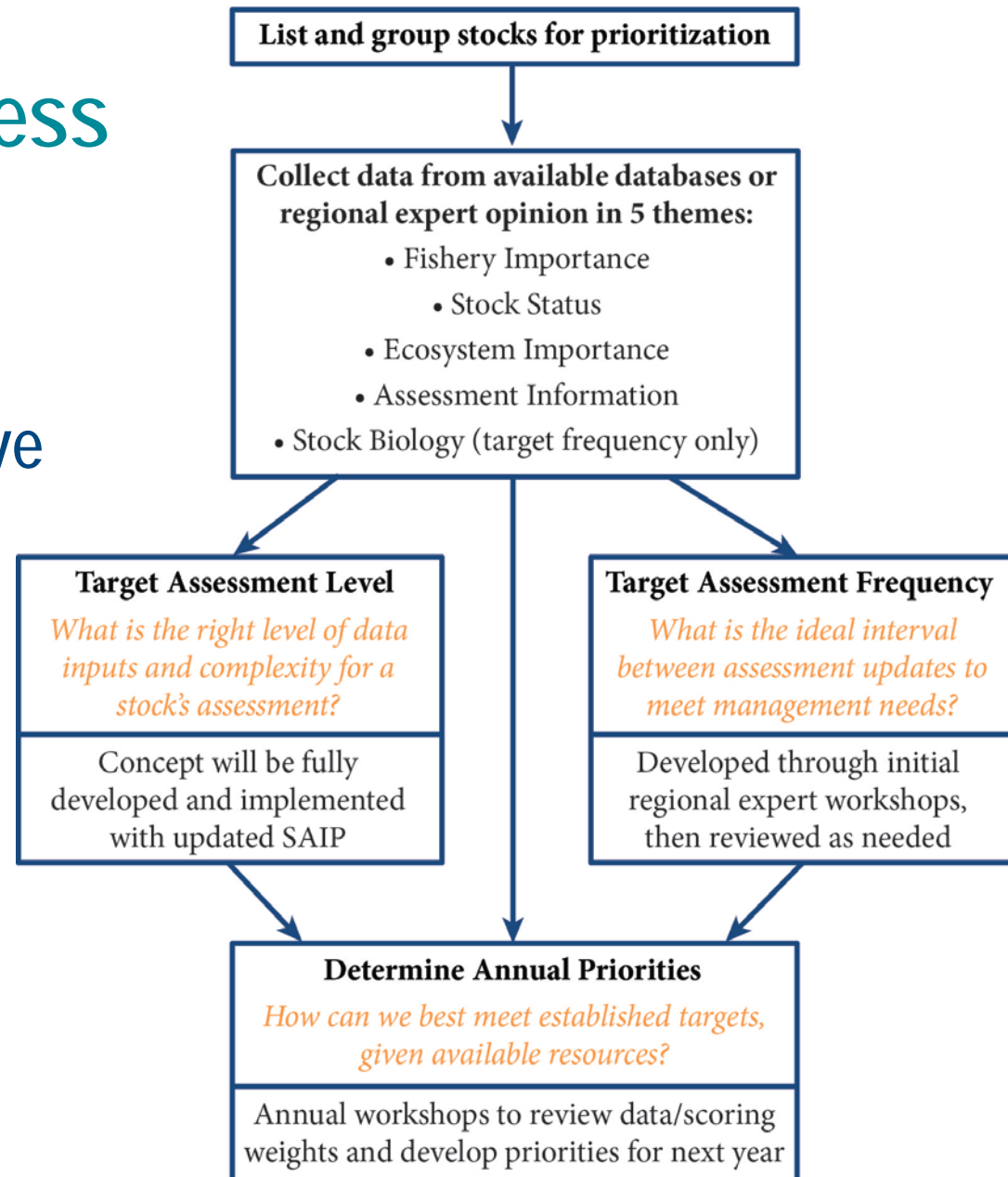
# Which Stocks Need Assessments?



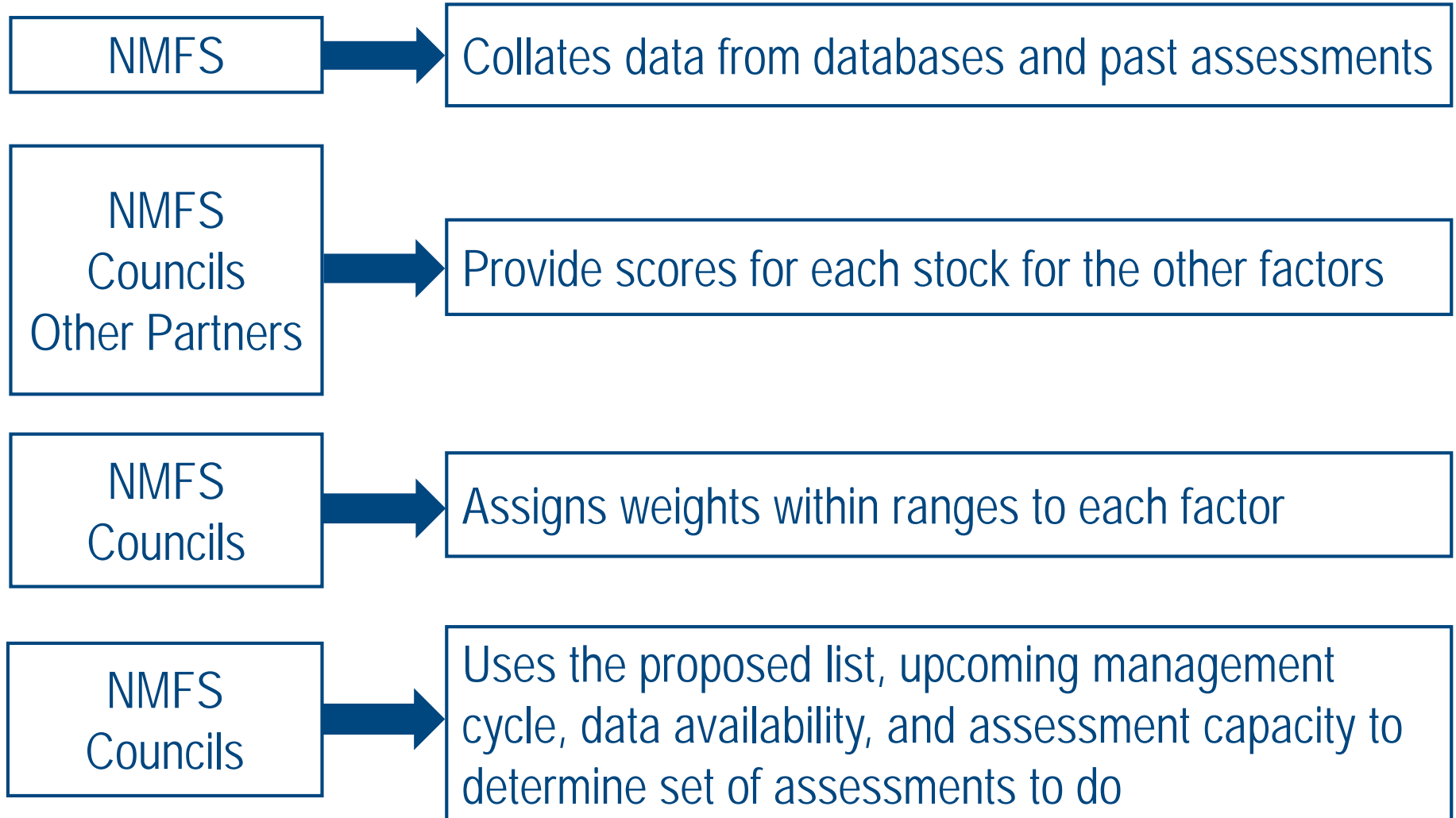
# Prioritization Process

Each step is a collaborative activity between:

- NMFS
- Councils
- Other regional partners



# Collaborative Roles in Prioritization Process





# Step 1: Organize Stocks for Prioritization

- Best to include all stocks in a region for which there are shared data sources, constituencies, assessment resources
- Separate prioritization group where there are very distinct separations in one of the above
- Where there are species-rich complexes, consider where to include each potentially assessable stock in prioritization

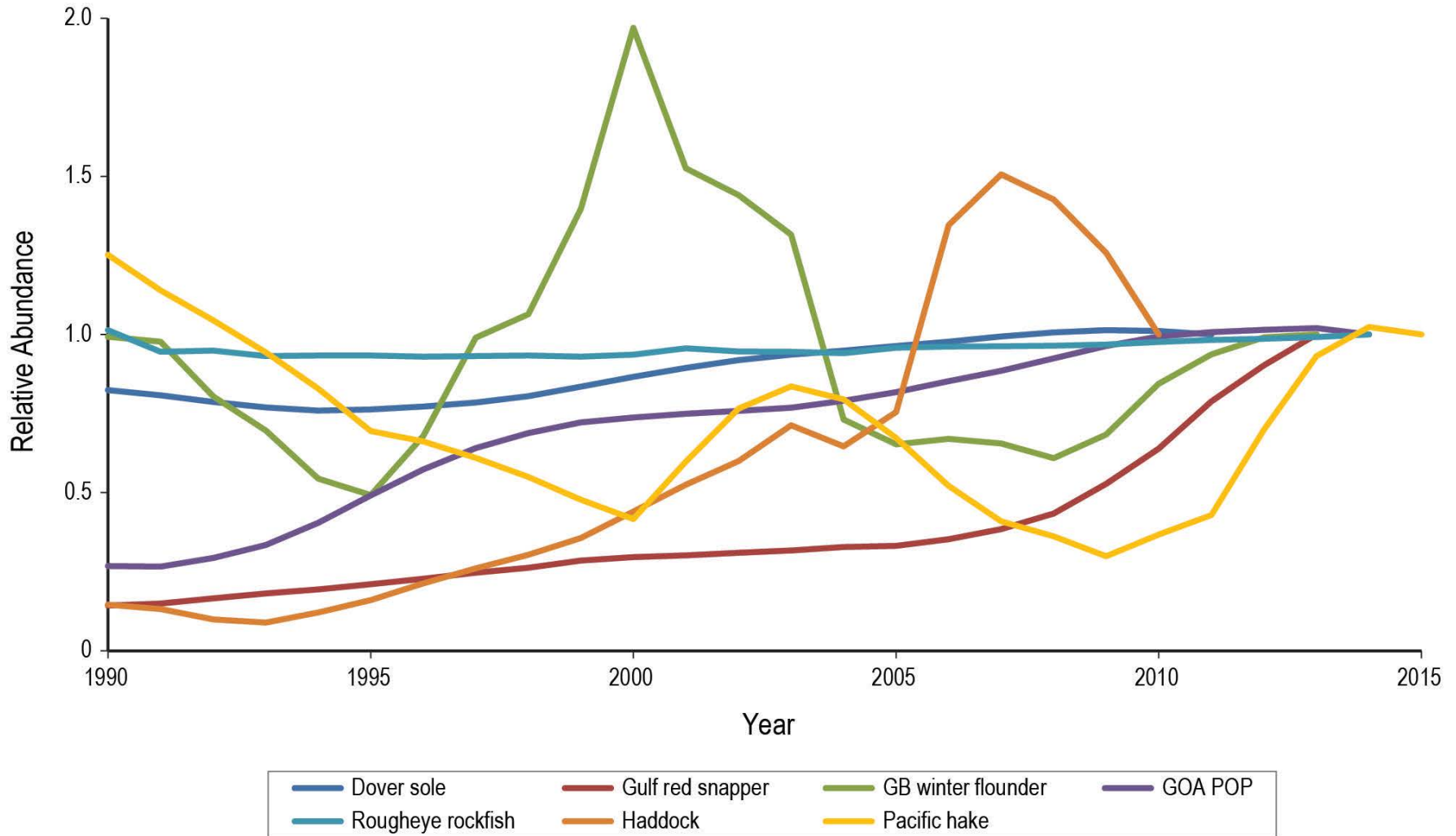
## Step 2: Get Values/Scores for each Factor

Category	Factor	Source	Raw Scores
FISHERY	Commercial Fishery Importance - rescaled log(ex-vessel value)	SIS- ACL	0-5
	Recreational Fishery Importance - from regional input	Experts	0-5
	Importance to Subsistence	Experts	0-5
	Non-Catch Value	Experts	0-5
	Constituent Demand/Choke Stock	Experts	0-5
	Rebuilding Status	SIS	0-1
STOCK	Relative Stock Abundance	SIS	1-5
	Relative Fishing Mortality	SIS	1-5
ECO	Key Role in Ecosystem	Experts	1-5
ASMT	Unexpected Changes in Stock Indicators	Experts	0-5
	Relevant New Type of Information Available	Experts	0-5
	Years Assessment Overdue - relative to Target Frequency	SIS	0-10
TARGET FREQ	Mean Age in Catch	Experts	Value
	Stock Variability	Asmt	-1 to +1

## Step 3: Identify Target Levels

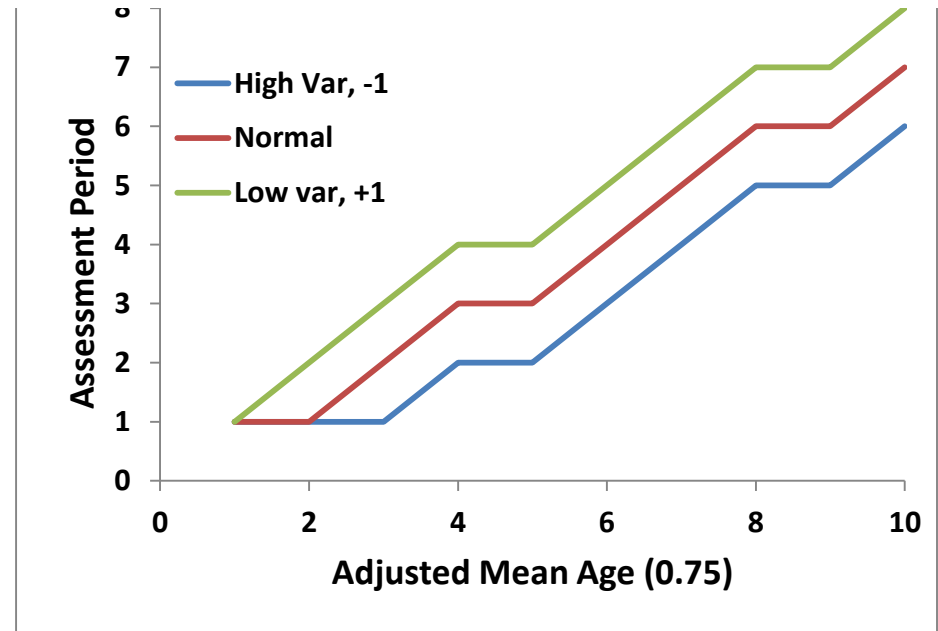
1. For now, we'll just assume that each stock needs a somewhat more data-rich and "better" assessment
2. In a year, the updated Stock Assessment Improvement Plan will describe an approach to identify gaps between current and species-specific target levels of assessment
3. Will consider where better surveys, age data, ecosystem-linkages, etc. are:
  - needed, feasible, good benefit/cost
  - pie-in-the-sky is not useful

# Goal: Assess Variable Stocks More Frequently



# Step 4: Target Assessment Frequency

- Mean age x regional scaling factor
- 1 year earlier for:
  - Variable stocks
  - High fishery importance
  - High ecosystem importance
- 1 year later for:
  - Stable stocks
  - Low fishery importance
  - Low ecosystem importance



## Step 5: Assign Factor Weights

- Factor weights will be the same for all stocks in a prioritization group
- Intended to be developed by regional NMFS and Council leaders
- Allows for regional tailoring of the contribution of each factor to the overall score
- For example, the factor for subsistence is expected to be high for Western Pacific insular species
- Prototype factor weights will be provided

# Step 6: Calculate and Rank Weighted Scores

Regional experts provide scores for stocks across each of the 12 prioritization factors

	Stock 1	Stock 2	...	Stock X
Factor 1				
Factor 2				
...				
Factor 12				

Regional managers weight each of the 12 prioritization factors

	Weight
Factor 1	
Factor 2	
...	
Factor 12	

Product of relative scores and weights are summed across all 12 factors for each stock

Sorted list of results provides guidance on assessment priorities for upcoming cycle

# How Different from Current Process?

*Probably not much!*

## Key Info Considered in Recent Planning Cycles:

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- Years since last asmt
- Asmt category
- Depletion ratio from last asmt
- Rebuilding status
- PSA score
- Commercial value
- Recreational value
- Total mortality ratio to ABC, OFL
- Availability of data

## Similar Scoring Factors Used for Prioritization:

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- Years Assessment Overdue
- Relative Stock Abundance
- Rebuilding Status
- PSA used for unassessed stocks
- Commercial Fishery Importance
- Recreational Fishery Importance
- Relative Fishing Mortality
- New Type of Information

## Potential Changes:

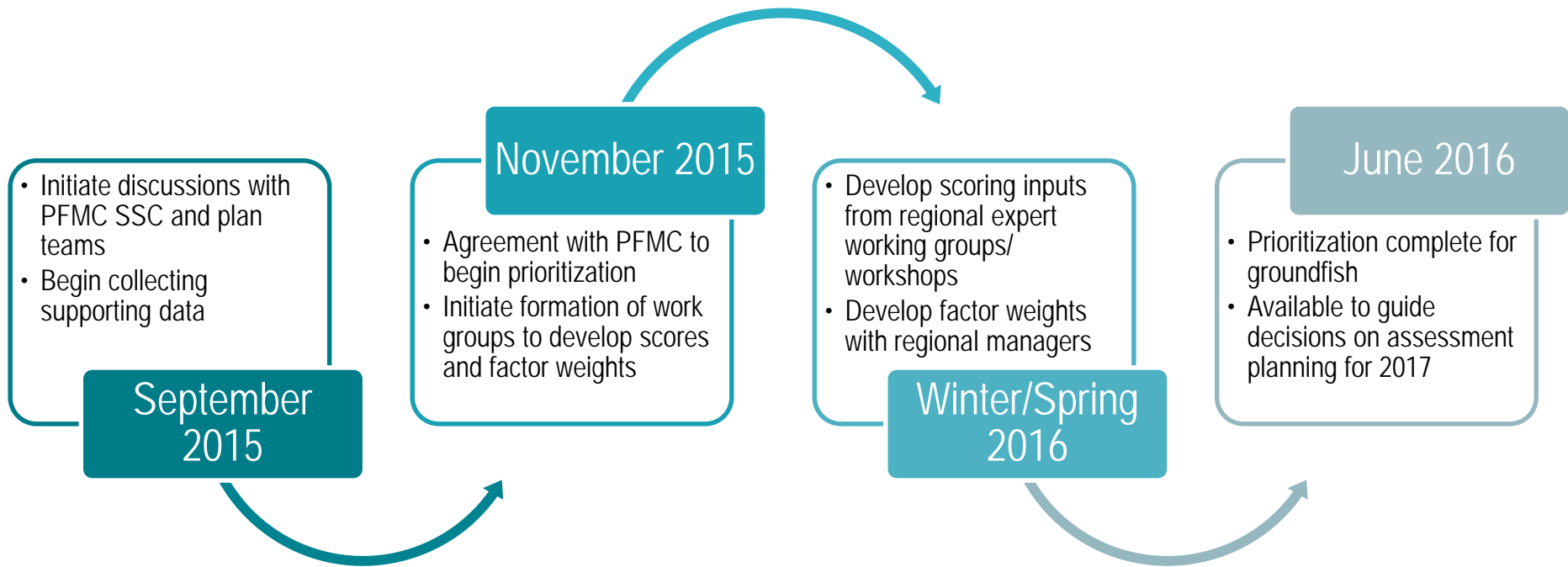
1. Additional factors considered in Prioritization (e.g. Ecosystem Importance) – data availability may limit impact of these factors initially
2. More nuanced consideration of fishing sectors in previous cycles – results are advisory, and process may evolve over time



# Next Steps for West Coast Groundfish

1. Agree to a feasible timeline for implementation
2. Design collaborative process to assemble factor scores; some may need specific workshops to do a complete job
3. Define stock list for prioritization (e.g. complexes?)

# Timeline for Prioritization Groundfish



# Future Directions

- Management Strategy Evaluations for select stocks can better inform setting of target assessment level and frequency
- Gaps between current and target assessment levels, and the number of overdue assessments, informs future investments in capacity
- The simple “factor score x weight” approach evolves to calculate a portfolio of assessments that achieve the greatest overall benefits

# Questions?