



Open to Grad Students,
Postdocs, & Staff
with prior R & population modeling experience

FISH 576/577

Winter & Spring 2025

APPLIED STOCK ASSESSMENT I & II

- Get real life experience
developing stock assessment models.

$$R_y = \left(\frac{R_0 S B_y}{S B_0} \right) e^{h(1 - S B_y / S B_0)} e^{-0.5 b_y \sigma_R^2 + \tilde{R}_y}$$

$$\tilde{R}_y \sim \tilde{N}(0; \sigma_R^2)$$

- Directly contribute to fisheries
management on the West Coast.

$$R_y = \frac{4 h R_0 S B_y}{S B_0 (1 - h) + S B_y (5 h - 1)} e^{-0.5 b_y \sigma_R^2 + \tilde{R}_y}$$

- Work with NOAA scientists.

- Build your professional network.

$$R_y = e^{\left(-z_0 + (z_0 - z_{\min}) \left(1 - (S B_y / S B_0)^p \right) \right)} S B_y e^{-0.5 b_y \sigma_R^2 + \tilde{R}_y}$$

Welcome to FISH576/577



Dr. Kiva Oken



Dr. Ian Taylor



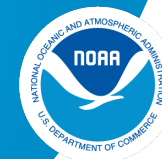
Dr. Vlada Gertseva



Dr. Owen Hamel



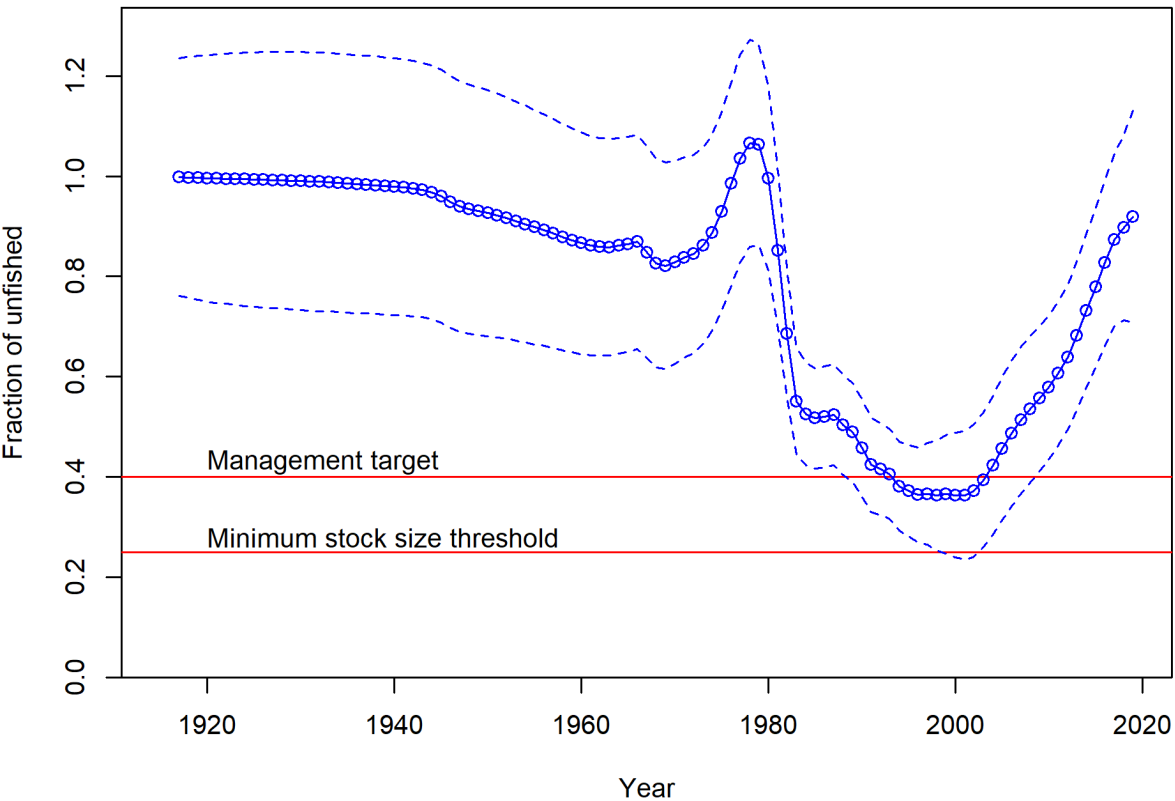
Dr. Melissa Haltuch



NOAA
FISHERIES

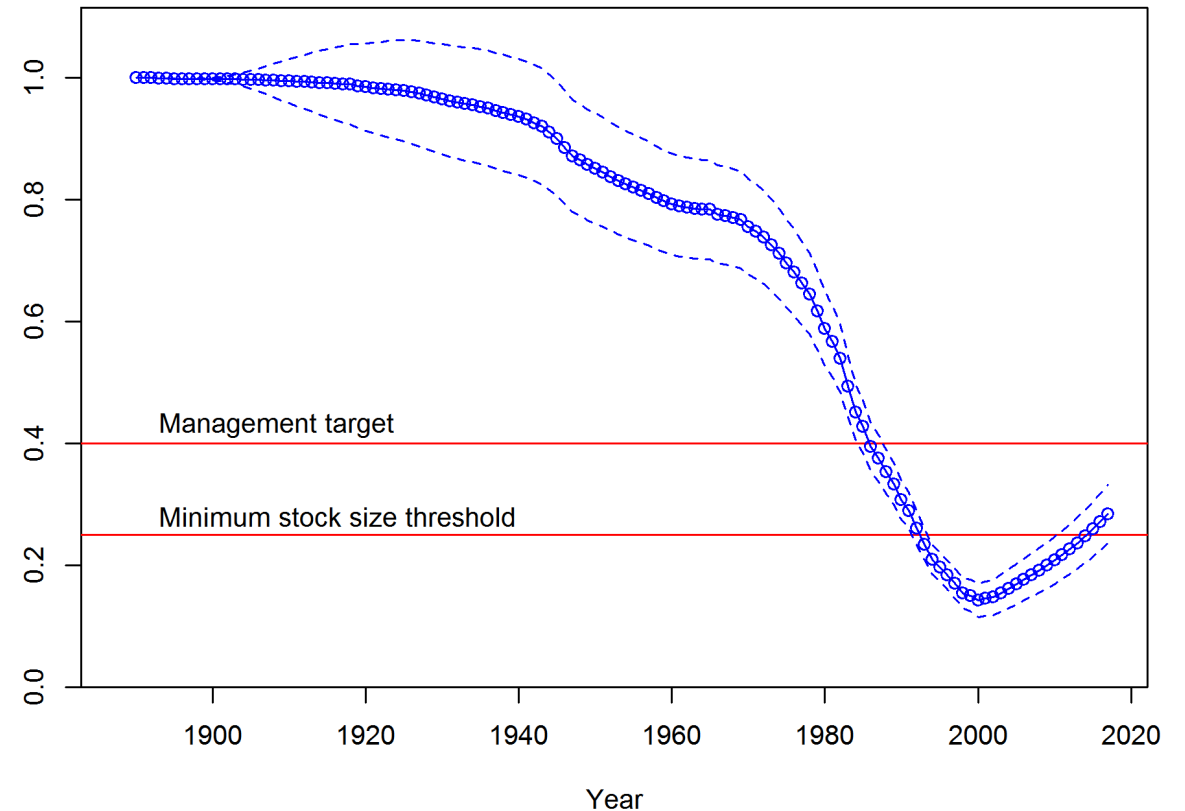
Species to be assessed

Widow rockfish



Most recently assessed in 2019

Yelloweye rockfish

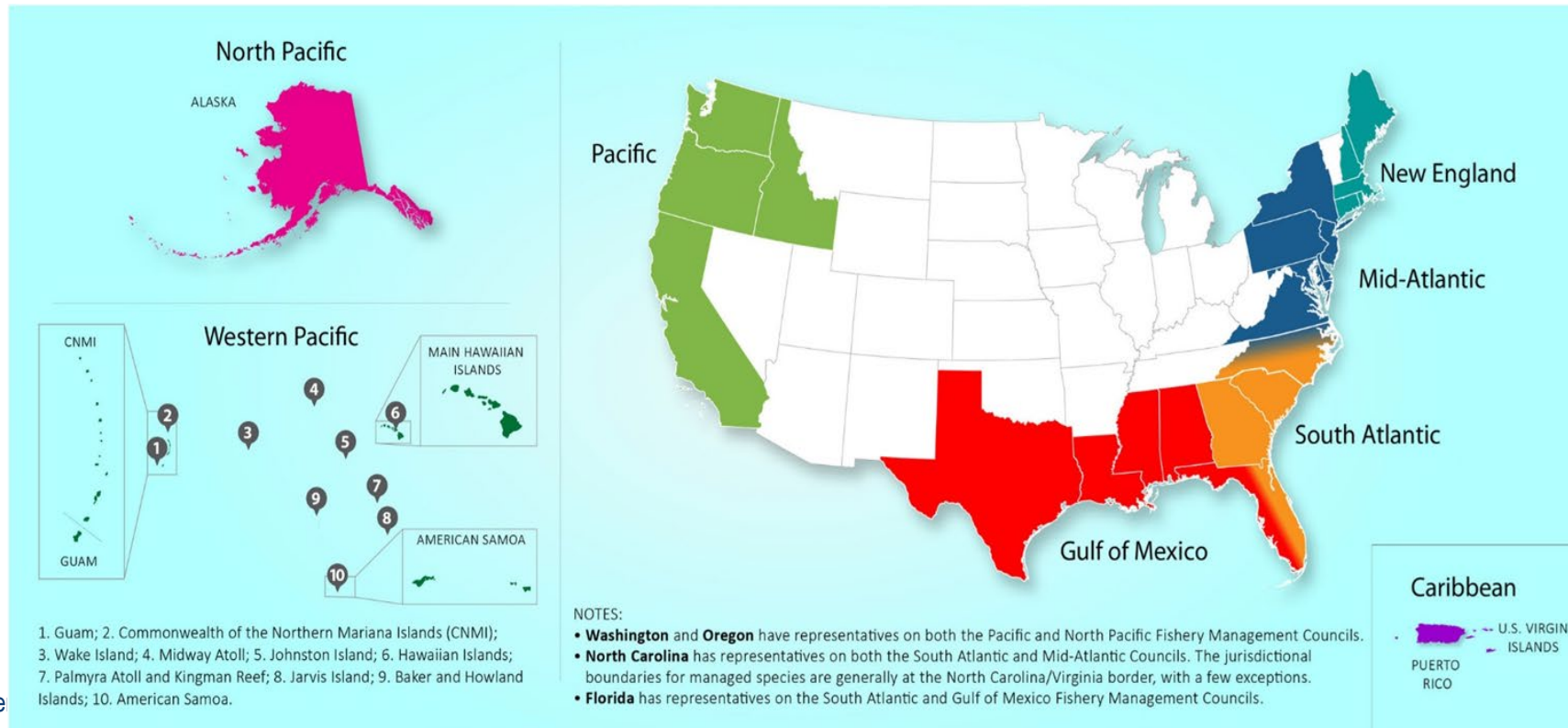


Most recently assessed in 2017



Who manages fisheries in U.S. federal waters

- The Magnuson–Stevens Fishery Conservation and Management Act is the main law that governs fishing in U.S. federal waters (ranging from 3 to 200 miles offshore)
- There are eight regional fishery management councils responsible for the fisheries in their region.
- Pacific Fishery Management Council (PFMC) manages commercial, recreational and tribal fisheries for about 119 species of salmon, groundfish, coastal pelagic species, and highly migratory species.



Managing Pacific coast fisheries

Whether you are interested in fish because they're your livelihood, your joy, your food, or your job, we have a way for you to get involved.

Get involved

- Council meetings +
- Fishery management plans +
- Electronic monitoring
- Habitat
- Offshore wind
- Pacific halibut
- Navigating the Council +
- News & events +
- Fishing communities and tribes
- Council actions
- Resources +



A transparent public process

The Pacific Fishery Management Council manages fisheries for approximately 119 species of salmon, groundfish, coastal pelagic species (sardines, anchovies, and mackerel), and highly migratory species (tunas, sharks, and swordfish) on the West Coast of the United States. We are one of eight regional fishery management councils established by Congress in 1976.

UPCOMING COUNCIL MEETING

March Council meeting

[Meeting details →](#)

📅 Mar 4-11, 2025
📍 Various

The Council contracts with hotels two to three years in advance.

PREVIOUS COUNCIL MEETING

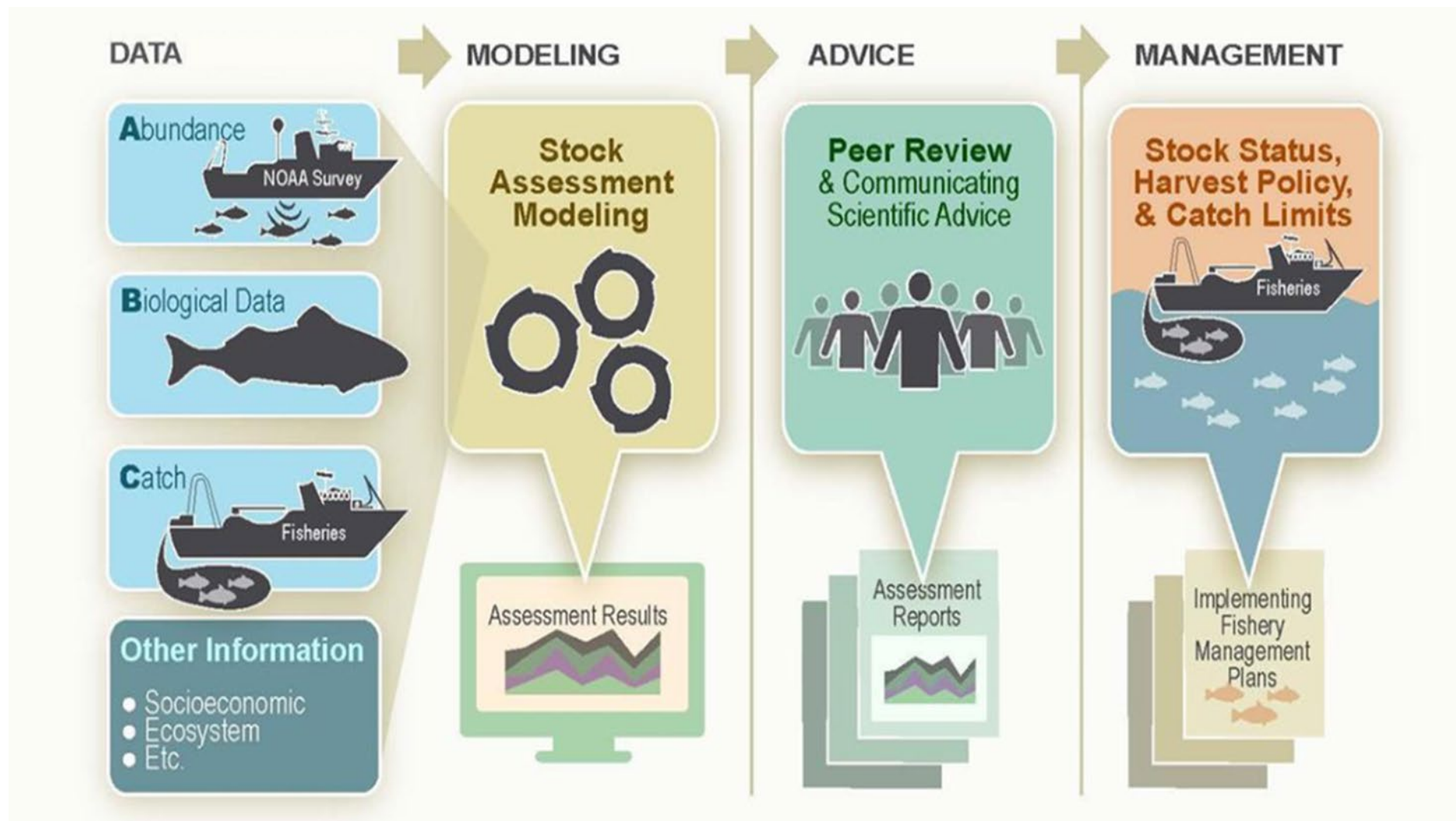
November Council meeting

[Meeting details →](#)

📅 Nov 13-18, 2024
📍 Costa Mesa, CA

Hilton Orange County / Costa Mesa 3050 Bristol Street - Costa Mesa, CA 92626 Phone: 714-540-7000

Stock assessment process components



NOAA
FISHERIES

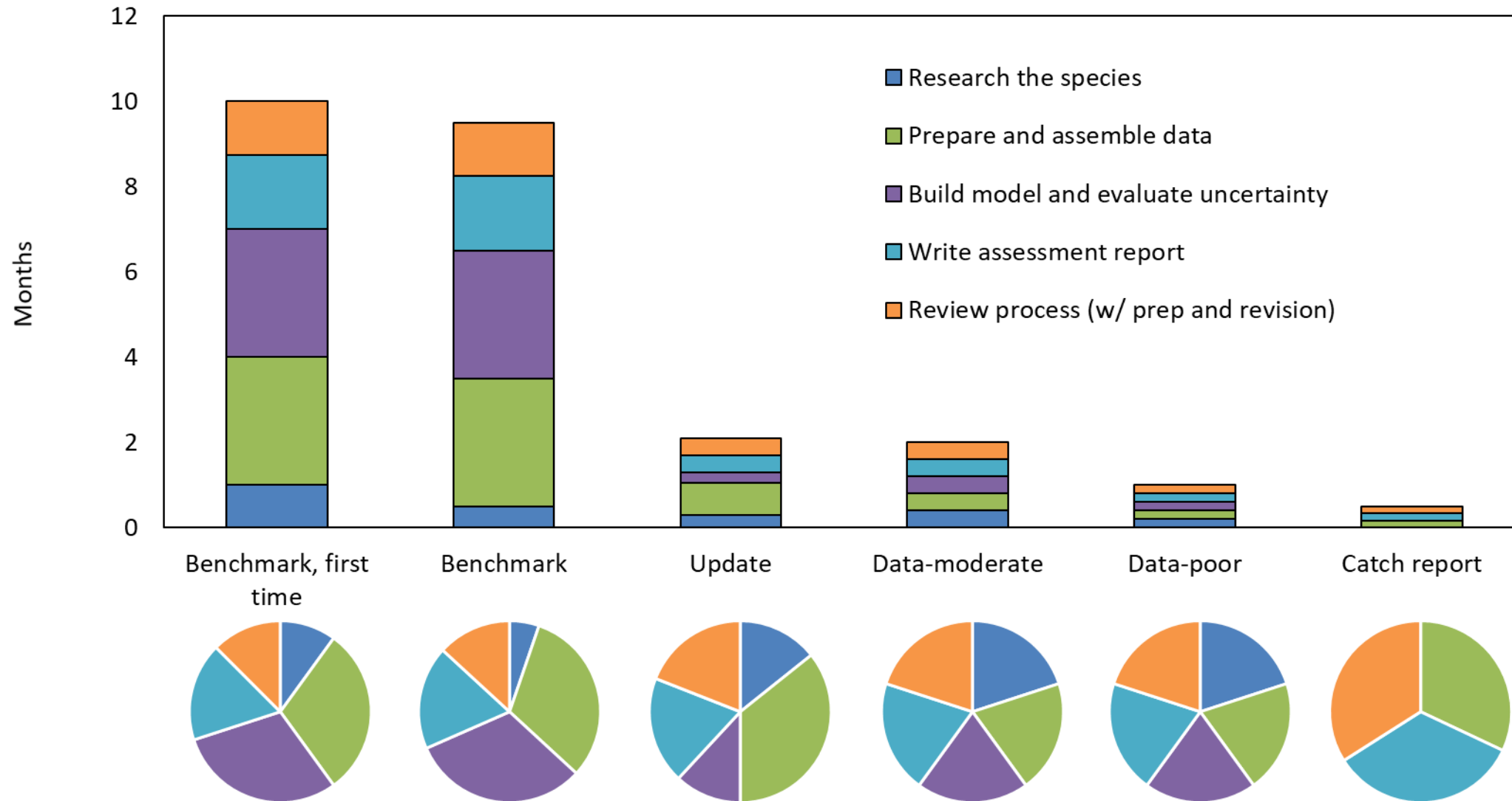
Assessment types

- **Benchmark/Full assessment:**
 - All data sources are evaluated
 - Model structure and assumptions are re-examination
 - Least restricted assessment, more complex multi-stage review process, including a week long Stock Assessment Review Panel (STAR Panel).
- **Update assessment**
 - Maintains the model structure and assumptions
 - Incorporates new data that have become available since the last full assessments
 - Technical reviews by the PFMSC Scientific and Statistical Committee (SSC)
- **Data moderate**
 - Age data not available or not reliable
 - Relies on catch data, basic life history information and length composition data
- **Data limited/Data poor**
 - Only catch data and basic life history information used
- **Catch-only or climate-only projection**
 - only recent fisheries catch or catch and climate information are added to an existing, approved stock assessment to generate projections



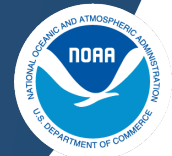
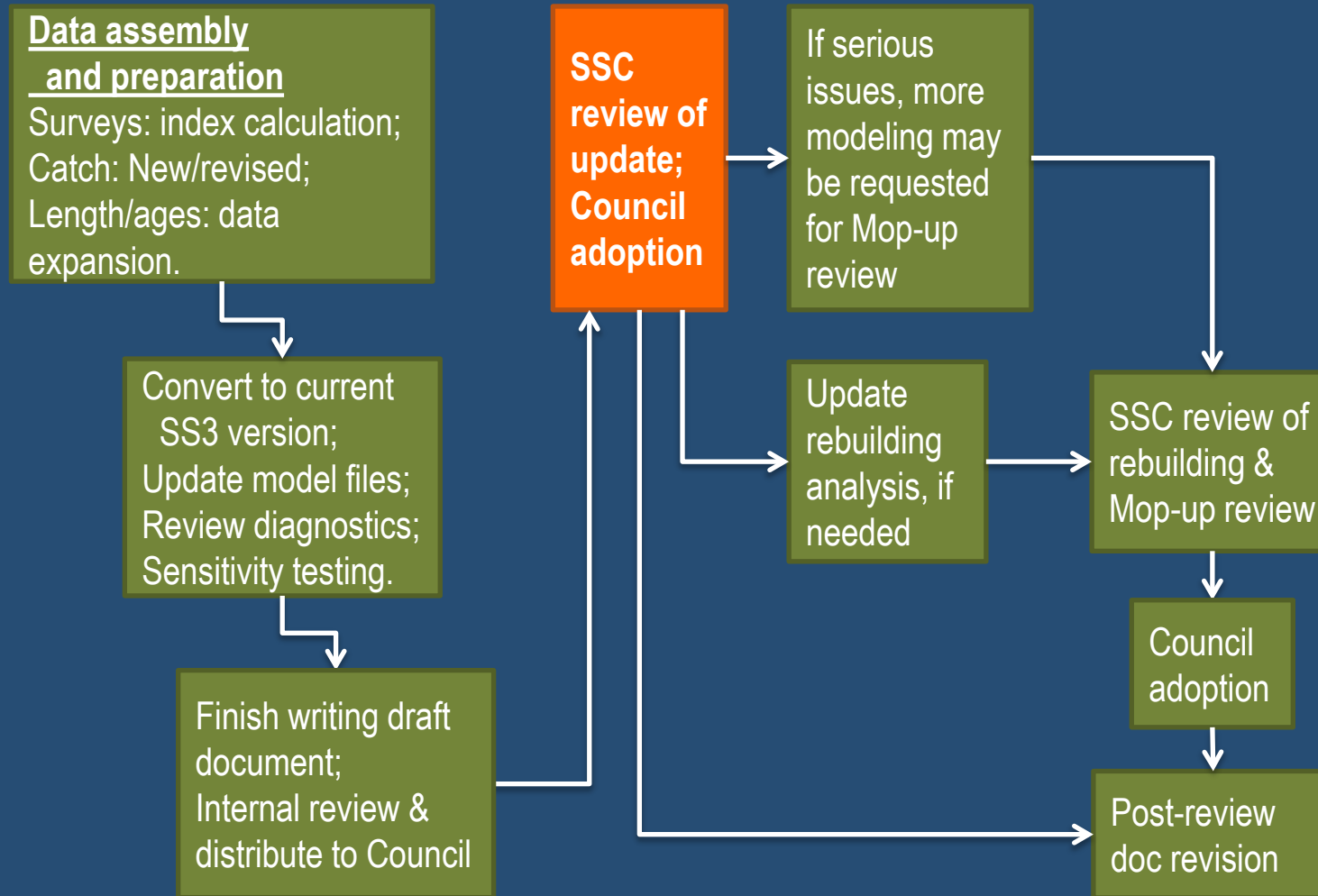
NOAA
FISHERIES

Assessment time spent on component tasks



Update Assessment Timeline

January February March April May June July August September



NOAA
FISHERIES

Terms of Reference (TORs):

- Outline goals and objectives of stock assessment and review process;
- Describe roles and responsibilities of process participants;
- Discusses different assessment products and establish timeline for all deliverables;
- Provide detailed template for assessment document and executive summary.



PFMC Update Assessment TORs

- Carries forward the fundamental structure of the last full assessment
- Generally restricted to the addition of new data (with some exceptions)
- Provide a step-by-step transition (via sensitivity analysis) from the last full assessment to an update assessment
- Full range of model diagnostics to be conducted.
- Model outputs are used to set harvest specifications



PFMC Update Assessment TORs

- Alterations are allowed when:
 - There are clear and straightforward improvements in the input data and how it is processed and analyzed.
 - The addition of new data reveals an unanticipated sensitivity of model
- The update assessment justifies and clearly documents such changes.

Document

- Has a specific format outlined in Appendices A and B

Update Assessment Review

Internal review
by NOAA
NWFSC

Technical review
by the SSC
(June 9-11,
2025)

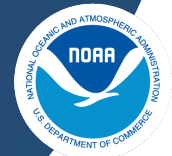
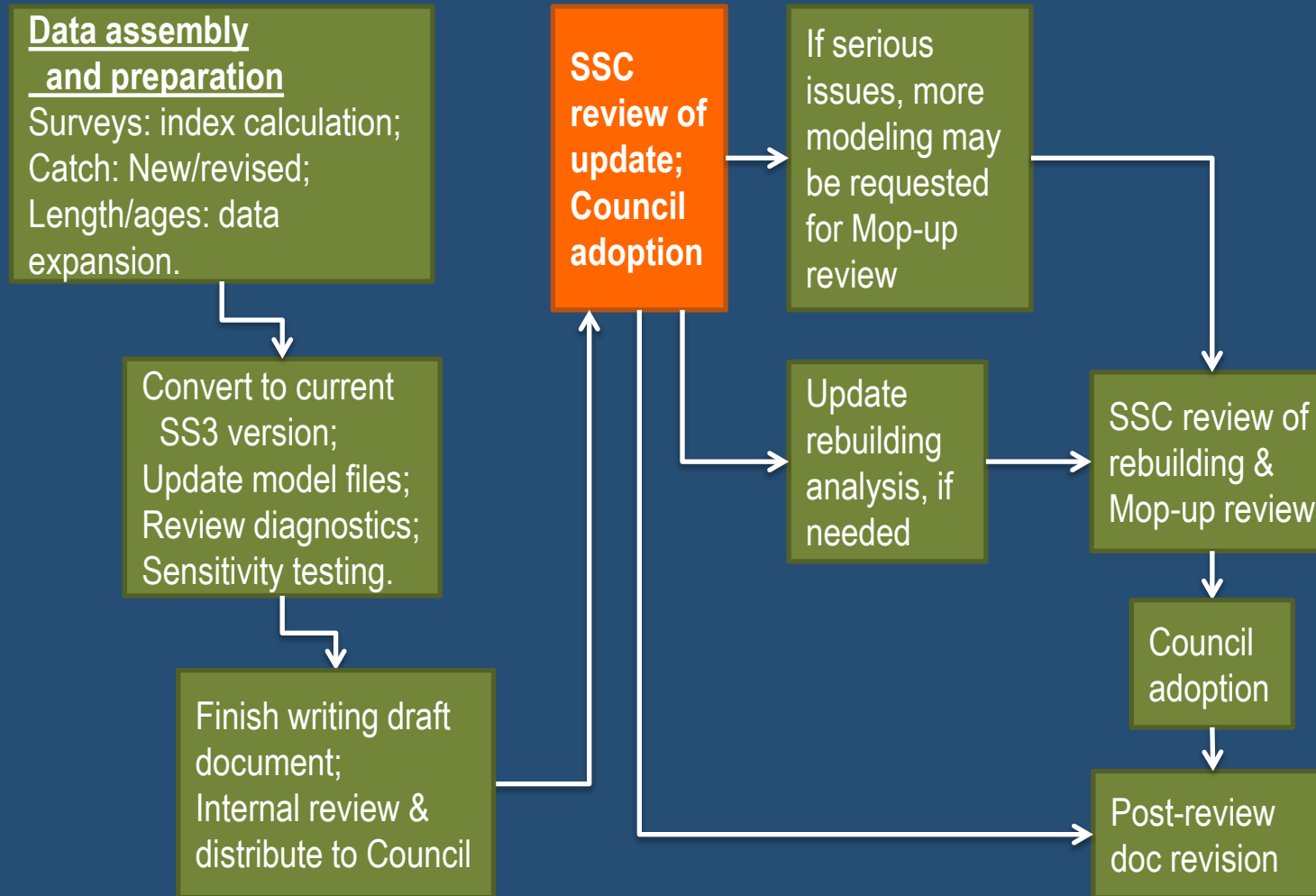
Review (and
adoption) by
PFMC

Does the assessment meet the criteria of a stock assessment update?

Can the results of the assessment represent the best available information to form the basis of Council decision making?

Update Assessment Timeline

January February March April May June July August September



NOAA
FISHERIES

Switch to PPMC website

- TORs, all assessments documents, STAR Panel reports, and advisory reports available online at www.ppcouncil.org

