



WORKFLOWS PROJECT:

Streamlining Stock Assessment Reports

A semi-automated, standardized, and reproducible approach using R packages

What is the Workflows Project?

Evaluating the status of a marine population is a complex and labor-intensive process. Multiple bottlenecks prevent the stock assessment report production process from being timely and efficient, including the absence of a standardized, reproducible workflow suitable across a variety of species and fishery management regions.

To address these issues, the Workflows team is developing two R packages, {asar} and {stockplotr}, that work in tandem to enable a semi-automated, reproducible, and transparent process for writing standardized stock assessment reports. We expect this methodology will empower stock assessment authors to substantially increase their capacity to produce timely, accurate, and accessible reports with far less manual effort.

What is {asar}?

An R package that facilitates stock assessment report writing.

How does it work?

- One function makes a standardized report template
- {asar} automatically fills in some information. **EXAMPLE:** author affiliations are matched to names
- A library of tools increases efficiency while writing: parameters (i.e., placeholders defined once and, if updated, change all other instances); ~1,000 acronyms in a dynamic glossary; and more
- The final report meets virtually all Section 508 criteria



What is {stockplotr}?

An R package that creates stock assessment report-ready tables and figures.

How does it work?

- A function converts model output into an appropriate format
- Create tables and figures showing biomass, landings, recruitment, and more
- Export individual plots, or all at once

Standardizing the workflow

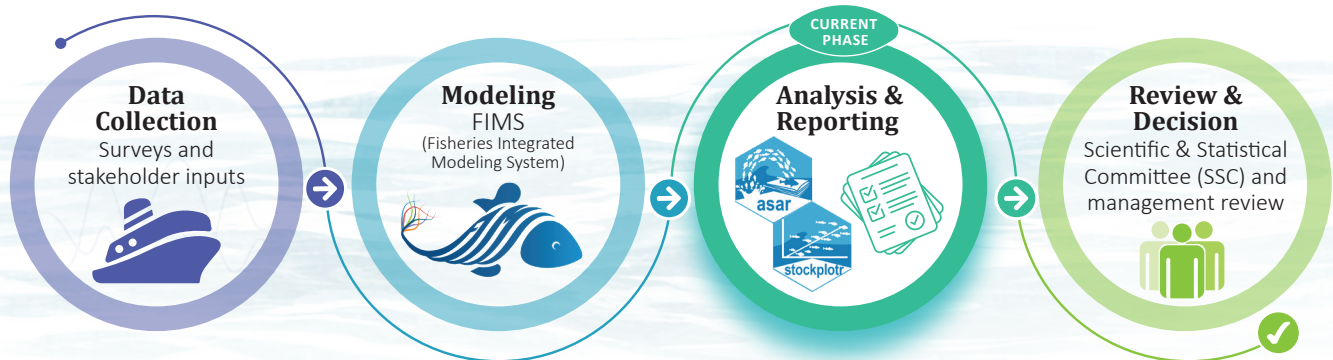
National report guidance

The template produced from {asar} incorporates all of the necessary reporting components to set catch levels and make stock status determinations and discuss the methods and conclusions on how this status was reached. The national report guidelines establish the basic minimum requirements for a stock assessment document for management evaluation. All Fishery Management Councils were consulted after the guidelines were developed. They unanimously supported the standard and explicit guidelines, which aim to reduce the length of these documents.

Standard tables and figures

A predetermined set of expected tables and figures will be incorporated into each document. This approach will reduce the excessive time required for authors to produce new tables or figures. While reviewing bodies can make requests, this system supports the assessment authors and the development of reproducible report components.

The Workflow FROM DATA COLLECTION TO MANAGEMENT REVIEW



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