

# Considering recreational data use in US West coast stock assessments

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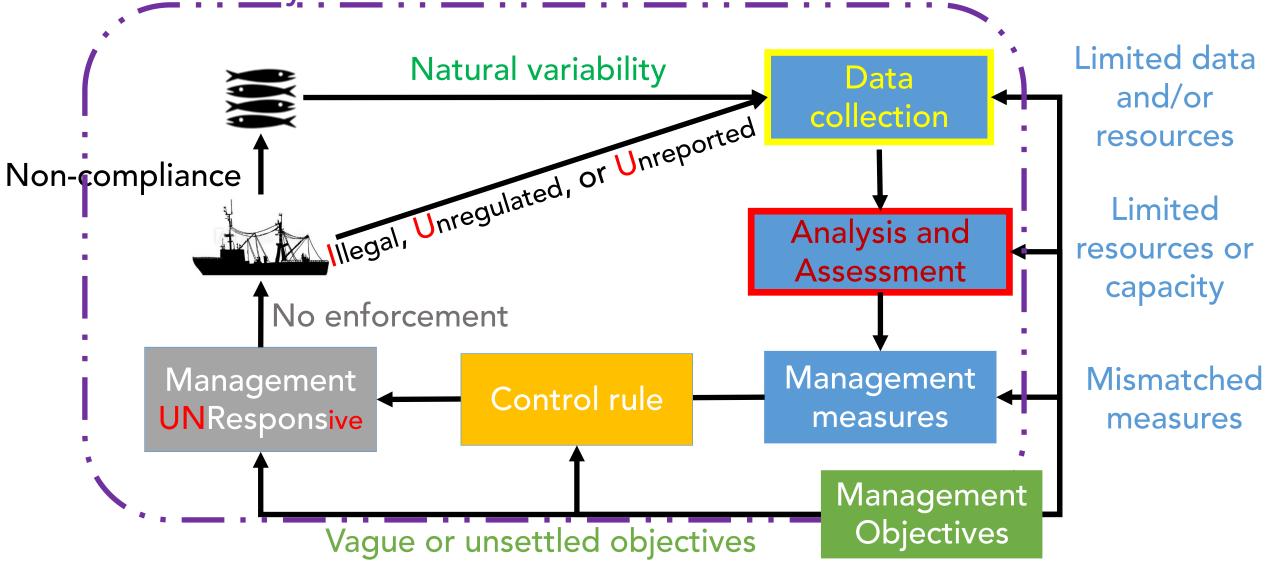
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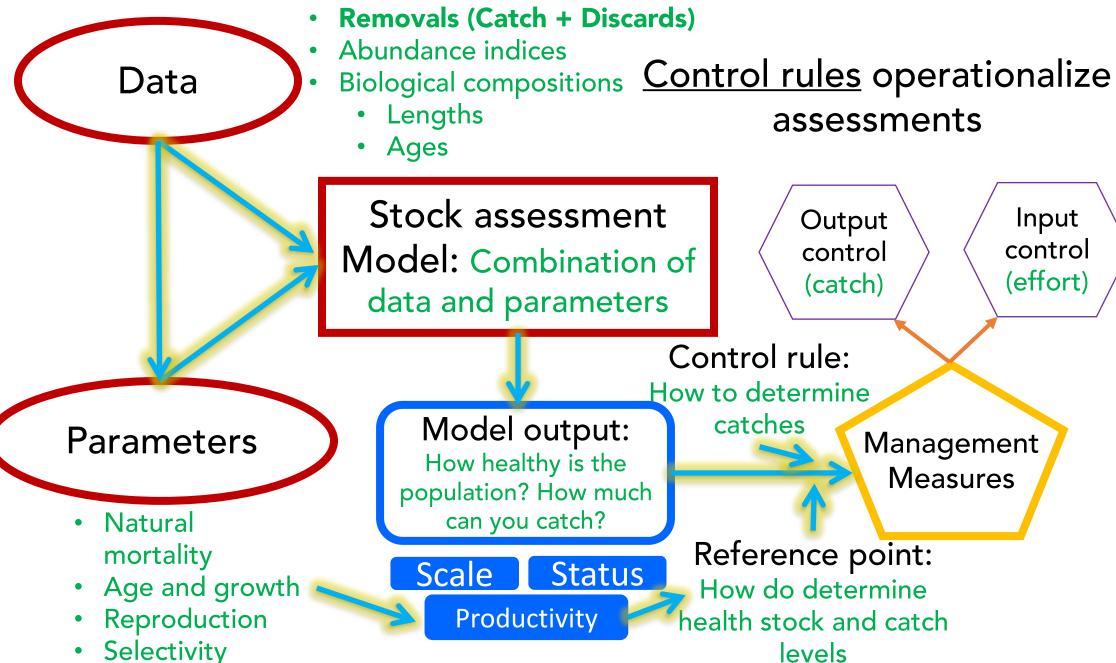
### Adaptive Management loop

Feedback system: Make rules, check status, update Science-based Data -Representativ Accessible, ongoing collection e data data streams Resources to Analysis and Robust response do **Assessment** Control rules assessments Implementation Management Clear, Management Control rule meaningful Response measures measures Management **Objectives Objective-oriented** Clear, agreed upon objectives

## When does it go wrong? Feedback system with cracks

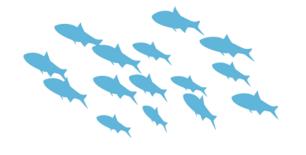


#### Basics of stock assessment

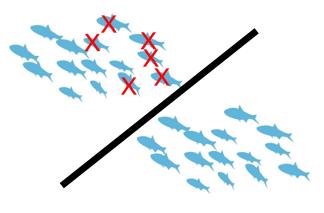


# Interpreting Stock Assessments: Scale, Status, & Productivity

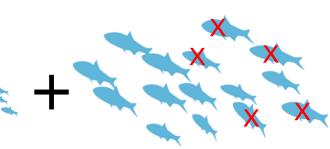
Scale: How many/much (numbers or biomass) are there?



Status: Current scale relative to unfished scale



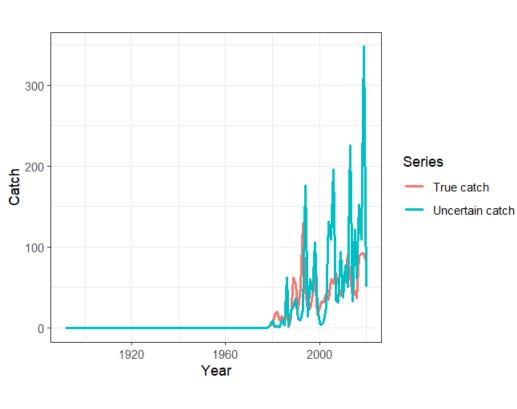
Productivity: Birth-Death. Rate of new numbers/biomass.

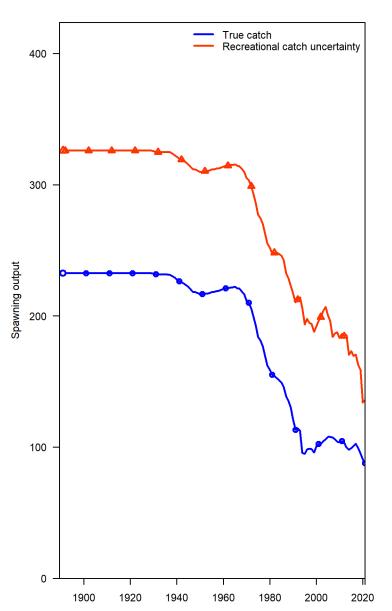


Sensitivity to reported catches: Scale

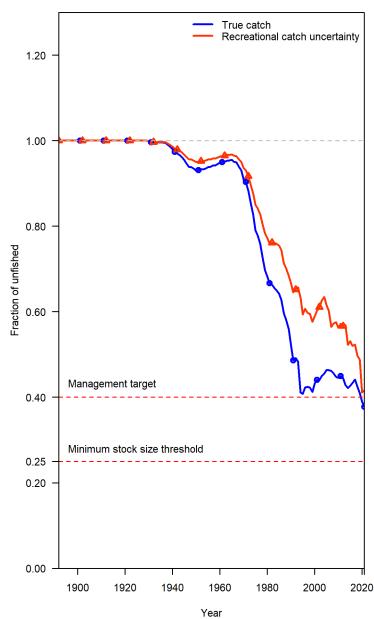
Status

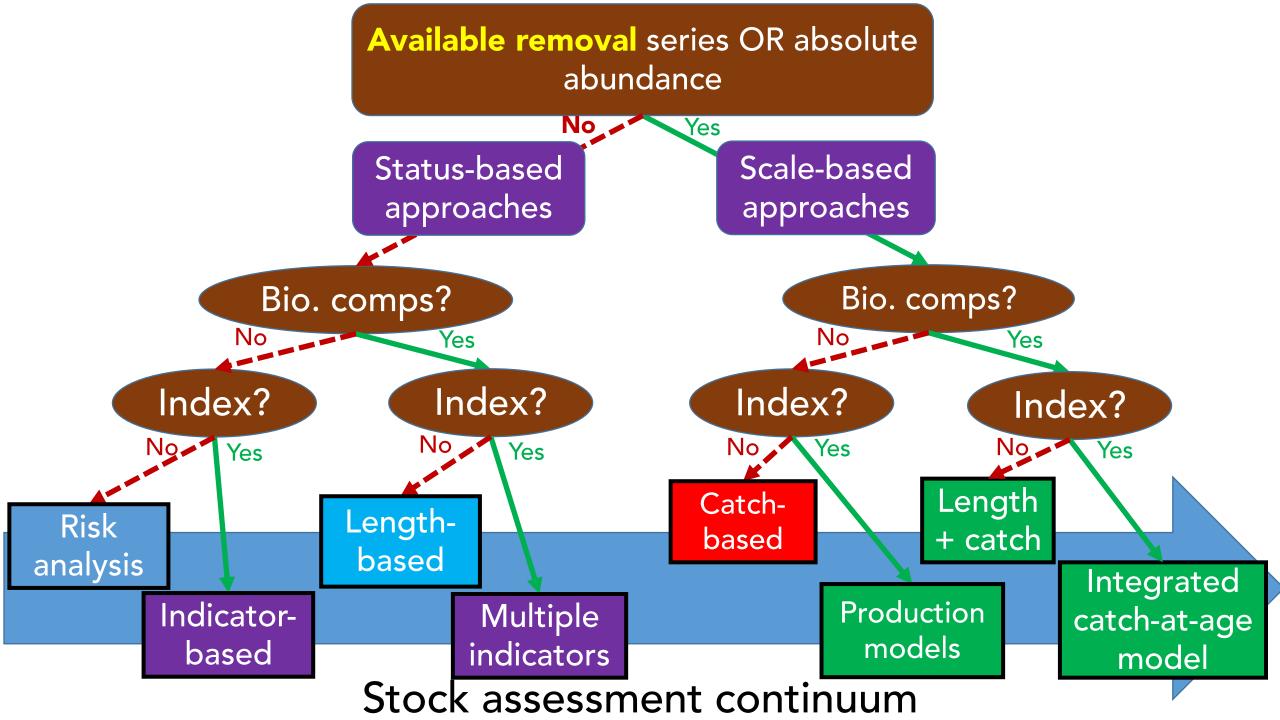






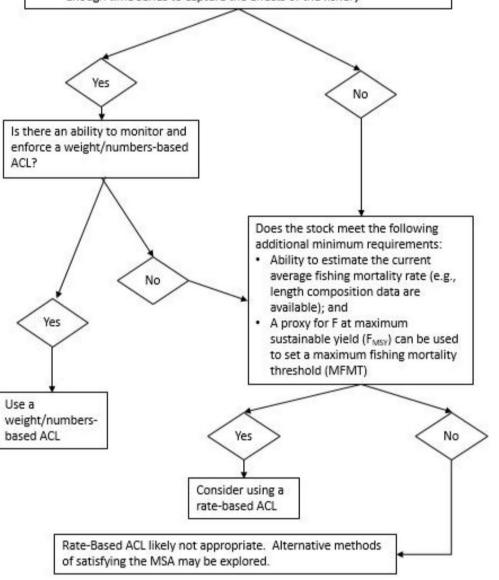
Year





Is one or more of the following types of information available?

- A mostly complete time series of removals and basic life history information
- At least 1 year of absolute abundance info and basic life history info
- A combination of basic life history info, recent annual removals, and a stock size indicator, such as a relative index of abundance, with a long enough time series to capture the effects of the fishery



#### Basics of stock assessment

Data

- Removals (Catch + Discards)
- Abundance indices
- Biological compositions Control rules operationalize
  - Lengths
  - Ages

assessments

Stock assessment
Model: Combination of
data and parameters

Output control (catch)

Input control (effort)

#### **Parameters**

- Natural mortality
- Age and growth
- Reproduction
- Selectivity

#### Model output:

How healthy is the population? How much can you catch?

Scale Status

Productivity

How to determine catches

Control rule:

Management

Measures

#### Reference point:

How do determine health stock and catch levels

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## What is needed in Recreational data reporting

- Representativeness
  - Are the data representing what is being sampled?
  - Are modes or sectors missing?
  - Avoid or correct for major biases
  - Consistent reporting
  - Transparent process
- Uncertainty
  - Where are the sources of uncertainty?
  - Direction of uncertainty
  - Expansion issues
  - Data weighting (i.e., effective sample sizes)

#### US West Coast recreational data access

- Contemporary
  - Mostly <u>RecFIN</u>
  - State partners



- Historical
  - State catch reconstructions
  - MRFSS period found to be troublesome, speciesspecific solutions are sometimes needed.