



# Management Strategy Evaluation—Tanner Crab (*Chionoecetes bairdi*)

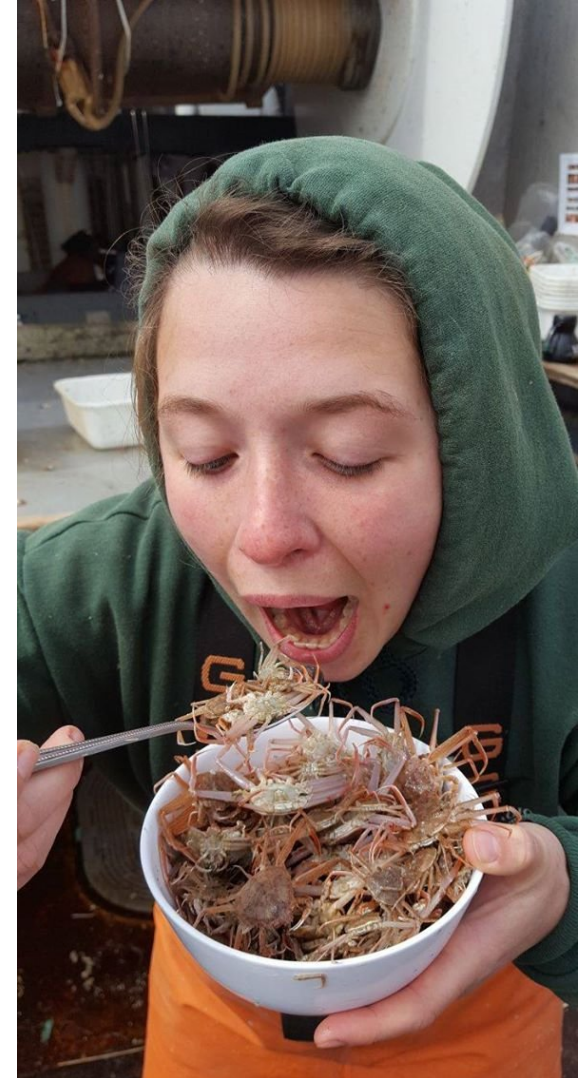
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Master's Research

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# My Background

- B.S. Aquatic and Fishery Sciences & Oceanography
  - Minors in Quantitative Science and Marine Biology
  - University of Washington
- NRC
  - 2014-present
  - BSFRF
    - Summer charters (3)
    - Growth charters (2)
- Master's Program at UW September 2017
  - Punt Lab
  - Committee:
    - Andre Punt
    - Buck Stockhausen
    - Chris Siddon
    - Trevor Branch



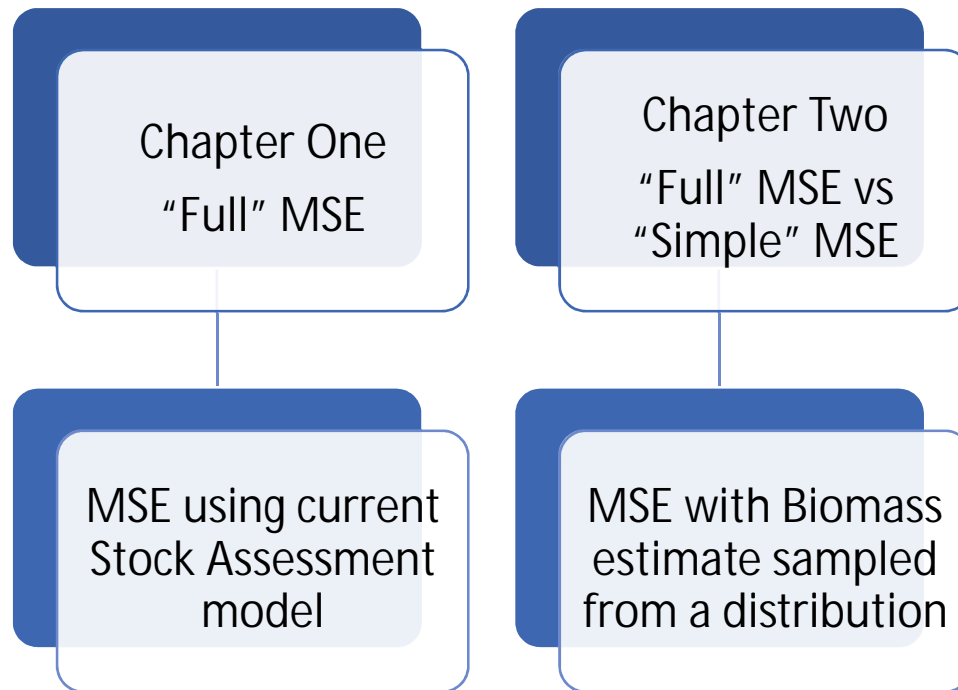
# Questions

- What harvest control rules are preferred/optimal for the Tanner crab fishery?
- What are the consequences of using a “full” vs “simple” MSE?

# Why an MSE?

- Low risk-high reward option for evaluating fishery options
- Evaluation of Harvest Control Rules
  - Identify a harvest strategies that achieve a satisfactory balance among the objectives
  - Evaluation of “on/off switches” and “thresholds” in candidate harvest control rules
- Building more flexibility for State
  - Model built with state consideration
  - Feedback options for managers and stakeholders

# Chapters



# Goals- i

1

Run MSE using the current assessment model under specified Harvest Control Rules

2

Use of a Full MSE

3

ADF&G Implementation

- BOF 2020
- Deliverable by April 2019

# Goals- ii

1

Run simplified MSE simulations under specified Harvest Control Rules

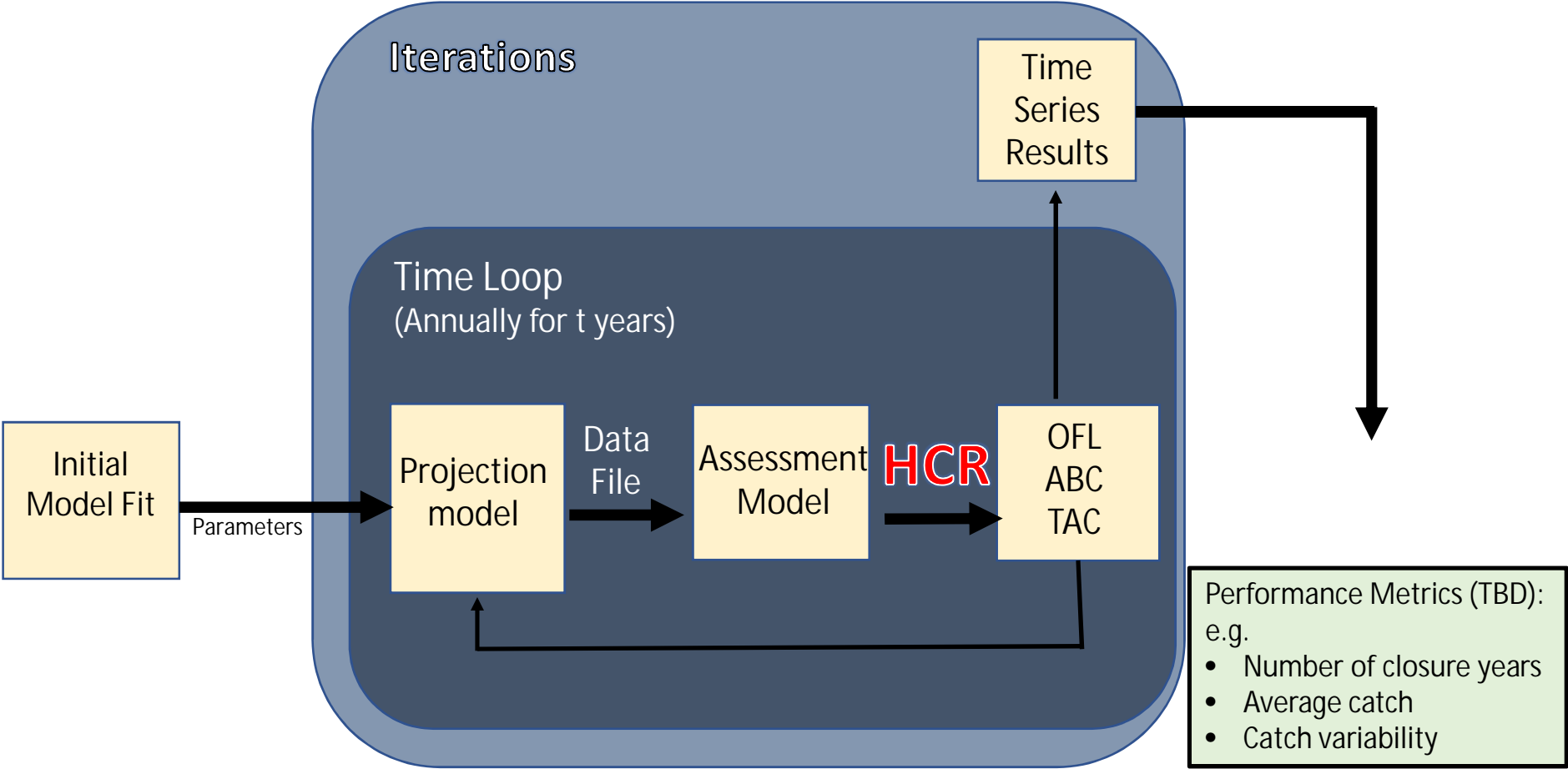
2

Evaluation of whether conclusions of simple MSE match those of full MSE

3

Present findings supporting/rejecting the use of "simple" MSEs when assessments exist

# Chapter 1- Full MSE using current Assessment





## Chapter 2 – MSE light

- Generate Biomass of crab from a specified distribution (e.g. log-normal)
- Compare Performance Metrics from the full MSE (chapter 1) to those from the simple MSE
  - Utility of “MSE light” methods
  - How much is lost?

# High Priority Steps

- Current Tanner crab assessment model
  - ✓ Running
  - ☐ Projecting under simple HCR (Fixed Catch)
- Meeting/Workshop with NMFS, ADF&G, Stakeholders
  - Establish fishery objectives
  - Workshop Harvest Control Rules to be tested in MSE

# Thank You! Questions?

- University of Washington
- BSFRF
- ADF&G
- NMFS
- NRC

