INTERNATIONAL PACIFIC HALIBUT COMMISSION

MSE Results

Agenda Item 6

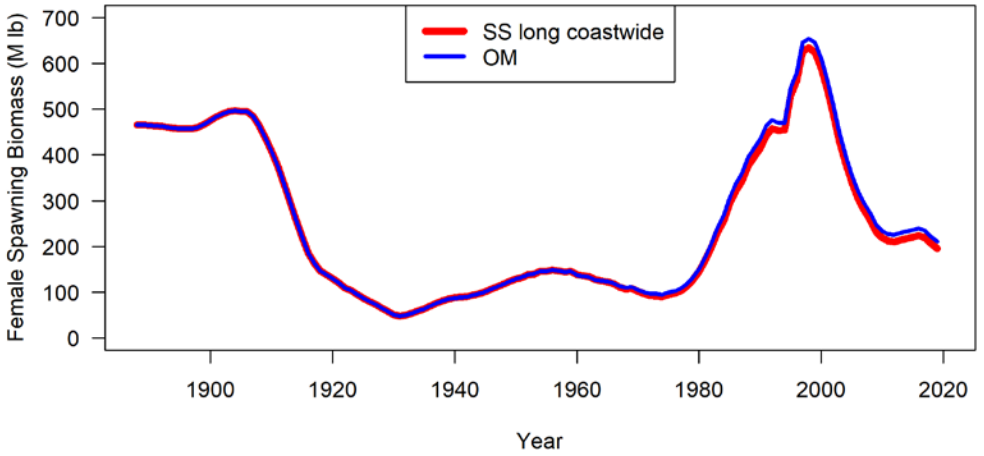
IPHC-2020-MSAB015-09

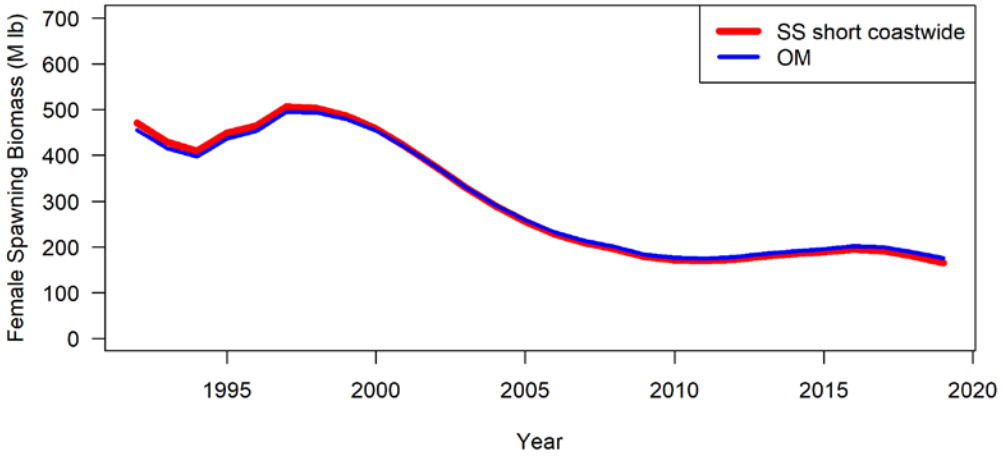
Verification of the operating model code

- Confirming that the calculations are correct and that the outcomes follow the appropriate fishery and population dynamics as intended
  - Compare outputs with simple models
  - Compare outputs with complex models (e.g. assessment)
  - Verify it returns to appropriate values without fishing

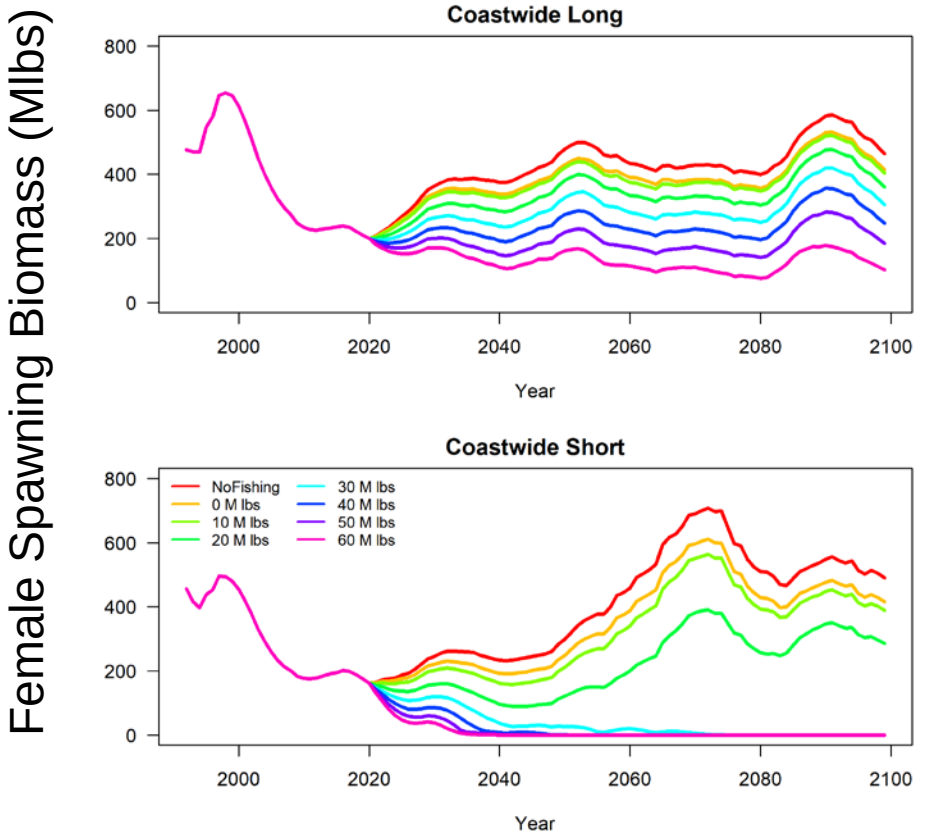
Assessment models

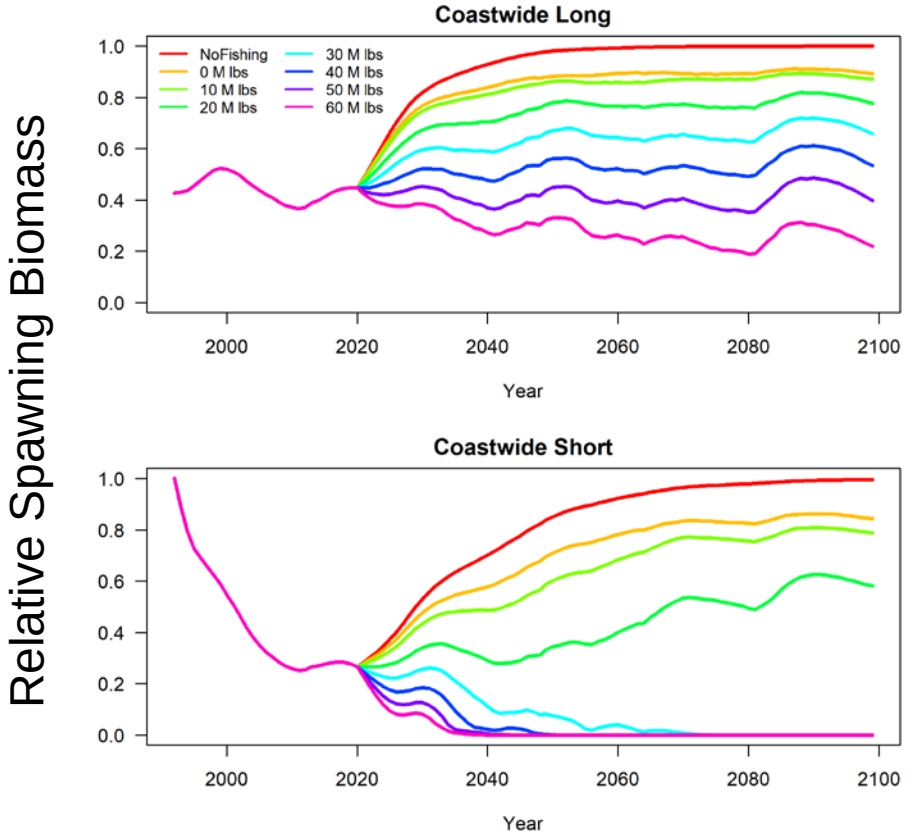
- Assessment models use stock synthesis
- Some different assumptions in the OM
- Very similar trajectories well within uncertainty intervals





Verify OM projections (100 years)



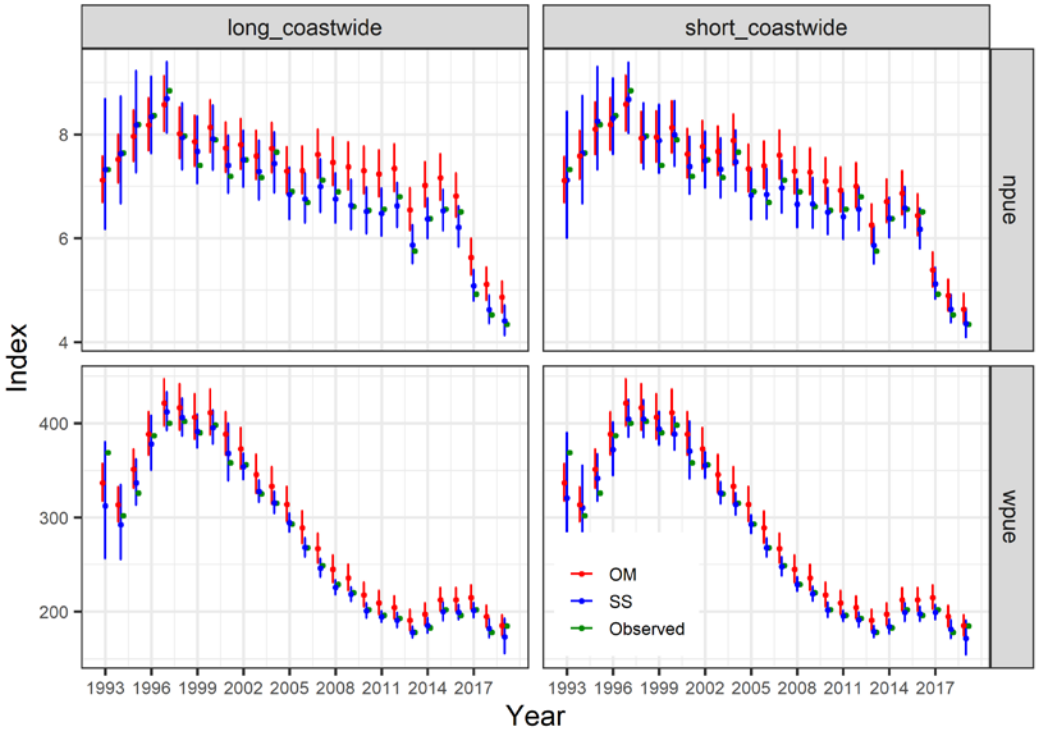


Multi-area models

- Currently being conditioned
- Examining the uncertainty in movement vs. distribution of recruitment

Data Generation

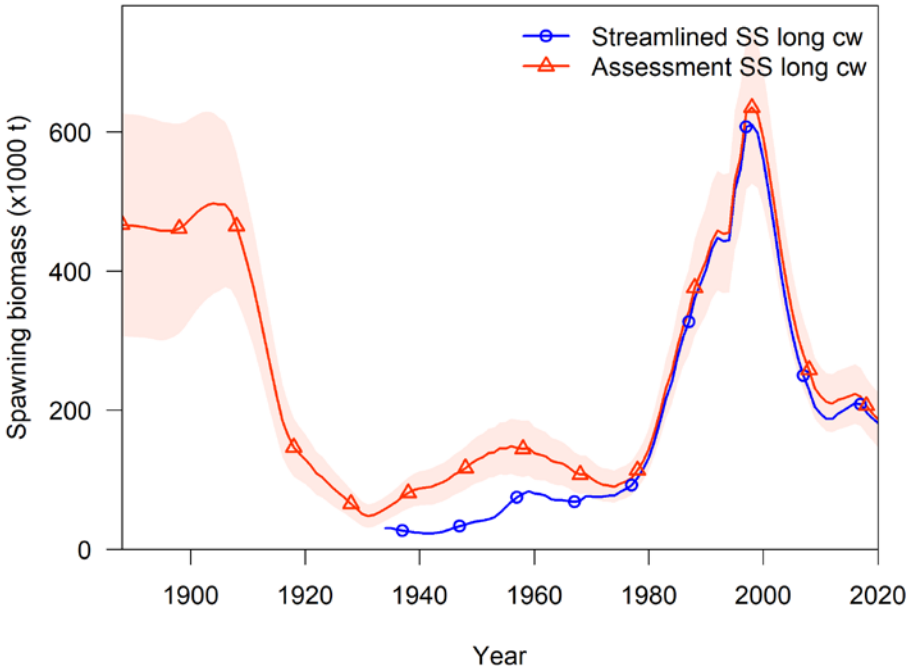
- MP code able to generate data similar to what is observed
- Conditioning to these data would reduce these differences

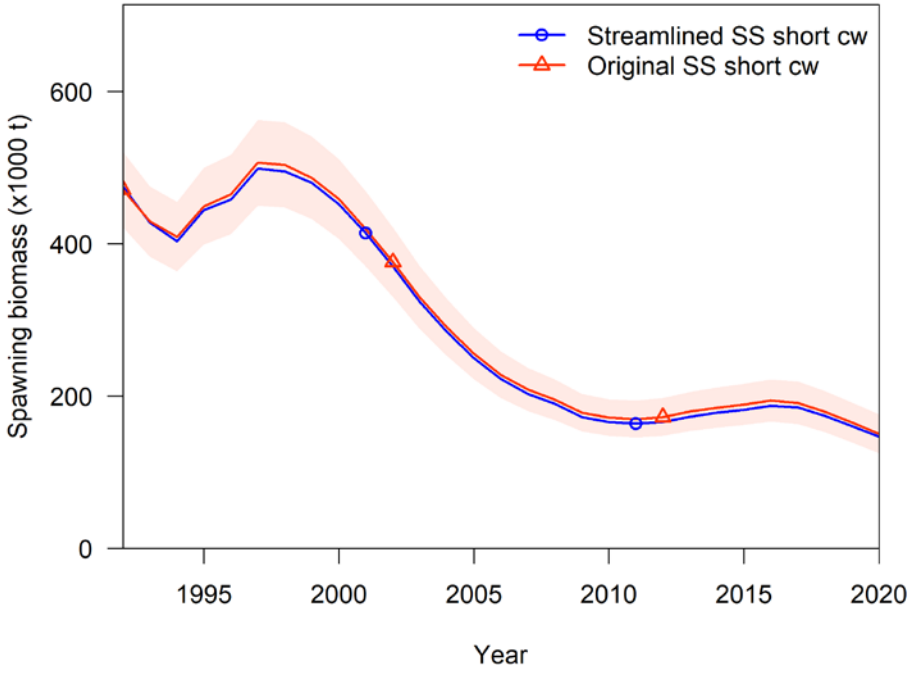


Estimation models

- Two estimation models used to represent the ensemble stock assessment
- Streamlined to reduce simulation times
  - Reduce the amount of data and length of the time-series
  - Mimic the recent period
  - Represent estimation uncertainty in projections

Streamlined estimation models





Recommendations

- **NOTE** paper IPHC-2020-MSAB015-09 which present preliminary results from the IPHC MSE simulations incorporating scale and distribution components of the management procedure.
- **NOTE** that the verification of the OM and framework matched coastwide expectations closely.
- **RECOMMEND** additional performance metrics and methods to present results for evaluation at MSAB016

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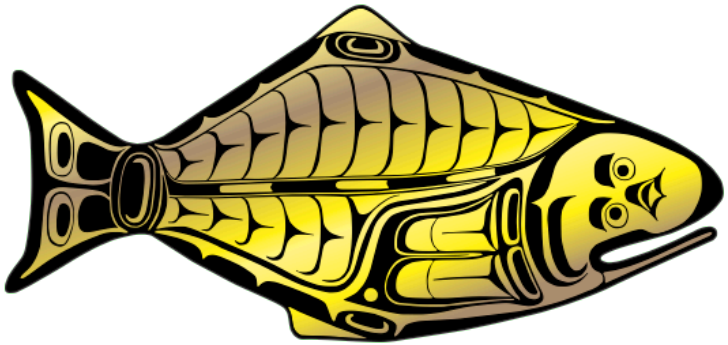

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