INTERNATIONAL PACIFIC HALIBUT COMMISSION

Harvest Strategy Policy

Agenda item: 5
IPHC-2024-MSAB020-07

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Commission Directives from WM2024

The Commission **DIRECTED** the Secretariat to continue to revise the draft Harvest Strategy Policy in conjunction with Contracting Parties, so that it:

a. captures the Commission's intent that outcomes from the Management Procedure's (MP) component of the Harvest Strategy Policy be non-prescriptive advice that preserves Commissioners' prerogative to account for other relevant factors during the annual decision-making process on coastwide TCEY and the distribution of the TCEY to Regulatory Areas;

b. uses the MP output as the reference value for the Harvest Decision Table, thereby providing a range of coastwide TCEY options and the associated risks;

c. presents a method to link the long-term consequences of different fishing intensity options determined from the MSE to the TCEY options presented in a decision table;

d. describes how variances in the Commission's annual decisions from elements of the MP have been incorporated into simulation testing;

e. is submitted as a working document for consideration at the 20th Session of the MSAB (MSAB) (paper deadline 29 September 2024);

- is submitted as a working document for consideration at the 100th Session of the IPHC Interim Meeting (IM100) (paper deadline 26 October 2024).

Harvest Strategy Policy

A framework for applying a consistent and transparent science-based approach to setting mortality limits while ensuring sustainability

- identifies an appropriate method to manage natural variability and scientific uncertainty,
- accounts for risk and balances trade-offs,
- reduces the time needed to make management decisions,
- ensures long-term sustainability and profitability,
- may increase market stability due to a more predictable management process,
- adheres to the best practices of modern fisheries management that is consistent with other fisheries management authorities and certification agencies, and
- allows for the implementation of the precautionary approach.

The Harvest Strategy Policy along with the *Protocol amending the Convention* provide the basis to manage risk to Pacific halibut fisheries and the Pacific halibut population

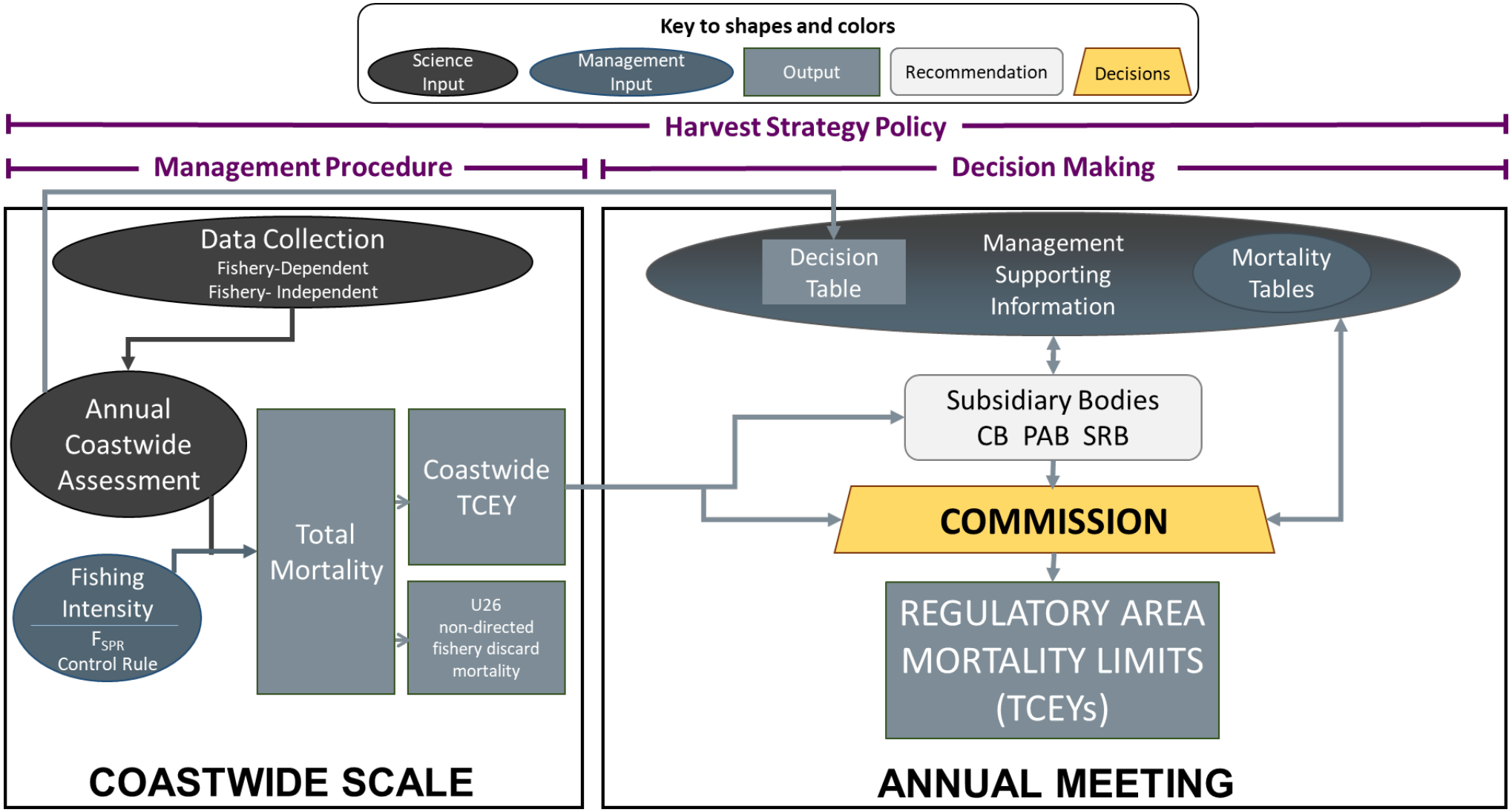
Harvest Strategy Policies elsewhere

- HSPs are common in fisheries management
  - MSFCMA and FMPs in the U.S.
  - Fisheries Act and Sustainable Fisheries Framework in Canada
  - Many tuna fisheries are adopting harvest strategies
    - https://harveststrategies.org/
  - Many countries have HSPs or similar

Interim Harvest Strategy Policy

- IPHC has operated under an interim HSP for 8 years
- Does not have a formally endorsed HSP
- Set a coastwide mortality limit using a reference SPR
  - Adopted a reference SPR=43% with support of the MSE framework
- The interim HSP is not formally documented and endorsed by the Commission

Annual mortality limit setting process



Definitions

- Management Procedure (MP)
  - A formulaic procedure to determine a management outcome (e.g. mortality limit) that has been simulation tested and produces a repeatable outcome
- Harvest Strategy
  - The framework for managing a fish stock, including the MP and objectives
- Harvest Strategy Policy (HSP)
  - The harvest strategy and decision-making process that results in endpoint management outcomes
- Management Supporting Information
  - Any information that assists the Commission in making a decision when determining mortality limits coastwide or by IPHC Regulatory Area

Chapter 1: What is a Harvest Strategy Policy?

- The harvest strategy policy encompasses the entire process of the management procedure and decision-making process to determine mortality limits as well as other important considerations such as objectives, key principles, and responses to specific events
- Due to many considerations in the decision-making process, the final coastwide mortality limit may deviate from the reference determined from the management procedure

Ch1: What is a Harvest Strategy

- The decision framework necessary to achieve defined biological and economic objectives
  - Objectives and key principles for the sustainable and profitable use of Pacific halibut.
  - Reference points and other quantities used when applying the harvest strategy.
  - Processes for monitoring and assessing the biological conditions of the Pacific halibut population and economic conditions of Pacific halibut fisheries in relation to biological and fishery reference levels (reference points).
  - Pre-determined rules that adjust fishing mortality according to the biological status of the Pacific halibut stock and economic conditions of the Pacific halibut fishery
    - These rules are referred to as harvest control rules or decision rules.

Chapter 2: Objectives & Key Principles

- Maintain Pacific halibut female spawning biomass, above a female spawning biomass limit where the risk to the stock is regarded as unacceptable (RSBLIM), at least 95% of the time;
- Maintain Pacific halibut female spawning biomass, at least 50% of the time, at or above a threshold reference (fixed or dynamic) female spawning biomass that optimises fishing activities on a spatial and temporal scale relevant to the fishery;
- Optimise average coastwide yield given the constraints above;
- Limit annual changes in the coastwide mortality limit (TCEY) given the constraints above.

Ch2: Overfished & Overfishing

- **Overfished**: when the estimated probability that female relative spawning stock biomass is below the limit reference point (RSB_{LIM}) is greater than 50%.
- **Overfishing**: where the stock is subject to a level of fishing that would move it to an overfished state, or prevent it from rebuilding to a 'not overfished' state, within a specific time-frame and probability, to be determined.

Chapter 3: Development of the HSP

- Accounting for fishing mortality on all sizes and from all sources
- Variability in the environment and biological characteristics
- Monitoring
- Establishing and applying decision rules
- Balancing risk, cost and catch
- Reference points and proxies
- Technical evaluation
- Re-evaluating the Harvest Strategy and MP

Ch3: Reference points

- A specified level of an indicator used as a basis for management
  - Reflect acceptable levels of biological impact and desired economic outcomes

Reference point	Definition	Proxy
Threshold reference point RSB_{THRESH}	The female dynamic relative spawning biomass level at maximum economic yield (RSB_{MEY}).	36% of the unfished spawning biomass ($RSB_{36\%}$).
Biological limit reference point RSB_{LIM}	The female dynamic relative spawning biomass level where the ecological risk to the population is regarded as unacceptable.	20% of the unfished female spawning biomass ($RSB_{20\%}$).

Ch3: Technical evaluation and re-evaluating

- MSE process
- Exceptional circumstances

  The coastwide all-sizes FISS WPUE or NPUE from the space-time model falls above the 97.5th percentile or below the 2.5th percentile of the simulated FISS index for two or more consecutive years.

- Response if triggered

  a) A review of the MSE simulations to determine if the OM can be improved and MPs should be reevaluated.

  b) If a multi-year MP was implemented and an exceptional circumstance occurred in a year without a stock assessment, a stock assessment would be completed as soon as possible along with the re-examination of the MSE.

  c) Consult with the SRB and MSAB to identify why the exceptional circumstance occurred, what can be done to resolve it, and determine a set of MPs to evaluate with an updated OM.

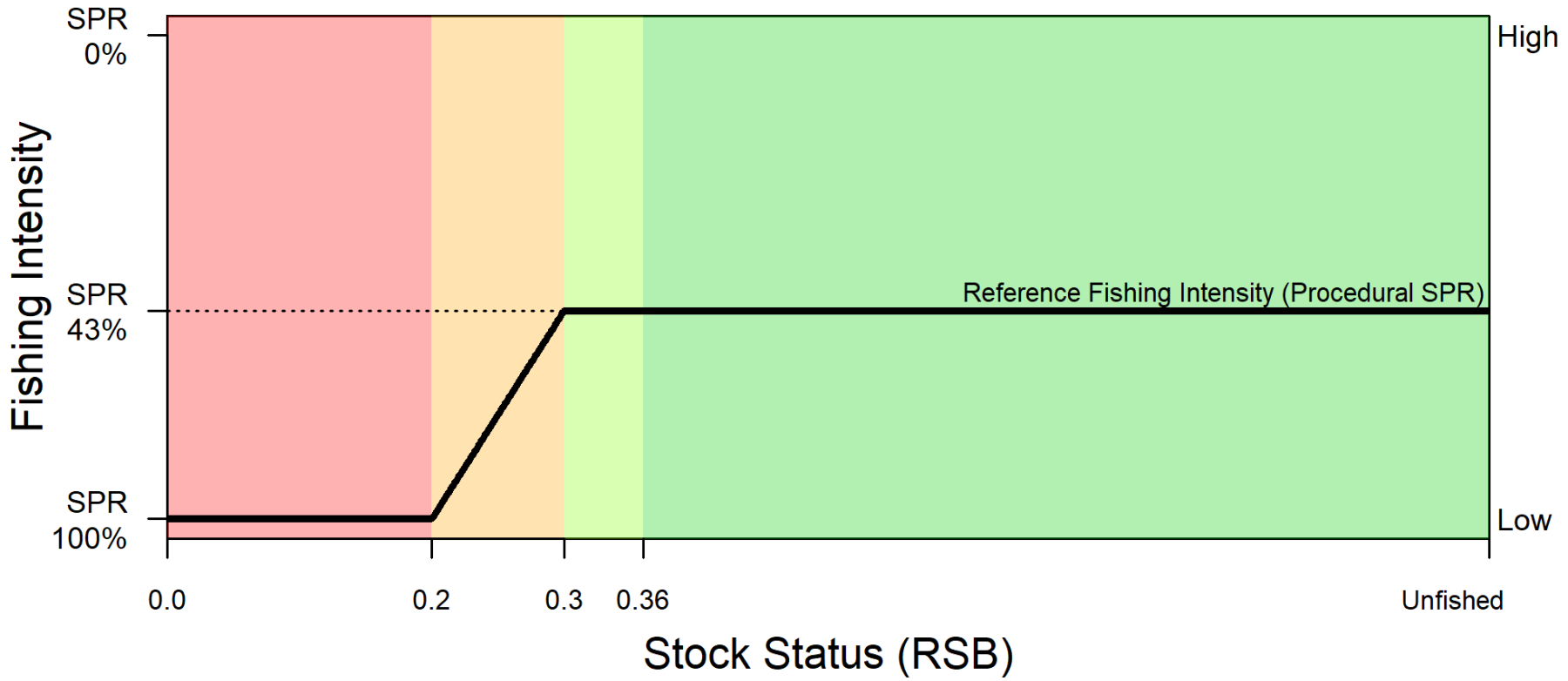
  d) Further consult with the SRB and MSAB after simulations are complete to identify whether a new MP is appropriate.

Chapter 4: Applying the HSP

- Coordinated management of domestic stocks
- Coordinated management of international stocks
- Stock assessment
- Coastwide reference mortality limit
- Rebuilding the stock if overfished
- Mortality limits for each IPHC Regulatory Area
- Stakeholder and scientific input
- Annual process

Ch4: Coastwide mortality limit

- Management procedure
  - Determined from the assessment with a harvest control rule
- Considered further during the decision-making process



Ch4: Rebuilding

- If overfished
  - Probability that female spawning stock biomass is below the limit reference point (RSB_{LIM}) is greater than 50%
- A rebuilding strategy must be developed to rebuild the stock to above its limit reference point, for agreement by the Commission.
- A rebuilding strategy will be required until the stock is above the limit reference point with a reasonable level of certainty (at least a 70% probability that the stock has rebuilt to or above the limit reference point).
- It must ensure adequate monitoring and data collection is in place to assess the status of the stock and rebuilding progress
- Develop a rebuilding timeframe

Ch4: Mortality limits for each IPHC Regulatory Area

- Final output before domestic management is applied
- Commission decision with the input of management supporting information
  - e.g. Mortality table & Harvest decision table

Next steps

- MSAB provide recommendation to Commission
  - e.g. Updates to MP elements supported through research in 2024
- Commission discuss updated draft at IM100
- Commission to consider for endorsement at AM101

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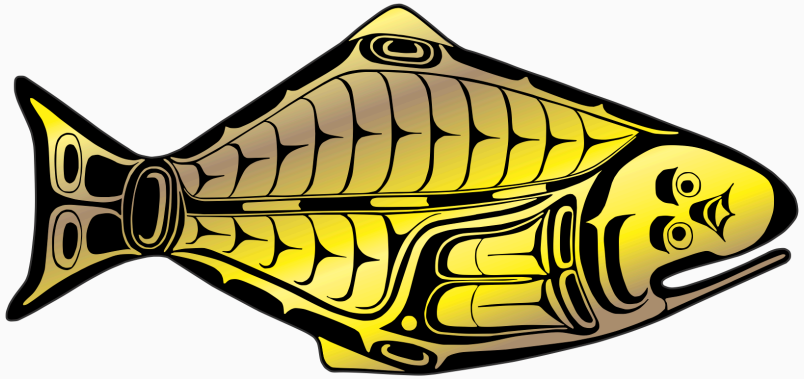

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https://www.iphc.int/