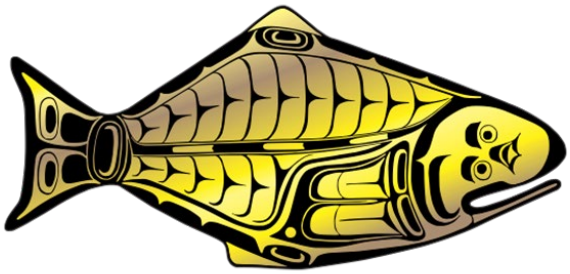
INTERNATIONAL PACIFIC HALIBUT COMMISSION

INTERIM: HARVEST STRATEGY POLICY

(2024)

INTERNATIONAL PACIFIC



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BIBLIOGRAPHIC ENTRY
IPHC 2024. Interim: IPHC Harvest Strategy Policy
IPHC–2024–HSP, 17 pp.

INTERNATIONAL PACIFIC HALIBUT COMMISSION

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NOTE: The following is an interim document based on an amalgamation of current IPHC practices and best practices in harvest strategy policy. It is not intended to be a definitive policy, noting that the IPHC is yet to adopt a formal harvest strategy for Pacific halibut. It is expected that over the coming year, the IPHC will develop and implement a harvest strategy, and that this policy document will then be updated accordingly.

ACRONYMS

HCR	Harvest Control Rule
HSP	Harvest Strategy Policy
IPHC	International Pacific Halibut Commission
LIM	Limit
MP	Management Procedure
MSAB	Management Strategy Advisory Board
MSE	Management Strategy Evaluation
NER	Net economic returns
OM	Operating Model
SB	Spawning Biomass (female)
SPR	Spawning Potential Ratio
SRB	Scientific Review Board
TCEY	Total Constant Exploitable Yield
THRESH	Threshold
U.S.A.	United States of America

DEFINITIONS

A set of working definitions are provided in the IPHC Glossary of Terms and abbreviations: https://www.iphc.int/the-commission/glossary-of-terms-and-abbreviations

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Chapter 1 INTRODUCTION

The *IPHC Harvest Strategy Policy* (HSP) provides a framework for applying a consistent and transparent science-based approach to setting mortality limits for Pacific halibut (*Hippoglossus stenolepis*) fisheries throughout the Convention Area while ensuring sustainability of the Pacific halibut population.

It defines biological and economic objectives that apply to the development of a harvest strategy for Pacific halibut. It also identifies reference points for use in the harvest strategy to achieve the Commission's stated objectives. This policy, together with the *Protocol amending the Convention between Canada and the United States of America for the preservation of the [Pacific] halibut fishery of the northern Pacific Ocean and Bering Sea (1979)*[1], provides the basis to manage the risk to Pacific halibut fisheries and the Pacific halibut population.

A harvest strategy developed under this policy will take available information about the Pacific halibut resource and apply a consistent and transparent science-based approach to setting mortality limits. A harvest strategy consistent with this policy will provide all interested sectors with confidence that the Pacific halibut fisheries are being managed for long-term economic viability while ensuring long-term ecological sustainability of the Pacific halibut population. The implementation of a clearly specified harvest strategy will also provide the fishing industry with a more certain operating environment.

1.1 SCOPE

The IPHC Harvest Strategy Policy applies to the Pacific halibut population managed by the IPHC, and where overlap with domestic jurisdictional management exists (e.g. managed jointly by the IPHC and Contracting Party domestic agencies) the IPHC will seek to apply and encourage the adoption of this policy in negotiating and implementing joint or cooperative management arrangements.

The IPHC is responsible for determining the mortality limit in each of eight (8) IPHC Regulatory Areas (Figure 1). The mortality limit in each IPHC Regulatory Area consists of all fishing mortality of all sizes and from all sources, except for discard mortality of under 26-inch (U26) Pacific halibut from non-directed commercial fisheries. This mortality limit without U26 non-directed commercial discard mortality has been termed the Total Constant Exploitation Yield, or the TCEY, but mortality limit is used here.

Mortality limits for each sector within an IPHC Regulatory Area, and all sizes of non-directed commercial discard mortality, are determined by Contracting Party domestic agencies. Therefore, this Harvest Strategy Policy is specific to the mortality limit in each IPHC Regulatory Area.

[1] https://www.iphc.int/uploads/pdf/basic-texts/iphc-1979-pacific-halibut-convention.pdf

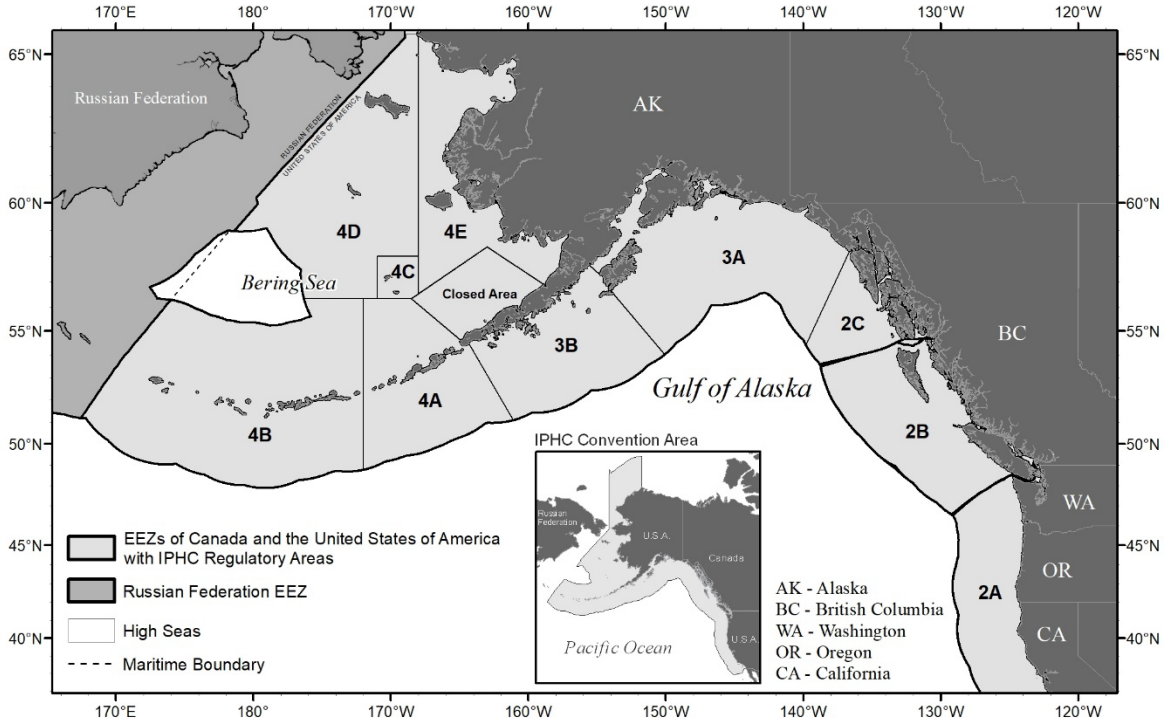

Figure 1. IPHC Regulatory Areas where 4C, 4D, 4E, and the closed area are considered one IPHC Regulatory Area (4CDE). The IPHC Convention Area is shown in the inset.

1.2 WHAT IS A HARVEST STRATEGY POLICY (HSP)?

Being a framework, the harvest strategy policy encompasses the entire process of the harvest strategy and decision-making process to determine mortality limits (Figure 2) as well as other important considerations such as objectives, key principles, and responses to specific events. To determine mortality limits, the process begins with determining the coastwide scale of fishing mortality (the MP) followed by the process for distributing the TCEY among IPHC Regulatory Areas (part of the harvest strategy). The final step of the HSP, which is not part of the MP, is the decision-making process that occurs at the Annual Meeting of the IPHC. The final mortality limits may deviate from those determined from the management procedure, resulting in less transparency in the process.

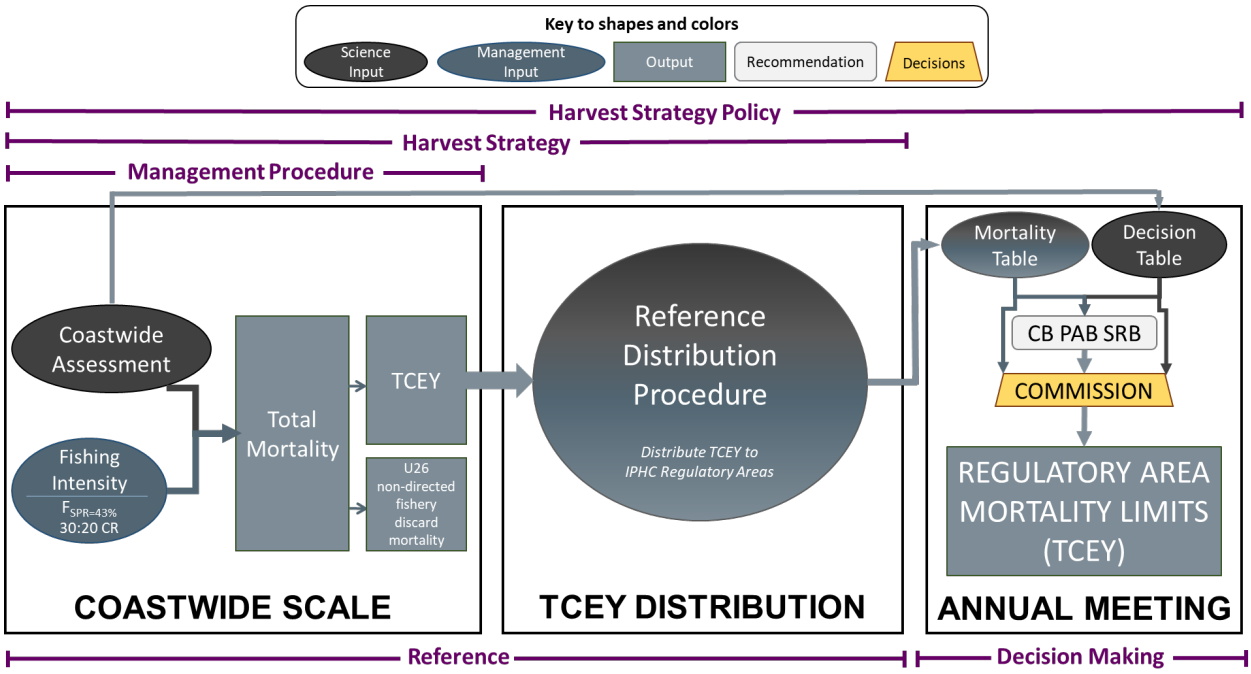

Figure 2. Illustration of the interim IPHC harvest strategy policy process to determine mortality limits showing the coastwide scale component as the management procedure along with the TCEY distribution component that comprise the harvest strategy. The TCEY distribution and Annual Meeting components make up the Commission decision-making process, which considers inputs from many sources and may deviate from the management procedure.

1.3 WHAT IS A HARVEST STRATEGY?

A harvest strategy, which may also be referred to as a management strategy, is the decision framework necessary to achieve defined biological and economic objectives for Pacific halibut. A harvest strategy will outline:

- 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 (a reference point or points).
- Pre-determined rules that determine fishing mortality according to the biological status of the Pacific halibut stock and economic conditions of the Pacific halibut fishery (as defined by monitoring and/or assessment). These rules are referred to as harvest control rules or decision rules.

A management procedure (MP) contains many of the components of a harvest strategy and is sometimes synonymous with harvest strategy. Here, we define an MP as different from a harvest strategy in that each component of an MP is more formally specified and has been shown to meet the objectives through simulation testing while also being robust to uncertainty and variability. Harvest strategy is a more general concept and refers to the entire process needed for determining reference mortality limits (i.e. the TCEY for each IPHC Regulatory Area) that are then subject to the decision-making step. Some steps, such as the

distribution of the TCEY, may not have been simulation tested and are subject to negotiation and decision-making. Simulation testing MPs using MSE models with decision-making variability ensure that a harvest strategy policy is robust to this uncertainty.

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 entire process to produce endpoint reference management outcomes (e.g. TCEYs for each IPHC Regulatory Area) which may have some components that are not simulation tested and subject to uncertainty. This outcome informs the decision-making process.

Chapter 2 OBJECTIVES AND KEY PRINCIPLES

A goal of the IPHC Harvest Strategy Policy is the long-term sustainable and profitable use (optimum yield) of Pacific halibut through the implementation of a harvest strategy that maintains the stock at sustainable levels while maximising economic returns.

To achieve this goal the IPHC will implement a harvest strategy that minimises risk to the stock and pursues maximum economic yield (MEY) for the directed Pacific halibut fisheries. Maximising the net economic return from the fishery may not always equate with maximising the profitability of the fishery. Net economic return may consider inter-annual stability to maintain markets, and economic activity may also arise from recreational and Indigenous fishing, and the need to share the resources appropriately will be considered where necessary. Priority objectives to achieve this goal include:

- maintain Pacific halibut female spawning biomass, above a female spawning biomass limit where the risk to the stock is regarded as unacceptable (SB_{LIM}), at least 95% of the time;
- maintain Pacific halibut female spawning biomass, at least 50% of the time, at or above a 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).

The harvest strategy will ensure fishing is conducted in a manner that does not lead to *overfishing*. Overfishing is defined as 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. Where it is identified that overfishing of the stock is occurring, action will be taken immediately to cease that overfishing and action taken to recover the overfished stock to levels that will ensure long-term sustainability and productivity to maximise NER.

The harvest strategy will also ensure that if the stock is overfished, the fishery must be managed such that, with regard to fishing impacts, there is a high degree of probability the stock will recover. If the stock is assessed to be below the female spawning biomass limit reference point (i.e. *overfished*), a stock rebuilding strategy will be developed to rebuild the stock to the limit female spawning biomass level, whereby the harvest control rules would then take effect to build the stock further to target female spawning biomass levels.

Overfished: when the estimated probability that female spawning stock biomass is below the limit reference point (SB_{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 HARVEST STRATEGY

The following requirements provide the basis for a transparent and systematic approach used when developing the harvest strategy to assist in meeting the objectives of the Harvest Strategy Policy.

3.1 ACCOUNTING FOR FISHING MORTALITY ON ALL SIZES AND FROM ALL SOURCES

The harvest strategy accounts for all known sources of fishing mortality on the stock and all sizes of Pacific halibut mortality, including directed commercial, recreational, subsistence, and fishing mortality under the management of another jurisdiction, such as non-directed fishing mortality. Discard mortality of released fish is accounted for using best available knowledge.

3.2 VARIABILITY IN THE ENVIRONMENT AND BIOLOGICAL CHARACTERISTICS

The productivity of Pacific halibut is affected by variability in the environment and by natural changes in biological characteristics. The environment fluctuates naturally and is altered due to climate change and other factors, which may affect biological characteristics such as size-at-age and recruitment of age-0 fish. The following types of variability were considered when developing the harvest strategy for Pacific halibut. Additional environmental linkages to the ecology and biology of Pacific halibut should be considered as knowledge improves.

- Variability in recruitment of age-0 Pacific halibut due to unknown causes
- Variability in average recruitment of age-0 Pacific halibut due to the environment (e.g. Pacific Decadal Oscillation, PDO).
- Variability in the distribution of age-0 recruits linked to the PDO.
- Changes in weight-at-age due to unknown causes
- Variability in movement throughout the Convention Area due to the environment (e.g. linked to the PDO).

The potential impacts of climate change were taken into account when developing the harvest strategy policy and future research on the potential effects of climate change on Pacific halibut fisheries and stocks will be incorporated as necessary.

3.3 MONITORING STANDARDS

[To be completed] This section describes standards for monitoring. For example, FISS, port sampling, catch monitoring, etc.

3.4 ESTABLISHING AND APPLYING DECISION RULES

The harvest strategy developed under this policy specifies all required management actions or considerations for Pacific halibut, at the stock or IPHC Regulatory Area level, necessary to achieve the ecological and economic management objectives for the fishery. Specifics are provided in Chapter 4.

3.5 BALANCING RISK, COST AND CATCH

This policy establishes a risk-based management approach, which provides for an increased level of caution when establishing control rules in association with increasing levels of uncertainty about stock status.

In the context of this policy, the risk, cost, and catch trade-off, refers to a trade-off between the amount of resources invested in data collection, analysis and management of Pacific halibut, and the level of catch (or fishing mortality) applied. Fishing mortality should always be constrained to levels at which scientific assessment indicates Pacific halibut is not exposed to an 'unacceptable ecological risk' (that is the risk that stocks will fall below the limit reference point).

The management decision to be taken in this context is whether investment of more resources in data collection and analyses and/or additional management will increase the understanding of the risk to a species or stock from fishing and provide confidence in the sustainability of a higher level of fishing pressure or catch. In the absence of this additional information–and associated improved understanding of a stock, it may be necessary to reduce the fishing effort in order to manage the risk. Decisions about investment in managing risk versus the economic return of the catch taken will be transparently made, clearly documented and publicly available.

3.6 REFERENCE POINTS AND PROXIES

A reference point is a specified level of an indicator used as a basis for managing Pacific halibut. The reference point should reflect acceptable levels of biological impact on the stock and the desired economic outcomes from the fishery. A reference point will often be based on indicators of either the total or female spawning stock size (relative or absolute spawning biomass), the amount of harvest (fishing mortality), or on other factors such as economic return from the fishery.

A harvest strategy for Pacific halibut shall be based on 'threshold' reference points and 'limit' reference points. A threshold reference point is a level that achieves the policy objectives if the indicator is at or above that level. When the stock is at or above a threshold reference point, optimal yield is possible. A biological limit reference point indicates a point beyond which the long-term health of the stock or the commercial fishery is considered unacceptable and should be avoided. Fishing when the Pacific halibut population is below the biological limit reference point places the Pacific halibut stock at a range of biological risks, including an unacceptable risk to recruitment and productivity, and an increased risk that the stock will fail to maintain its ecological function, although risk of extinction is not a major concern. A fishery limit reference point indicates a stock level below which the fishery is unlikely to remain profitable. Proxy reference points are described in Table 1.

Spawning biomass reference points may be dynamic or absolute calculations. A dynamic calculation pertains to relative spawning biomass (RSB) being relative to the spawning biomass that would have occurred if fishing had not occurred, but other variability had occurred (e.g. recruitment deviations, changes in size-at-age, etc). This measures the effect of only fishing, rather than the effect of fishing and the environment. An absolute spawning biomass is typically a specified spawning biomass level and may be presented as a number or a value estimated in a particular year. An absolute spawning biomass may be useful as a threshold reference point where being below would result in low catch rates and possibly other concerns. Currently there are no absolute spawning biomass reference points, but they may be a useful contrast to dynamic reference points.

Table 1. Proxy reference points

Reference point	Definition	Proxy
Threshold reference point SB_{THRESH}	The female dynamic spawning biomass level at maximum economic yield (SB_{MEY})	36% of the unfished spawning biomass ($SB_{36\%}$).
Biological limit reference point SB_{LIM}	The female dynamic spawning biomass level where the ecological risk to the population is regarded as unacceptable (i.e. at least 95 percent of the time)	20%of the unfished female spawning biomass ($SB_{20\%}$).

3.7 TECHNICAL EVALUATION OF THE HARVEST STRATEGY

A harvest strategy should be formally tested to demonstrate that it is highly likely to meet the objective and key principles of this policy, and outcomes of that testing should be made publicly available. Management strategy evaluation (MSE), a procedure where alternative management strategies are tested and compared using simulations of stock and fishery dynamics, is one of the best options to test harvest strategies. An MSE should incorporate variability and uncertainty, such as described in Section 3.2, structural uncertainty in operating models (OMs), and represent spatial fishing sectors appropriately. An accepted harvest strategy should, at a minimum, be evaluated using MSE and meet the priority objectives outlined in Chapter 2.

MSE involves determining objectives, identifying MPs to evaluate, simulating those MPs with a closed-loop simulation framework, evaluating the MPs to determine which one best meets the objectives, and finally adopting that MP as part of the harvest strategy. This process takes input from stakeholders through meetings of the Management Strategy Advisory Board (MSAB) and is reviewed by the IPHC Scientific Review Board (SRB).

3.8 RE-EVALUATING THE HARVEST STRATEGY AND MANAGEMENT PROCEDURE

A harvest strategy is a transparent and science-based approach to determining mortality limits and is meant to remain in place for many years. Frequent modifications or departures from the harvest strategy reduce the transparency and science-based approach. Therefore, it is important to specify, as part of the harvest strategy, time periods for re-evaluation of management procedures and to identify exceptional circumstances that would trigger a re-evaluation before that time period.

The IPHC currently operates of a schedule of three-years for full stock assessments, with update stock assessments in the intervening two years, and the MSE OM is updated following each full stock assessment to maintain consistent approaches and paradigms. Therefore, MPs are re-evaluated at a minimum of three years after implementation, if needed. An exceptional circumstance may trigger a re-evaluation before then and are defined as follows.

- The coastwide all-sizes FISS WPUE or NPUE from the space-time model is above the 97.5th percentile or below the 2.5th percentile of the simulated FISS index for two or more consecutive years.
- The observed FISS all-sizes stock distribution for any Biological Region is above the 97.5th percentile or below the 2.5th percentile of the simulated FISS index over a period of two or more years.
- Recruitment, weight-at-age, sex ratios, other biological observations, or new research indicating parameters that are outside the 2.5th and 97.5th percentiles of the range used or calculated in the MSE simulations.

Exceptional circumstances would be reviewed by the SRB to determine if one should be declared.

In the event that an exceptional circumstance is declared, the following actions are to be completed.

- A review of the MSE simulations to determine if the OM can be improved and MPs should be re-evaluated.
- 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.
- Further consult with the SRB and MSAB after simulations are complete to identify whether a new MP is appropriate.

MSE work is currently ongoing to supplement this interim harvest strategy policy. Current elements of MPs being investigated include not conducting a stock assessment every year and using an empirical rule based on the FISS WPUE in years without a stock assessment to determine the coastwide TCEY. With the harvest strategy currently being evaluated, updates to this interim harvest strategy policy may occur before three years.

Chapter 4 APPLYING THE HARVEST STRATEGY

4.1 JOINTLY-MANAGED DOMESTIC STOCKS

Consistent with the *Protocol amending the Convention between Canada and the United States of America for the preservation of the [Pacific] halibut fishery of the northern Pacific Ocean and Bering Sea* (1979), the IPHC will pursue the sustainable use of Pacific halibut within fisheries managed by other jurisdictions.

4.2 JOINTLY-MANAGED INTERNATIONAL STOCKS

The IPHC Harvest Strategy Policy does not prescribe management arrangements in the case of fisheries that are managed by a Party external to the IPHC Convention. This includes management arrangements for commercial and traditional fishing in the US Treaty Tribes and Canadian First Nations, that are governed by provisions within relevant Treaties. However, it does articulate the IPHC preferred approach.

4.3 STOCK ASSESSMENT

[To be completed] The stock assessment occurs annually, although a full stock assessment, investigating all aspects and potentially making major changes, occurs triennially. The stock assessment will include a summary of the data available for analysis, estimates of current stock size and trend relative to reference points, and short-term projections of various risk metrics (probability of stock decrease, probability of exceeding fishing intensity reference points, etc.) under different levels of future harvest.

4.4 COASTWIDE MORTALITY LIMIT

The coastwide mortality limit is determined using the stock assessment and a fishing intensity (i.e. F_{SPR}) defined by a harvest control rule (Figure 3). The stock assessment estimates the stock status which is used in the harvest control rule to determine if fishing intensity should be reduced from a reference SPR of 43%. The reference SPR is linearly reduced when the stock status is estimated below 30% and is set to 100% (no fishing for directed fisheries) when the stock status is estimated at or below 20%.

4.5 REBUILDING IF THE STOCK BECOMES OVERFISHED

If Pacific halibut is determined to be overfished (when the probability that female spawning stock biomass is below the limit reference point (SB_{LIM}) is greater than 50%), immediate action is required to cease directed fishing and rebuild the stock to levels that will ensure long-term sustainability and productivity, i.e. at or above SB_{LIM}. 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.

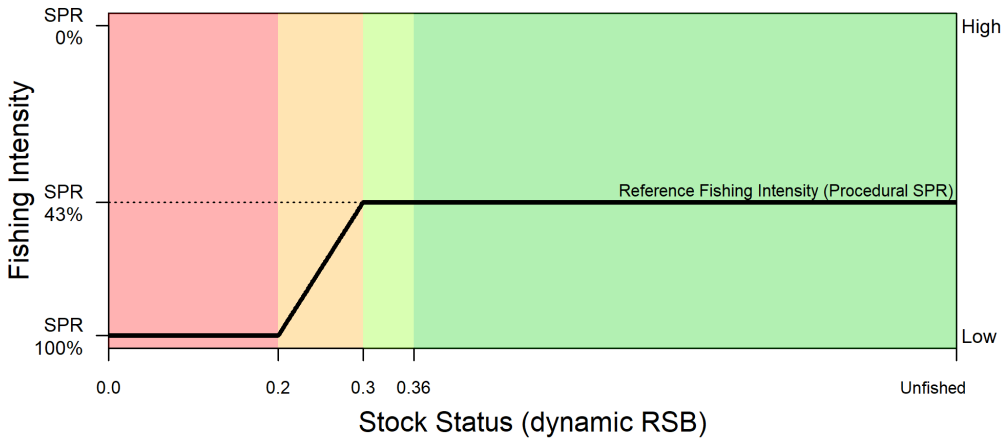

Figure 3. Harvest control rule for the fishing intensity (i.e. F_{SPR}) to determine the coastwide total mortality limit. The stock status is the dynamic relative spawning biomass (RSB) determined from the stock assessment. The reference fishing intensity is $F_{SPR=43\%}$, and is applied when stock status is above the trigger of 30%. SPR is linearly reduced between a stock status of 30% and 20%, and set to 100% when at or below 20% (no directed fishing). A stock status of 20% is also the reference point SB_{LIM}. The threshold RSB, 36%, is related to an objective to maintain the relative spawning biomass at or above $SB_{36\%}$ at least 50 percent of the time. Colours show the area below B_{LIM}, the area 'on the ramp', the area above the trigger and below SB_{THRESH}, and the area above SB_{THRESH}.

Directed fishing and incidental mortality of Pacific halibut, if determined to be overfished, should be constrained as much as possible to levels that allow rebuilding to the limit reference point (SB_{LIM}) within the specified timeframe. Once a stock has been rebuilt to above the limit reference point with a reasonable level of certainty, it may be appropriate to recommence directed fishing, and increase incidental mortality in line with the harvest strategy, noting that the usual harvest strategy requirements regarding the application of the harvest control rule and risk of breaching the limit reference point will apply.

The rebuilding strategy should note where sources of mortality exist that cannot be managed or constrained by the IPHC, and must take this mortality into account. Where practical and appropriate, the IPHC will work with other jurisdictions to ensure other sources of mortality from fishing are reasonably constrained consistent with any catch sharing arrangement.

When a rebuilding strategy is being developed, it must include performance measures and detail on how and when these measures will be reported on. Where there is no evidence that a stock is rebuilding, or is going to rebuild in the required timeframe and probability, the IPHC will review the rebuilding strategy and make the result of the review public. If changes to the rebuilding strategy are considered necessary, such changes should be made in a timely manner.

4.5.1 Rebuilding timeframes

Rebuilding timeframes are explicitly related to the minimum timeframe for rebuilding in the absence of commercial fishing. Rebuilding timeframes should take into account Pacific halibut productivity and recruitment; the relationship between spawning biomass and recruitment; and the stock's current level of depletion.

4.6 MORTALITY LIMITS FOR EACH IPHC REGULATORY AREA

The final outputs of the harvest strategy policy before domestic management is applied are mortality limits for each IPHC Regulatory Area. This component (Figure 2) is part of the harvest strategy but is not part of the management procedure because it is subject to negotiation and decision-making. During this process, the coastwide mortality limit may change as well, which has been accounted for in the MSE by incorporating decision-making variability.

Reference mortality limits for each IPHC Regulatory Area are useful for the decision-making process. These are determined using the coastwide TCEY, stock distribution estimated from the FISS observations, and defined relative harvest rates for each IPHC Regulatory Area (1.0 for IPHC Regulatory Areas 2A, 2B, 3C, and 3A, and 0.75 for IPHC Regulatory Areas3B, 3A, 4CDE, and 4B). Using stock distribution provides insight into where biomass is distributed, and lower relative harvest rates in western areas protects biomass that may still move to eastern areas and may have lower sustainable harvest rates.

4.7 COMMON OUTPUTS USED FOR DECISION-MAKING

Two outputs are produced as part of the harvest strategy policy to assist the decision-making process at the Annual Meeting (Figure 2): a *mortality table* and a *decision table*.

Mortality table: The mortality table uses the output of the harvest strategy, mortality limits for each IPHC Regulatory Area, and defines the mortality limits for each sector within each IPHC Regulatory Area. Domestic catch-sharing plans and Commission agreements on projecting non-directed discard mortality are used to fill out the details. This table can be produced for any projected year, but is commonly presented for only the first projected year.

Decision table: The decision table is a stock assessment output that provides risk relative to stock trend, stock status, fishery trends, and fishery status for a range of coastwide mortality levels. The decision table is not dependent on the harvest strategy, although the reference F_{SPR} is a provided as a central point of the range and allocation of mortality among IPHC Regulatory Areas and sectors may have a small influence. Alternative coastwide mortality limits are presented on either side of the reference mortality limit. The decision table presents probabilities for different metrics over a three-year projection period.

4.8 STAKEHOLDER AND SCIENTIFIC INPUT

Stakeholder and scientific input into the application of the harvest strategy are an important process to support the sustainable and profitable management of the Pacific halibut fishery. Input from both of these sources occurs at meetings throughout the year.

4.8.1 Stakeholder input

Stakeholder input can occur via public testimony at any public IPHC meeting or at meetings of various IPHC subsidiary bodies. In particular, the MSAB, Research Advisory Board (RAB), Conference Board (CB), and Processor Advisory Board (PAB) are populated by individuals representing various interests related to Pacific halibut. Terms of reference and rules of procedure are provided for each subsidiary body.

MSAB: The Management Strategy Advisory Board suggests topics to be considered in the MSE process, provide the IPHC Secretariat with direct input and advice on current and planned MSE activities, and

represent constituent views in the MSE process. The MSAB meets at least once per year before the Annual Meeting.

CB: The Conference Board consists of individuals representing Pacific halibut harvesters, organisations, and associations, and provides a forum for the discussion of management and policy matters relevant to Pacific halibut and provides advice to the Commission on these matters. The CB also reviews IPHC Secretariat reports and recommendations, regulatory proposals received by the Commission, and provide its advice concerning these items to the Commission at its Annual Meeting, or on other occasions as requested. The CB meets during the week of the Annual Meeting.

PAB: The Processor Advisory Board represents the commercial Pacific halibut processing industry from Canada and the United States of America and advises the Commission on issues related to the management of the Pacific halibut resource in the Convention Area. The PAB meets during the week of the Annual Meeting.

RAB: The Research Advisory Board, composed of members of the Pacific halibut community, suggests research topics to be considered for incorporation in the IPHC integrated research and monitoring activities and comments upon operational and implementation considerations of those research and monitoring activities. The RAB also provides the IPHC Secretariat staff with direct input and advice from industry on current and planned research activities contemplated for inclusion in the IPHC 5-Year program of integrated research and monitoring. The RAB meets once per year, typically before the Interim Meeting.

4.8.2 Scientific input

Scientific input occurs through independent, external reviews, including, but not limited to, semi-annual meetings of the Scientific Review Board (SRB). The SRB reviews science/research proposals, programs, products, strategy, progress, and overall performance, as well as the recommendations arising from the MSAB and RAB.

4.9 ANNUAL PROCESS

A series of meetings occurs throughout the year, leading up the Annual Meeting in January when mortality limit decisions are made. The MSAB meets at least once a year in spring to provide guidance on the MSE and may also meet in autumn if necessary. The SRB meets in June and September to peer review IPHC science products, including the stock assessment and MSE. The CB and the PAB meet during the week of the Annual Meeting to advise the Commission on issues related to the management of the Pacific halibut resource in the Convention Area.

An Interim Meeting, typically late November, precedes the Annual Meeting and is when the stock assessment, stock projections, and harvest decision table are first presented. The final stock assessment, stock projections, and harvest decision table are presented at the Annual Meeting, typically in late January, to support mortality limit decisions.