



Updating the Interim Harvest Strategy Framework for tuna in IAW

5th Harvest Strategy Stakeholder Workshop

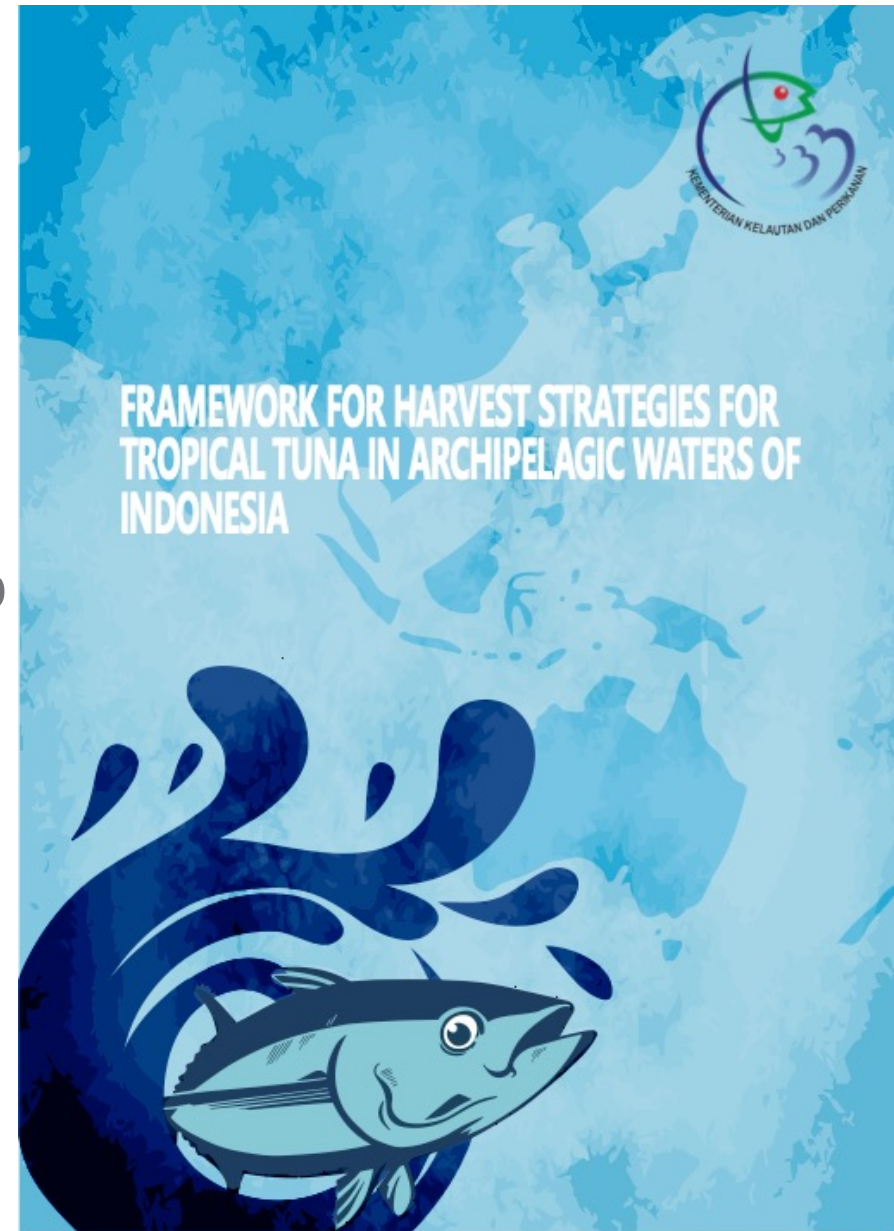
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8th Technical Workshop for Tuna Harvest Strategy in IAW, Bogor, 21-22 November 2022, F2F and Online.



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Objectives and Reference Points – What have we completed?

Objective

“to ensure the sustainability of yellowfin tuna, bigeye tuna and skipjack tuna resources” through harvest strategy implementation”.



Limit Reference Point

*“To maintain spawning stock biomass above **0.2** of the unfished level with a probability of **90%**.”*



Target Reference Point

- To be decided.
- Generally, focused on economic and social indicators, such as level of catch, CPUE, stability of operating environment.
- MSE can provide concrete options for stakeholders to select preferred TRP in 2023.





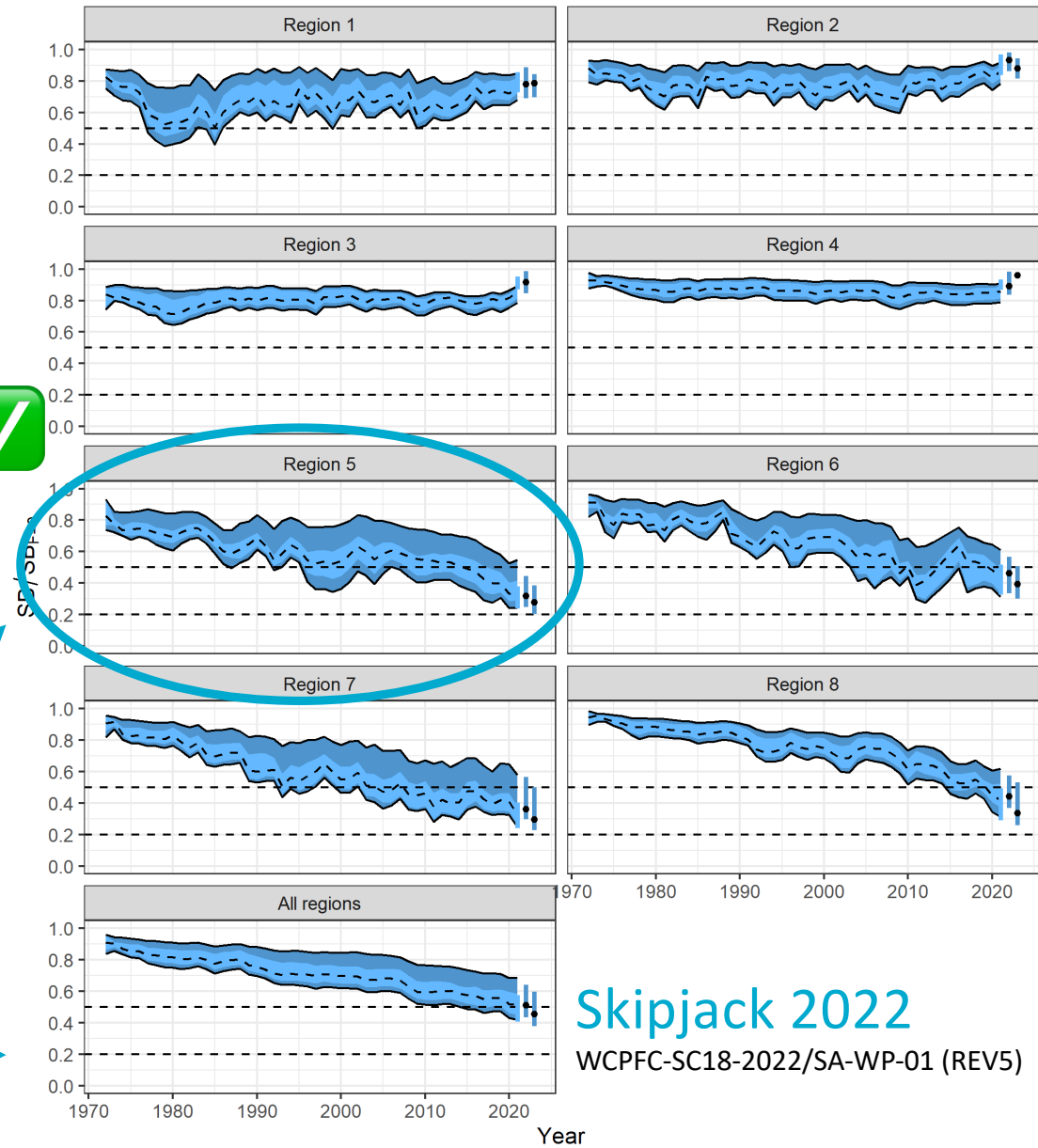
Stock Assessment – measuring performance

- Source of “best estimates” of stock status
- Basis to compare performance of Harvest Strategy implementation stock status to reference points



Region 5, for performance of HS in IAW

All regions, for WCPO stock status



Skipjack 2022
WCPFC-SC18-2022/SA-WP-01 (REV5)

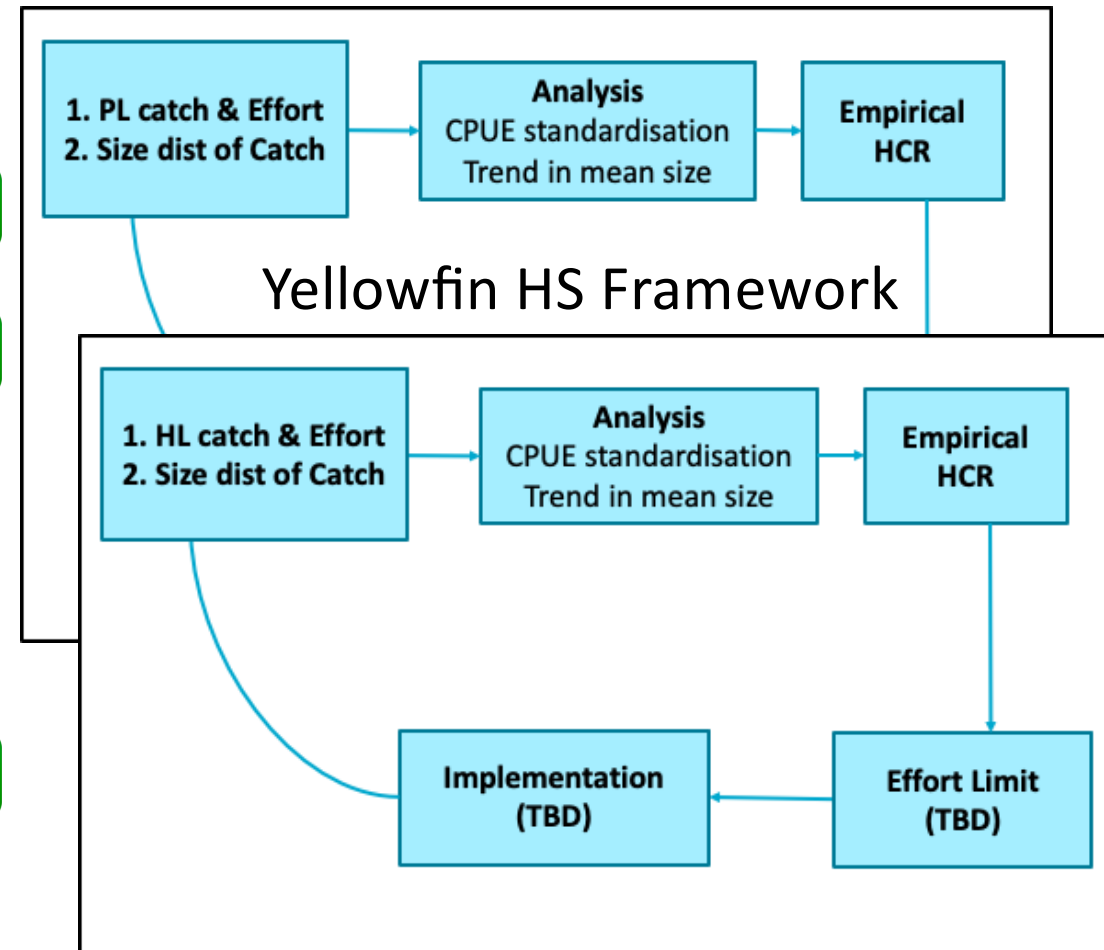


Empirical Harvest Strategies

- An empirical harvest strategy for IAW
 - **Uses monitoring data directly from the fishery.**
 - **Empirical Harvest Control Rule** based on trends in the monitoring indices.
 - The Harvest Control Rule is **calibrated to meet the objectives** of the HS as part of the simulation testing in the Management Strategy Evaluation process.
- Decision on specific management measures and implementation.
- Empirical Harvest Strategies are accepted by global fisheries certifiers.
 - E.g. Sth African Hake, Eastern Tuna and Billfish, Northern Banana Prawn.



Skipjack HS Framework





Management Strategy Evaluation

- Simulation models developed to compare performance of different forms of HS under range of plausible conditions and scenarios for IAW that are consistent with WCPO stock assessments.
- Empirical Harvest Strategies using general effort management measures have been tested using monitoring data and selectivity from Indonesian fleets
- Need more specific definition of management measures for implementation
- Have not considered catch-based (output) management measures
- Have not included “implementation uncertainty” in simulations to date
- Harvest Strategy tested by MSE considered best practice by MSC 3.0



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Updates of operating model and preliminary results of Management Strategy Evaluation to evaluate relative performance of harvest strategies for yellowfin tuna fisheries in Indonesia

Technical report prepared for the Harvest Strategy Technical Working Group (TR4-2021)

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Management Measures and regulation

- Under Harvest Strategy, the level of fishing will be adjusted adaptively in response to monitoring data
- Need for short-term reduction in fishing
- Review of legislation and regulations by DGCF
 - Identified actions required/ /challenges to implementation of operational management measures
- In consultation with stakeholders, develop specific operational management measures that can be implemented in practice.
- Allocation, quota and measurable fishing policy
 - Clarify relationship between allocation of access and HS implementation, including implementation schedule
 - Clarify monitoring and compliance arrangements and resourcing for effort/catch monitoring





HS Implementation – Initial draft of priority activities

Element of Harvest Strategy Framework	Priority Activities
Objectives and Reference Points	Decide Target Reference Point
Stock Assessment	Complete. Regular update of WCPO Stock Assessments
Empirical Harvest Strategies	Secure funding to continue and expand ongoing catch monitoring
	Specify range of % and frequency of change in fishing
	Specify practical catch and effort management measures in more detail
Management Strategy Evaluation	Modify MSE models for catch-based management measures
	Update MSE models with outputs from recent SKJ and YFT stock assessments
	Implement more specific management measures, including implementation uncertainty
Management Measures	Refine proposal for short-term reduction in fishing, prior to HS implementation, given stock indicators and increasing trend in catches
	Develop specific operational management measures that can be implemented in practice
	Review and implement monitoring and compliance with management measures
	Improve integration of allocation and PIT policy with HS implementation for tuna fisheries
Targeted Research	Complete population biology for SKJ, YFT, BET to provide Indonesian specific population parameters for MSE and management measures
	Develop integrated strategy for social and economic research to increase understanding and monitor and evaluate HS implementation



Thank you to everyone involved and supporting the tuna Harvest Strategy development and implementation.



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FRAMEWORK FOR HARVEST STRATEGIES FOR TROPICAL TUNA IN ARCHIPELAGIC WATERS OF INDONESIA

