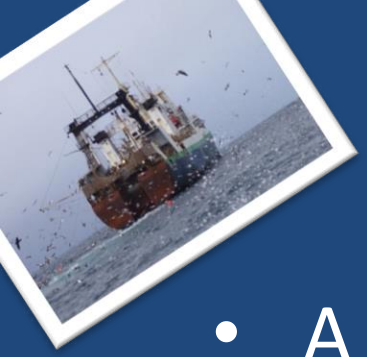
Fishing for the Future:
Harvest Strategies & the TTD

May 11, 2020

THE OCEAN FOUNDATION

Shana Miller
Senior Officer
International Fisheries Conservation
The Ocean Foundation



What is a Harvest Strategy?

- A pre-agreed framework for making management decisions
- Evaluated and selected using management strategy evaluation
- Also known as a Management Procedure

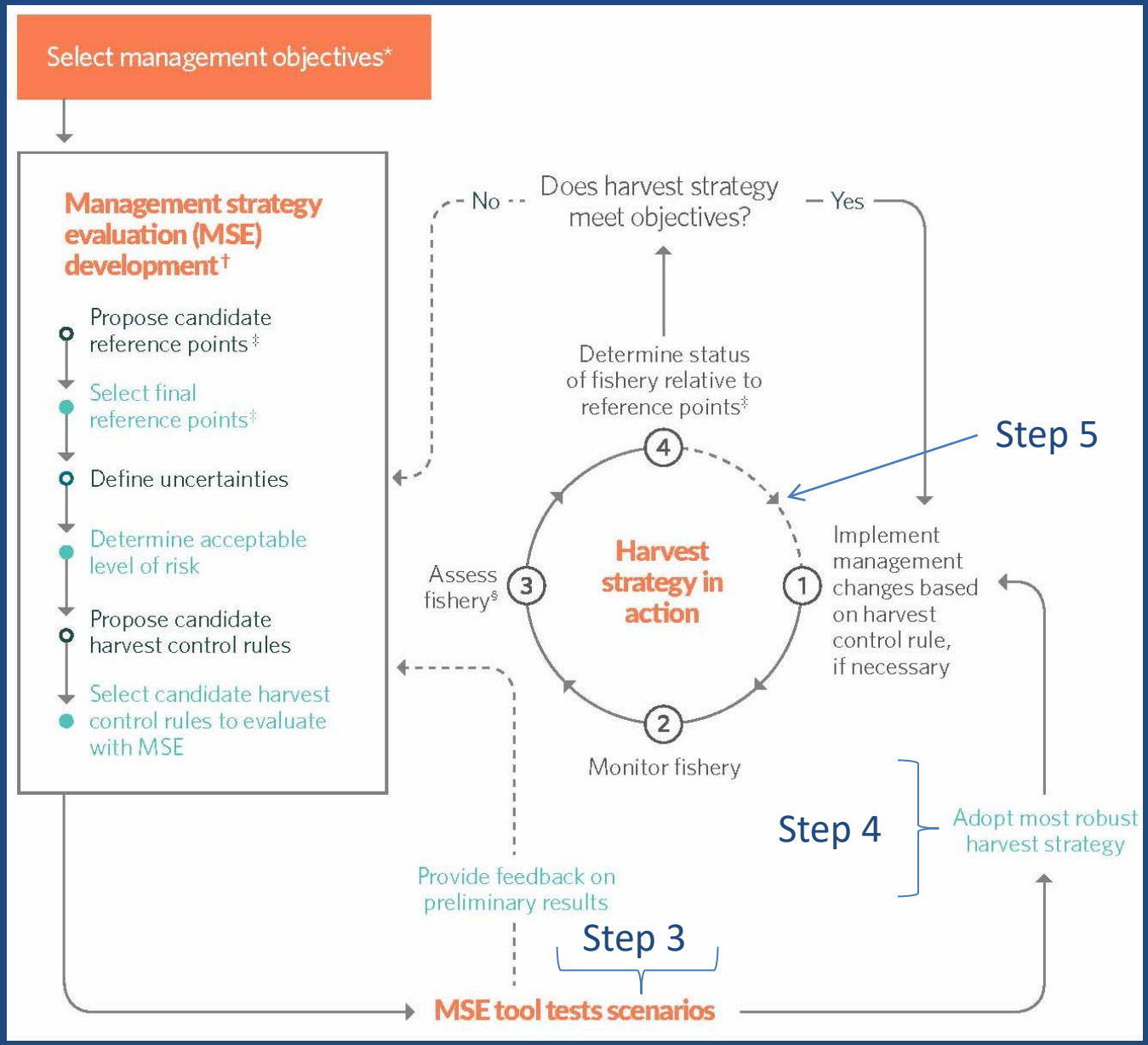
Why Harvest Strategies?

- Offset natural variability, scientific uncertainty and political influence
- Account for risk and balance trade-offs
- Increase transparency, predictability and market stability
- Facilitate swift, efficient management to ensure resource health and industry profitability
- Effectively implement the precautionary approach (UNFSA, MSC)

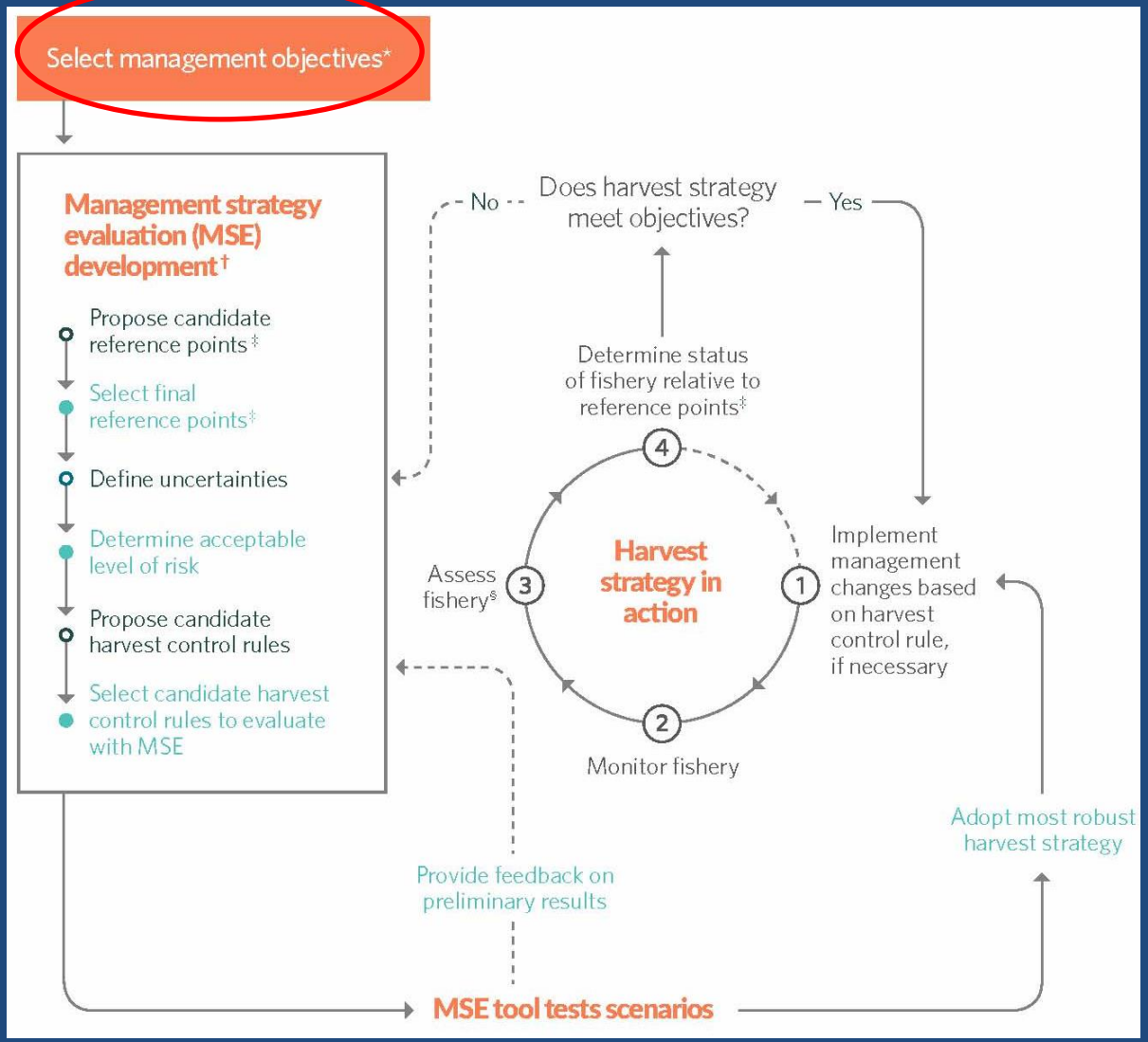
HS AND THE TTD

- Environmental Sustainability: Robust science-based management plans, including harvest strategies that can maintain stocks at, or restore them at least to, levels which can produce maximum sustainable yield
- Government Partnership: Implement harvest strategies for all tuna stocks under the jurisdiction of each tuna RFMO by 2020, that will ensure sustainably managed tuna fisheries

Harvest Strategy Development



Management Objectives

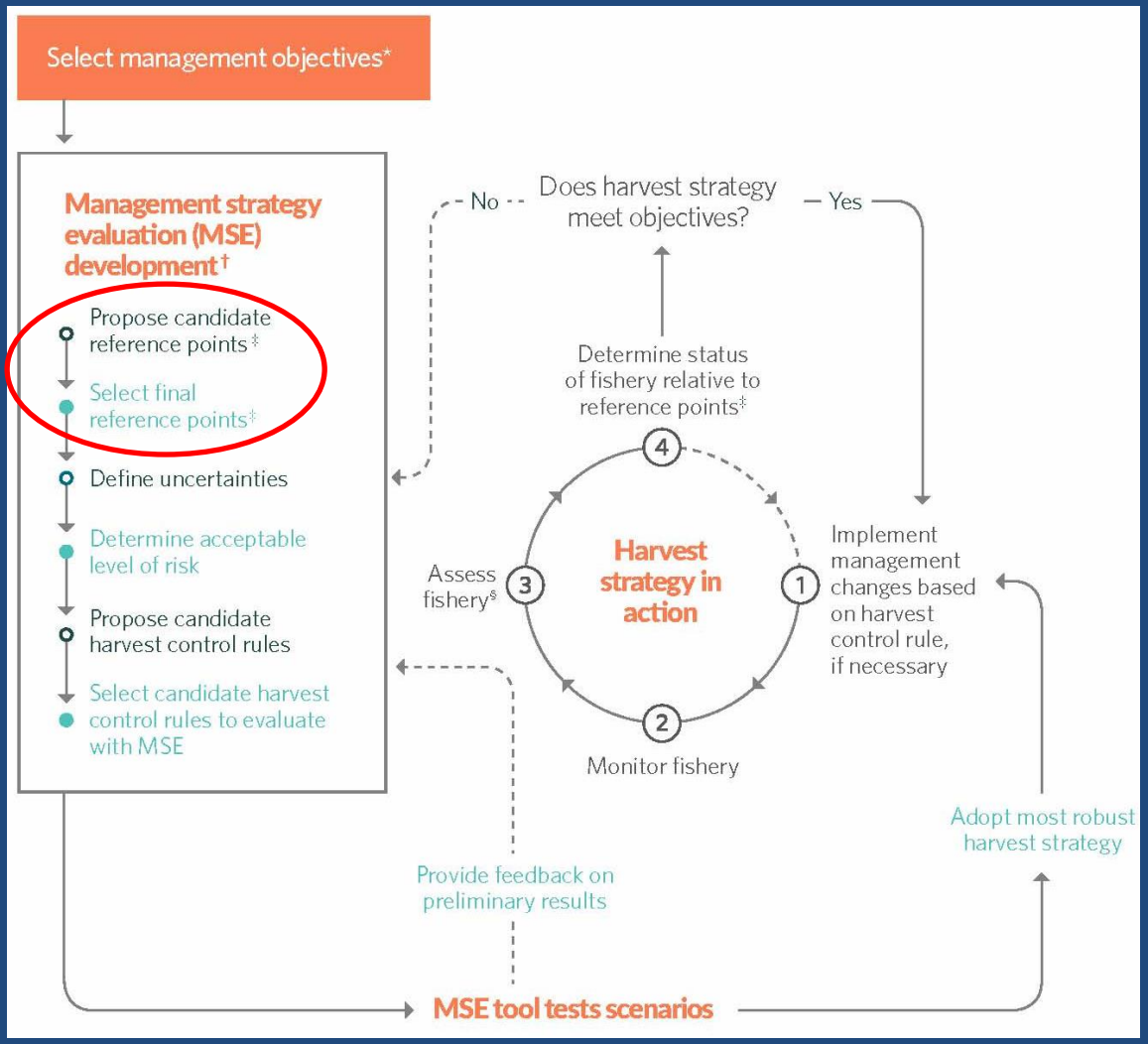


- **Consistent with Convention objectives**
- **Specific and measurable**
- **Probabilities & timelines**
- **Can be weighted by priority**

Types of Management Objectives

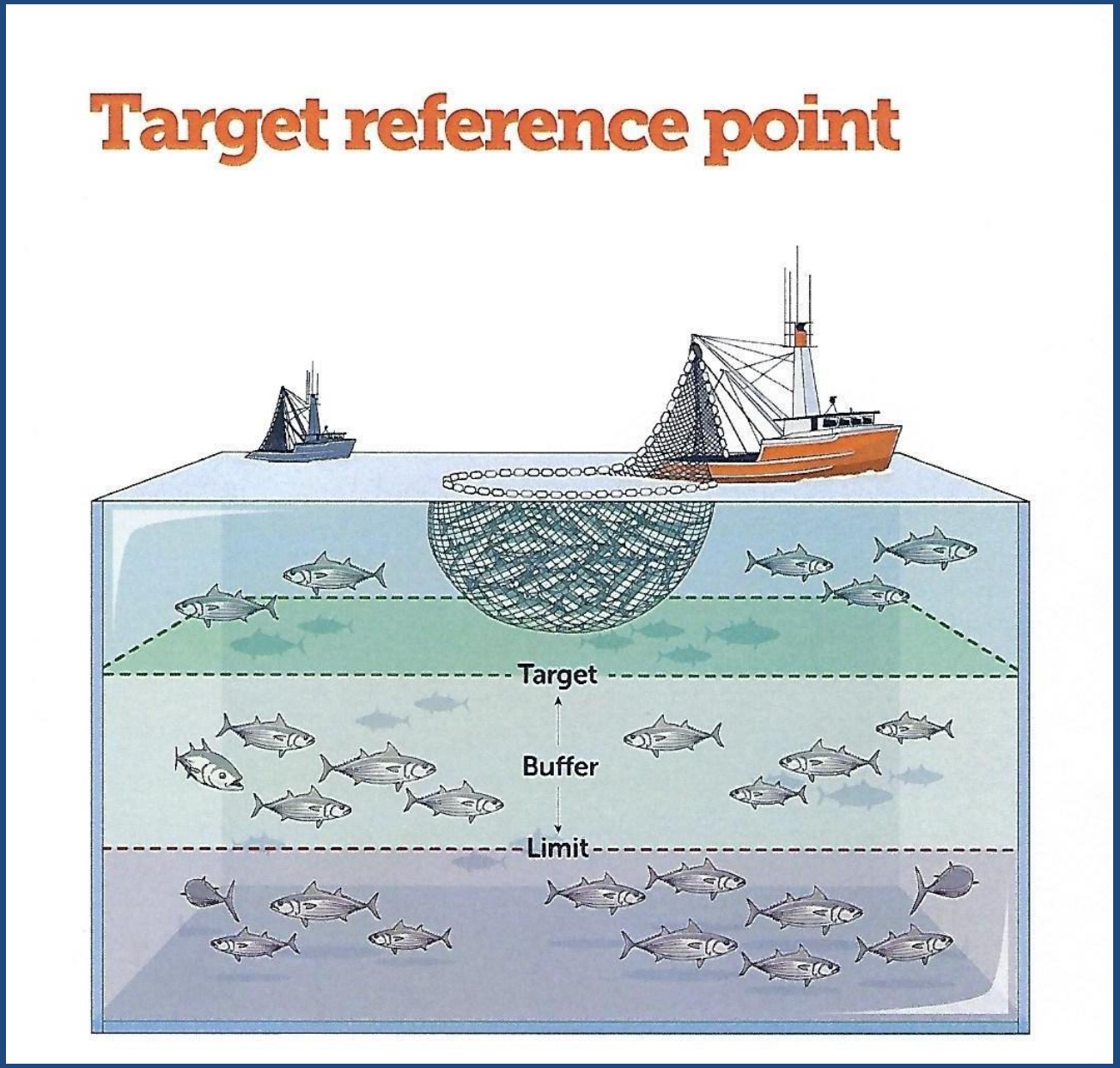
- Status: Healthy stock level
- Safety: Avoid dangerously low level
- Yield: Maximize catch
- Abundance: Maximize catch rates
- Stability: Minimize change in catches from year to year

Reference Points

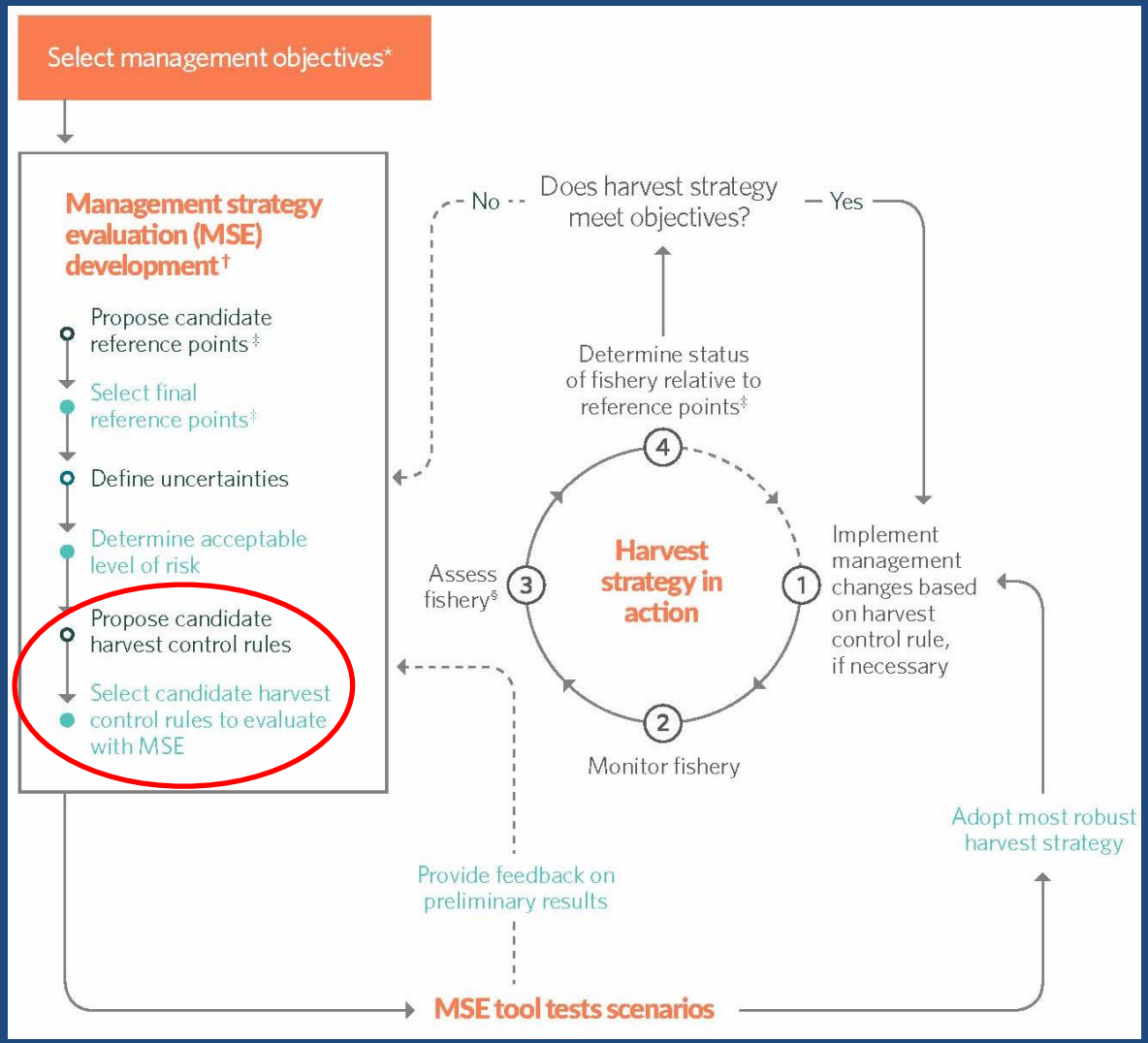


- **Benchmarks used to compare the current status of a fishery to a desirable (or undesirable) state**

Reference Points

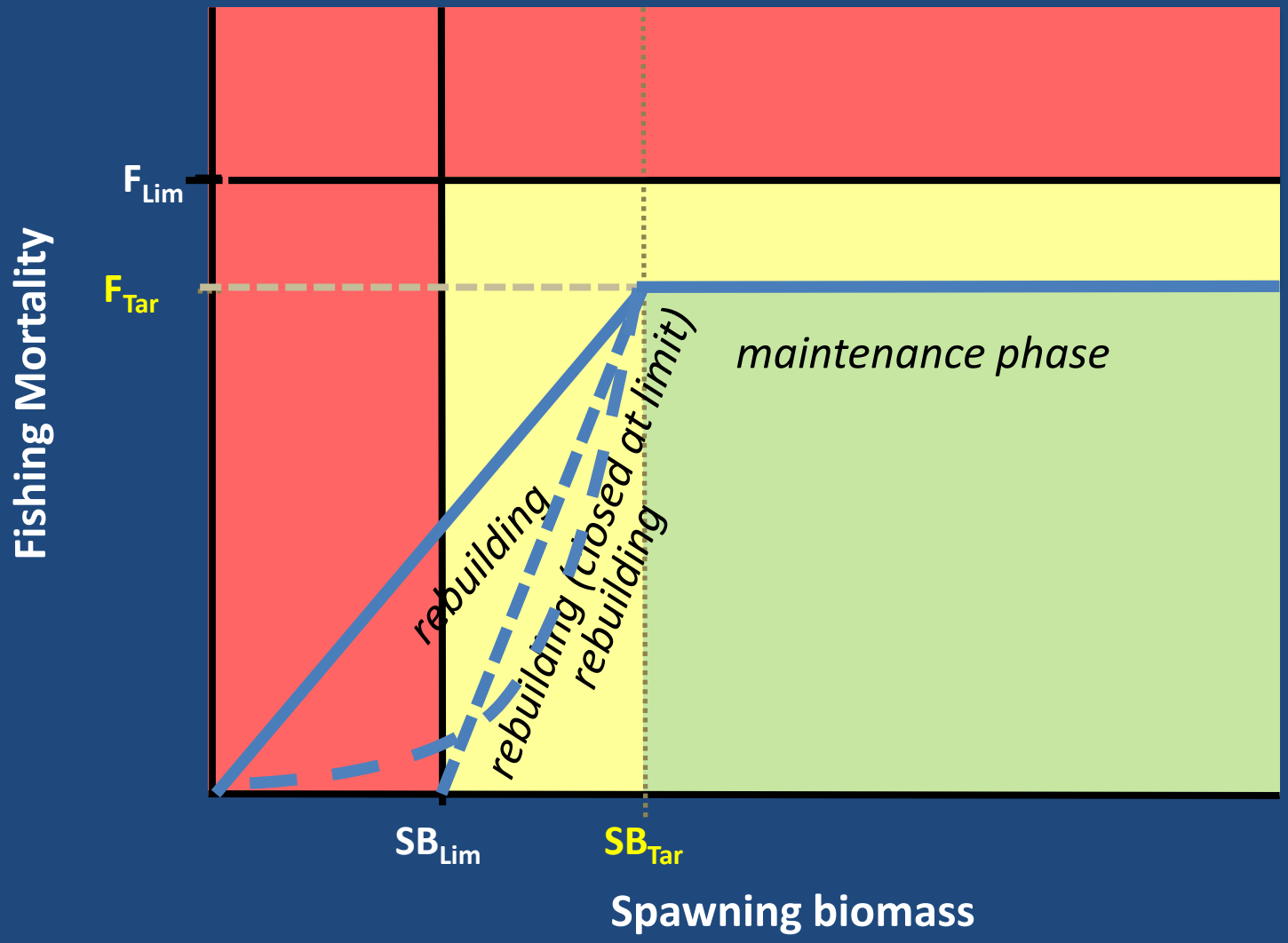


Harvest Control Rule

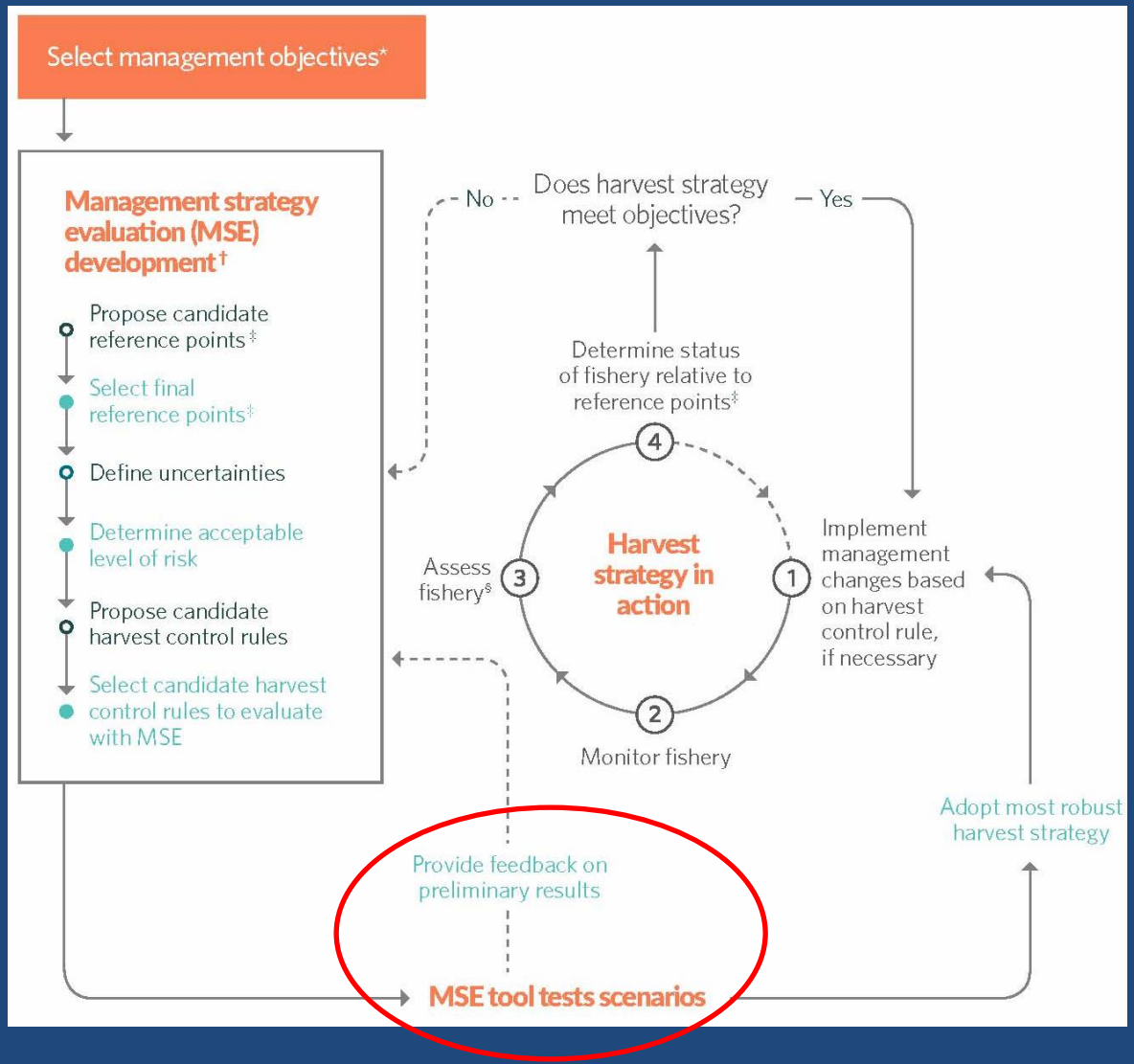


- An agreed rule that prescribes management action based on an indicator of stock status

Harvest Control Rule

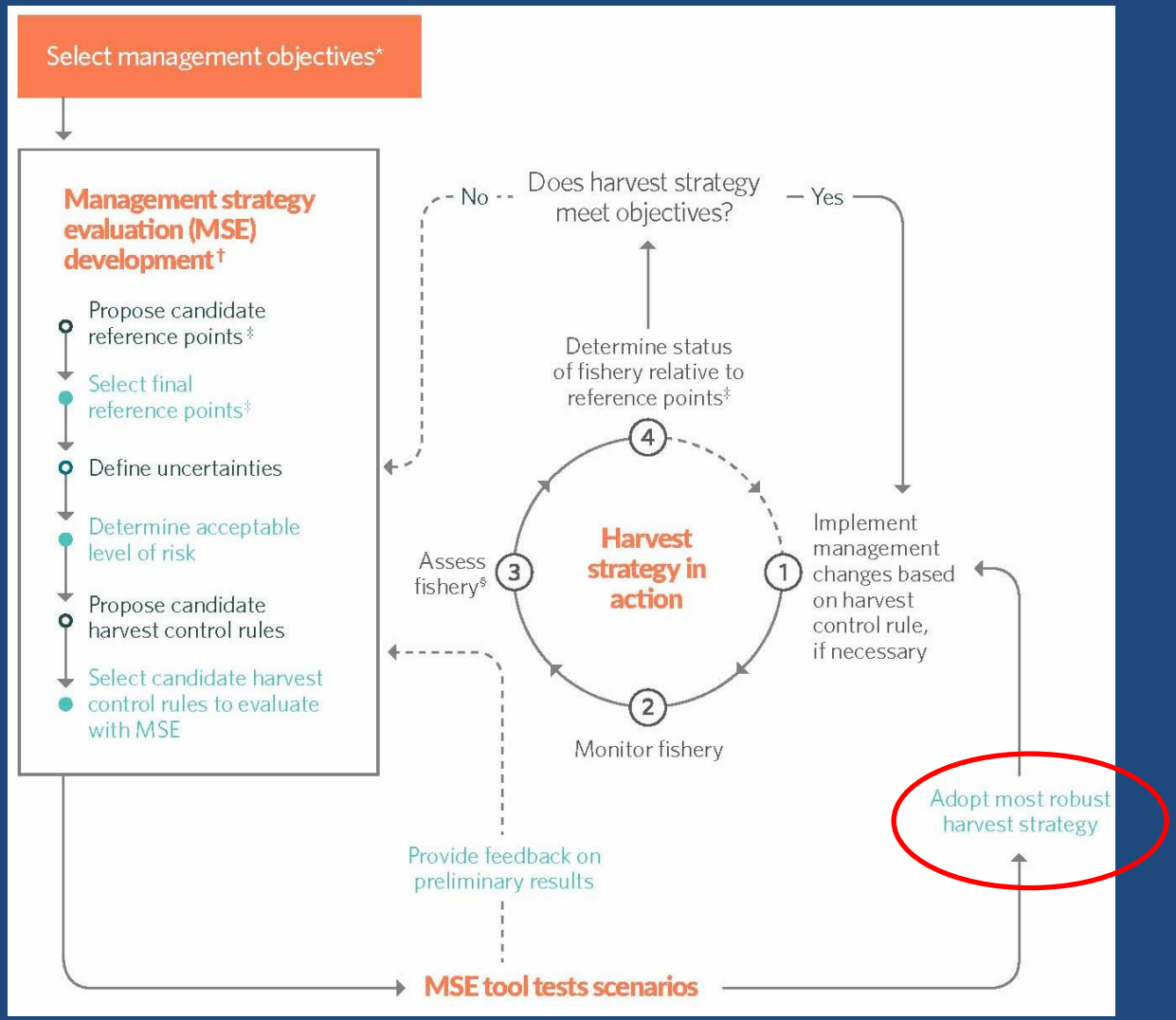


Management Strategy Evaluation



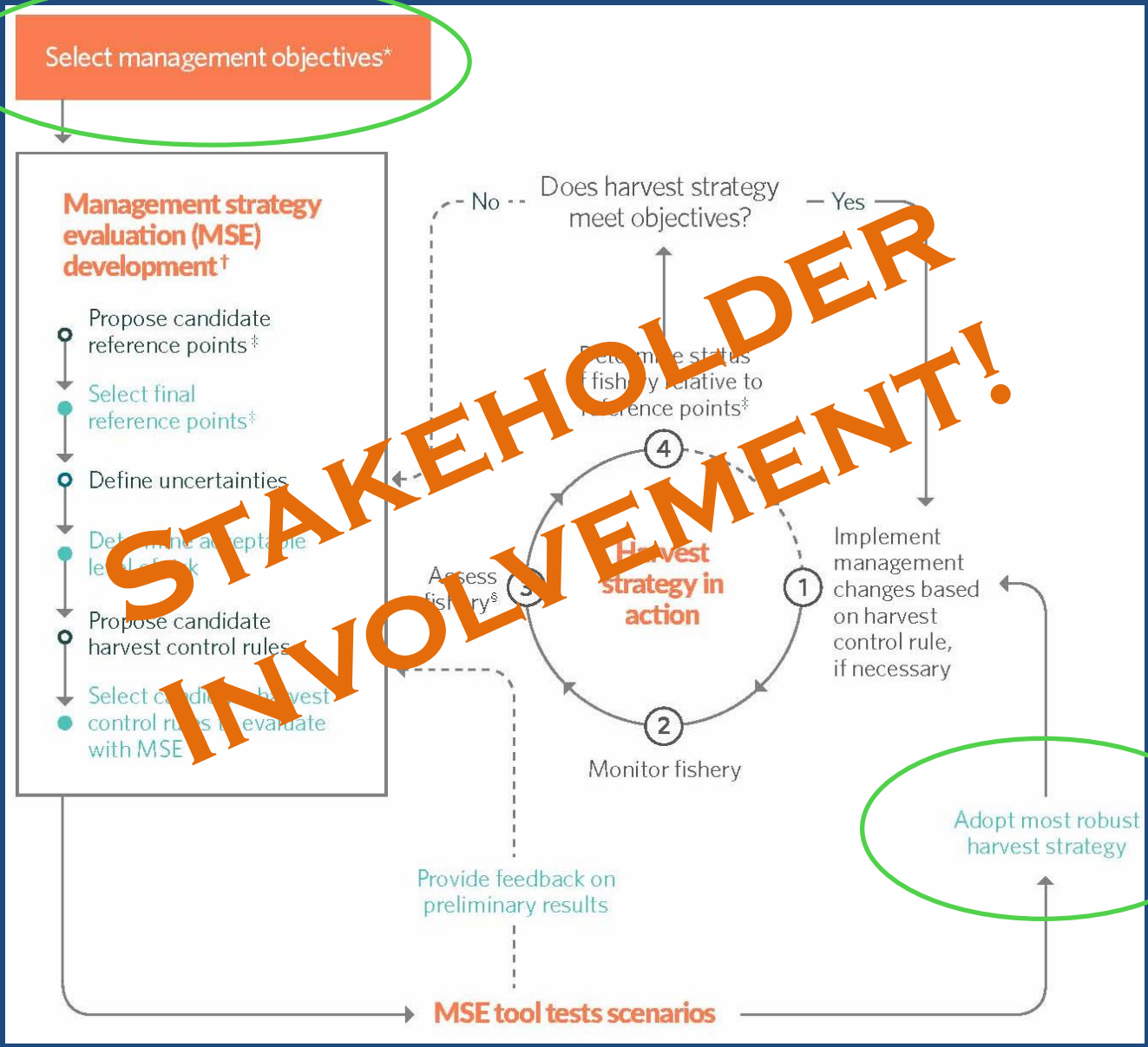
- **Uses a simulation tool to measure the performance of harvest strategies given uncertainties**
- **Balances trade-offs of competing management objectives**
- **The process for developing harvest strategies**

ADOPTION!



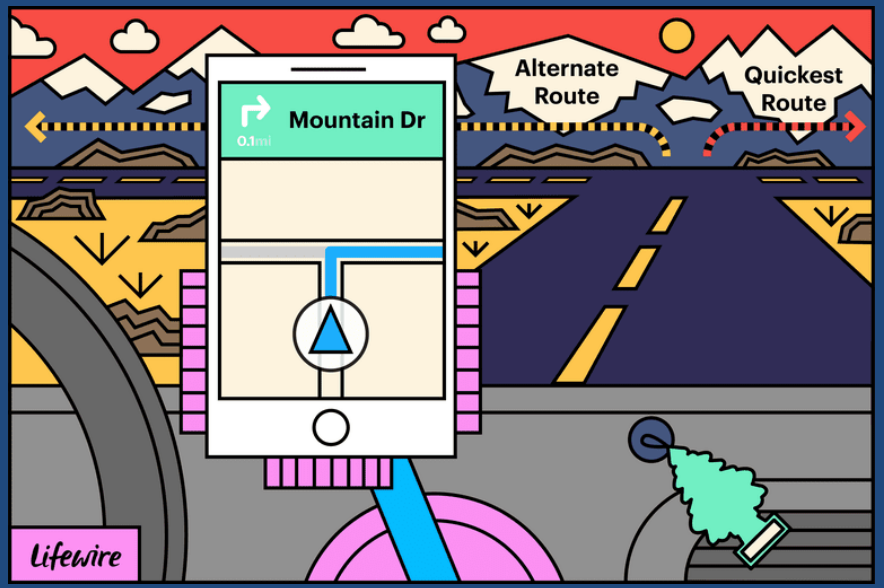
- **Input from scientists-managers dialogue group**
- **MSE results**
- **Advocacy from stakeholders!**

Control Over First & Last Steps



Control Over First & Last Steps

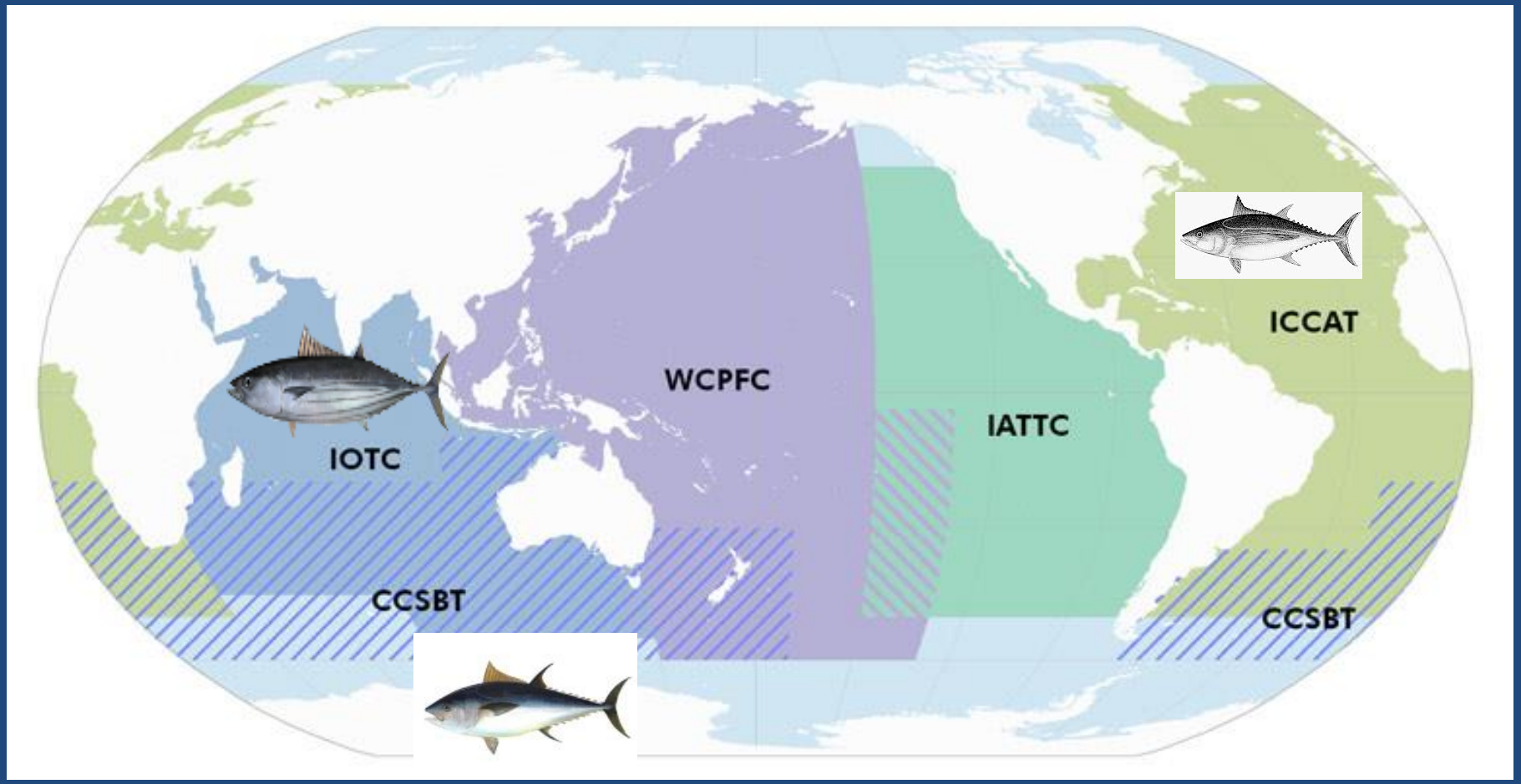
- What is our vision for the fishery?
- How do we want to get there?



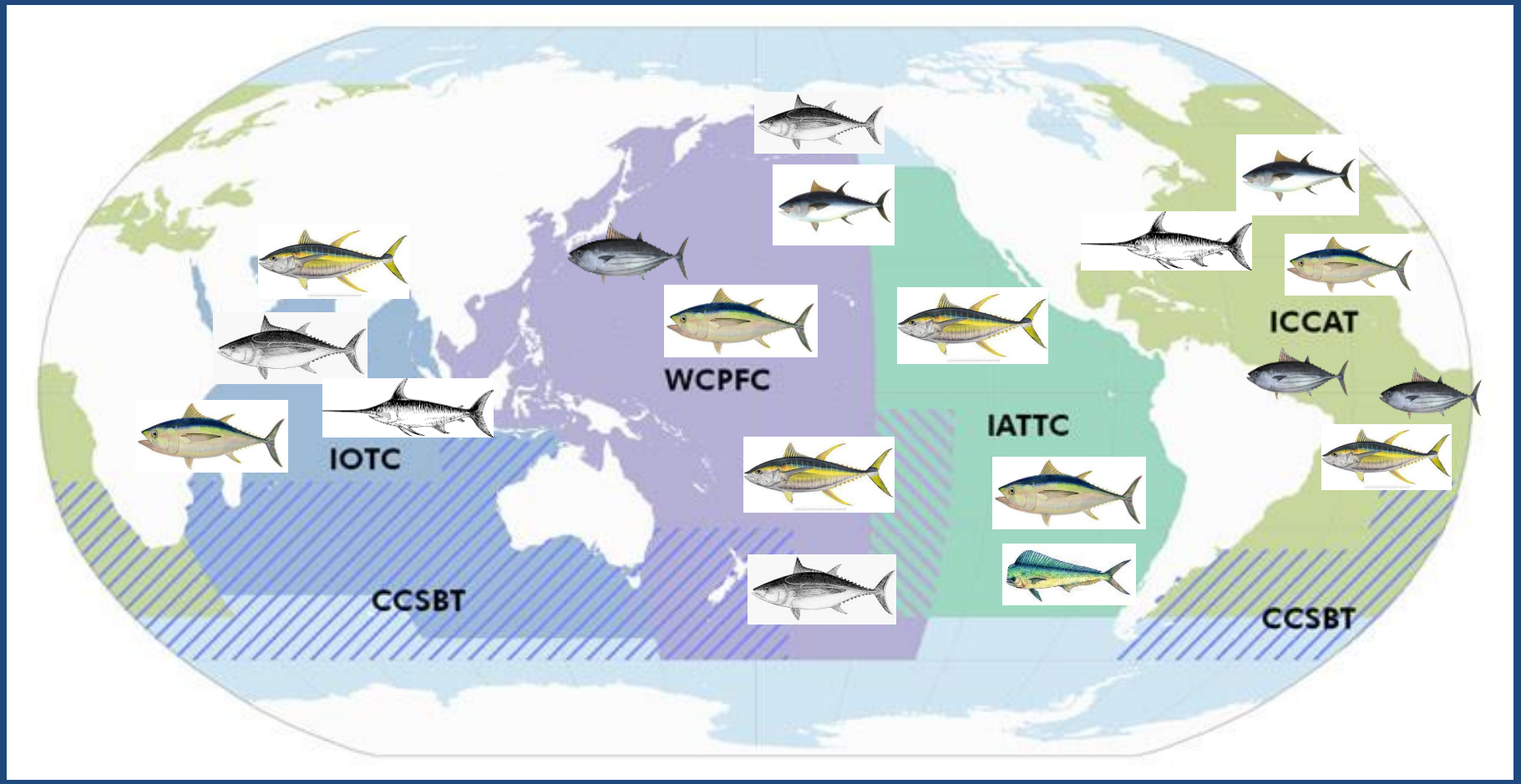
The Feedback Loop

Reevaluate & revise harvest strategy

Harvest Strategies @ the tRFMOs: In Place



Harvest Strategies @ the tRFMOs: In Development



tRFMO Status

	CCSBT	IATTC	ICCAT	IOTC	WCPFC
Mgmt Objectives	✓	X	NALB, BFT, SWO ✓	BET, YFT, SKJ, SWO, ALB ✓	PS, LL, PBF, NPALB, NPSWO ✓
Reference Points	✓	BET, YFT, SKJ ✓	NALB, SWO ✓	BET, YFT, SKJ, SWO, ALB ✓	BET, YFT, SKJ, SPALB, PBF, NPALB, NPSWO, NPSTR ✓
HCRs	✓	BET, YFT, SKJ (2016) ✓	NALB (2017) ✓	SKJ (2016) ✓	X
Harvest Strategy	2011 ✓	X	X	X	X

ICCAT: HS Development Status

2015 – Commitment to develop HCRs using MSE for 8 priority stocks by 2021

2019 COM
November 25, 2019 (9:53 am)

Doc. No. PLE_115A / 2019

Original: English

ROAD MAP FOR THE DEVELOPMENT OF MANAGEMENT STRATEGY EVALUATION (MSE) AND HARVEST CONTROL RULES (HCR)

Submitted by the USA

This schedule is intended to guide the development of harvest strategies for priority stocks identified in Rec. 15-07 (North Atlantic albacore, North Atlantic swordfish, eastern and western Atlantic bluefin tuna, and tropical tunas). It builds on the initial roadmap that was appended to the 2016 Annual Meeting report. It provides an aspirational timeline that is subject to revision and should be considered in conjunction with the stock assessment schedule that is revised annually by the SCRS.* Due to the amount of cross-disciplinary dialogue that may be needed, intersessional Panel meetings and/or meetings of the Standing Working Group to Enhance Dialogue between Fisheries Scientists and Managers (SWGSM) may be necessary. The aspirational nature of this timeline assumes adoption of a final management procedure for northern albacore in 2020 and interim management procedures for bluefin tuna and northern swordfish in 2022 and tropical tunas as soon as 2023, however the exact timeline for delivery is contingent on funding, prioritization, and other work of the Commission and SCRS.

* For 2015 through 2019, roadmap reflects progress to-date in some detail. For 2020 onward, more general steps for the SCRS and Commission are anticipated pending outcomes of the 2019 Annual Meeting.

2020: NALB MP

2021: ABFT MP

2022: NSWO MP

2023-4: Tropical Tunas

IOTC: HS Development Status

2013: Target and limit reference points and a decision framework
2016: Established a Technical Committee on Management Procedures

- Current workplan is from 2017
  - MP adoption for ALB, YFT, BET, SWO in 2020
- Commission tasked with adopting updated workplan in 2020; Australia's proposal:
  - YFT in 2021
  - BET in 2022
  - ALB & SKJ in 2023
  - SWO in ?

WCPFC: HS Development Status

2014: Agreement to move toward a harvest strategy approach

2018

- Most recent HS workplan agreed
  - SKJ in 2020
  - SPALB in 2021, BET/YFT in 2021

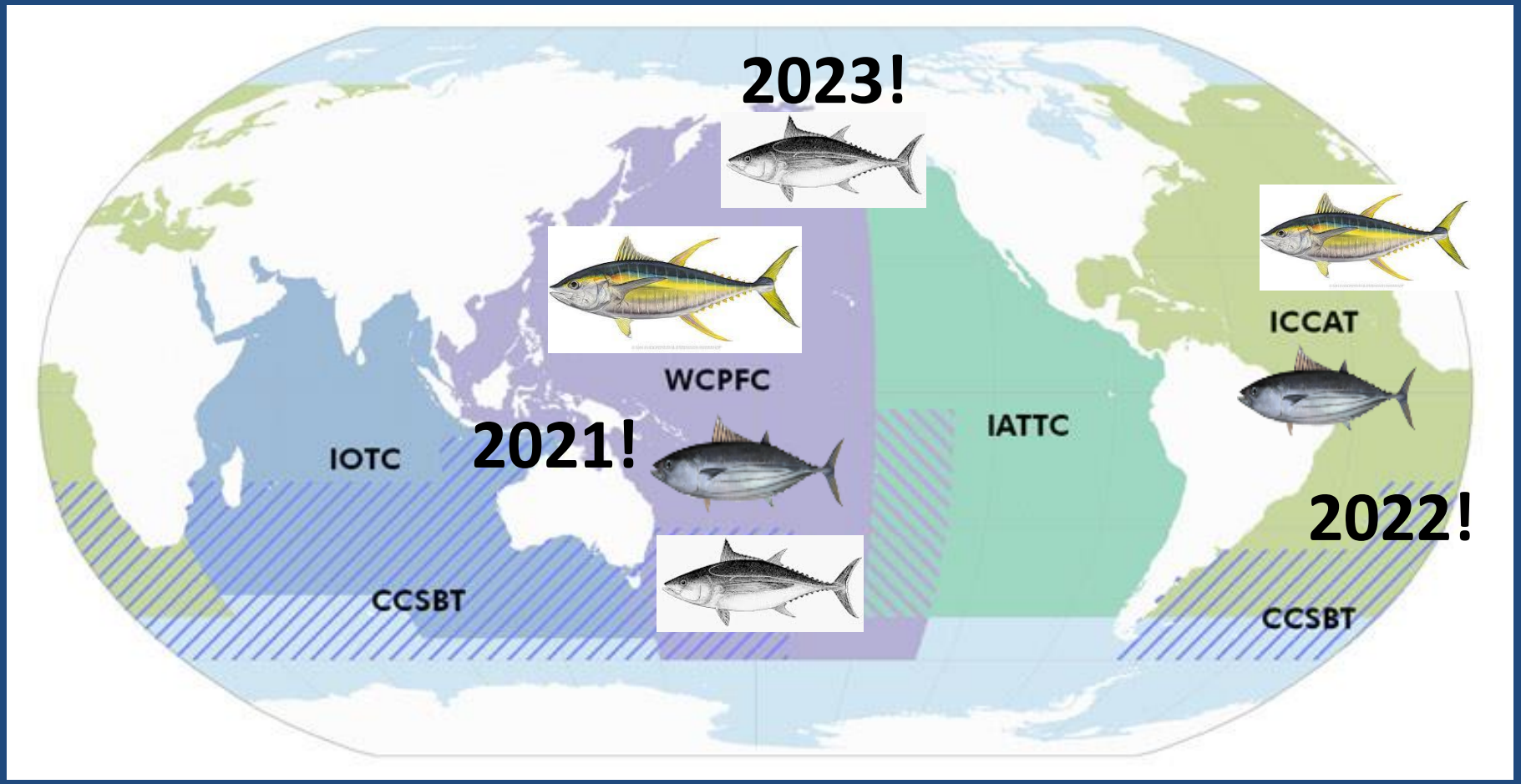
https://www.wcpfc.int/harvest-strategy

ISC handling MSE for NALB (2021?) and PBF (2024); "harvest strategies" already in place @ WCPFC

IATTC: HS Development Status

- 2016: “HCR” adopted for tropical tunas
- 2019: MSE completed for mahi
- BET MSE now underway; completion in 2023
- Next YFT/SKJ

HARVEST STRATEGIES & THE MSC



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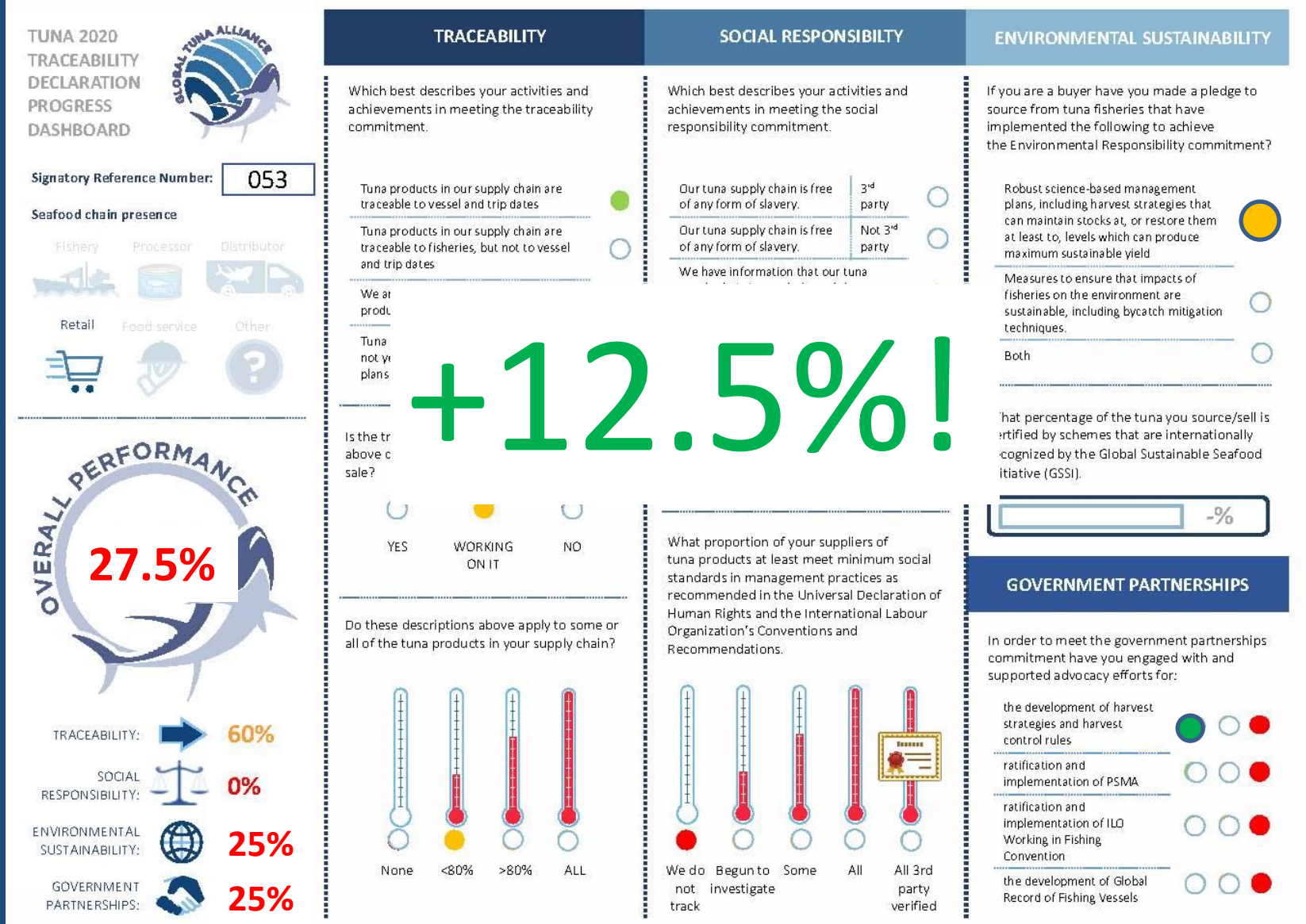

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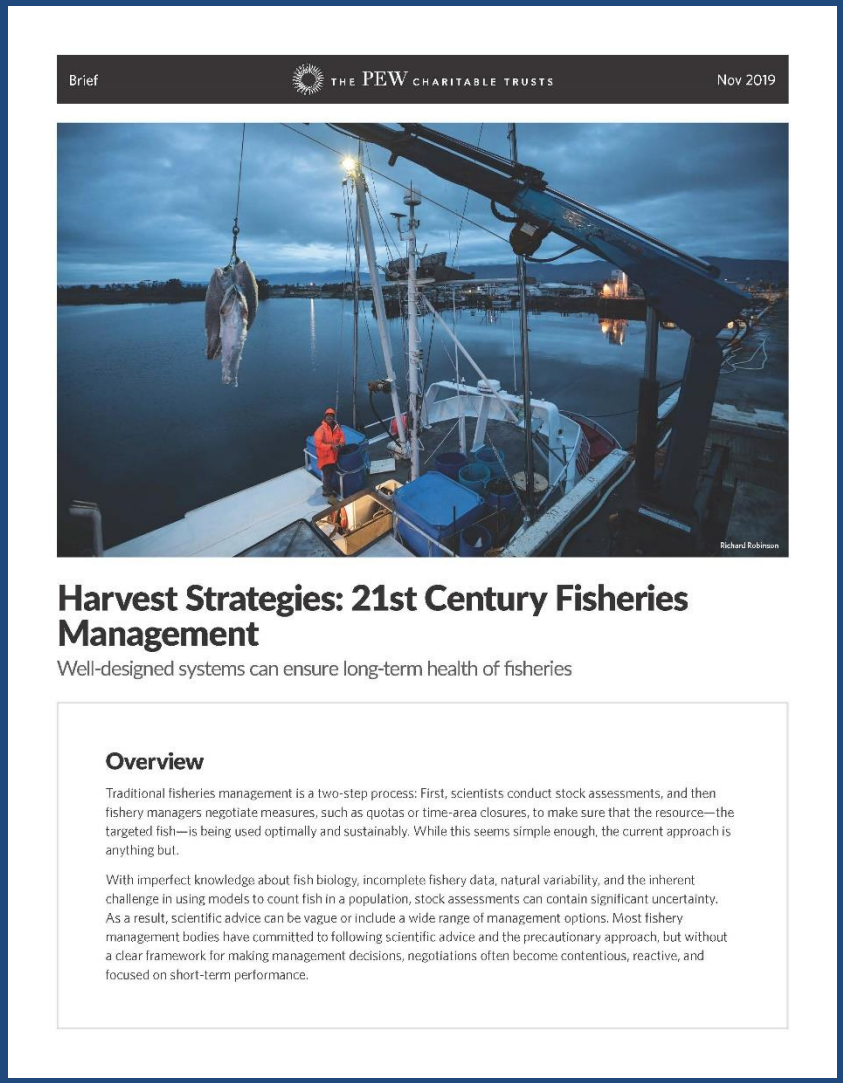
Acknowledgements


Brief THE PEW CHARITABLE TRUSTS Nov 2019

Richard Robinson

Harvest Strategies: 21st Century Fisheries Management

Well-designed systems can ensure long-term health of fisheries

Overview

Traditional fisheries management is a two-step process: First, scientists conduct stock assessments, and then fishery managers negotiate measures, such as quotas or time-area closures, to make sure that the resource—the targeted fish—is being used optimally and sustainably. While this seems simple enough, the current approach is anything but.

With imperfect knowledge about fish biology, incomplete fishery data, natural variability, and the inherent challenge in using models to count fish in a population, stock assessments can contain significant uncertainty. As a result, scientific advice can be vague or include a wide range of management options. Most fishery management bodies have committed to following scientific advice and the precautionary approach, but without a clear framework for making management decisions, negotiations often become contentious, reactive, and focused on short-term performance.

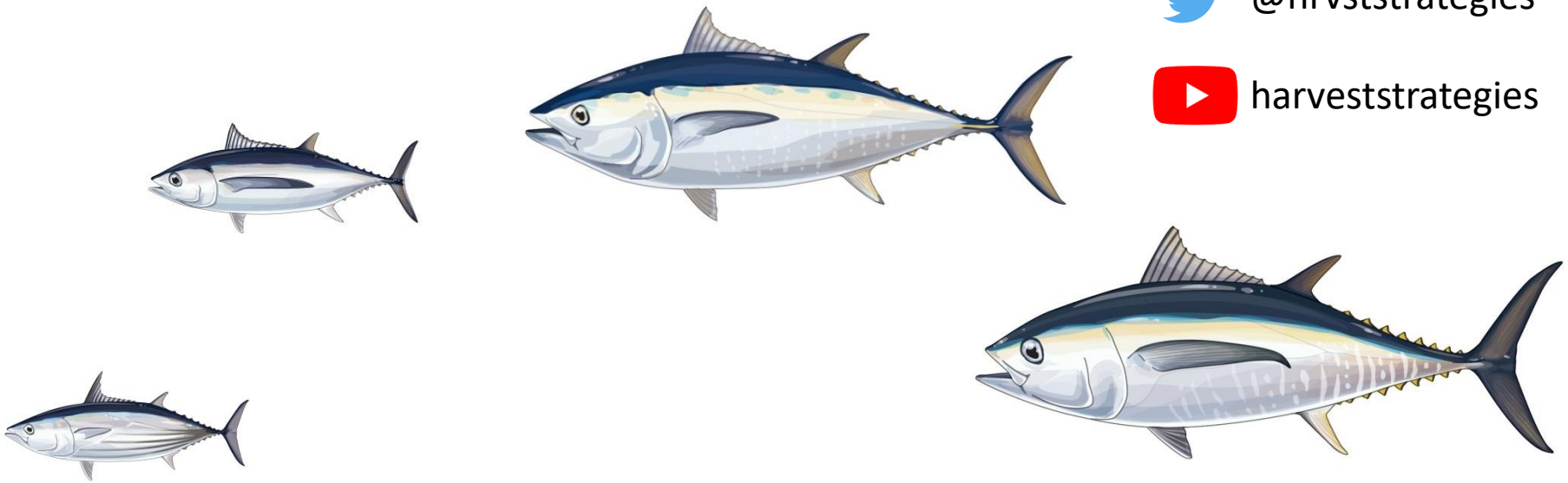
THE PEW CHARITABLE TRUSTS

RFMO Policy Team - HS

Amanda Nickson
Rachel Hopkins
Gerry Leape
Grant Galland
Dave Gershman
Glen Holmes
Sara Pipernos
Macy Placide
Leah Weiser
Ashley Wilson

@hrvststrategies

harveststrategies



For more information and to download the materials:

www.pewtrusts.org/harveststrategies

www.harveststrategies.org