



Western & Central Pacific
Fisheries Commission

Harvest Strategies in ICCAT: North Atlantic albacore

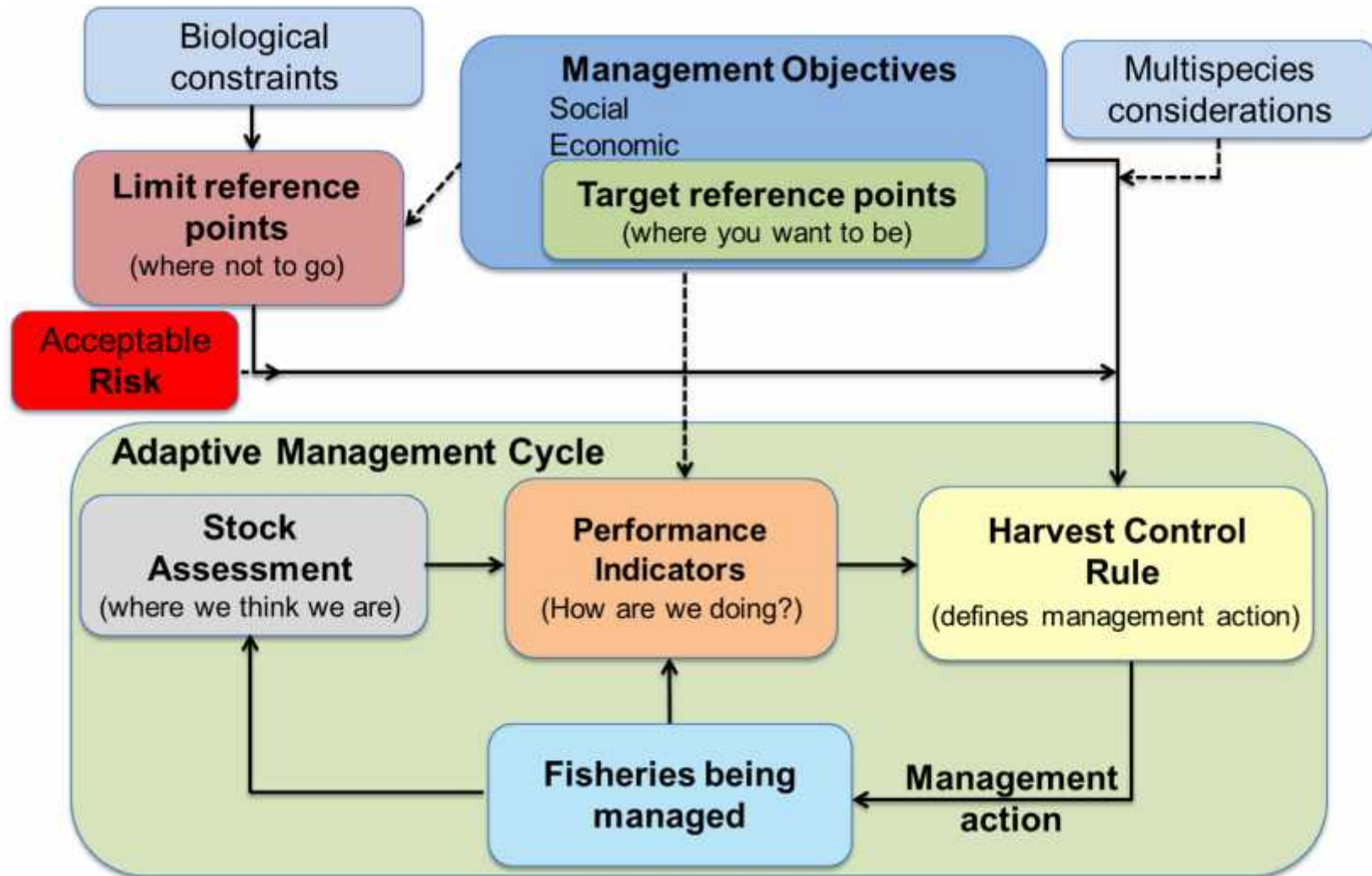
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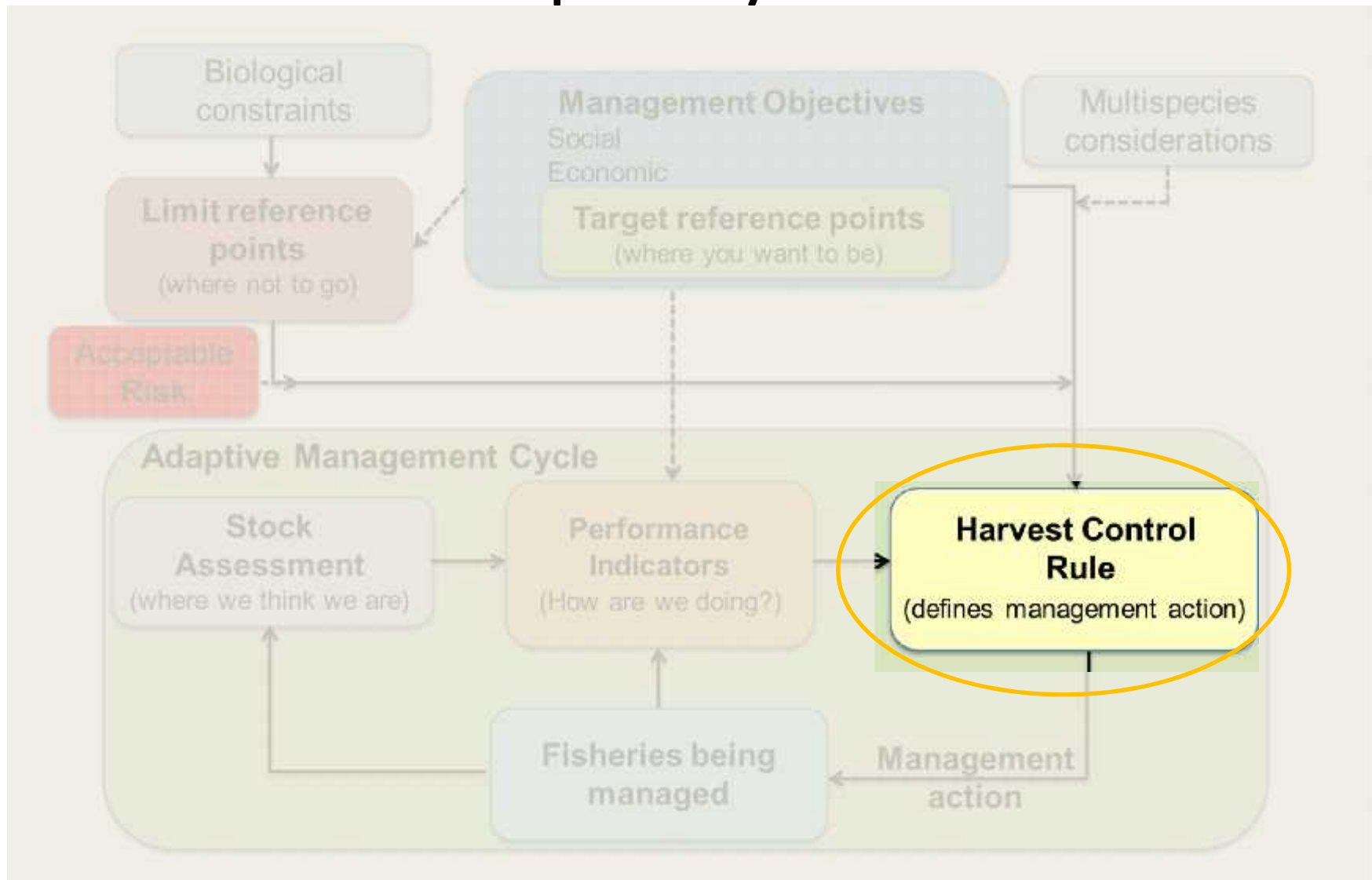
Harvest Strategy Worskshop, Bali (Indonesia), 30th November 2015



Harvest Strategy: Management of a complex system



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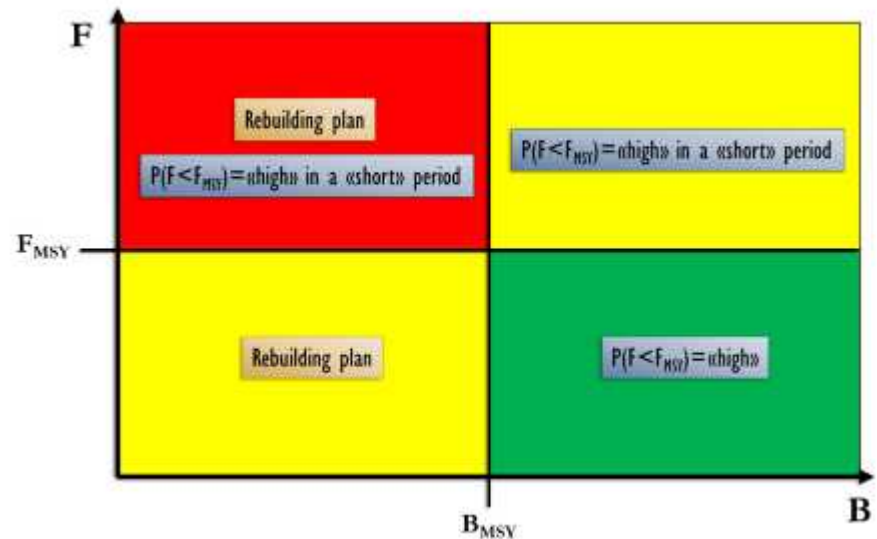
Harvest Strategy: Management of a complex system

- **Designed to achieve management objectives** (desired outcomes):
 - ✓ *“ICCAT aims at achieving Maximum Sustainable Yield”*
 - ✓ PA in ICCAT: *“Undesirable outcomes be anticipated and measures taken to reduce the probability of them occurring”*

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Generic HCR (ICCAT Recommendation 11-13)

- 1. For stocks that are not overfished and not subject to overfishing (...), management measures shall be designed to result in a high probability of maintaining the stock within this quadrant.
- 2. For stocks that are not overfished, but are subject to overfishing, (...), the Commission shall immediately adopt management measures (...) designed to result in a high prob of ending overfishing in as short a period as possible.
- 3. For stocks that are overfished and subject to overfishing (...), the Commission shall immediately adopt management measures (...) designed to result in a high probability of ending overfishing in as short a period as possible. In addition, the Commission shall adopt a plan to rebuild these stocks (...).
- 4. For stocks that are overfished and not subject to overfishing (...), the Commission shall adopt management measures designed to rebuild these stocks in as short a period as possible (...).

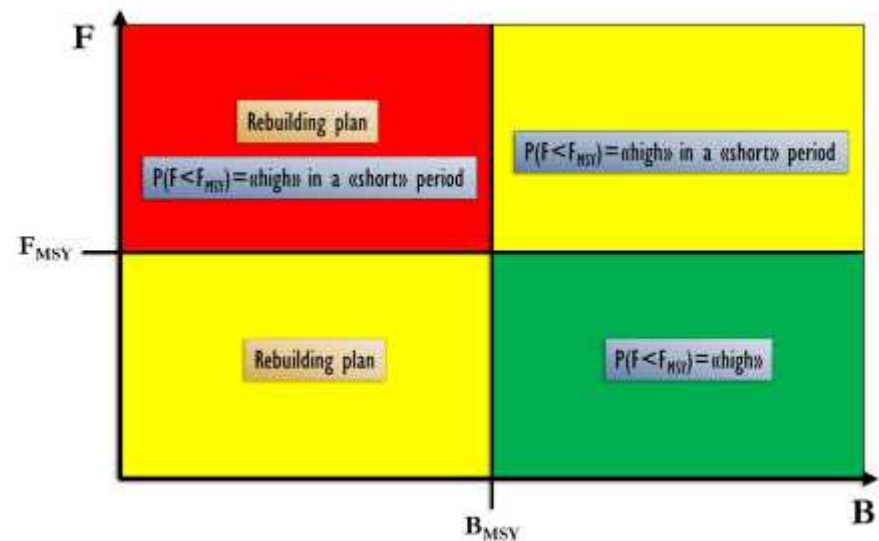


**Harvest Control
Rules**

Harvest Strategy: Management of a complex system

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Harvest Control Rules

Harvest Strategy: Management of a complex system

From the general recommendations towards the applicability of Harvest Strategies



*New Recommendations
(2015)*

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General Rec (PLE 124C)

3. As first steps of MSE implementation for a specific stock, the Commission shall provide guidance to the SCRS. Therefore, beginning in 2016 and consistent with priorities to be agreed by the Commission in light of the SCRS work program, the relevant ICCAT Panels will identify the following management inputs on a stock-by-stock basis, for, *inter alia*, northern albacore, bluefin tuna, North Atlantic swordfish, and tropical tunas:
 - a) Management objectives, such as maximizing average catch, minimizing inter-annual fluctuations in TAC levels, returning or maintaining the stock in the green quadrant of the Kobe plot, etc, taking into account the requirements of Rec. [11-13];
 - b) Acceptable quantitative level(s) of probability of achieving and/or maintaining stocks in the green zone of the Kobe plot and avoiding limit reference points; and
 - c) Timeframes for halting overfishing on a stock and/or rebuilding an overfished stock.

*New Recommendations
(2015)*

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NA albacore (PA2-602B)

1. The management objective for northern albacore stock is
 - a. to maintain the stock in the green zone of the Kobe plot, with at least a 60% probability, while maximizing long-term yield from the fishery, and
 - b. where the spawning stock biomass (SSB) has been assessed by the SCRS as below the level capable of producing MSY (SSB_{MSY}), to rebuild SSB to or above SSB_{MSY} , with at least a 60% probability, and within as short time as possible, by 2020 at the latest, while maximizing average catch and minimizing inter-annual fluctuations in TAC levels.

*New Recommendations
(2015)*

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NA albacore (PA2-602B)

2. In 2016, the SCRS shall identify and test candidate reference points (e.g., $SSB_{THRESHOLD}$, SSB_{LIM} and F_{TARGET}) and associated harvest control rules (HCRs) that would support the management objective expressed in paragraph 1 above and/or any other management objectives agreed by the Commission.
3. The result of the analyses described in paragraph 2 will be discussed in a dialogue between scientists and managers to be organised in 2016, either during a meeting of the SWGSM or as an inter-sessional meeting of Panel 2.

*New Recommendations
(2015)*

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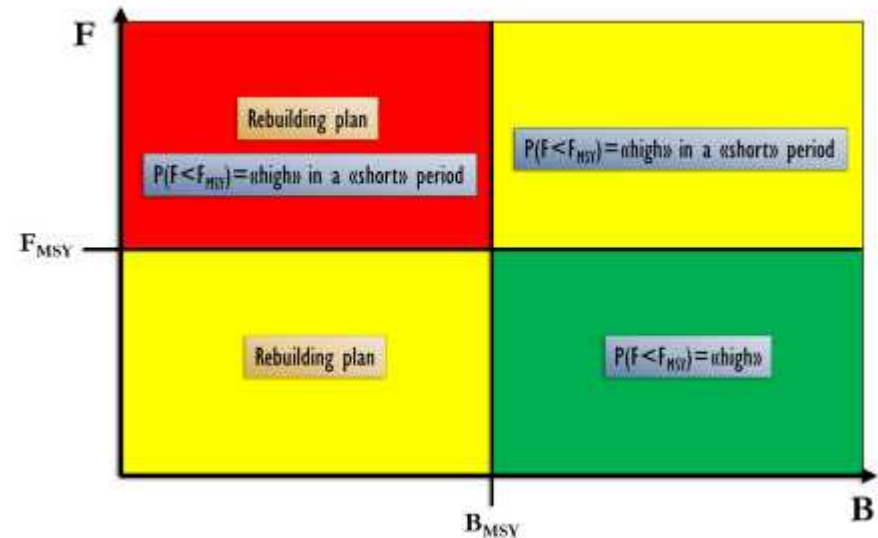


- Objectives
 - i. Maintain the biomass at or above levels required to produce MSY or its proxy and maintain the fishing mortality rate at or below F_{MSY} or its proxy; (**Green quadrant**)
 - ii. Avoid the biomass being below B_{LIM} and the fishing mortality rate being above F_{LIM} (**Red quadrant**);

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- “Guidelines”
Recommendation 15-10
- *Equivalent to ICCAT 11-13*
- Interim target and limit reference points:
 - albacore
 - yellowfin
 - Swordfish
 - Bigeye
 - skipjack



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Thank you