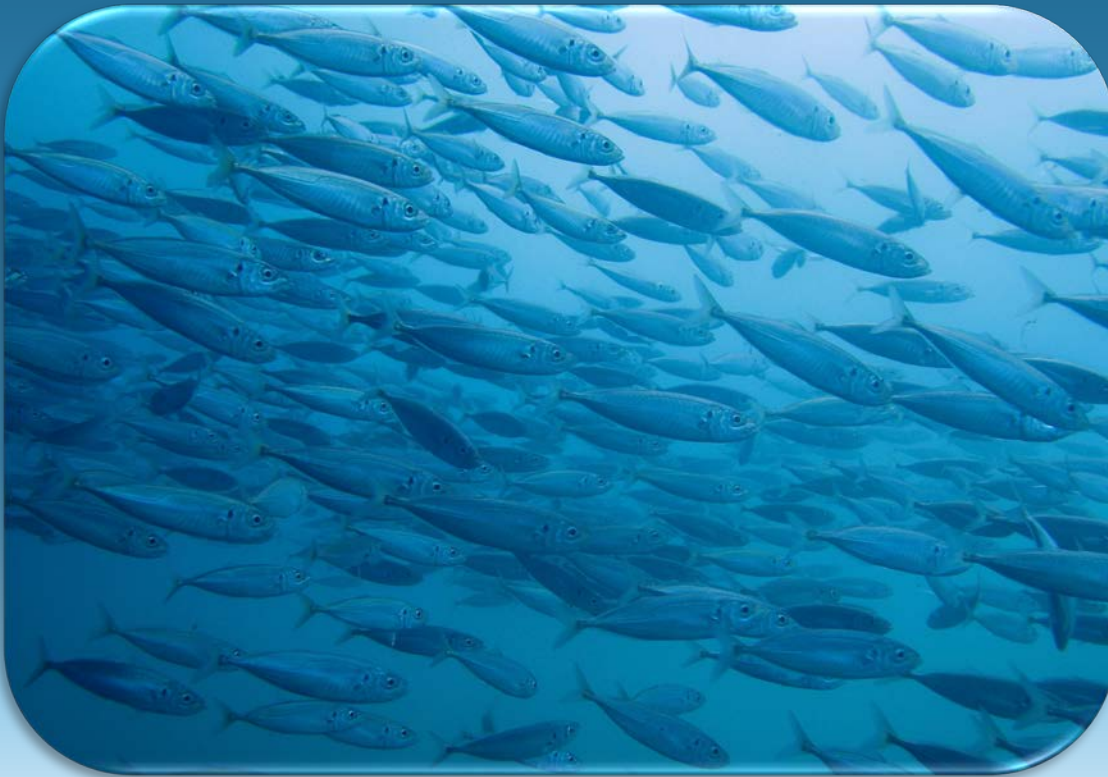


# Proposed Revised SPF Harvest Strategy



SPF Scientific Panel  
January 2016

# What is a Harvest Strategy?

Also known as a 'Management Procedure' or 'Operational Management Procedure', a Harvest Strategy (under the Commonwealth Harvest Strategy Policy) is:

- A set of agreed rules intended to specify the management action to be taken in response to agreed indicators of stock status.

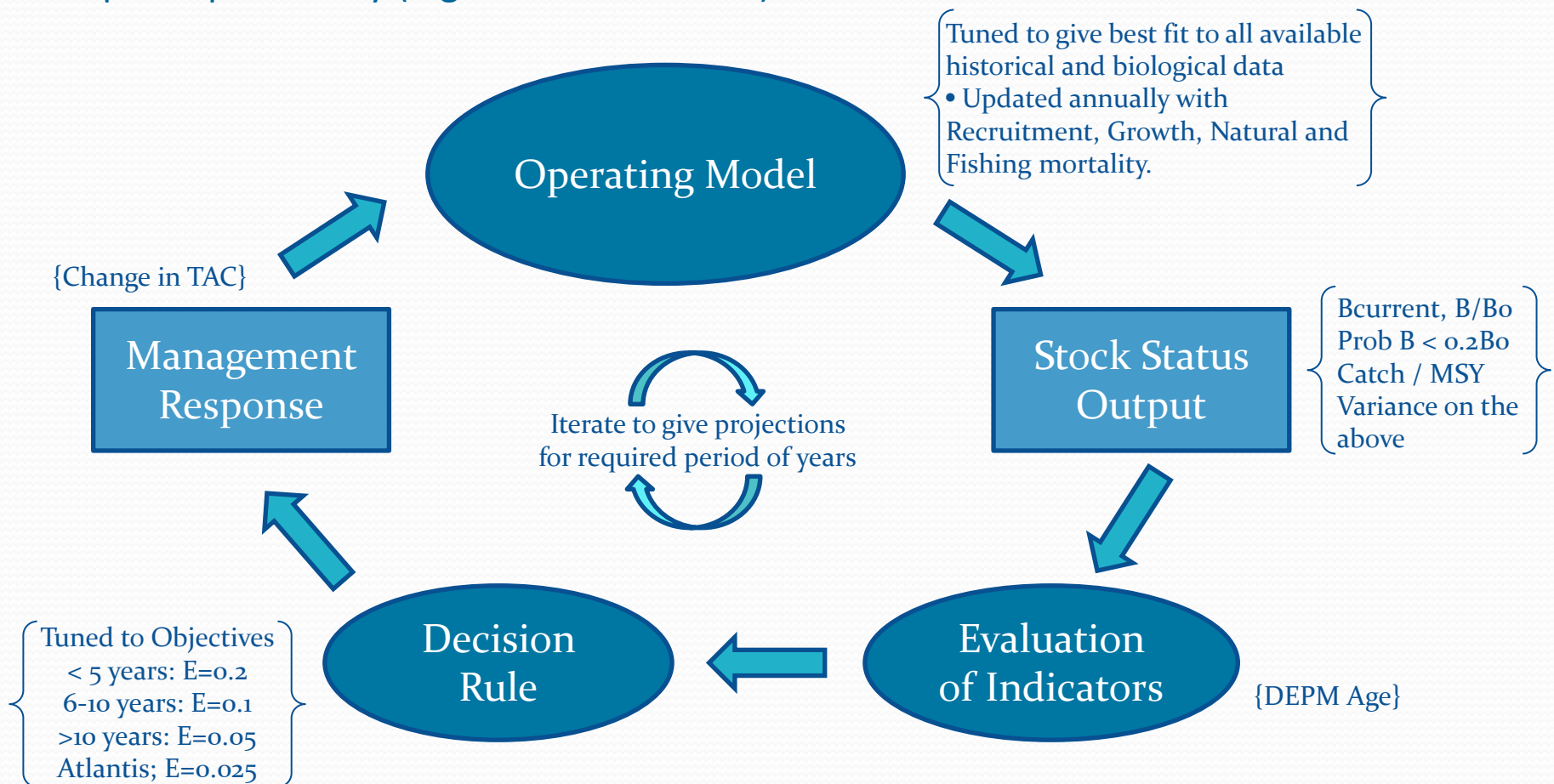
Harvest Strategies are quantitatively tested to ensure that they will achieve the stated objectives, with the required probability, under specified conditions.

Harvest Strategies typically consist of:

- Clearly stated and measurable objectives, including the required probability of achieving those objectives;
- Agreed indicators to be used to indicate current status or change in status, including the data to be collected to ensure that the indicators will be available;
- An agreed quantitative decision rule or rules, specifying how management measures, such as the TAC, should change in response to the indicators used.
- A meta-rule or meta-rules specifying what alternative action must be taken if the indicators of stock status move outside the bounds tested during management strategy evaluation.

# Management Strategy Evaluation

Management Strategy Evaluation (MSE) is the process of testing and tuning proposed decision rules to ensure that they will achieve the required objectives with the required probability (e.g. Smith *et al.* 2015)



# SPF Harvest Strategy – Apr 2015

## Decision Rules and Reference Points

- This HS adopts a limit reference point of 20% of unfished biomass and a target reference point of 50% of unfished biomass, based on the HSP default settings.
- This follows recommendations that, both singly and in combination, depleting SPF target species has only minor impacts on other parts of the ecosystem and that none of the higher trophic level predators in south east Australia has a high dietary dependence on SPF species (Smith *et al.* 2015).
- Species-specific harvest rates are applied for Tiers 1 and 2, based on MSE testing (Smith *et al.* 2015).

Species	Tier 1		Tier 2		Tier 2b Atl	Tier 3
Australian Sardine	20%	5 y	10%	5 y	10%	<= 500t
Blue Mackerel	15%	5 y	7.5%	5 y	7.5%	<= 500t
Jack Mackerels	12%	5 y	6%	10 y	6%	<= 500t
Redbait	10%	5 y	5%	10 y	5%	<= 500t

Tier 2b Atlantis exploitation rates could not exceed the Tier 2 maximum exploitation rate applied to the lower bound of the 95 per cent confidence interval range of biomass estimates obtained from Atlantis - S PF

# Proposed revised SPF Harvest Strategy

## Decision Rules and Reference Points

- Maintain the limit reference point of 20% of unfished biomass and the target reference point of 50% of unfished biomass.
- Maintain Tier 1 and Tier 2 maximum harvest rates, and the maximum seasons that a stock may remain at Tier 1 or Tier 2.
- Remove Tier 2b – Atlantis estimates only to be used if a DEPM has never been conducted, in which case a stock must remain at Tier 3 until a DEPM is conducted.
- Apply the same harvest rate reduction strategy to the step from Tier 2 to Tier 3, as from Tier 1 to Tier 2 – halving the Tier 2 harvest rates.
- If no DEPM has ever been conducted for a stock, apply 25% of the Tier 2 harvest rate to the Atlantis best estimate for that stock.

Species	Tier 1		Tier 2		Tier 3	Tier 3 Atl
Australian Sardine	20%	5 y	10%	5 y	5%	2.5%
Blue Mackerel	15%	5 y	7.5%	5 y	3.75%	1.875%
Jack Mackerels	12%	5 y	6%	10 y	3%	1.5%
Redbait	10%	5 y	5%	10 y	2.5%	1.25%

# Revised SPF Harvest Strategy Control Rules

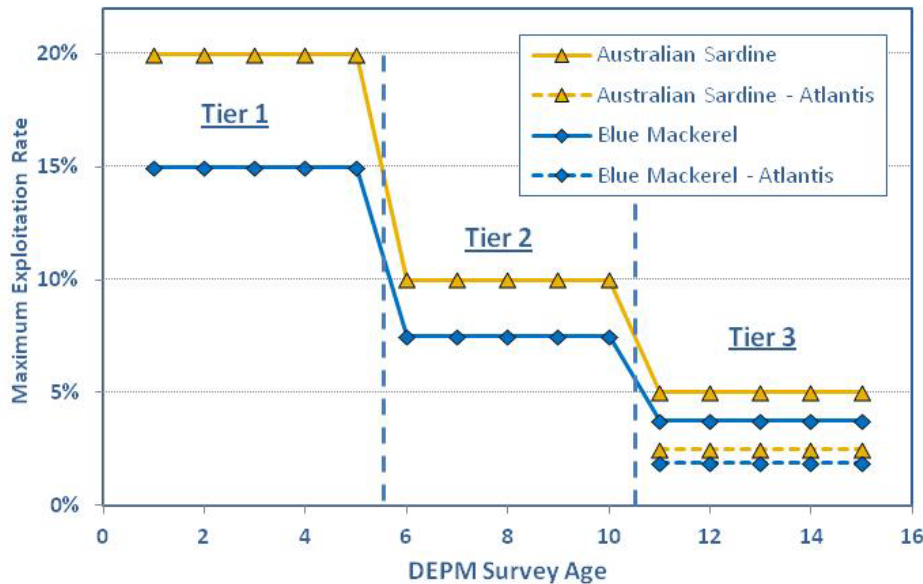
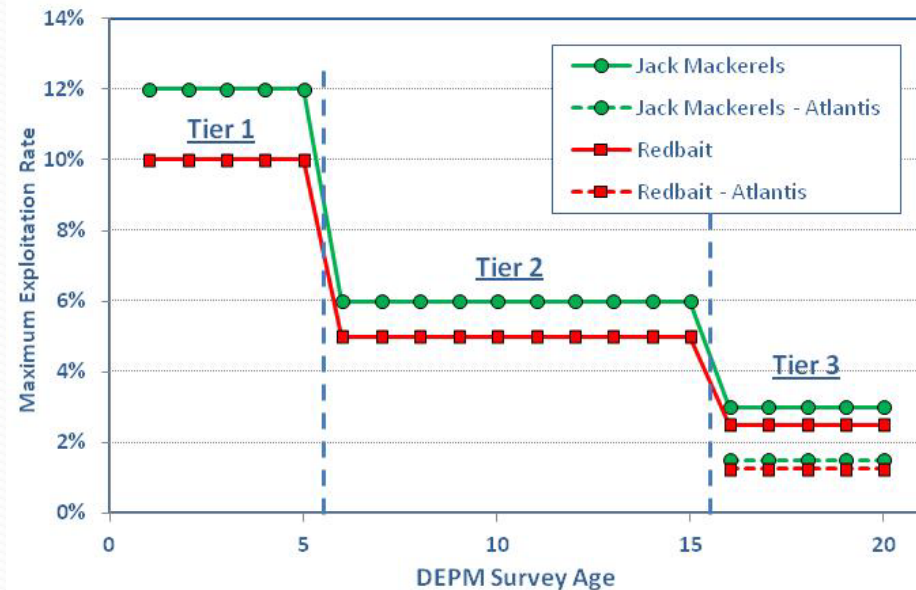


Illustration of the risk-response reduction in maximum SPF Harvest Strategy exploitation rates by species over time, as species transition between Tiers based on the age of the most recent DEPM survey.



# SPF Harvest Strategy Meta-Rules

## Meta-rule

The SPF HS does not include any specific indicator-based meta-rules or 'breakout' rules. However, the HS does provide that:

- *“If SEMAC or the AFMA Commission consider that the application of the decision rules does not support the objectives of the HSP, SPF HS or other policies or legislation relevant to the fishery (e.g. Bycatch Policy, EPBC Act), the SPF Scientific Panel may be asked to provide additional advice about altering catch limits and other controls that may be necessary to support the relevant management objectives.”*

## Exploratory Fishing and Research Catch

- *“Catch allowances may be set to support a research program in accordance with AFMA’s existing policies regarding research catch allowance and exploratory fishing. The research program must be considered by the SPF Scientific Panel and SEMAC. All catch allowances are set by the AFMA Commission.”*

Questions?

