

# **Management Objectives Workshop 2**

**Cairns 28-29 November 2013**

# Objectives of the workshop

- Review candidate objectives, indicators and reference points.
- Gain further insight into the options and trade offs associated with the future management of WCPFC fisheries, using examples from key fisheries
- Provide advice to the Commission on the value of a management framework, and future work in support of its development.

# Progress to Date

- WCPFC 7 initiated a process resulting in MOW1 held in Manila prior to WCPFC9

## MOW1:

- provided an increased understanding of management objectives, indicators and reference points; and
  - developed a list of recommended management objectives , broken down by biological, economic, social and ecological objectives,
- WCPFC9 considered the MOW1 report and directed the development of a ‘strawman’ consisting of a candidate list of management objectives, performance indicators, and **target** reference points for five major fisheries

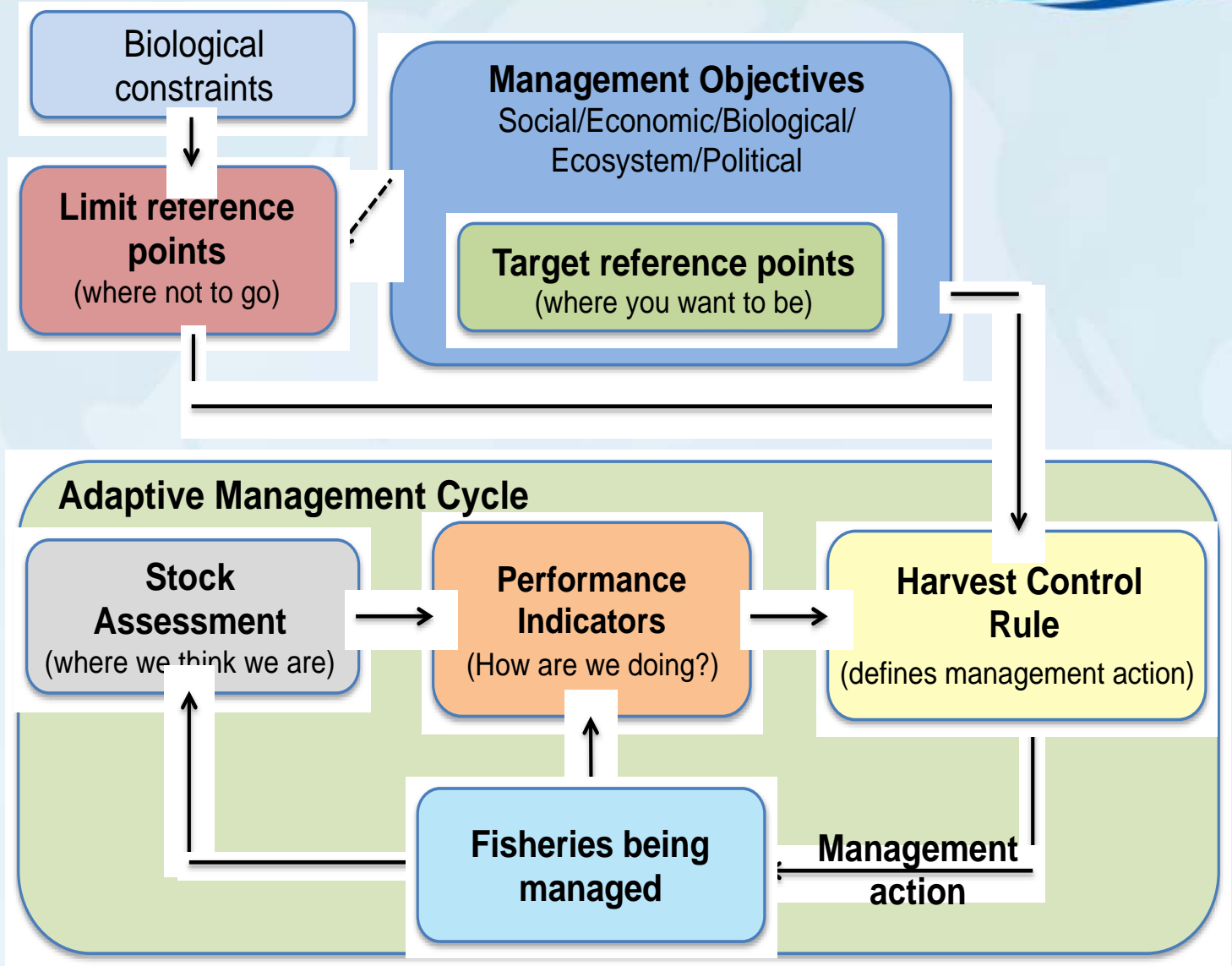
## Progress to date (2)

- “Strawman’ document (MOW2-IP01) developed, circulated to CCMs and discussed at TCC, SC and NC. Feedback from these committees included as an attachment.

**Report of the Expert Working  
Group on management objectives,  
performance indicators and  
reference points**

# Purpose of a management framework

- To be clear on what CCMs want to achieve from management of their oceanic fisheries resources (**management objectives**)
- To measure progress in achieving these objectives (**performance indicators**).
- To establish where CCMs would like the fishery to be (**target reference points**) and avoid (**limit reference points**) as measured by performance indicators)
- To establish how fishing will be managed in response to the status of performance indicators (**Harvest control rules (HCRs)**)



# Progress at the Commission, subregionally and nationally

- Progress at the Commission– e.g. status quo catch caps and LRPs
- Subregional developments –e.g. Vessel Days Scheme
- Management frameworks in place in some CMMs



# Candidate management objectives

- ***Overarching, global objectives*** e.g. *To ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean (Art 2 WCPFC Convention)*
- ***Operational objectives***, which are more specific, measurable and have practical interpretation. They may include a specified timeframe for achieving the objective
- Biological, economic, ecosystem and social
- Widely differing aspirations, including the special requirements of SIDS/ disproportionate burden those of fishing states

# Indicators

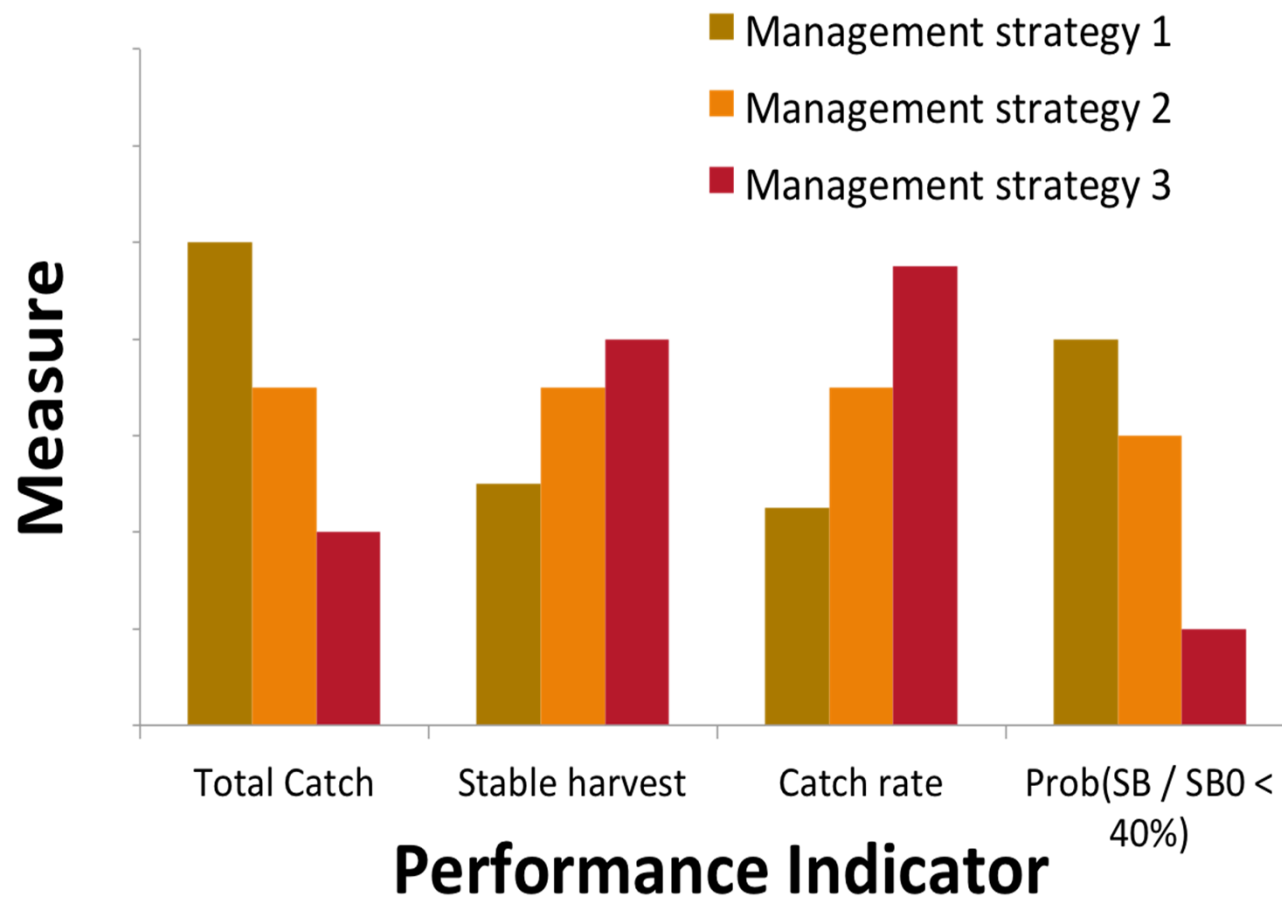
- Performance indicators measure the effectiveness of fishery management actions implemented to meet policy objectives. They can also enhance communication, transparency, effectiveness and accountability in fisheries management.
- There should be indicators for all objectives, but some will only require monitoring and not necessarily reference points (e.g. indicators for some bycatch species).
- Some objectives may have a number of indicators, particularly where a 'weight of evidence' approach using more than one indicator is used to inform management decisions (e.g. fishing mortality, biomass and spawning biomass).

# Target Reference Points

- A pre-determined level of a given indicator (e.g. adult stock size or catch rate/CPUE) that management either seeks to achieve as a management objective (target reference point or TRP) or avoid (limit reference point or LRP)
- Seek to make desired biological (ecosystem) and socio-economic objectives of management operational, and quantifiable.
- Generally translated into the states of fish stocks and fisheries (biomass, fishing mortality) that would be required to achieve the objectives, allowing them to be related to the results of scientific stock assessment.
- Risk and time to achieve TRPs in depleted stocks

# Reconciling objectives and targets

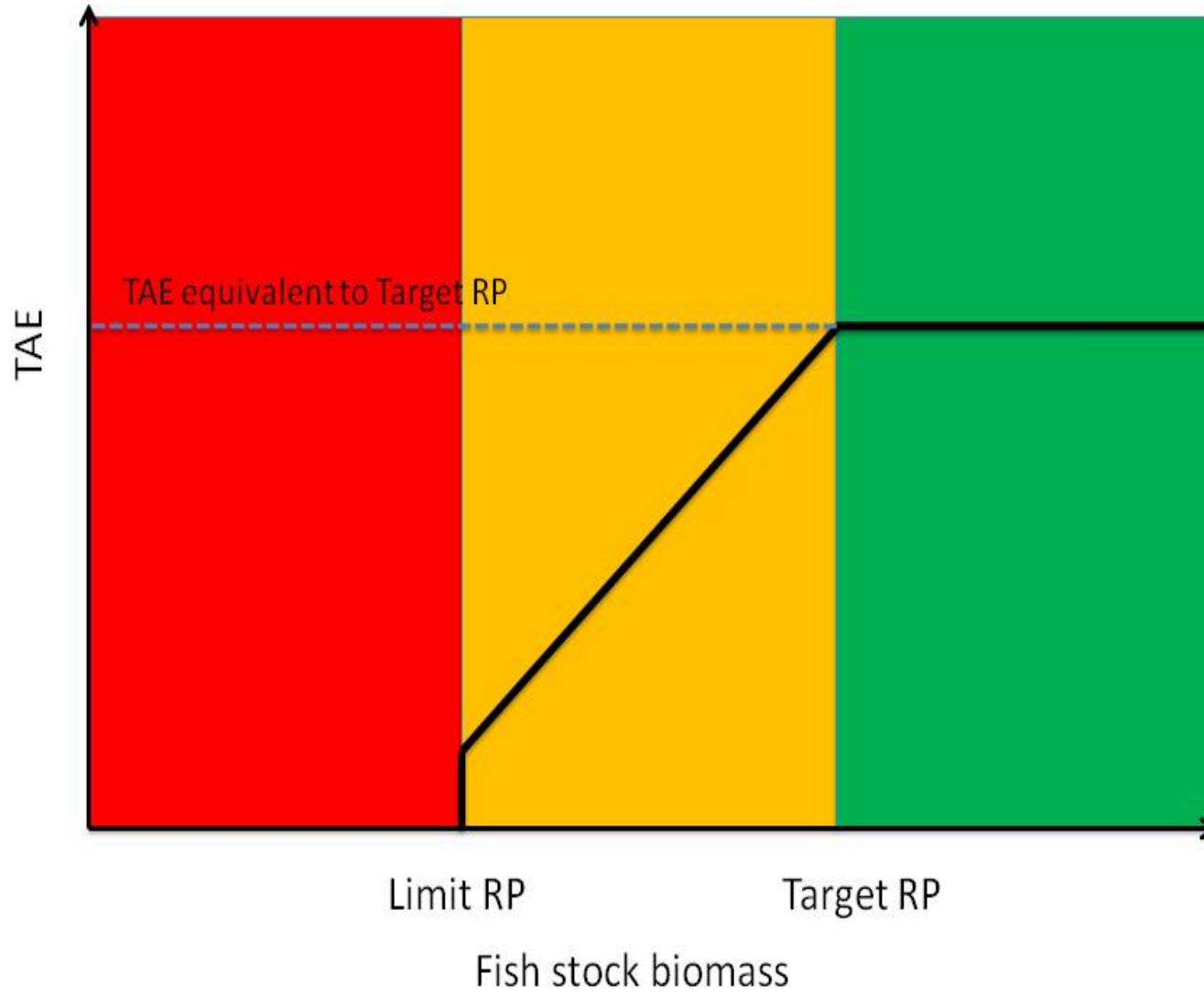
- Subjects of papers for MOW2
- Extensive trade-offs required



# Harvest Control Rules

- The process by which the level and direction of a management decision is made in response to changes in population status (e.g. stock biomass).
- HCRs are pre-agreed and can avoid, lengthy and challenging negotiations on catch and effort levels, with more timely and proactive responses to changes in the fisheries.
- MSE allows the harvest control rule to be tested within the fishery prior to implementation.

# Example of a HCR



# Management Strategy Evaluation

- Development of an operating model, which captures the plausible range of fish, stock dynamics including variability and uncertainty). Where economic objectives are being examined the model must also include economic aspects.
- Development a suite of management measures (or management procedures/HCRs) to apply and test using the operating model.
- Evaluation of the measures against performance indicators (which should provide insight on achieving objectives).

# Evaluating identified fisheries

- Candidate management objectives from MOW1 used as a basis to develop fishery-based tables.
- Need to consider interactions between fisheries
- Many of the indicators and target reference points will not be used in a formal management framework approach using harvest control rules e.g. management action in direct response to changes in indicators for developmental objectives.
- Changes in these indicators will be monitored as management decision) (e.g. restrictions on catch and/or effort) are reflected in changes in other key indicators such as biomass and spawning stock.



# Workshop Process

- While requested by the Commission, the workshop is informal
- ***Morning:*** Series of presentations by SPC and one from FFA with Q and A sessions
- ***Afternoon:*** Four working groups
- ***Tomorrow AM:*** Report back and plenary discussion

# Workshop Groups

- ***Group 1:*** WP 1 TRPs for South Pacific Albacore. Facilitator: **Matt Hooper**
- ***Group 2:*** WP2 Yellowfin catch rates across the range of the stock. Facilitator: **Victor Restrepo**
- ***Group 3:*** Strategies, RPs , indicators and HCRs for skipjack. Facilitator: **Robin Allen**
- ***Group 4:*** WP4 Trade offs in multi-species, multi-gear fisheries. Facilitator: **Ian Cartwright**

# Points to note

- Essentially a fisheries management process – aimed at policy makers and informed by science (biology and economics) and operational realities.
- The working papers are generic in nature and are provided to elicit discussion, not to suggest particular management actions.
- The resources to undertake the MOW process have been limited and heavy reliance placed on goodwill and use of existing analysis.
- It is now be an appropriate time to review the make-up of the Expert Panel in light of any future direction suggested by the Commission.

**Questions?**