



Pacific  
Community  
Communauté  
du Pacifique

# **The Role of MSE in the development of harvest strategies**

SPC, OFP

November 2015

# What is MSE?



## Management Strategy Evaluation:

*A process of applying a proposed management strategy to a model of the fishery and projecting the model into the future under various scenarios to account for likely variation to see how well the strategy is likely to perform in achieving its objectives*

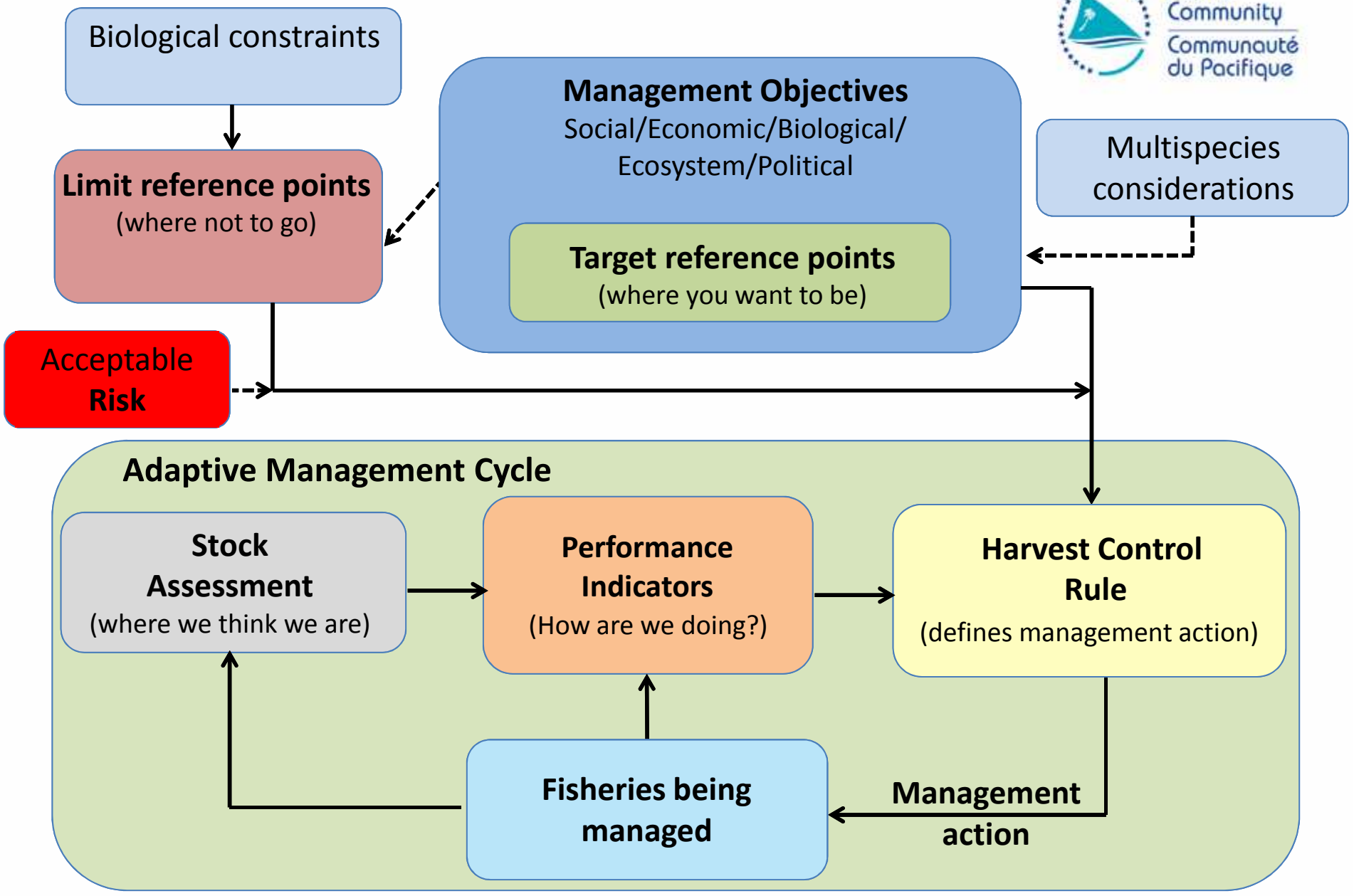
*“The evaluation of management strategies using simulation is widely considered to be the most appropriate way to evaluate the trade-offs achieved by alternative management strategies and to assess the consequences of uncertainty for achieving management goals.”*

*Punt et al 2014 MSE: best practices, Fish and Fisheries. DOI 10.1111/faf.12104*

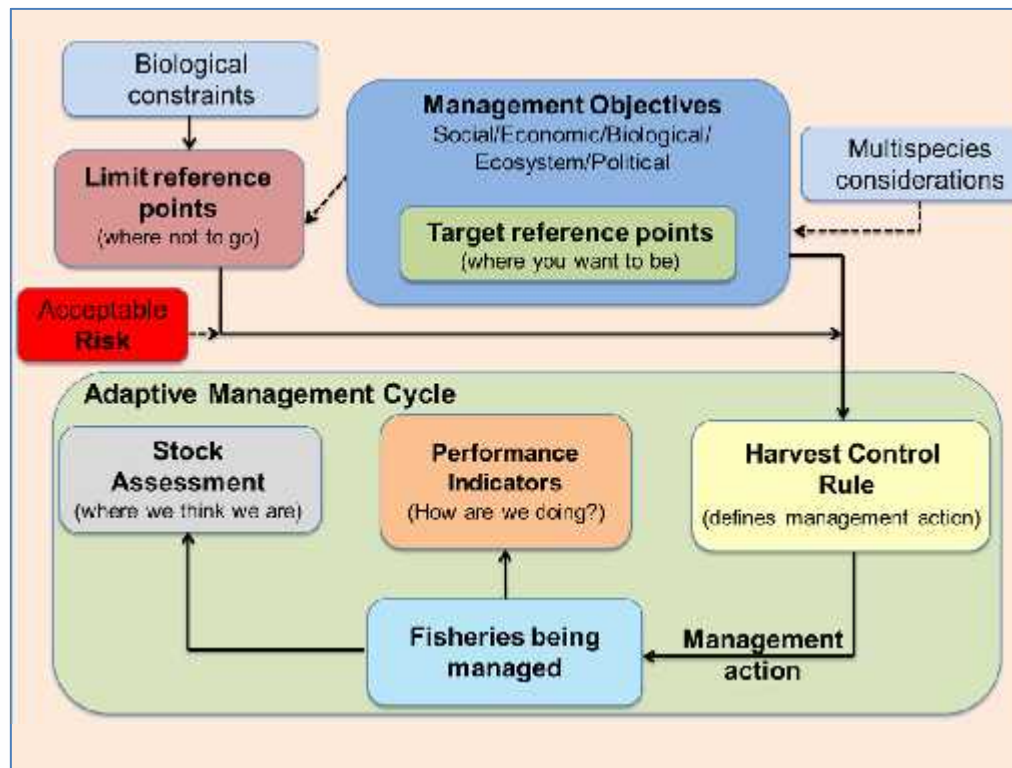
# Why have an MSE process?



- Clearly defined Management Objectives
- Harvest Control Rules built on agreed target and limit reference points.
- Models each step of the management process - better evaluate the trade-offs of alternative strategies.
- Decisions based on longer-term trade offs between management objectives rather than short term considerations.
- Consultative approach to developing and adopting a harvest strategy.



Management Objectives



Performance Indicators



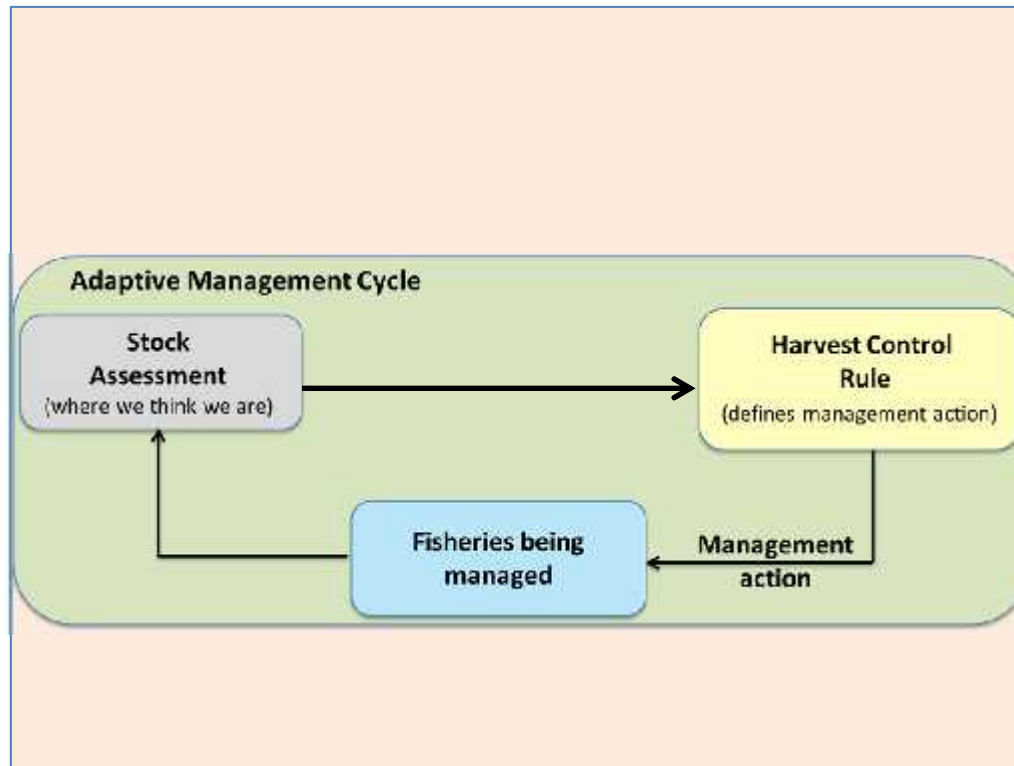
**Target reference points**  
(where you want to be)

**Limit reference points**  
(where not to go)

Multispecies  
considerations

**Performance  
Indicators**  
(How are we doing?)

**Management  
Objectives**



**Performance  
Measures**

Maintain the stock around the TRP  
 Minimise inter-annual variation in yield/effort  
 Avoid falling below the LRP with ?% risk

Annual Adult Biomass levels  
 Average annual change in yield/effort  
 Probability of falling below LRP

