What exactly is MSE?

T. KITAKADO, I. MOSQUEIRA, R. SHARMA (WPM)

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What is MSE?

Definitions

- Risk

- Uncertainty

- Simulation

A brief history of MSE

- IWC NMP (1976): B, K, MSY
- IWC MPA

SA-based SC advice

Diagram

Problems

- SA uncertain or wrong

- Inter-annual changes in SA

- Short time horizon

- Management objectives unclear

- Stakeholder distance

Decision rules

- Agree rules of game before start playing

- Data + Decision rule + Management

- EXAMPLES

The 6 STEPS

1. Specify & prioritize objectives

2. Quantify them as performance measures

3. Develop a set of OMs

4. Identify candidate MPs (SA + HCR)

5. Simulate the future
   - Generate data
   - Determine management action
   - Apply to fleet and stock

6. Summarize performance of MPs

7. Select best MP

Advantages

- Less haggling for short term benefits

- Evaluation of risk

- Limits catch variability

- Consistent with PA

- Interaction among scientists, managers & stakeholders

- Default management if no agreement

- Robust performance over tracking noise in data

Disadvantages

- Lengthy complex development (but less and less so)

- Overly rigid

- Autopiloting?

- Poor data, poor models

- Choosing scenarios, test cases

  Limitations

MSE at IOTC

- Current status

- Future work

  Predicition is very difficult, specially if it is about the future – Niels Bohr