Flowchart to guide the MP development process.
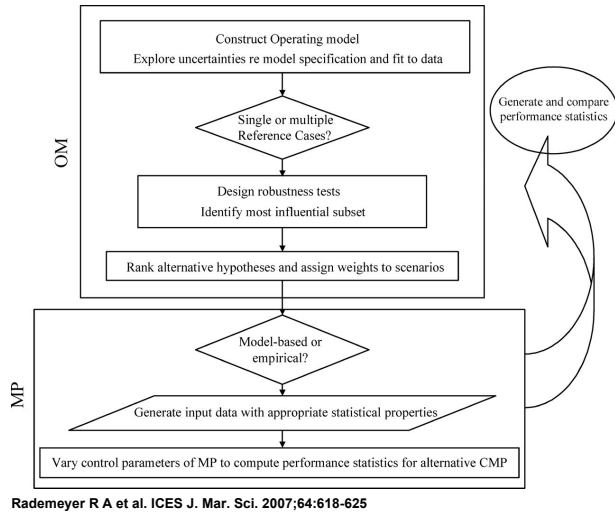

OM

Construct Operating model

Explore uncertainties re model specification and fit to data

Single or multiple
Reference Cases?

Generate and compare
performance statistics

Design robustness tests
Identify most influential subset

Rank alternative hypotheses and assign weights to scenarios

MP

Model-based or
empirical?

Generate input data with appropriate statistical properties

Vary control parameters of MP to compute performance statistics for alternative CMP

Figure 1: Conceptual framework for Management Strategy Evaluation.
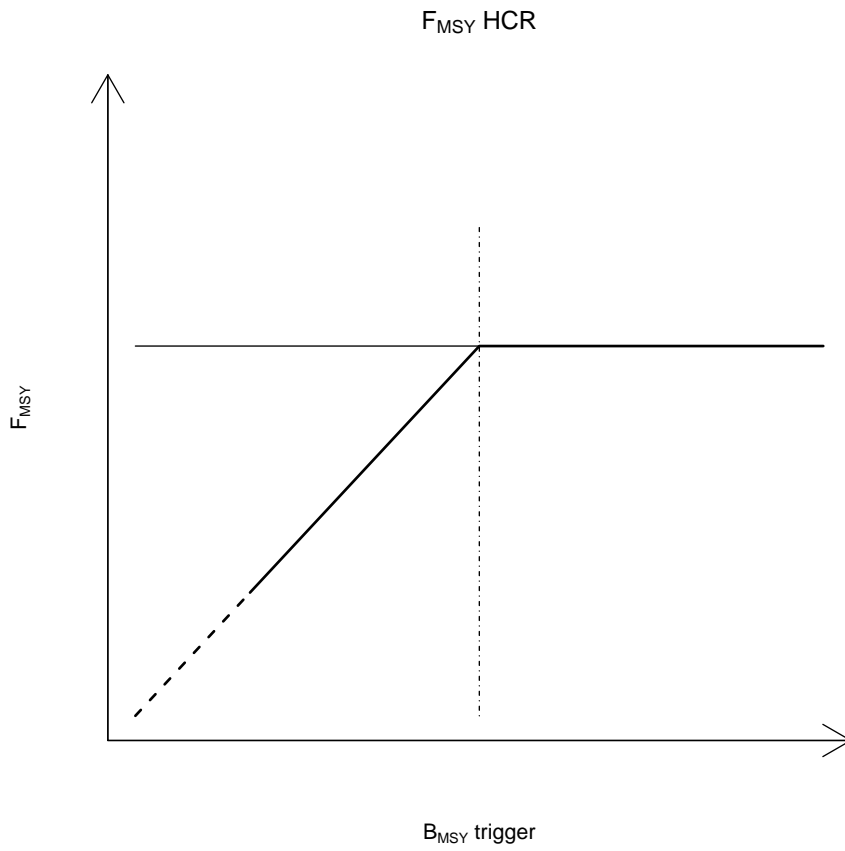

F_{MSY} HCR

F_{MSY}

B_{MSY} trigger

Figure 2: Harvest Control Rule.

Figure 3: *Worm plots* for MSE with a constant F target showing 2 possible trajectories (red and green) for fishing mortality, recruitment, spawning stock biomass and yield, annual medians and interquartiles (thick and thin blue lines) are also indicated.
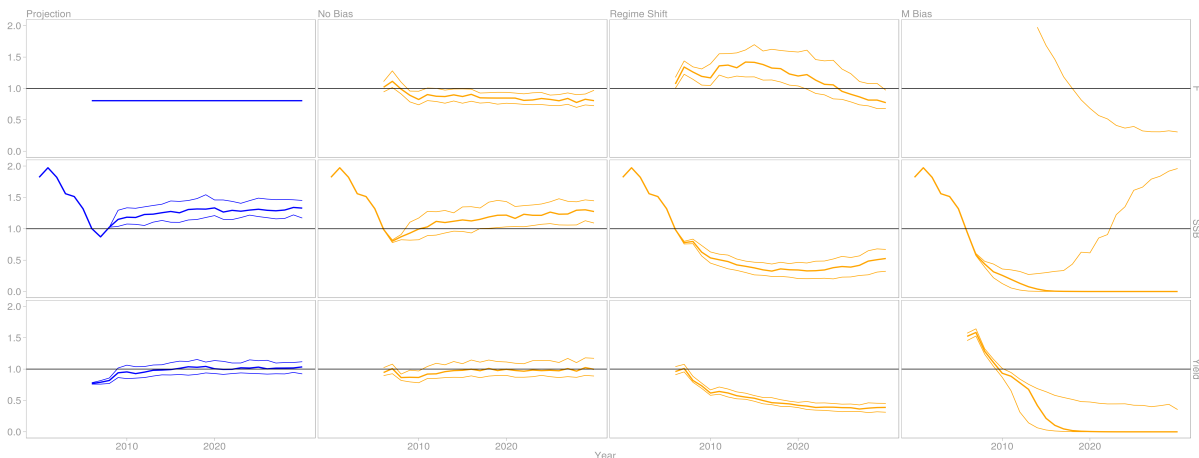

Figure 4: Results from the MSE; interquartile and median plots for fishing mortality, spawning stock biomass and yield, annual medians and interquartiles are indicated; results are presented for a constant F MSE (orange) and for a stock projection (blue)

Figure 5: Results from the MSE; interquartile and median plots for fishing mortality, spawning stock biomass and yield, annual medians and interquartiles are indicated; results are presented for a HCR with a $B\pounds_{Trigger}$ (red)and a stock projection (blue)
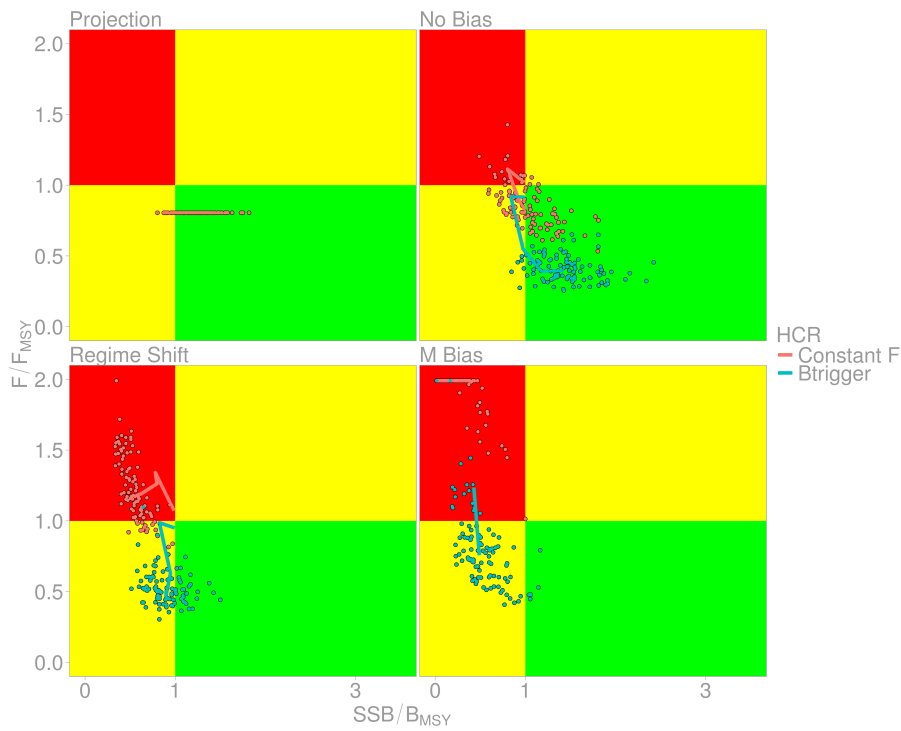

Figure 6: Kobe Strategy Matrices for stock evolution in 2010 by scenariofor constant F and HCR with $B_{Trigger}$ (pink and blue respectively)
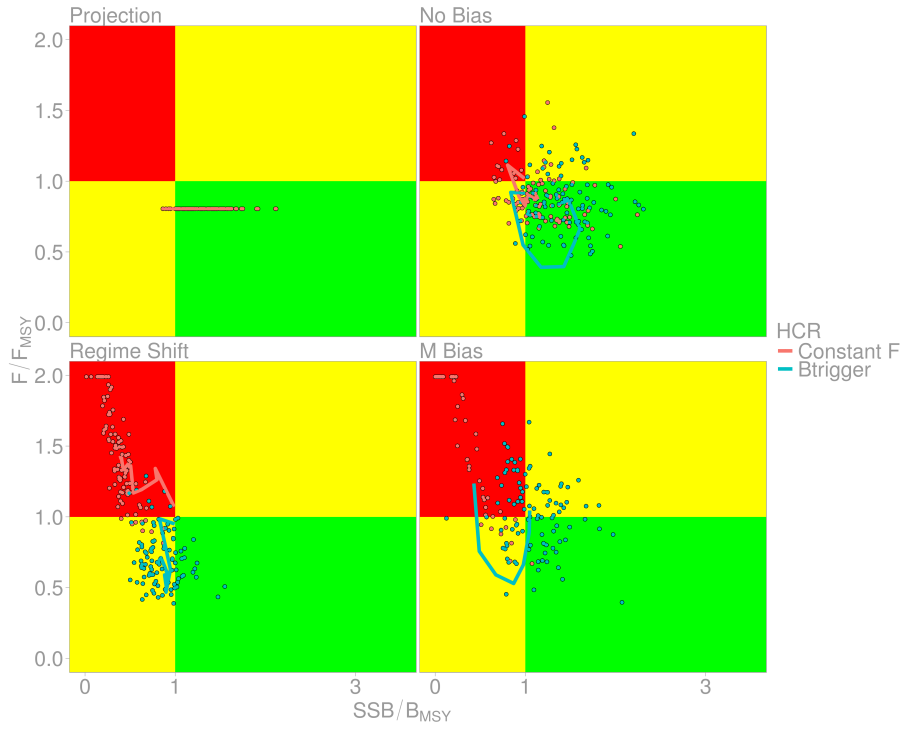
3

Figure 7: Kobe Strategy Matrices for stock evolution in 2015 by scenariofor constant F and HCR with $B_{Trigger}$ (pink and blue respectively)
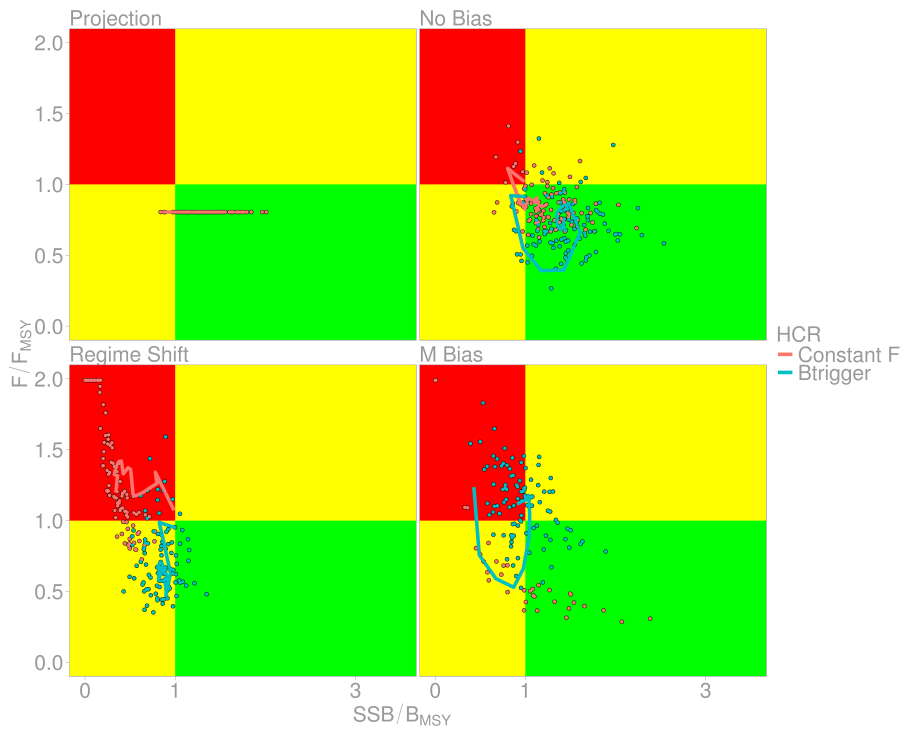

Figure 8: Kobe Strategy Matrices for stock evolution in 2020 by scenariofor constant F and HCR with $B_{Trigger}$ (pink and blue respectively)
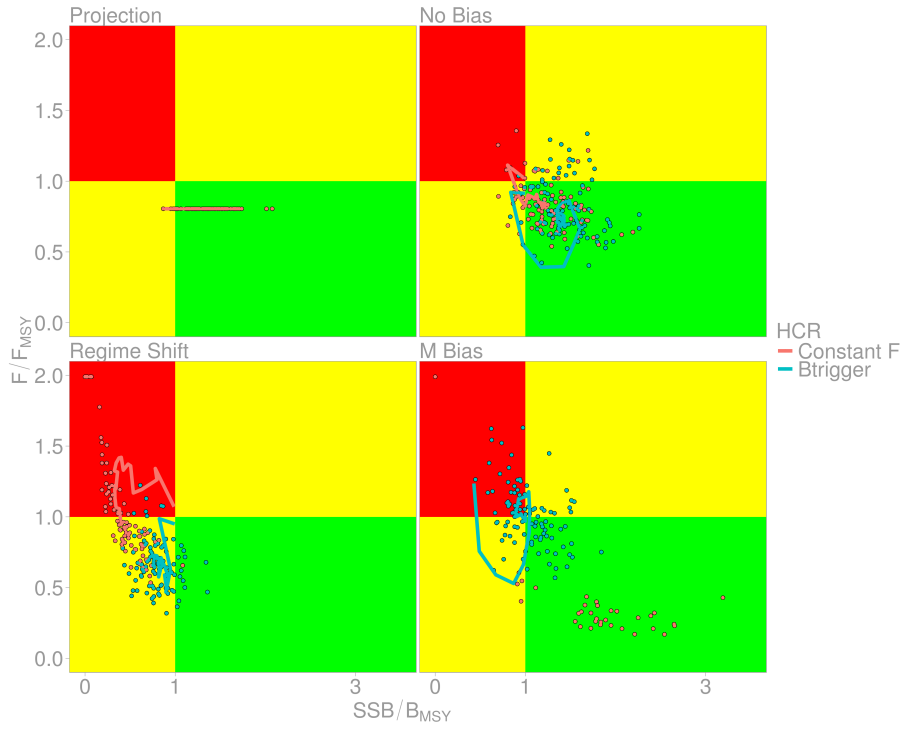
Figure 9: Kobe Strategy Matrices for stock evolution in 2025 by scenariofor constant F and HCR with $B_{Trigger}$ (pink and blue respectively)
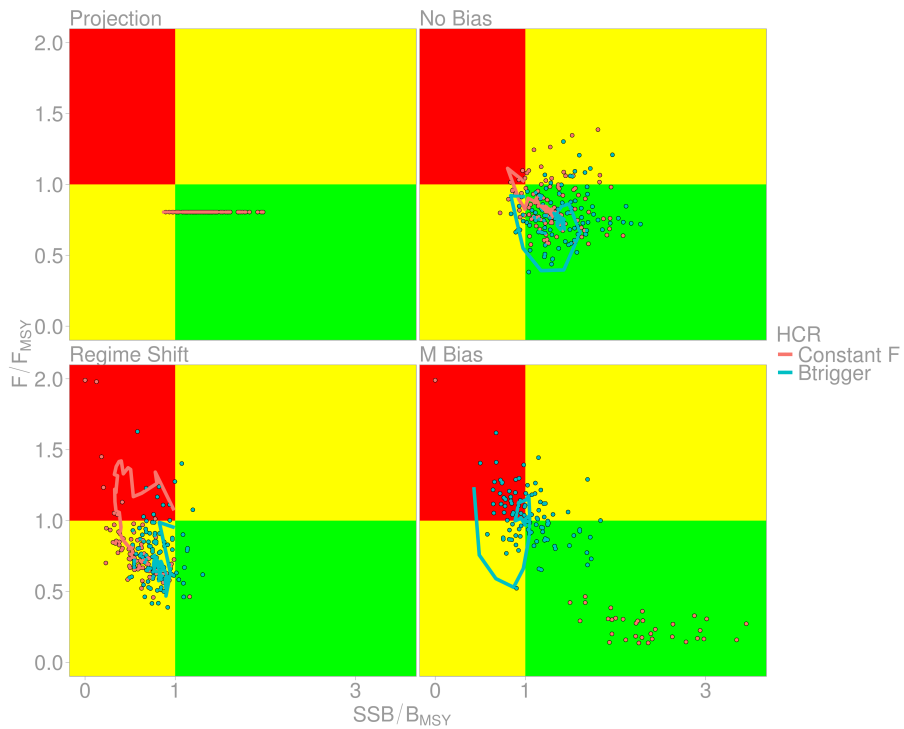

Figure 10: Kobe Strategy Matrices for stock evolution in 2030 by scenariofor constant F and HCR with $B_{Trigger}$ (pink and blue respectively)