STATUS OF THE MANAGEMENT PROCEDURE EVALUATION FOR ALBACORE

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Management Procedures for Albacore

iotc ctoi

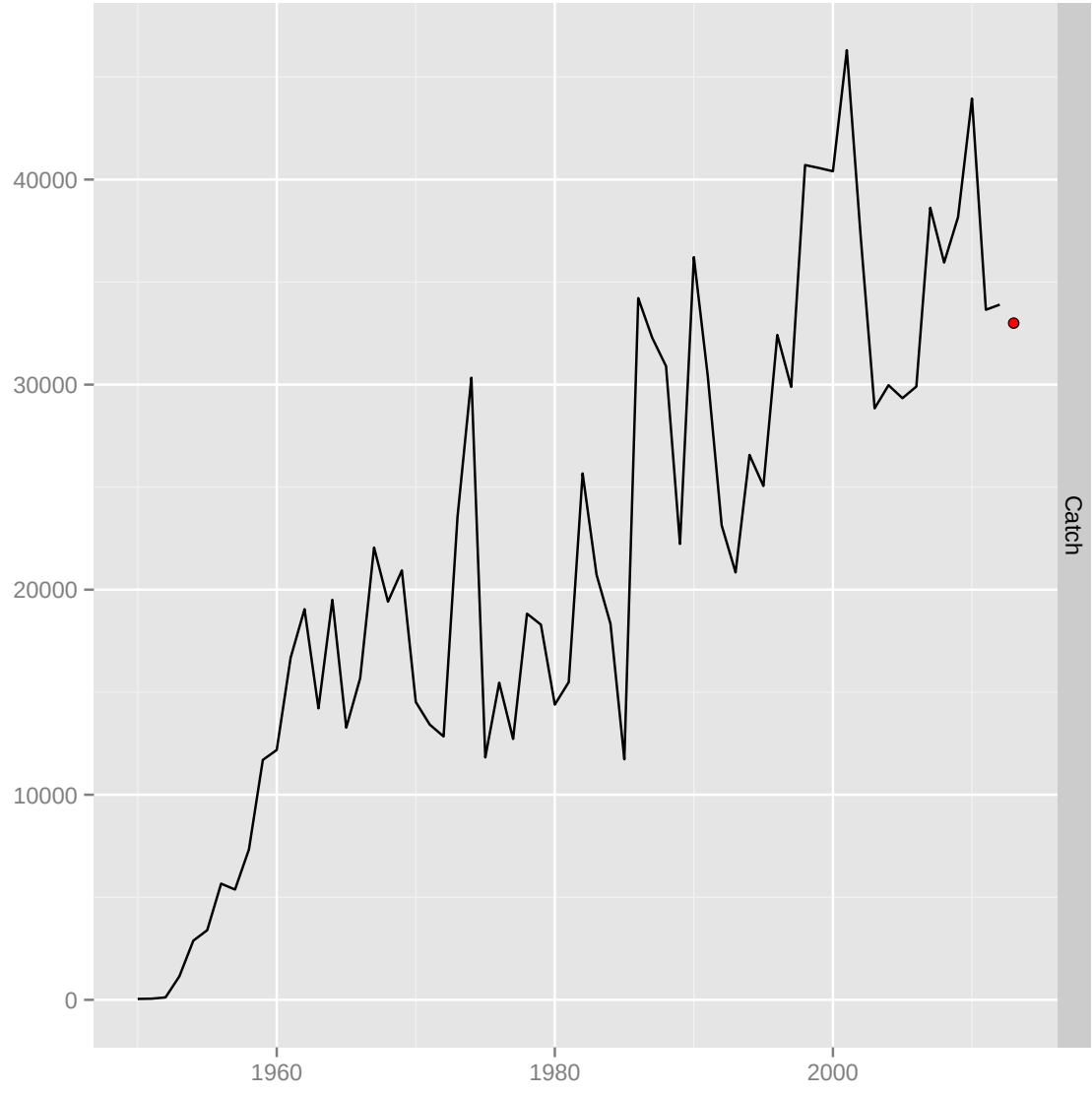
- Data as **input**, management values as **output**
- **Tuned** to achieve **objectives** and **risk levels**

Alternative Management Procedures

- Many possible Management Procedures
  - Different **inputs**: SA, CPUE, ...
  - **Risk**

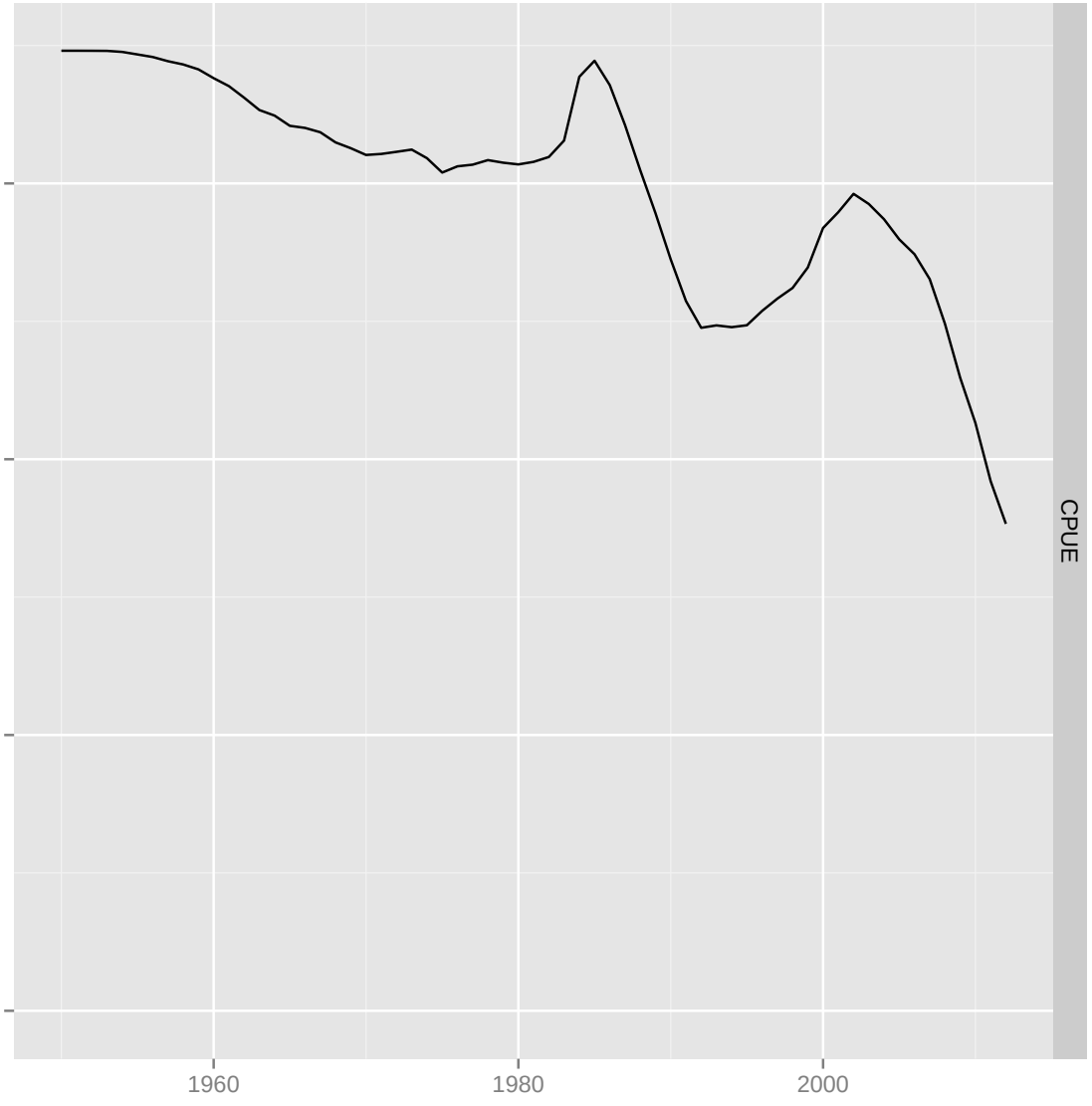
QCPUE MP: TAC

- Output: Total catch (TAC)



QCPUE MP: CPUE data

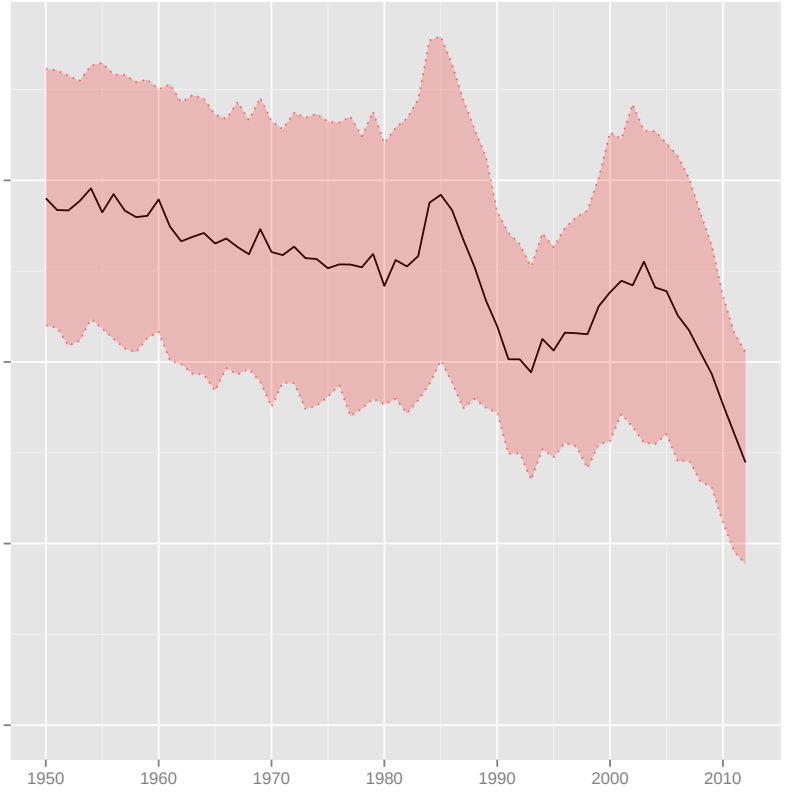
- Data: One CPUE series



QCPUE MP: Control parameters

Quantiles

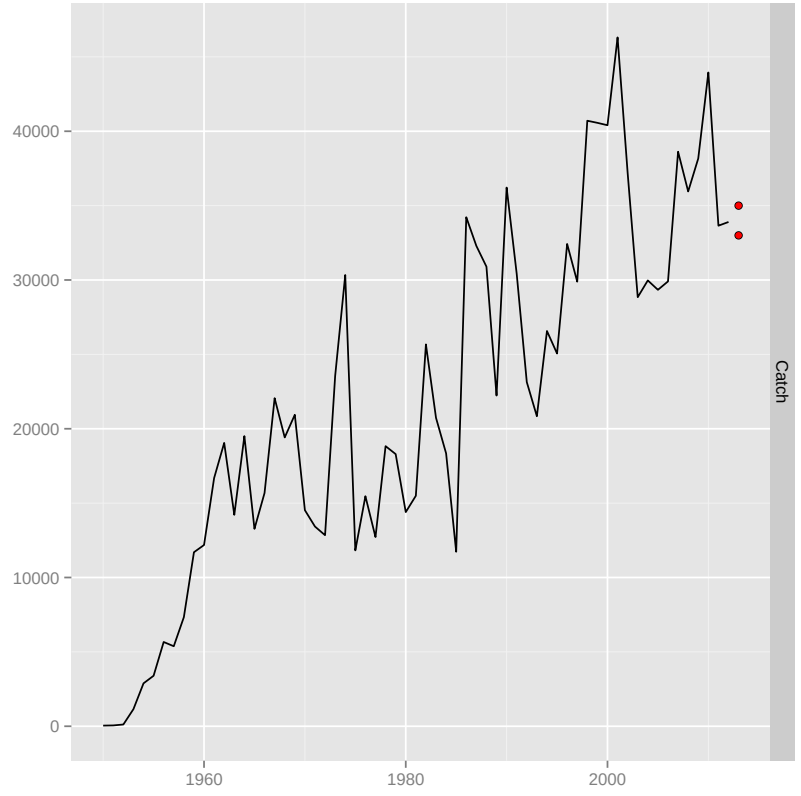
- How far can we deviate from past CPUE?



QCPUE MP: Control parameters

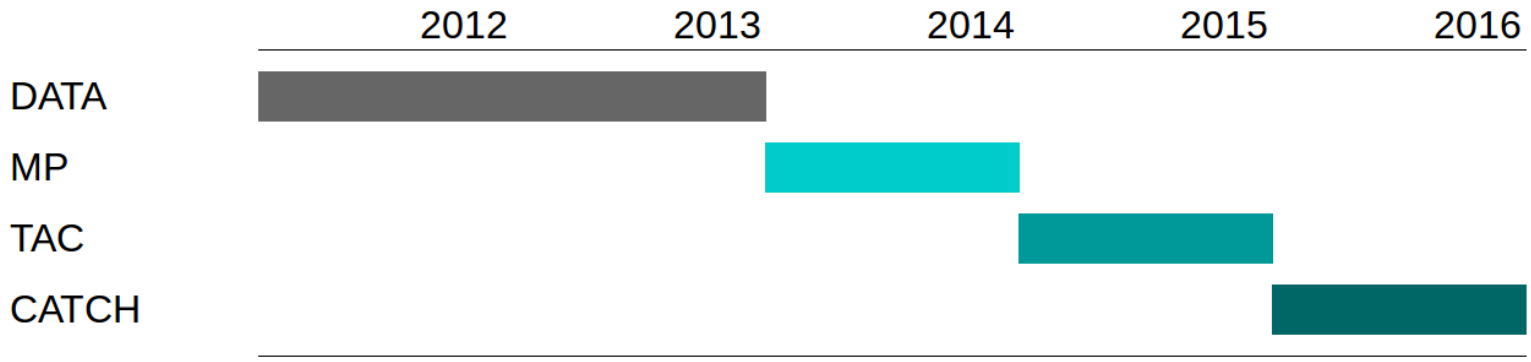
Delta

- How much can TAC change, up or down?



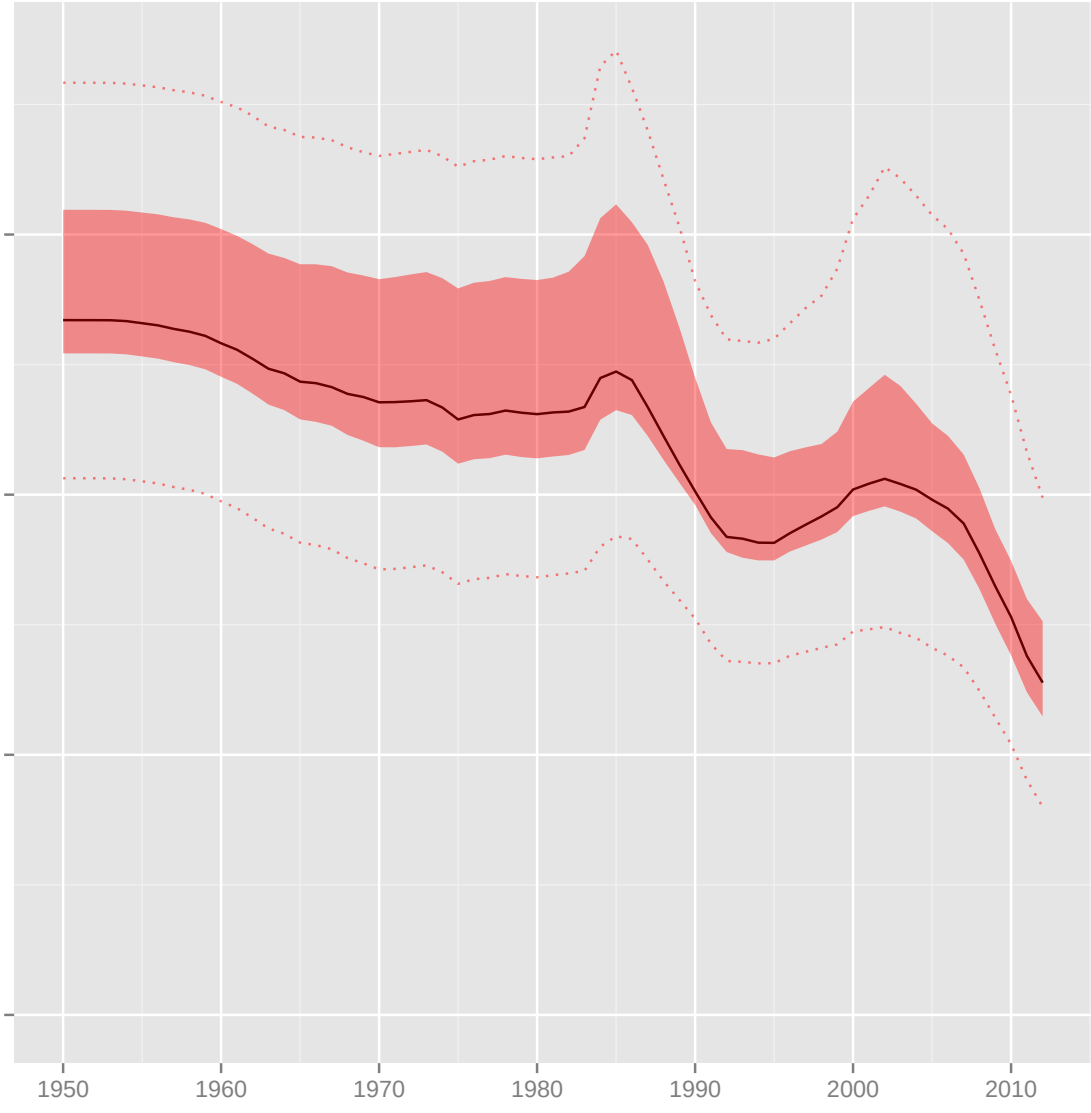
QCPUE MP: Time lags

- Lags: Science & Management



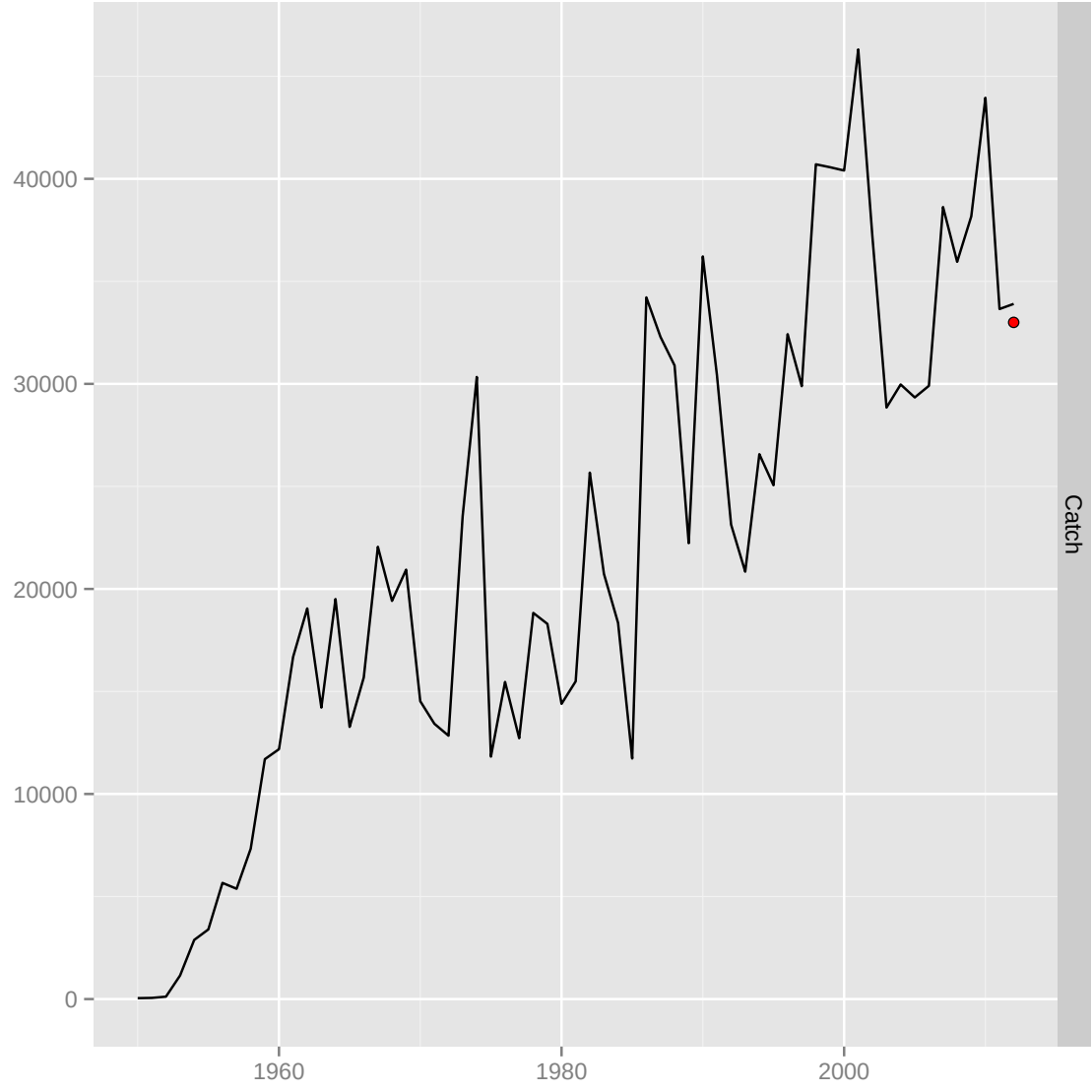
QCPUE MP: Error

Observation



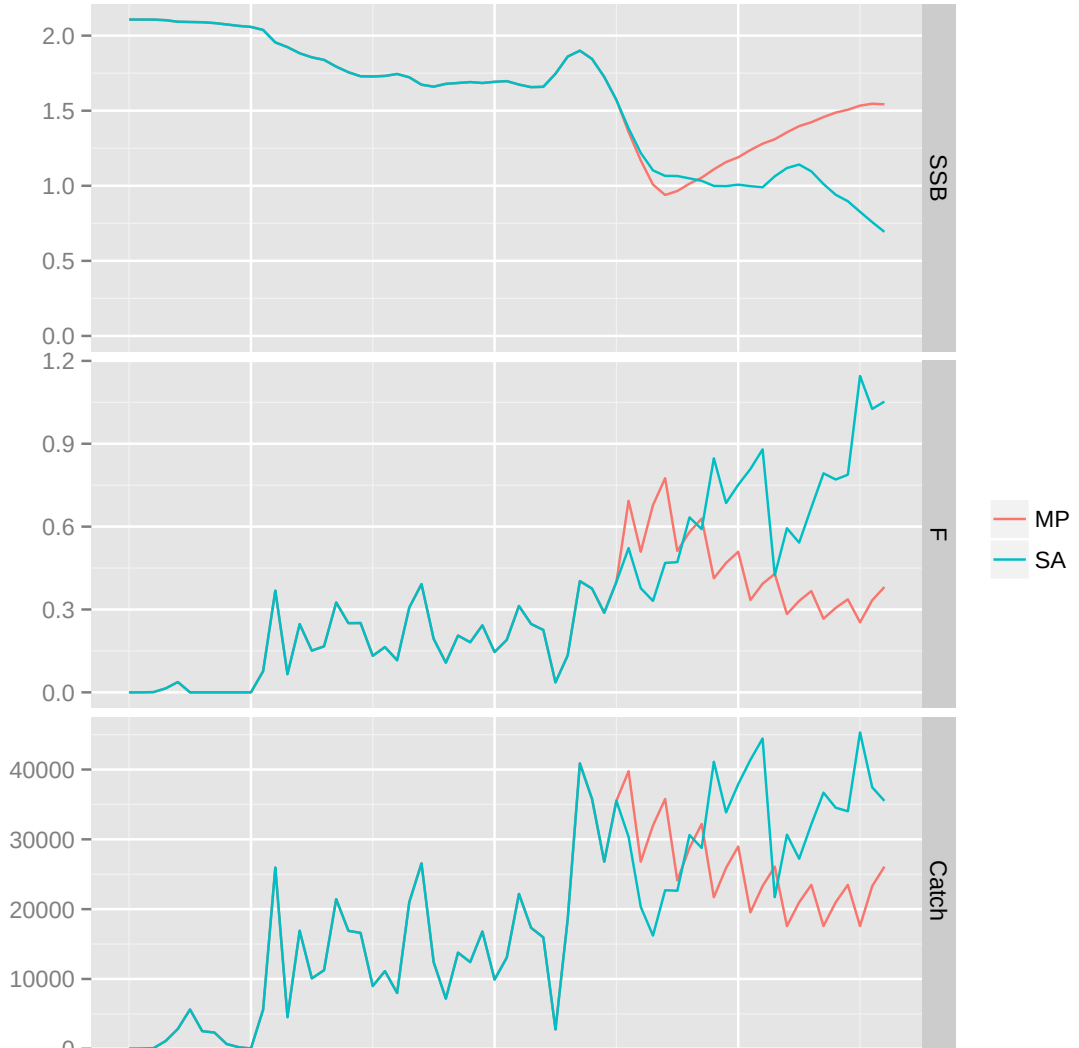
QCPUE MP: Error

Implementation



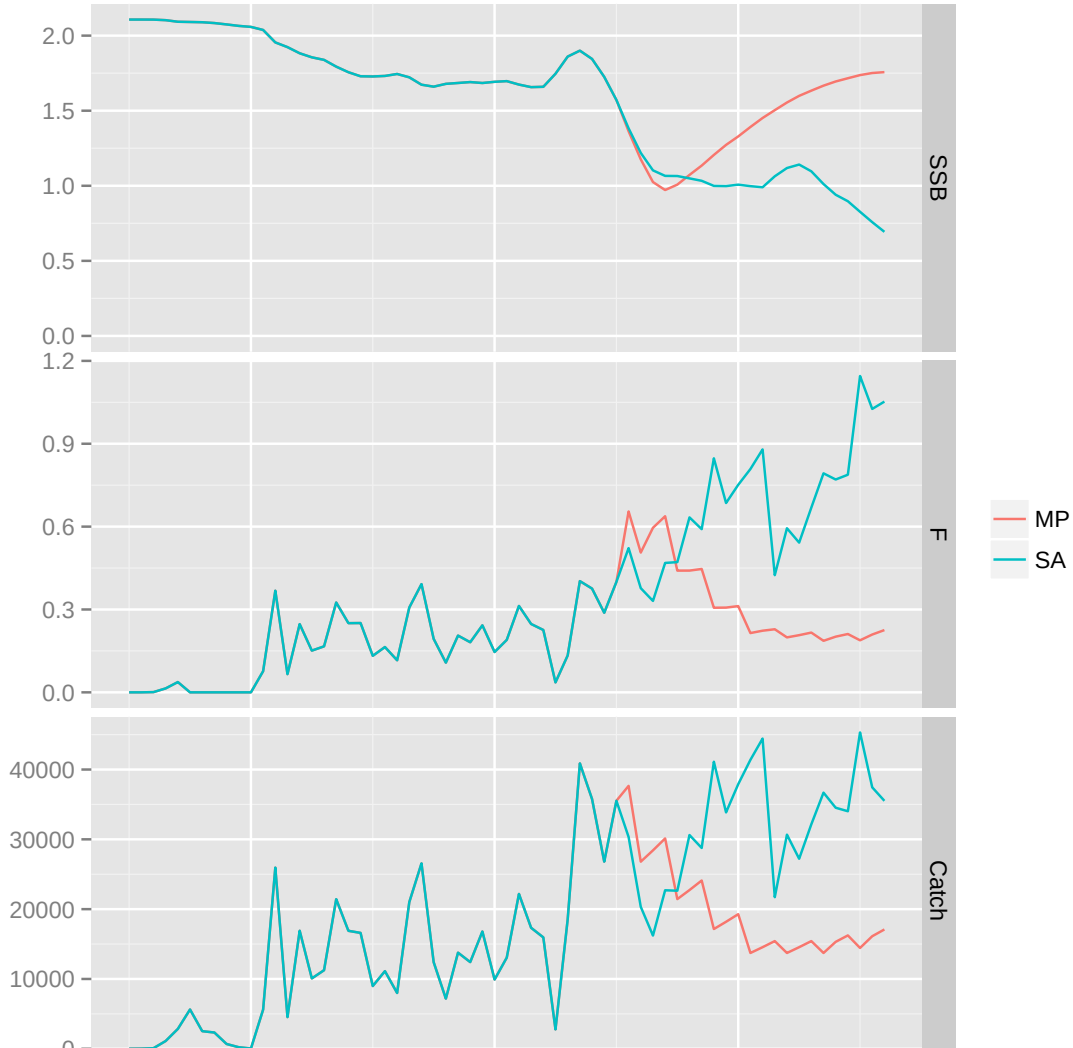
A run of the past

- What if we had applied this MP to the stock from 1990?
  - Band around CPUE (20%)
  - Comfortable TAC changes (10%)



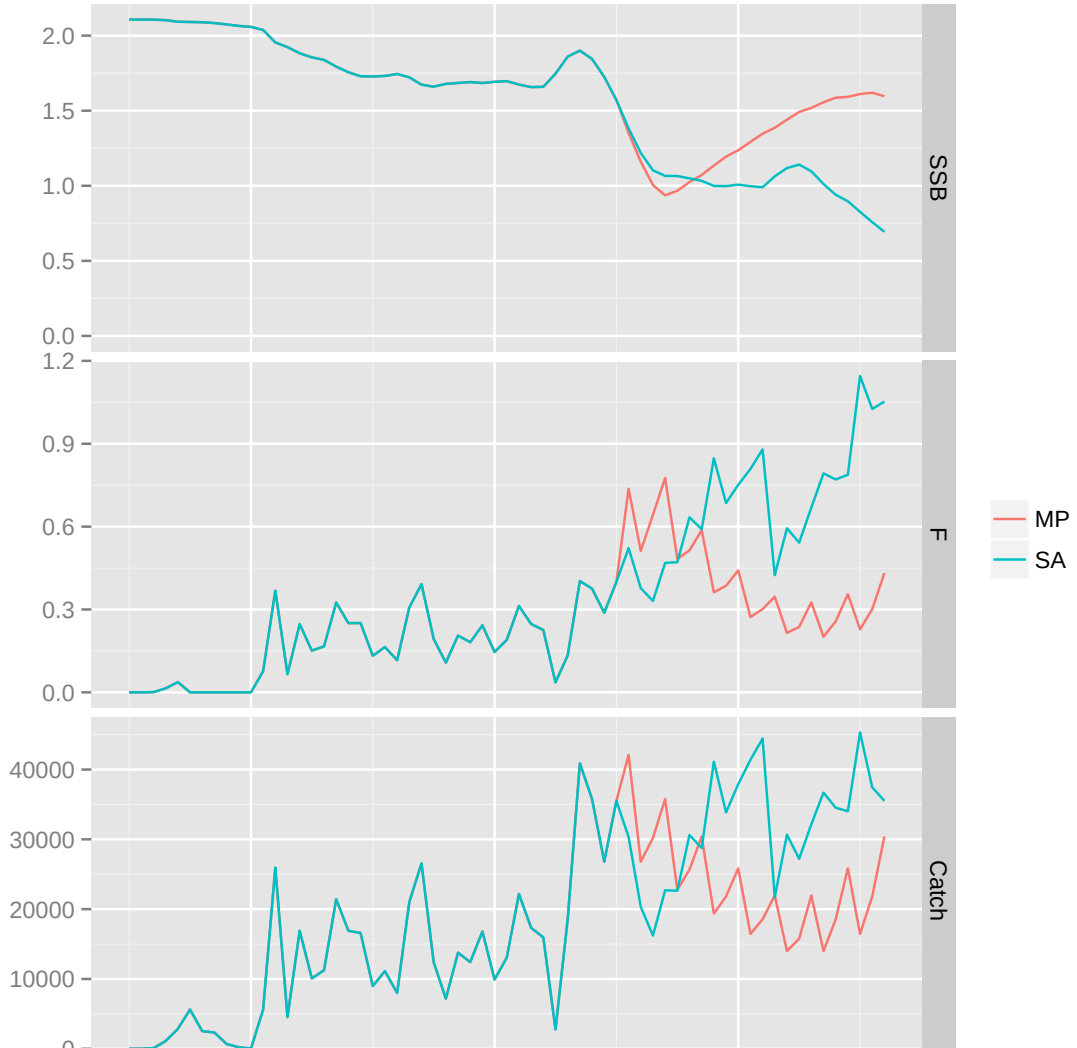
A run of the past

- What if we use more *conservative* controls?
  - Narrow band around CPUE (10%)
  - Assymetrical TAC changes (i.e. reduces more than increases)

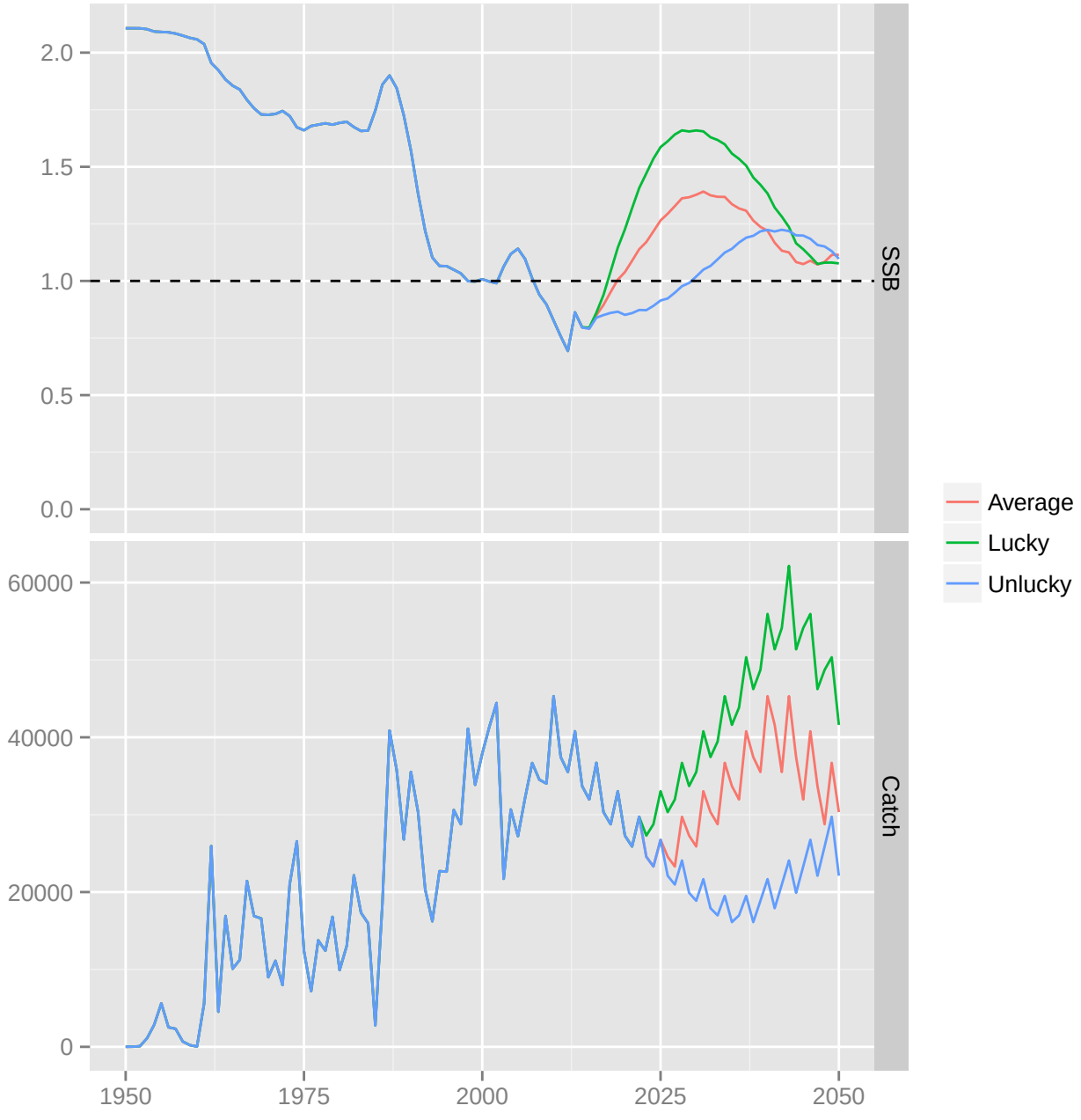


A run of the past

- What if we use more *relaxed* controls?
  - Wide band around CPUE (40%)
  - Larger TAC changes (15%)



Looking at the future



Trade-offs

TODO Add a couple of examples

- Margin of manoeuvre vs. risk (Quantiles)
- Speed of response vs. risk (Delta)
- Effect of lags and implementation error

Wrap up

- Current work on ALB MSE is more **complex**, including many **sources of error** and **variability**
  - Unknowns in biology
  - Observation error in catch and CPUE
  - Environmental influences in recruitment
- But main ideas are the same
  - Data IN, decisions OUT
  - Need to tune MPs to objectives
  - Trade-offs are unavoidable
- All code is Open Source, `http://github.com/iotcwpm/ALB`

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