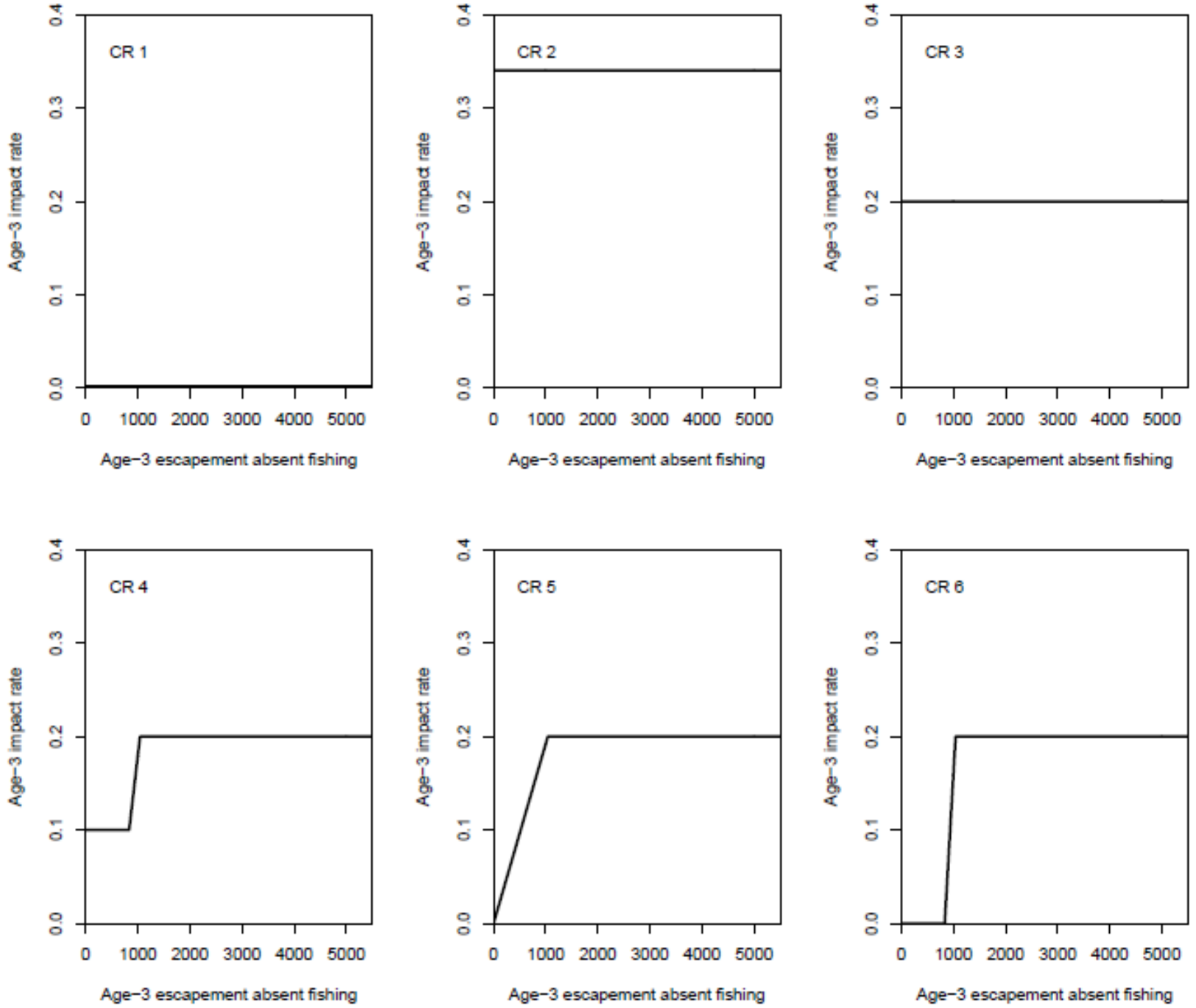
Harvest control rule and risk assessment

- Develop a suite of exploitation rate control rules

- Evaluate those control rules (risk assessment)
  - Costs to the fishery
  - Conservation benefit

Example suite of control rules evaluated for Sacramento River winter Chinook



Considerations for SONCC coho control rules

- Total ER or ocean fishery ER?
- Constant ER, abundance-based control rule, other form?
- Applies to a single or multiple populations in the ESU?
- Applies to natural-origin fish only, or composite stock?
- Informed by estimates of productivity?

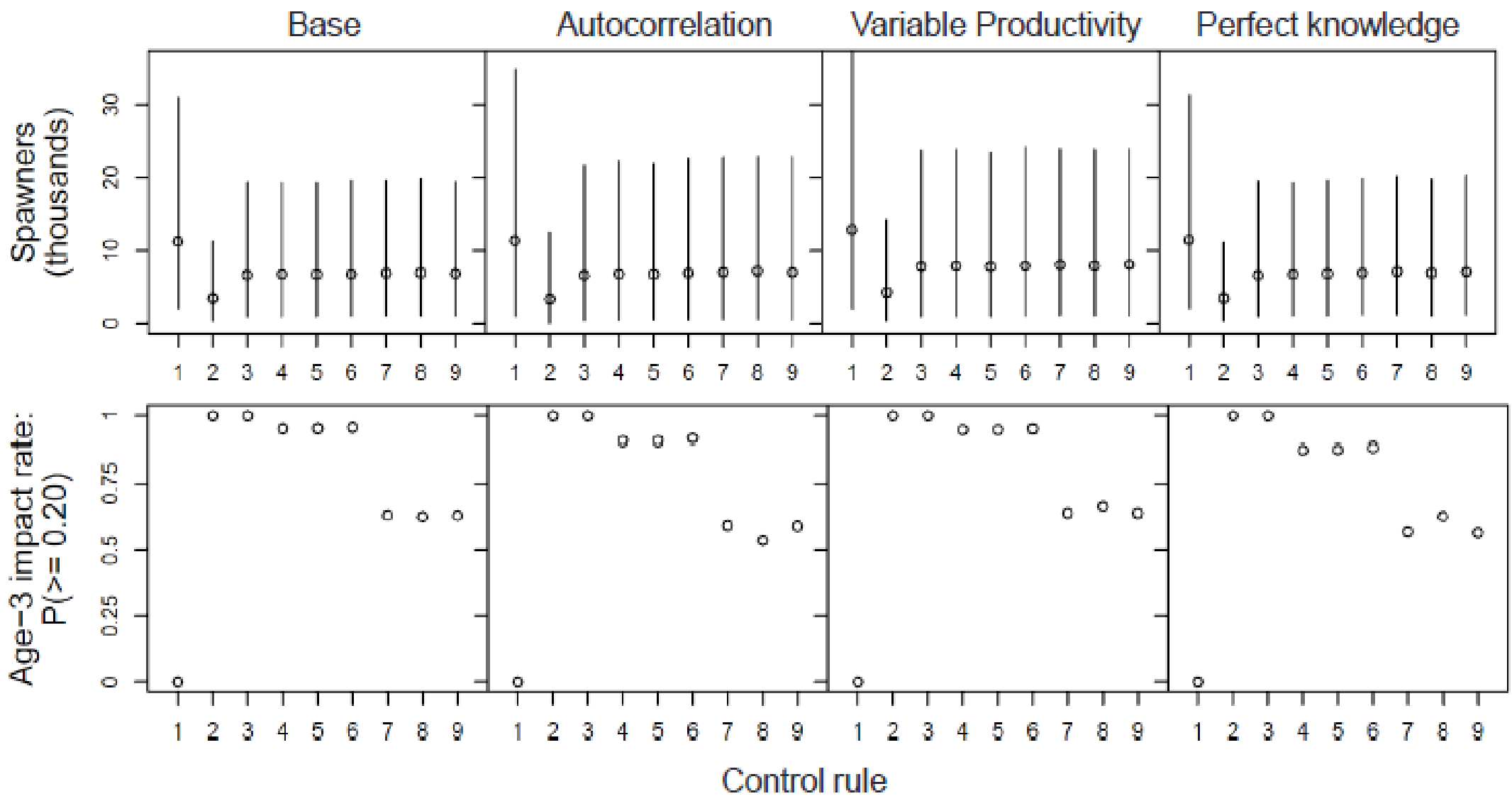
Risk assessment

- A variety of approaches with different names

- Evaluate control rules based on:
  - Conservation risks
  - Effects on fisheries

- Management Strategy Evaluation (MSE)

  “Management strategy evaluation (MSE) involves using simulation to compare the relative effectiveness for achieving management objectives of different combinations of data collection schemes, methods of analysis and subsequent processes leading to management actions.” (Punt et al. 2014)


Base
Autocorrelation
Variable Productivity
Perfect knowledge
Spawners (thousands)
0
10
20
30
1 2 3 4 5 6 7 8 9
Age−3 impact rate: P(>= 0.20)
0
0.25
0.5
0.75
1
Control rule