

A STAKEHOLDER-CENTERED APPROACH TO RESOLVING CONFLICT IN FISHERIES MANAGEMENT: REFLECTIONS ON THE LEPMAG PROCESS

COLLABORATIVE MODELLING

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OVERVIEW

- History of percid management in Lake Erie
- Development of a stakeholder-centered approach
- Review of the LEPMAG Process
 - Walleye focus
- Updates: where we are
 - Walleye
 - Yellow Perch
- Looking forward



HISTORY OF WALLEYE MANAGEMENT IN LAKE ERIE

1970

- Harvest moratorium

1976

- International quotas introduced

2004

- Consensus among agencies over walleye harvest was reached & then breached
 - Varying degrees of contention among stakeholders & between stakeholders and managers



LEPMAG TERMS OF REFERENCE

VISION STATEMENT

Lake Erie percid fisheries will be **transparently** managed using **sound science** & **partnerships** to achieve stable & sustainable harvests from shared stocks providing **broad & equitable benefits** for all jurisdictions.

RULES OF ENGAGEMENT



LAKE ERIE PERCID FISHERIES

- **Primary objectives:**

- Minimize economic risk to commercial fishers
- Maintain acceptable catch rates for recreational fishers
- Minimize risk of low spawning stock abundance

- **Primary approach:**

- Adjusting fishing rates for commercial & recreational fisheries

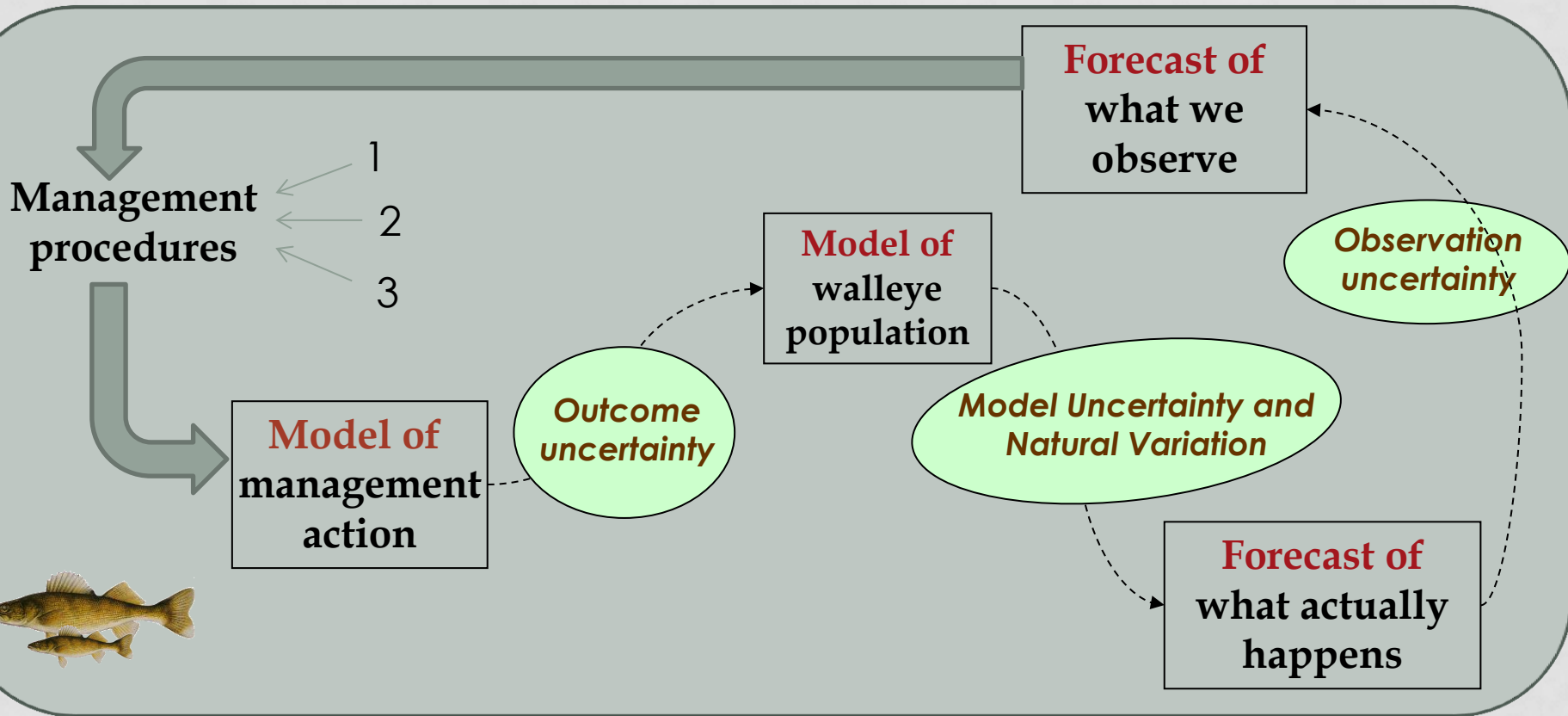


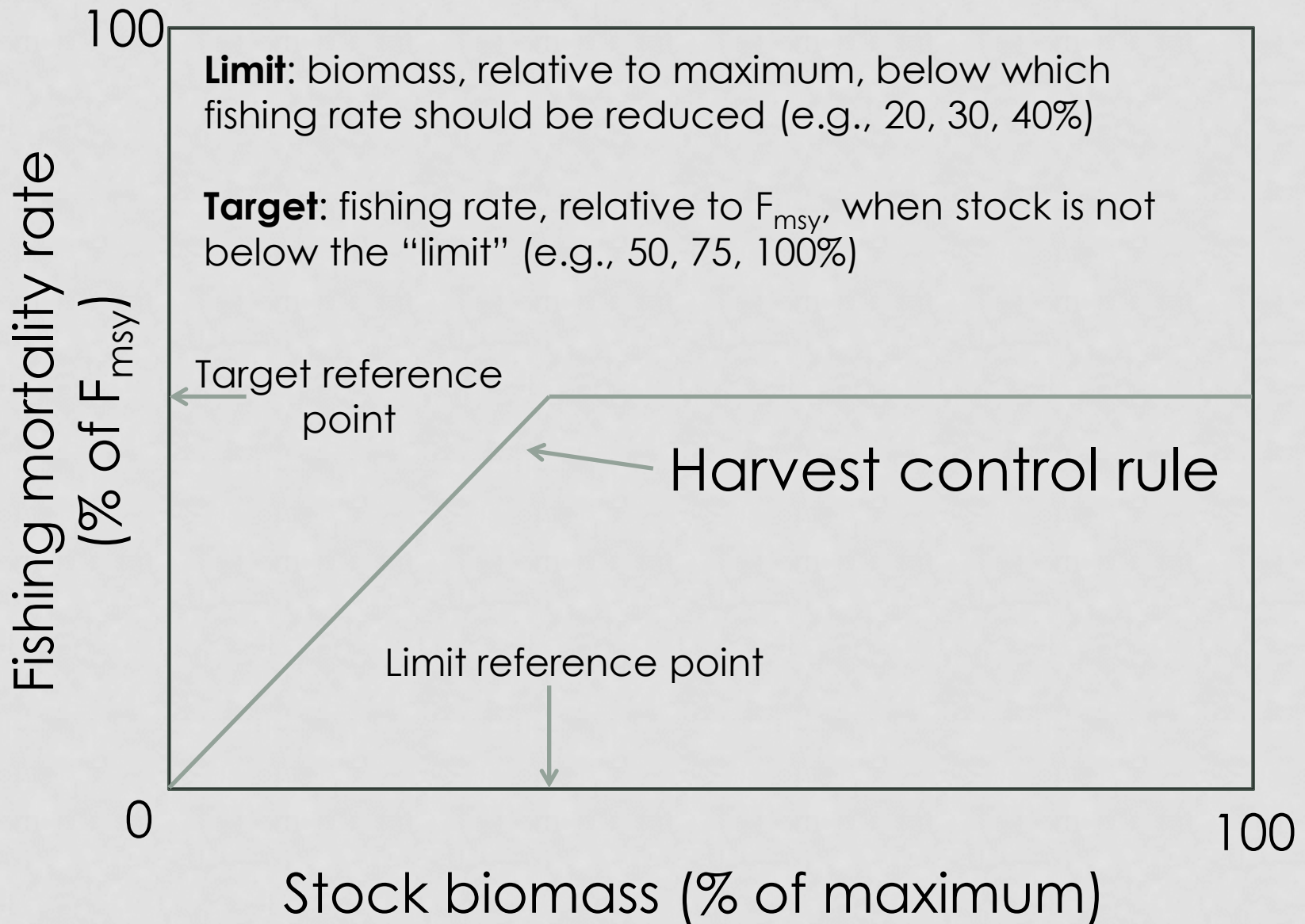
MANAGEMENT STRATEGY EVALUATION

- Process is based on objective evaluation of the management system
- Model of entire management system
- Evaluate performance of alternative “management procedures”
- Account for uncertainties

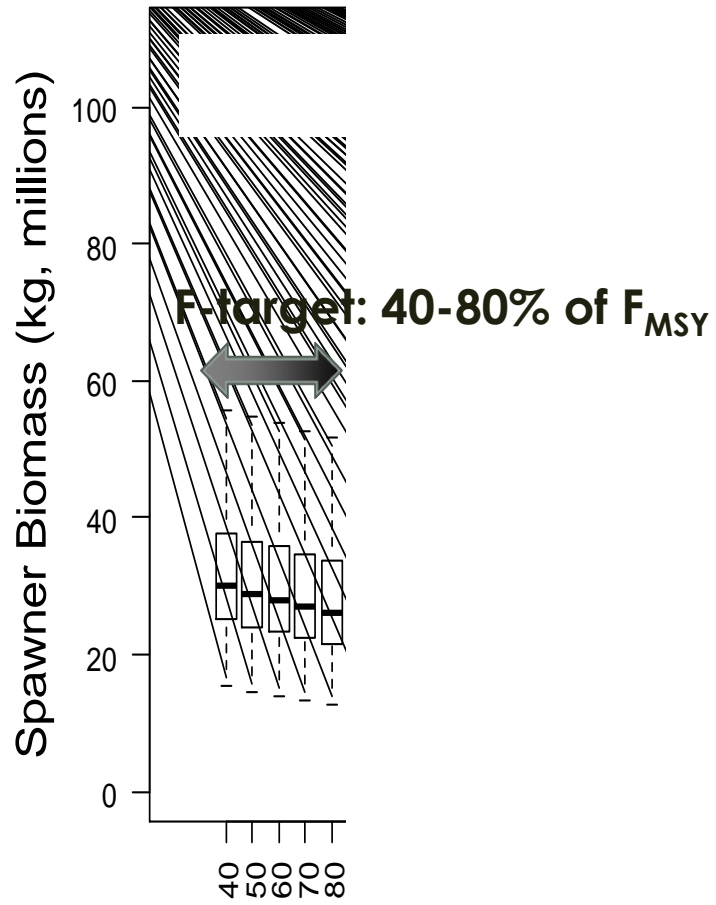


MANAGEMENT STRATEGY EVALUATION



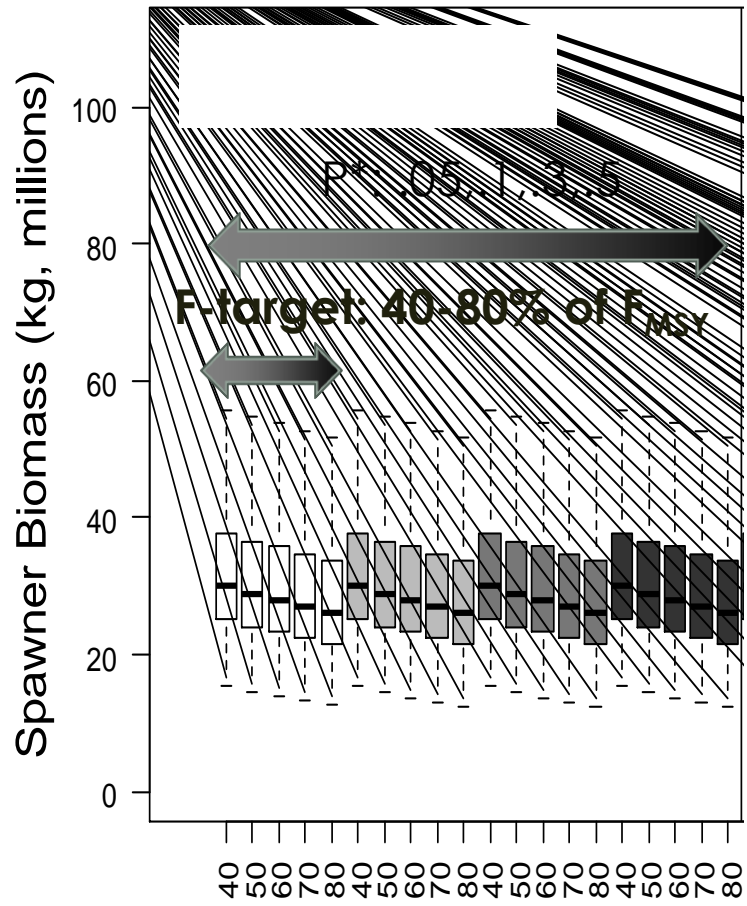


Spawner Biomass



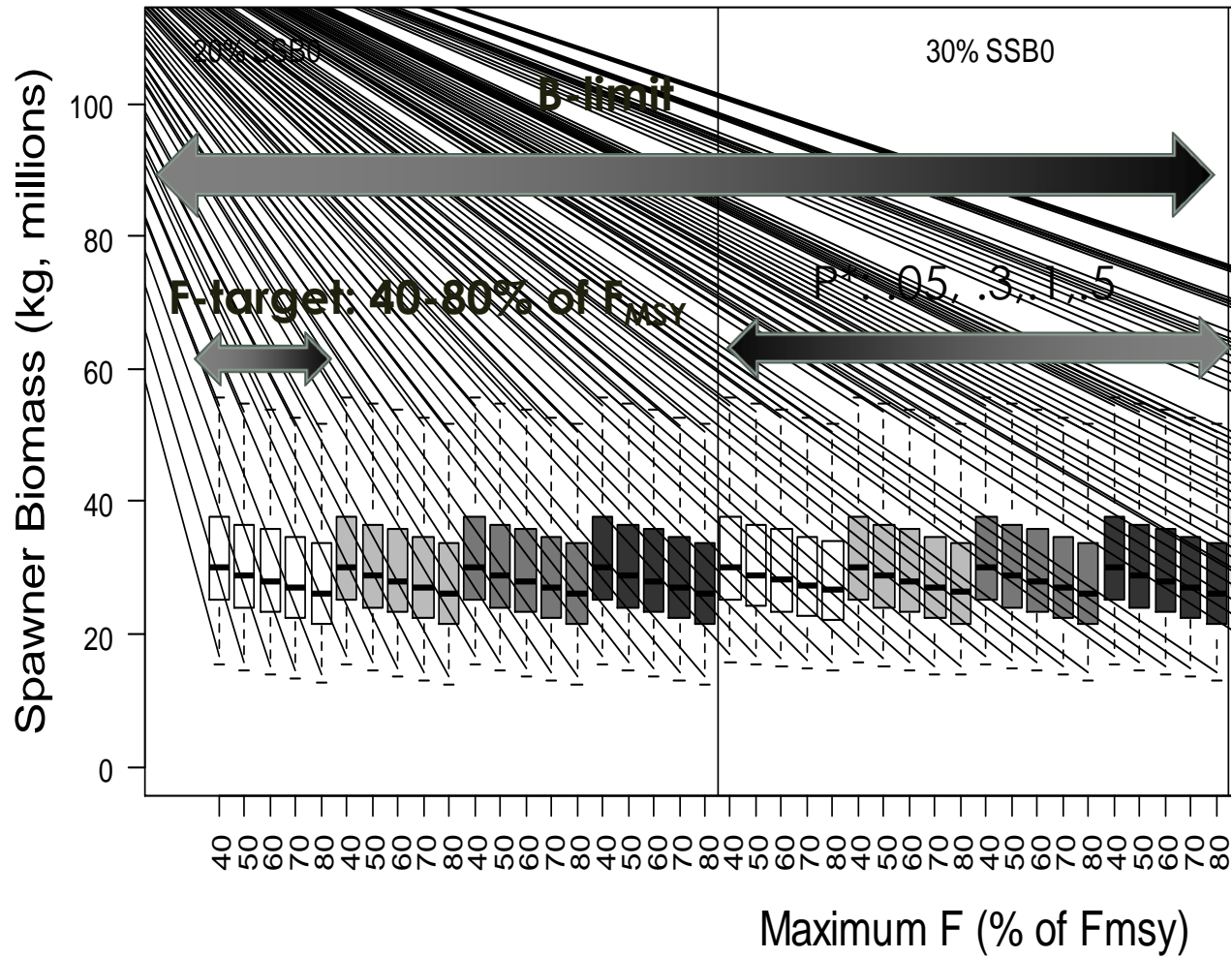
Maximum F (% of F_{msy})

Spawner Biomass

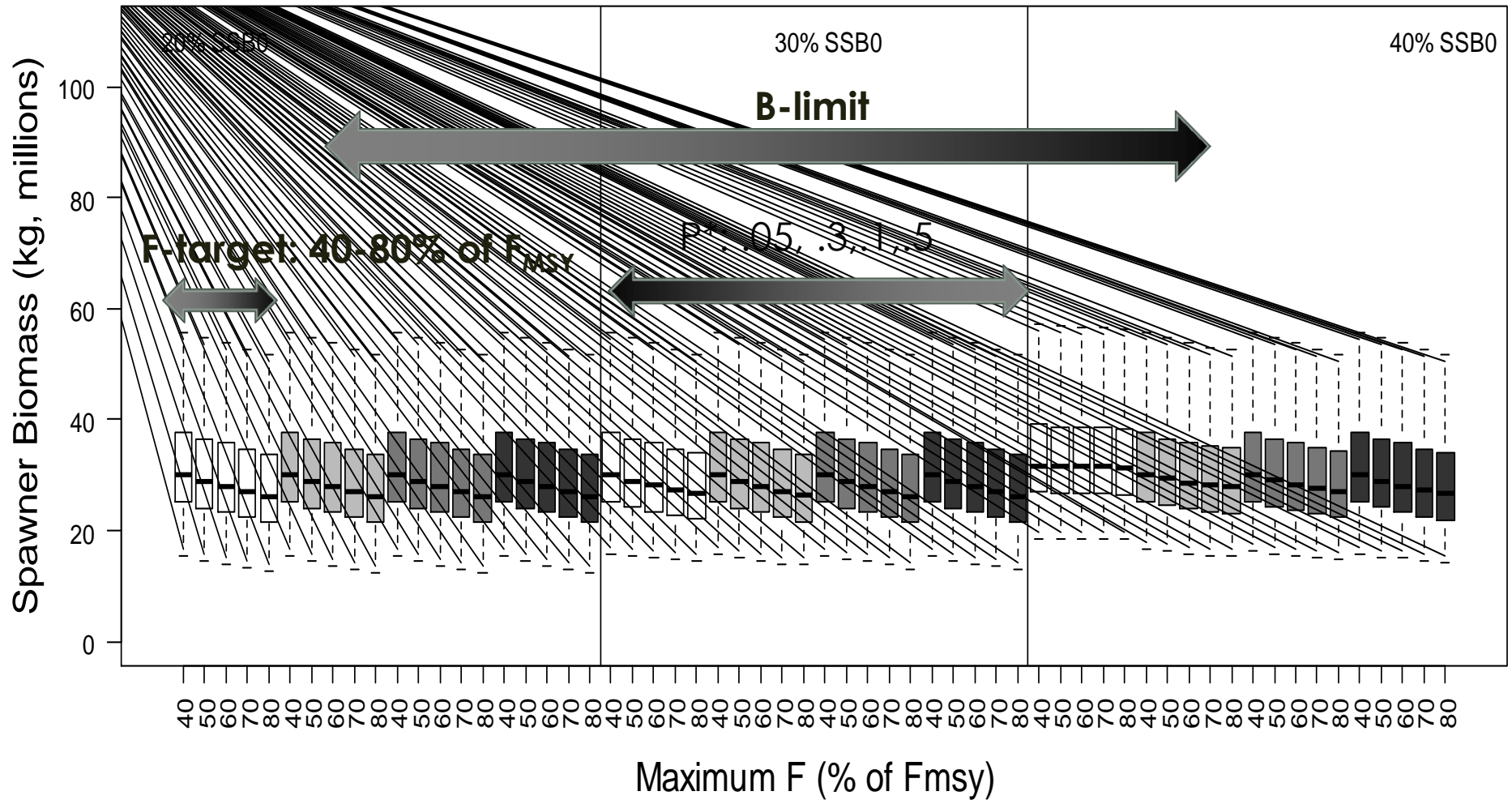


Maximum F (% of F_{msy})

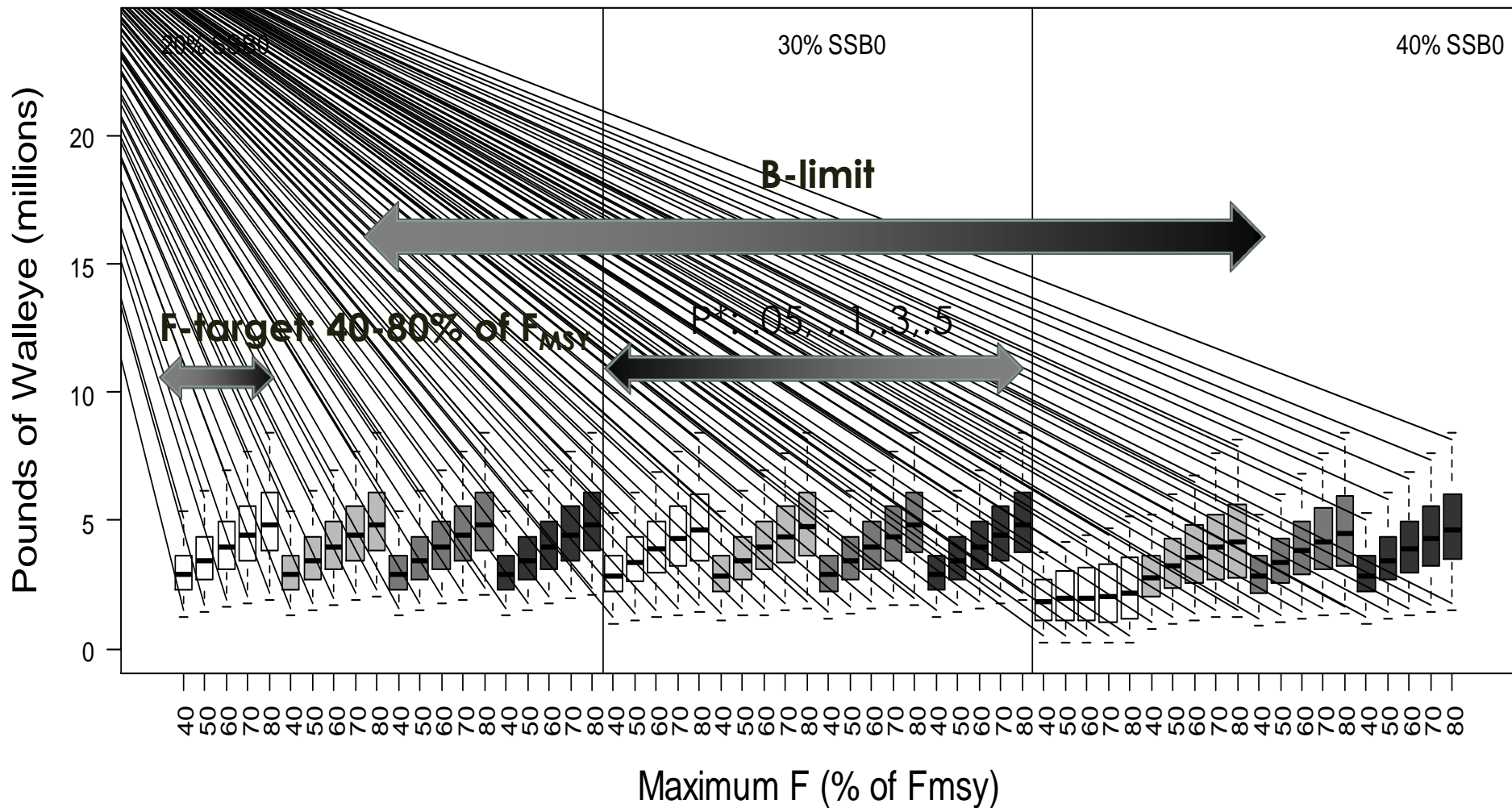
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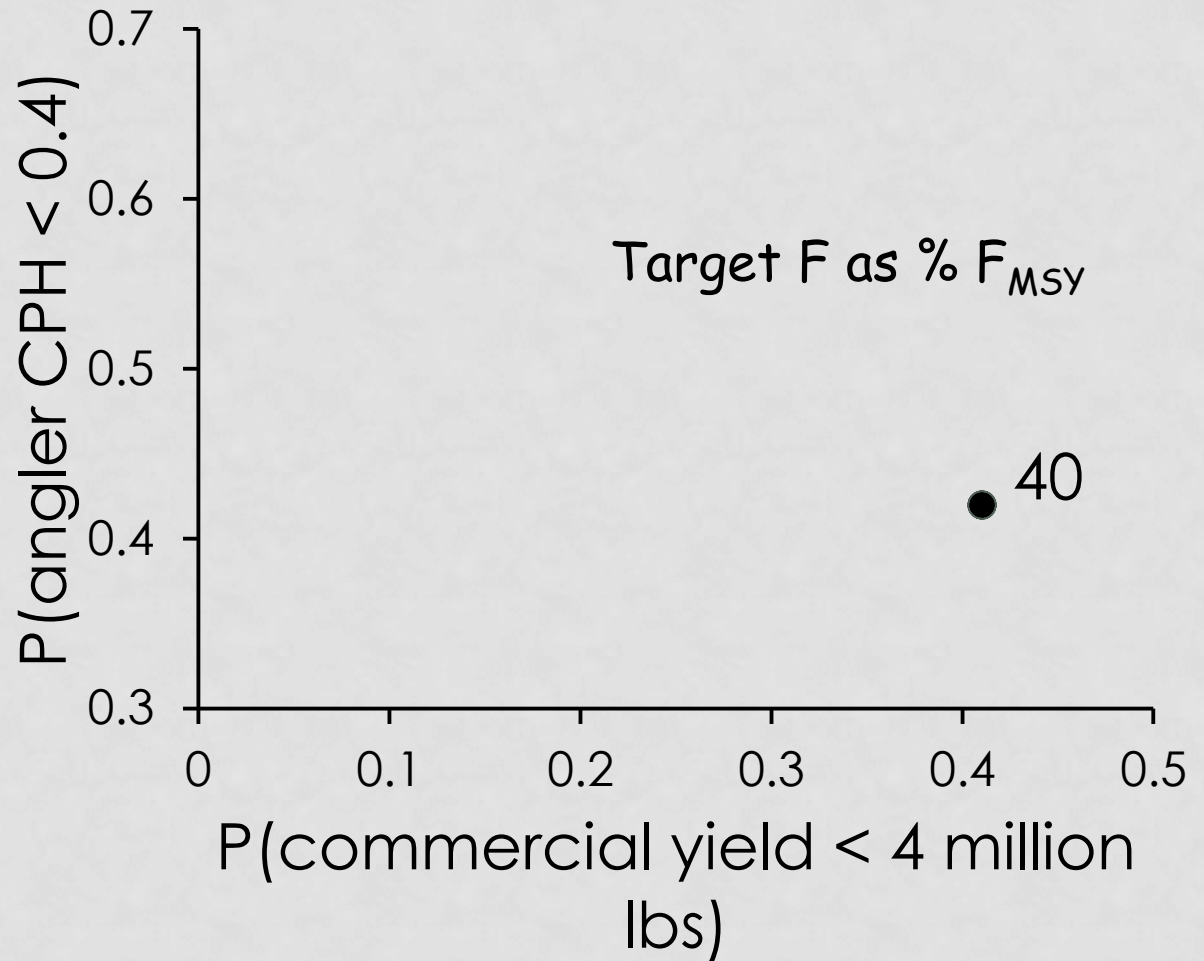
Spawner Biomass



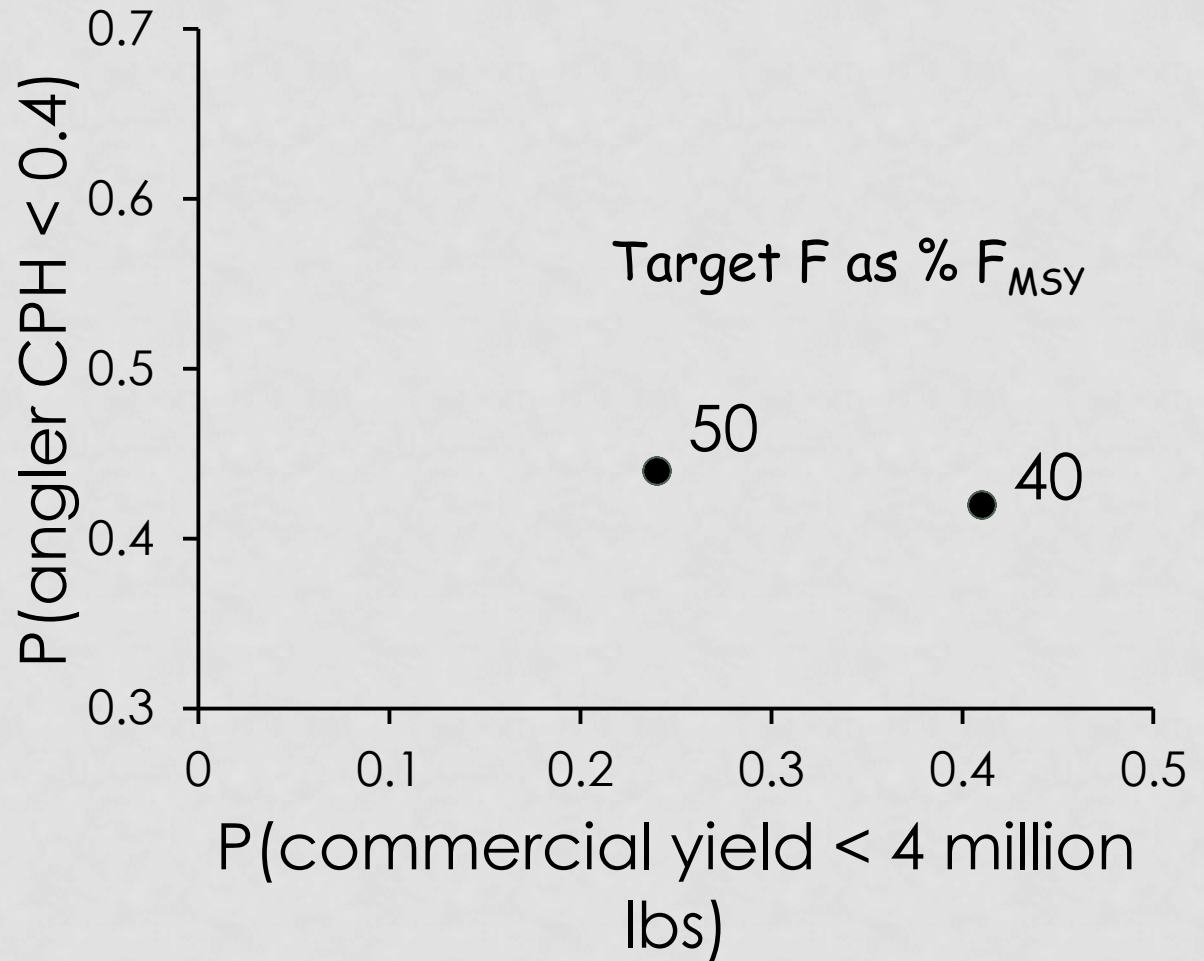
Mean Commercial Yield



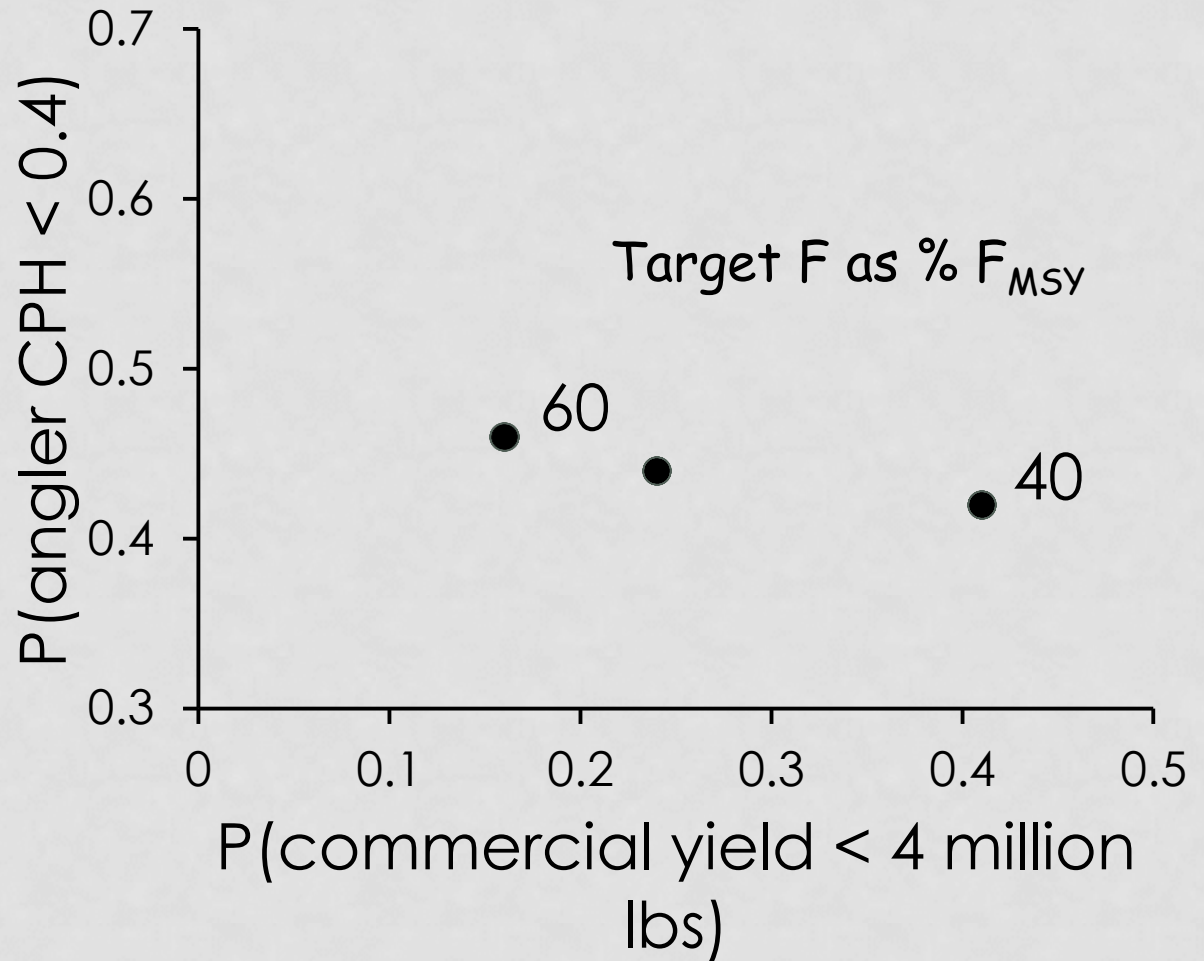
Emergent trade-offs



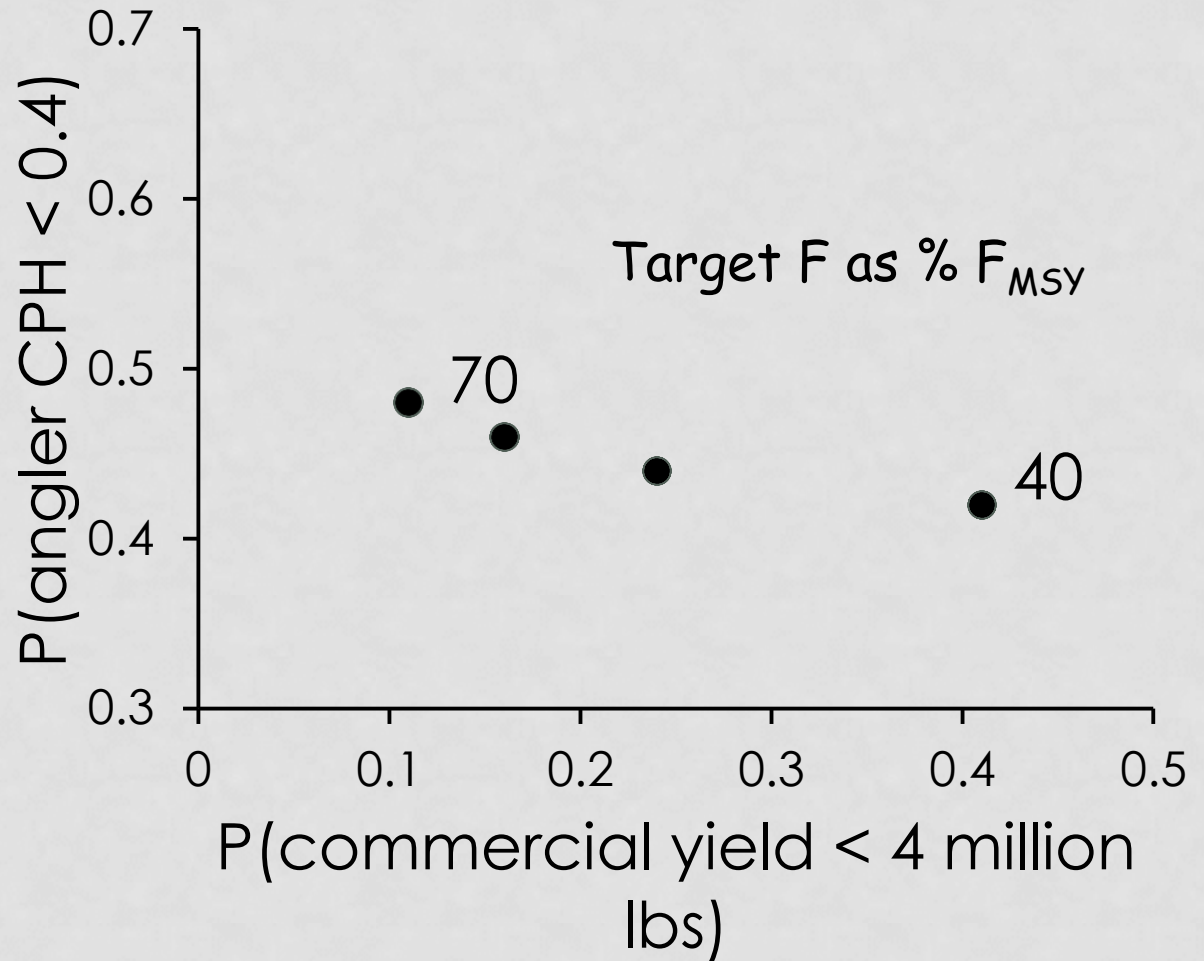
Emergent trade-offs



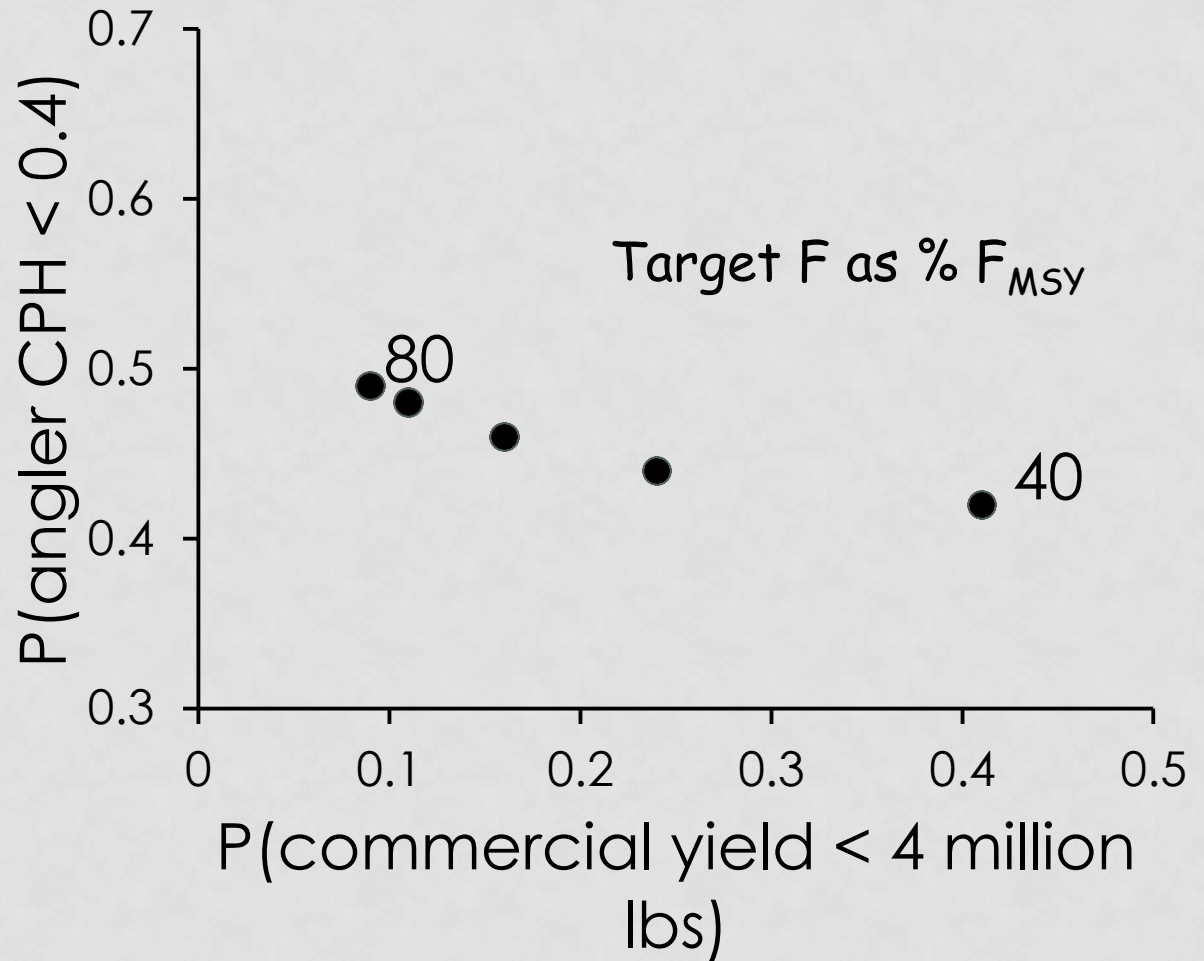
Emergent trade-offs



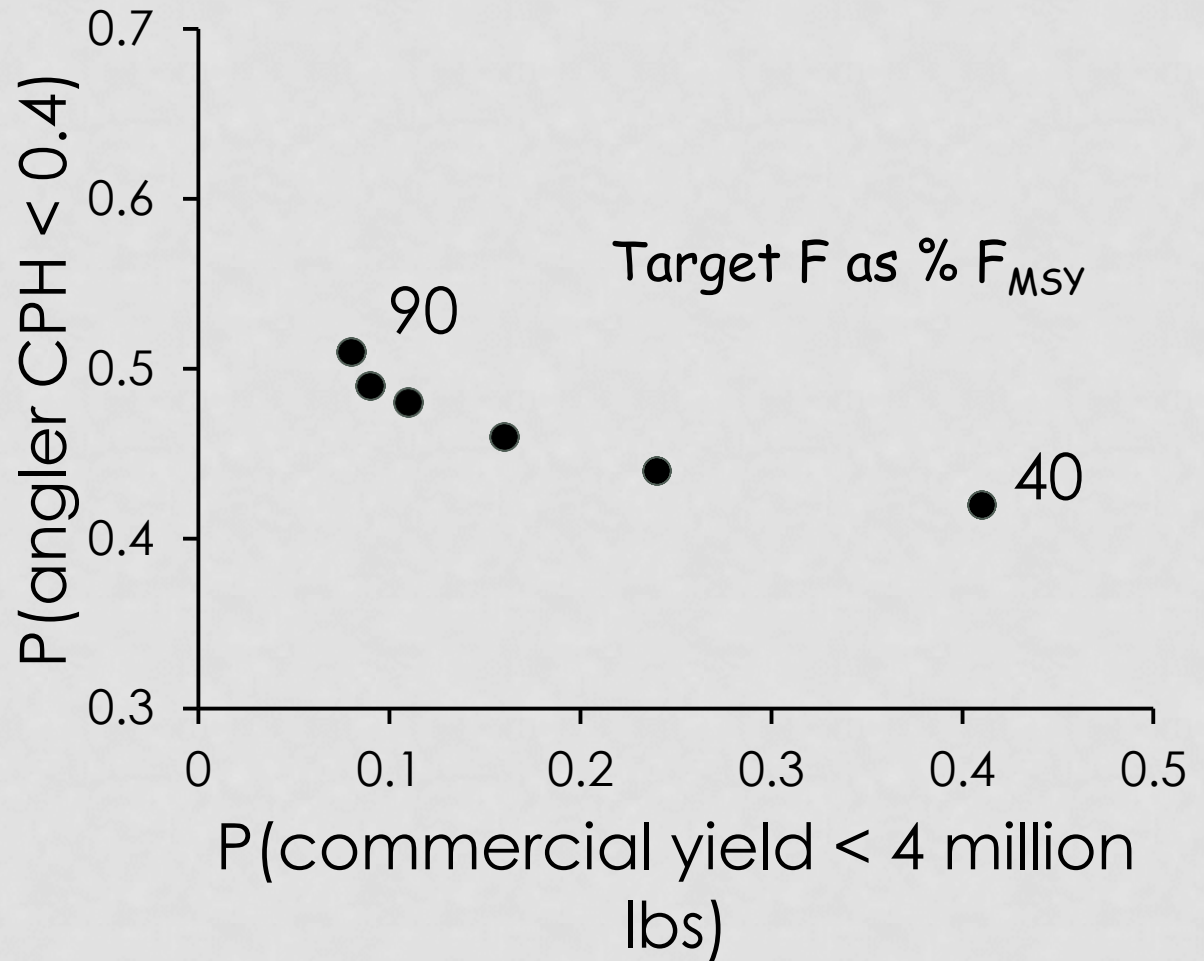
Emergent trade-offs



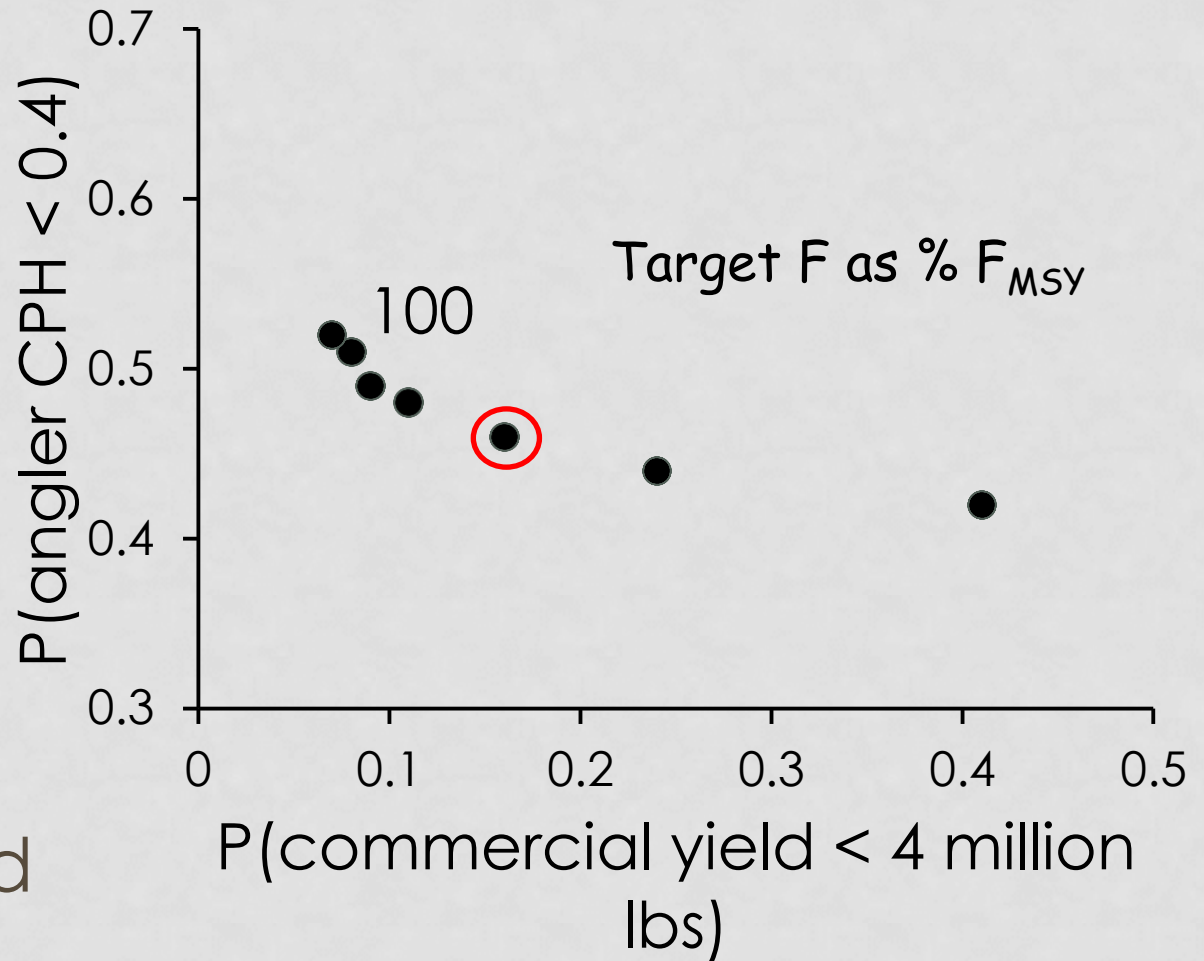
Emergent trade-offs



Emergent trade-offs



Emergent
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LEPMAG

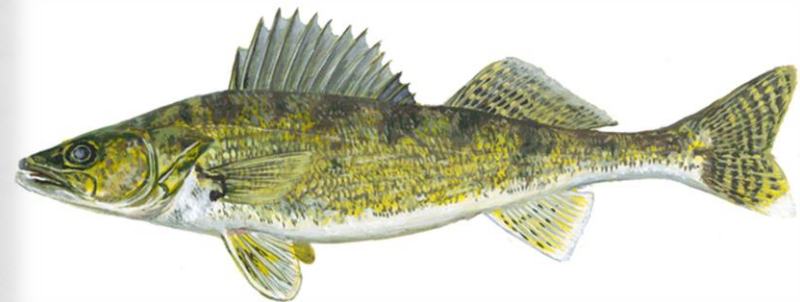
Recommended
Target F:

60% of MSY



WHERE THE PROCESS IS NOW: WALLEYE

- Based on LEPMAG recommendations:
 - Updated assessment model adopted
 - New HCR formally adopted
 - First applied during the 2014 quota-setting process for Lake Erie walleye
- 2015 Walleye Management Plan



THE LEPMAG PROCESS

- Facilitate the understanding among stakeholders of shared management goals
- Provide a forum for discussion of concerns & areas of risk for conflict
- Build trust in the fisheries management process

