Report of the 2009 National SSC Workshop

Establishing a Scientific Basis for Annual Catch Limits

2nd National SSC Workshop
St. Thomas, USVI
November 10-13, 2009

Host: Caribbean Fishery Management Council

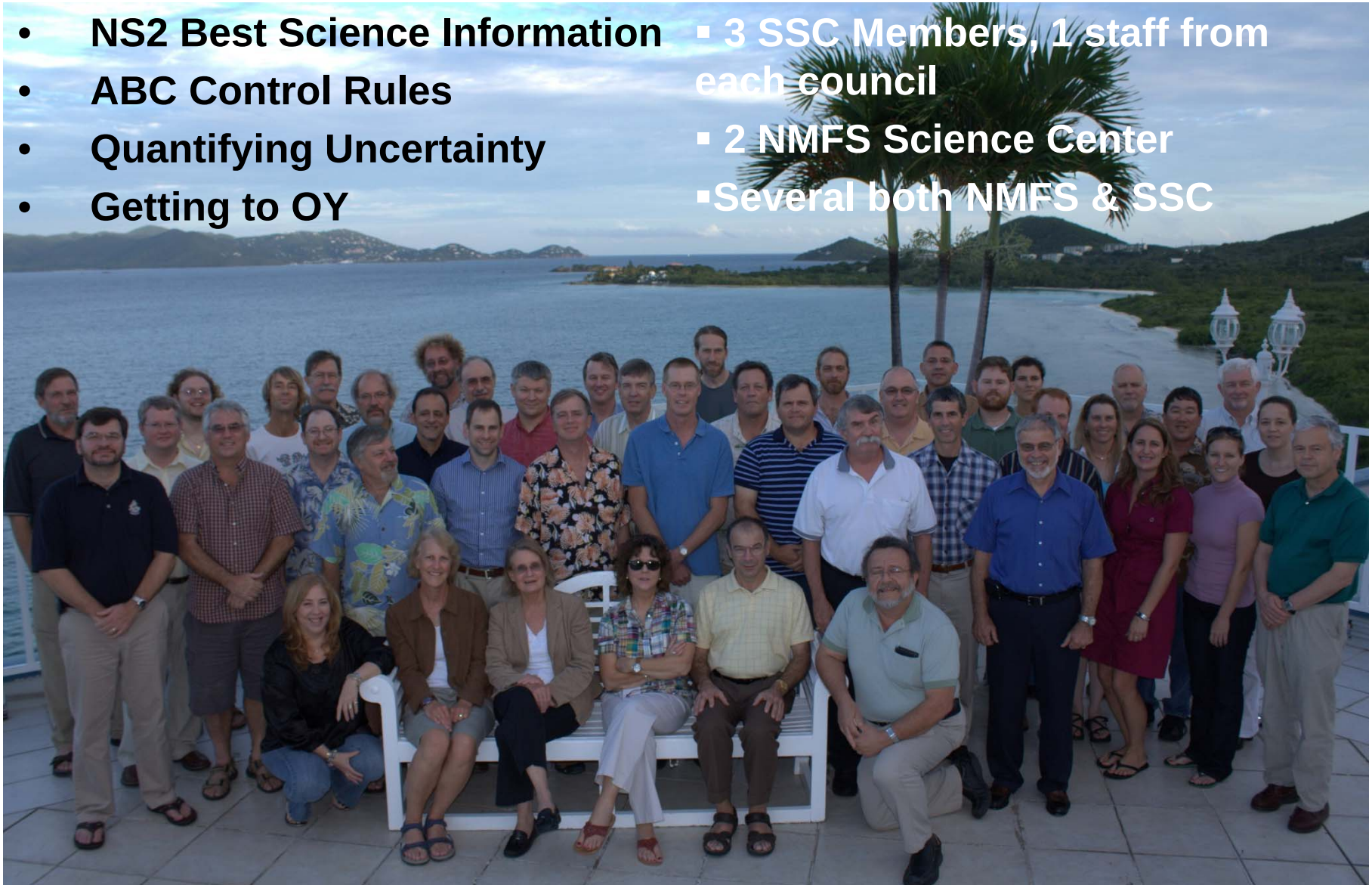
Workshop Objectives and Participation

Objectives

- NS2 Best Science Information
- ABC Control Rules
- Quantifying Uncertainty
- Getting to OY

Participation

- 3 SSC Members, 1 staff from each council
- 2 NMFS Science Center
- Several both NMFS & SSC



Workshop Agenda

1. National Standard 2 and Peer Review
- Background Report (Michaels)

2. National Standard 1 and ABC Control Rules
- Background Report (Methot and Williams)
- Report from each SSC on their progress

3. Scientific Uncertainty
- Report on stock vulnerability (Patrick)
- Discussion of best practices

3. Hitting the Target – Getting to OY
- Background Report (Lambert)
- Economics of rebuilding (Anderson)
- Defining maximum economic yield (Tomberlin)
- Accounting for Management Uncertainty (Millikin)

2. Other Contemporary Issues
- Use of Management Strategy Evaluation (Dorn)
- Catch Shares (Millikin)
- Update on Marine Recreational Information Program (Andrews)

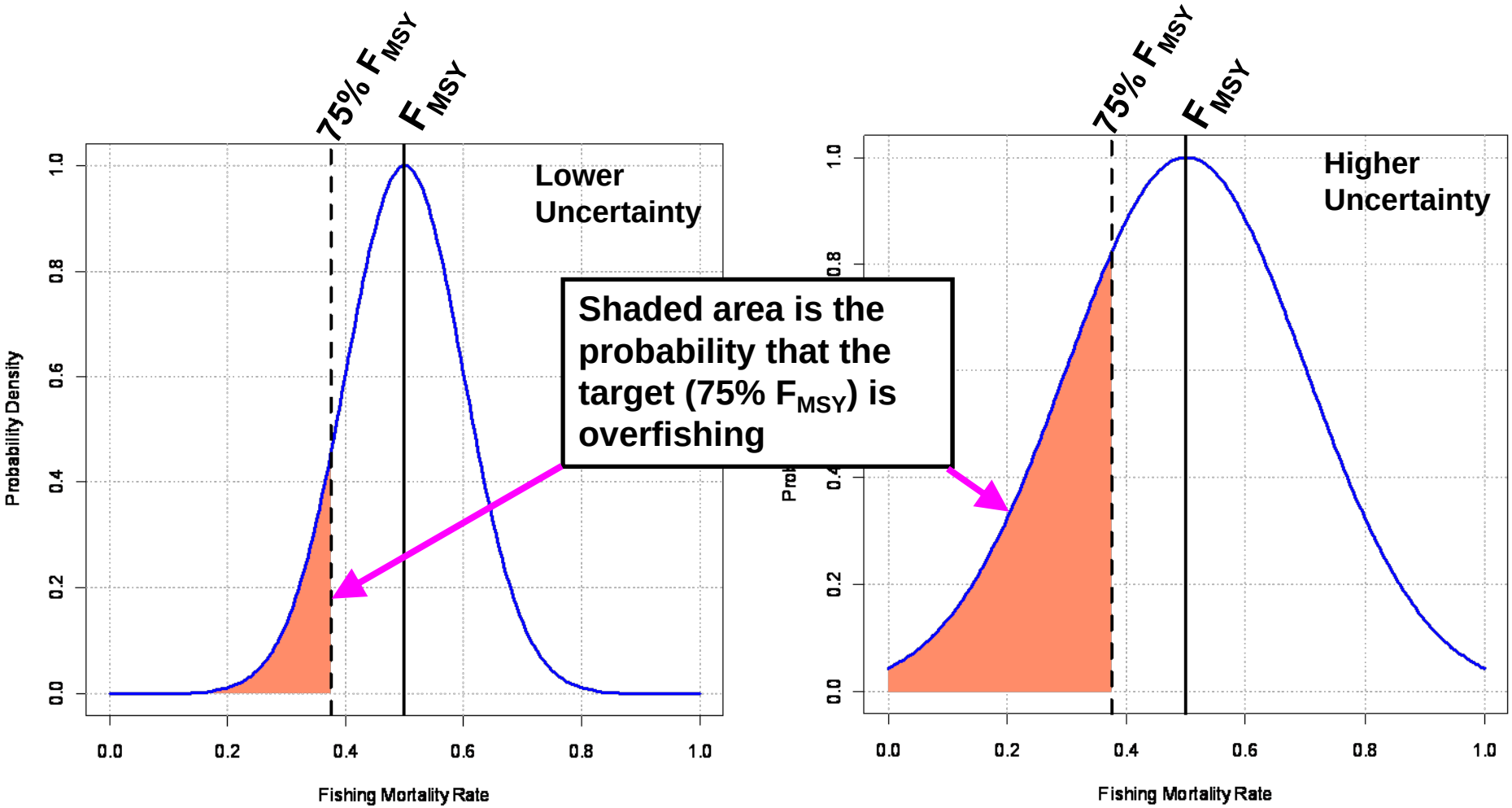
Workshop Findings – ABC Control Rules

- Each SSC is developing protocols for setting a science-based buffer between the Overfishing Limit (OFL) and the Acceptable Biological Catch (ABC)
- Where feasible, SSCs are considering the P* approach that uses quantified science uncertainty to set ABC at level to match a pre-specified probability (risk) of overfishing
- Variations include:
  - Method to calculate scientific uncertainty
  - Tiered approach linked to quality of information about uncertainty
  - Inclusion of stock productivity score in the risk calculation
  - fixed buffers where uncertainty is not fully quantified

<u>Conclusion</u>: Differences across SSCs reflect fisheries diversity and data availability. Although there should be some consistency across SSCs, uniform procedures are not practical.

WHAT IS THIS P*?

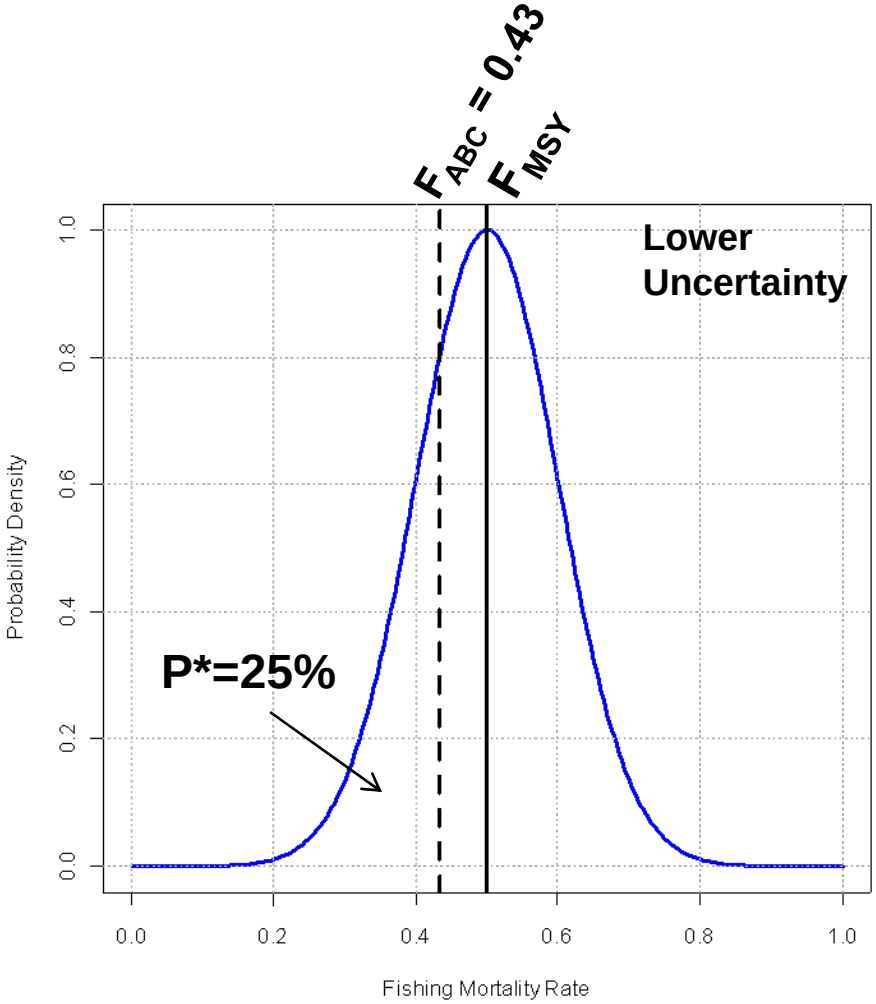
Constant buffer: Target F = 75% F_{MSY}

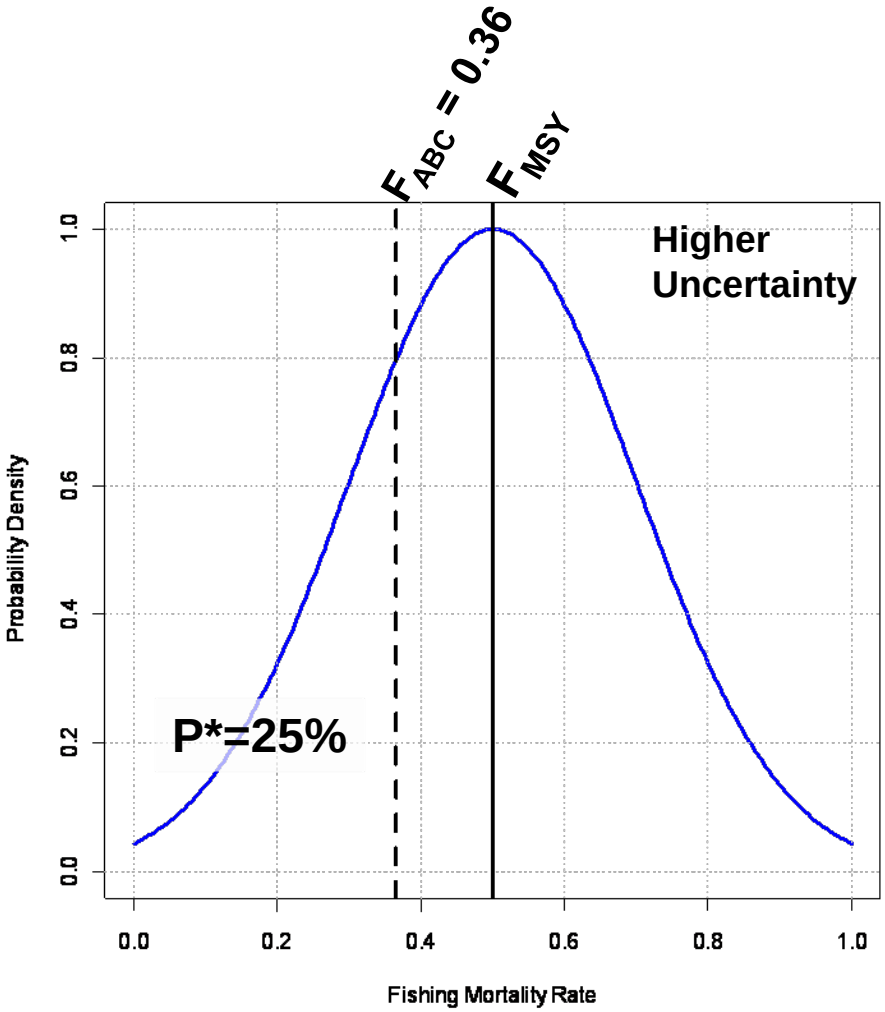


P* = 10.5%

P* = 26.6%

Constant probability: P* set to 25%





Workshop Findings – Risk Policy

- Risk policy (P*) is a management (Council) responsibility informed by science
- The development of ABC control rules should be a joint management and scientific process.
- Scientific information that could be useful to the Council in evaluating risk policy options could include:
  - Projections of future yield and stock abundance,
  - Effect of management uncertainty,
  - Effect on achievement of optimum yield
- The SSCs may need to exercise professional judgment for exceptional situations, so some flexibility must be available to the SSCs in the application of ABC control rules.

Workshop Findings – Peer Review

Tiered Approach to Best Scientific Information Available

Step 1: Technical, in-depth peer review

External participants for independence

SSC participants for continuity and communication

Step 2: SSC Recommendation on ABC

Resolve issues carried forward from peer review

Assert that result represents BSIA for Council

Make ABC and other fishing level determinations; communicate to Council

Step 3: Council action on ACL, etc.

Step 4: NMFS receives, reviews, approves and implements Council recommendations

Documentation of above, either in one or several documents, comprise the SAFE report

Workshop Findings – Other

- An ad-hoc group was formed to further explore options for setting fishing level recommendations in extremely data-limited situations
- Quantitative consideration of Optimum Yield and Maximum Economic Yield is not common in U.S. fishery management.
  - Could provide a logical context for evaluating the impact of short-term reductions in risk of overfishing on the long-term achievement of optimum yield
- Another SSC Workshop should be held.
  - Methods to calculate and evaluate ABC control rules will continue to evolve
  - Protocols for peer review processes will also change as result of NS2 revisions
  - National SSC Workshop is ideal setting for SSCs to learn from each other's experiences and to guide future improvements