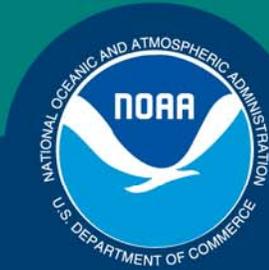


Science, Service, Stewardship



Establishing a Scientific Basis for Annual Catch Limits

Report of the 2009 National SSC Workshop

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

Host: Caribbean Fishery Management Council

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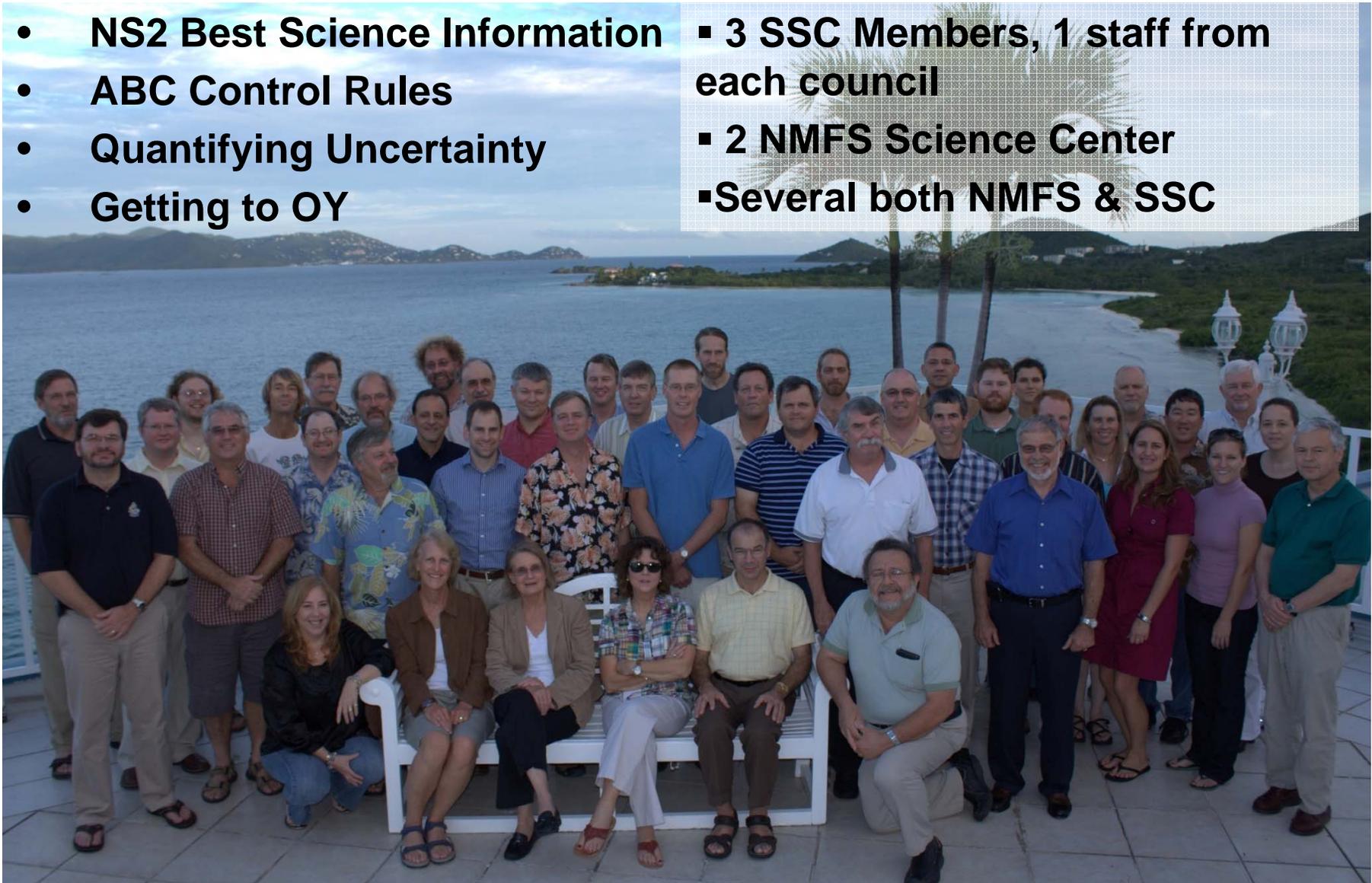
Workshop Objectives and Participation

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

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

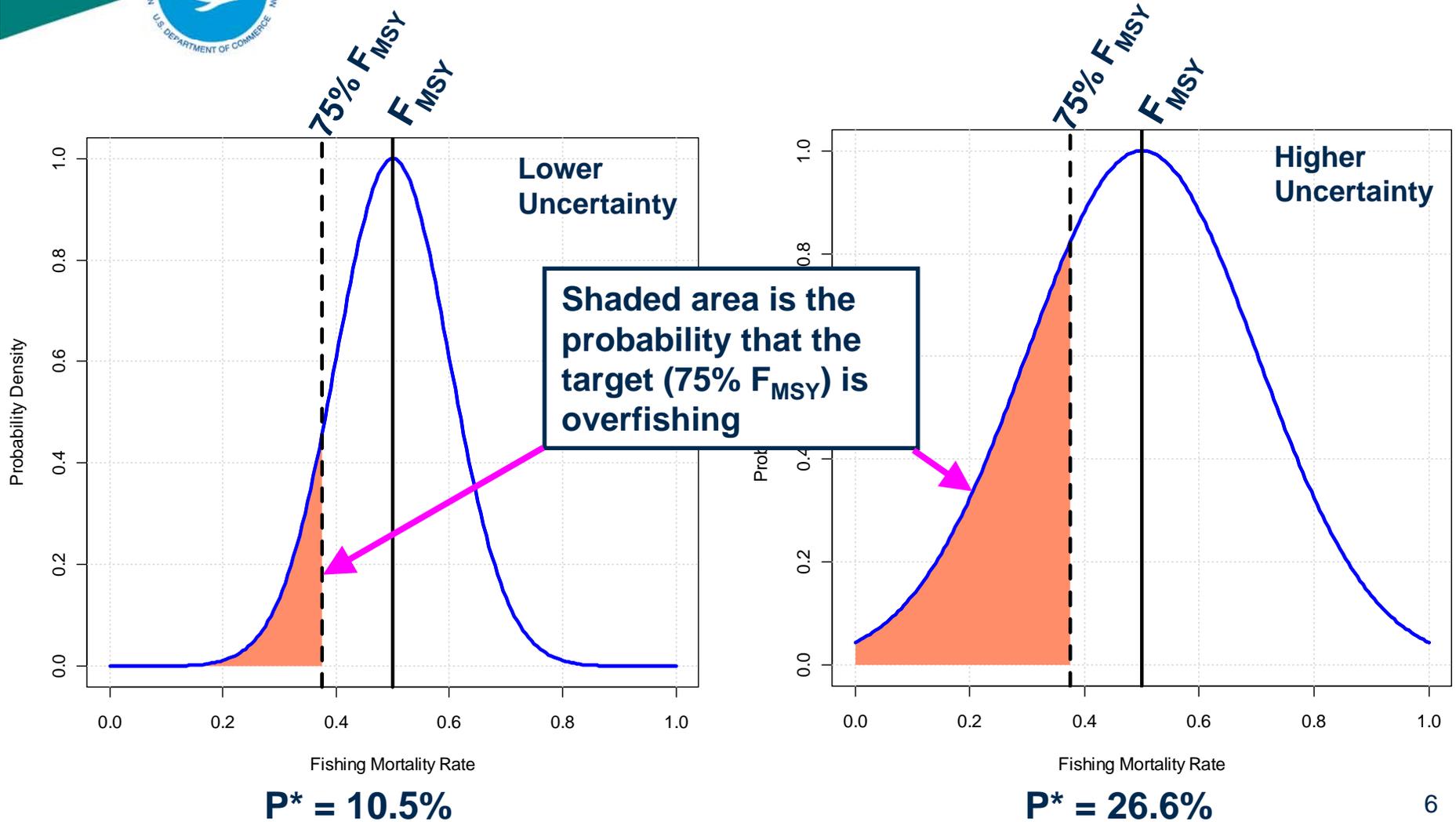
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WHAT IS THIS P*?

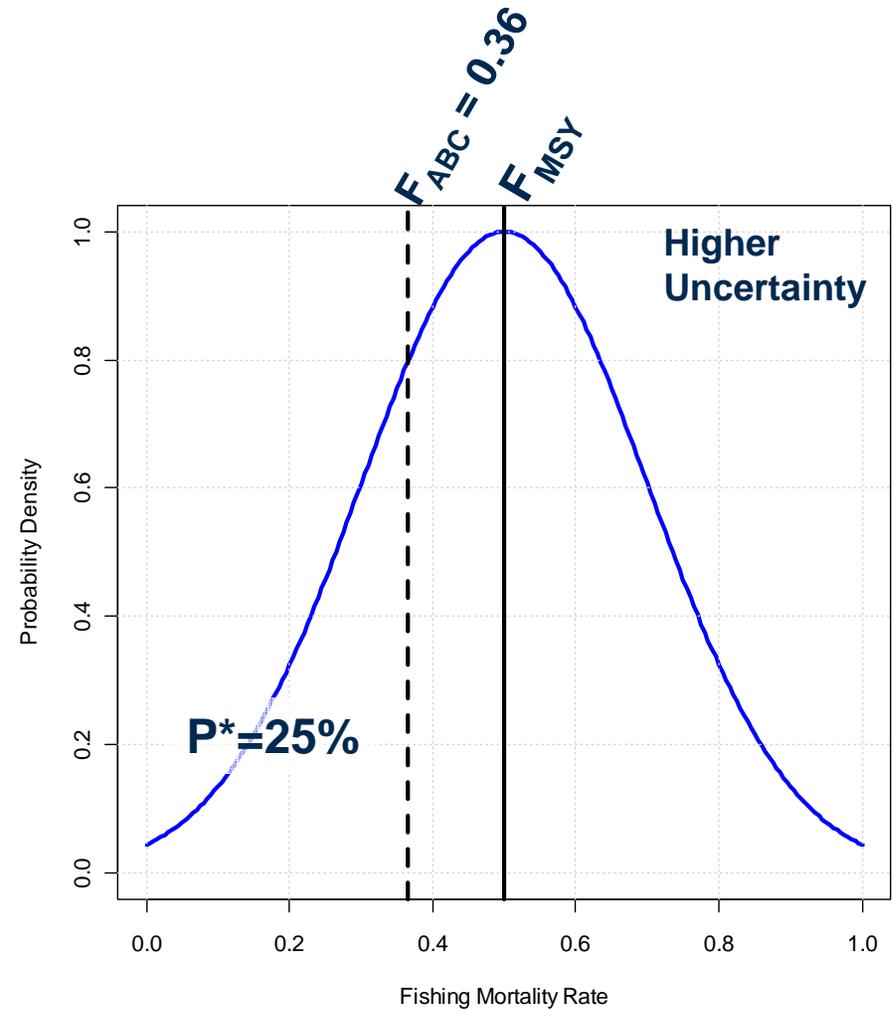
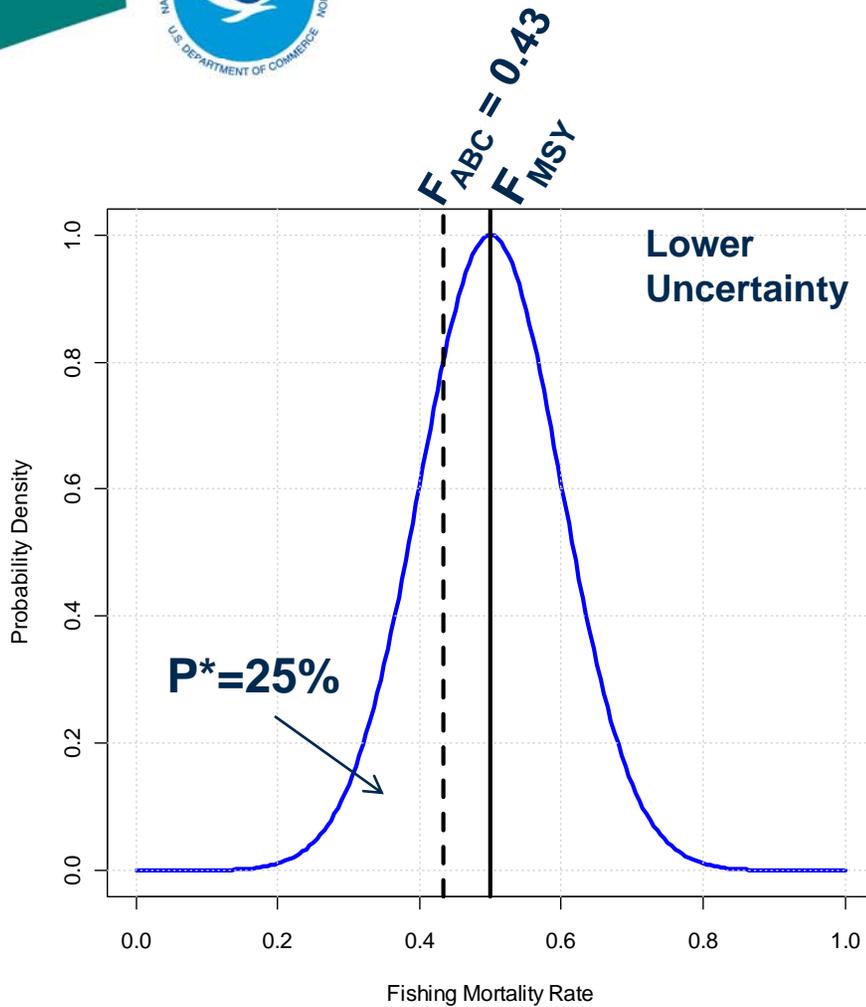


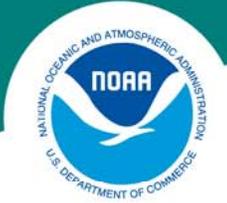
Constant buffer: Target $F = 75\% F_{MSY}$





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