

Alternative Regime?

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Fisheries Management Processes

"Experts on tap, not on top"



Science

Political Processes

Interactions (Ezrahi, "Pragmatic Rationalism")

Experts

Agree

Disagree

Politicians

Agree

Efficient means to end

Handsome delegation of authority to experts

Clarify range, foundation, & consequences of disagreement

Disagree

Evaluate efficacy of alternative proposals to accomplish policy objectives

Biostitution

Little chance for experts to play a productive role in decision making

Search for Viable Options

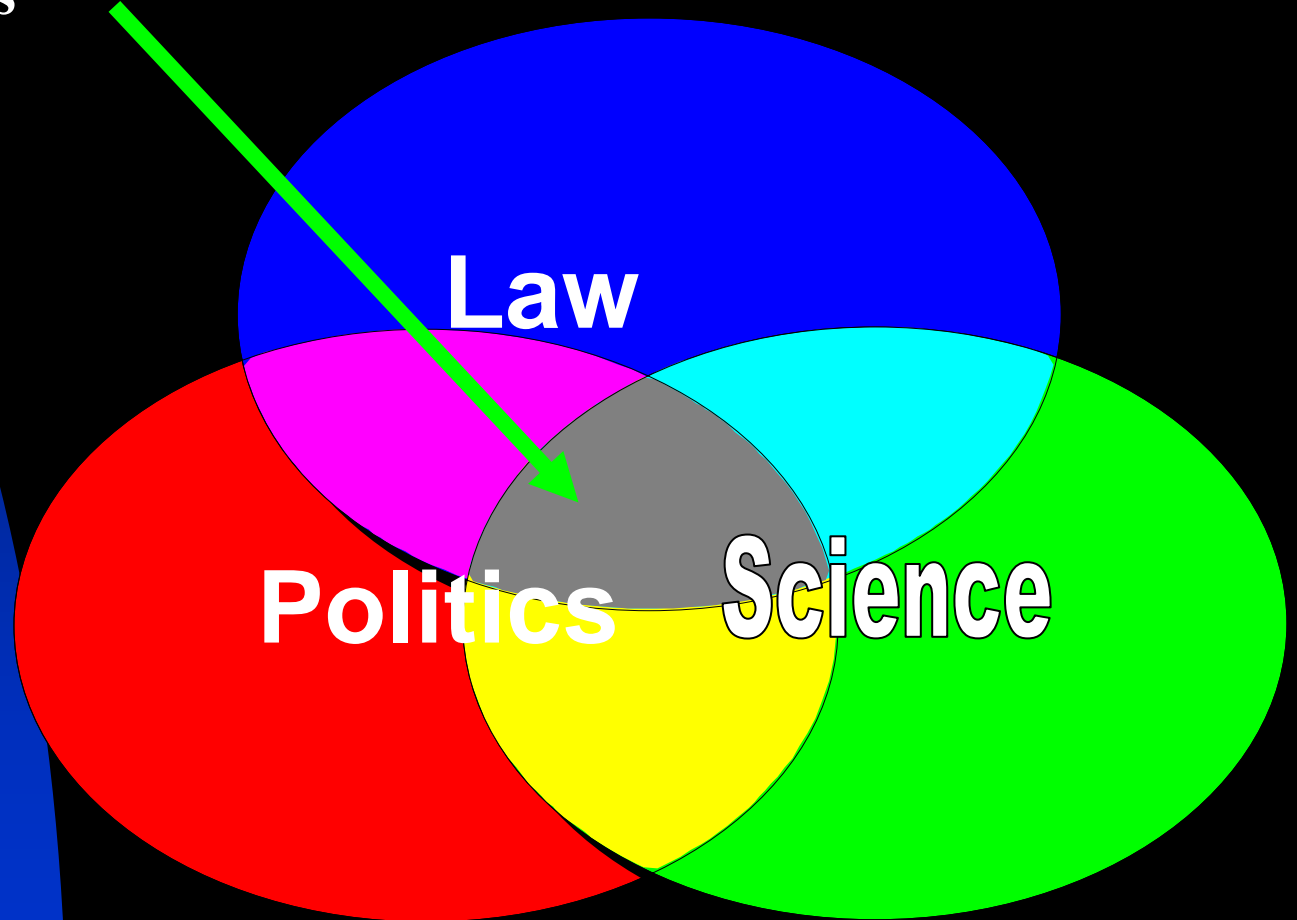
- Satisfy tests of scientific acceptability and supports reasoned decision-making
- Do not sacrifice social interests on the altar of *impossible scientific certainty*

Triangulation

- **Joining of political, legal, and technical considerations in an interest-laden and uncertain environment**

Triangulation

Viable Options



Current Chinook & Coho Regimes

- Based on stock-age-time-fishery exploitation rates
- Constraints determined through the use of average base period expectations of distribution and patterns of exploitation
- Exploitation rates serve to distribute the conservation responsibility and harvest benefits

Motivation for another alternative

- Managers covet flexibility when seeking to increase social benefits while constraining impacts on stocks of concern to acceptable levels
 - **Variability and uncertainty in spatial/temporal patterns of distribution**

Alternative?

- Use variable resolution management with numerical limits evaluated against inseason GSI-based estimates of encounters or mortalities on stock group aggregates

Variable Resolution

- **Aggregate in highly-mixed stock fisheries** where proportion comprised of individual stocks is small
 - ◆ Coarse resolution provided by GAPs
 - ◆ Reduce uncertainty in assignment error to increase reliability
 - ◆ Don't chase after trying to get good estimated of impacts on small individual stocks

Variable Resolution

- **Disaggregate** when proportion comprised of individual stocks increases or local GSI baselines provide higher resolution
 - ◆ **Increased reliability when stocks are more concentrated or more-stock specific discriminatory power available**

How would it work?

- Use planning models to forecast contributions in individual stocks in highly mixed stock fisheries
- Aggregate small populations based on GSI reporting groups
- Establish limits on allowable mortalities (or encounters) under agreed regimes – fishery would close once limits are reached

How would it work?

- Managers (or individual fishermen) retain flexibility to shape fisheries within these limits to advance social objectives – variability in timing & concentration
- Enforce/Monitor impacts through inseason GSI sampling (acceptable precision) – disincentives?
- Evaluate cumulative effects through CWT-based cohort analysis on indicator stocks

Evaluation

- **Simulation model**
 - ◆ Sampling
 - ◆ Stock-age misassignment
 - ◆ Uncertainty in catches or escapements
- **Implications**
 - ◆ Downstream allocation effects

Will It Work?

