THE OYSTERFUTURES STAKEHOLDER CONSENSUS-BUILDING PROCESS

JEFF A. BLAIR AND ROBERT M. JONES
PRESENTED TO THE ABSI CAB MARCH 11, 2020
Research Team

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Objective: test the Consensus Solutions process for developing fishing regulations and restoration policies.

Study Site: Choptank and Little Choptank Rivers in the Maryland Chesapeake Bay.

Approach: Facilitated process to promote consensus decision-making with modeling to forecast potential effects of decisions.
Project Premises:

• Natural resources can be better sustained by policies developed cooperatively among all affected stakeholders, scientists, and government representatives.

• A systematic approach for conducting collaborative policy development that is grounded in sound science is needed.

• We used the oyster fishery in Chesapeake Bay as a test case to study and improve this approach.
Project Goal:

- To develop recommendations for oyster policies and management that meet the needs of industry, citizen, and government stakeholders in the Choptank and Little Choptank Rivers of the Maryland Chesapeake Bay.
Their goal: an economically viable, healthy and sustainable Choptank and Little Choptank Rivers oyster fishery and ecosystem
... and at the end

March, 2018
The Entire Team

Stakeholders, Scientists, and Facilitators
Sixteen Stakeholders Representing:

- Waterman (6)
- Aquaculture (2)
- Seafood Buyers (1)
- Environmental Citizen Groups (3)
- Recreational Fishing Groups (1)
- State Agency—Maryland Department of Natural Resources (1)
- Oyster Recovery Partnership (1)
- Federal Agency—NOAA (1)
Listening, Thinking, Working Together

Key Points
- Consensus-Driven
- Facilitated
- 60% Industry
- 75% Agreement
- Science-Based
**WORKGROUP PROCESS**

1. Workgroup members identified and agreed to key issues, and identified and acceptability rated a full suite of options for each key issue.

2. Workgroup members identified & agreed to performance measures.

3. $\geq 75\%$ in favor threshold required for consensus recommendations for options and performance measures.

4. Iterative process allowing stakeholders the flexibility to make changes based on model simulation results.
WORKGROUP PROCESS

5. Evaluating options in the context of trusted science, built trust and a desire to work collaboratively to meet the needs of all stakeholders.

6. Science presented in a sensible and understandable format, including data gaps, assumptions and uncertainty.

7. All options, ratings, and comments are compiled and available through the entire process.

8. No decision is final until the vote on the consensus package of recommendations during the final meeting.
E.g. Decision Making-Economics

<table>
<thead>
<tr>
<th>Economics</th>
<th>Support Level (%)</th>
<th>4—Acceptable</th>
<th>3—Minor Reservations</th>
<th>2—Major Reservations</th>
<th>1—Not Acceptable</th>
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<tbody>
<tr>
<td>July 2017 Rating</td>
<td>100%</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>0</td>
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<tr>
<td>March 2017 Rating</td>
<td>100%</td>
<td>7</td>
<td>4</td>
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<td>Nov. 2016 Rating</td>
<td>100%</td>
<td>3</td>
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</table>

Workgroup member comments before rating:

- Tried to incorporate economic dynamics into the model. Levels of harvest corresponding with profitability 5-8 bushels a day depending on gear type. “profitable oysters”
- Bushel price? A: Using data from the last completed fishing season.
Current process for making oyster policies

Stakeholders → Government → Managers, Scientists → Fishing regulations & restoration policies → Stakeholders
The Consensus Solutions process is designed to be:
• Fair
• Transparent
• Powerful
• Representative

It provides a respectful place for people to speak their truth to power and to each other.
The Ingredients

Scientific Approach

Trust

Collaborative Spirit
STAKEHOLDER-CENTERED APPROACH TO DEVELOPING MANAGEMENT AND RESTORATION PLANS

How did the process work?

Stakeholders propose objectives, options, and performance measures
STAKEHOLDER-CENTERED APPROACH

**Stakeholders propose** objectives, options, and performance measures

Model development and modification

Scientists

Stakeholders
Stakeholders are at the center of the Consensus Solutions process.

- Stakeholders propose objectives, options, and performance measures.
- Stakeholders revise options and performance measures.
- Scientists develop and improve model.
- Review model results.
- Options with >75% agreement advance to package of recommendations.
Stakeholders are at the center of the Consensus Solutions process.

- Stakeholders propose objectives, options, and performance measures.
- Review model results.
- Revise options and performance measures.
- Develop and improve model.
- Options with >75% agreement advance to package of recommendations.
- One consensus vote on the entire package.

Scientists.

- Options with >75% agreement become recommendations.
- Stakeholders are at the center of the Consensus Solution process.

[Image of Oyster Futures report with recommendations for Oyster Management and Restoration in the Choptank and Little Choptank Rivers.]
OysterFutures Communication Network

- Increase in communication (connecting to *more people*)
- Increase in frequency of communication (communicating *more often*)
- Decreased centralization (wider flow of information)

Index of communication

![Chart showing the average weighted degree for different workshops]

Slide from Goelz and Hartley
Natural system model of oysters

Integrate scientific and stakeholder knowledge

Stakeholder meetings

Recommend fishing regulations and restoration strategies

Social science study

Improve methods for stakeholder involvement in fisheries management
Natural system model of oysters: Integrate scientific and stakeholder knowledge.

Stakeholder workshops:
- Recommend fishing regulations and restoration strategies.

Scientists serve as consultants.
Stakeholders decide on options and outcomes to be modeled

How did computer models support the process?

- Changing or rotating fishing areas
- Planting shell, spat-on-shell, and reef balls
- Restoring reefs
Computer model includes scientific and stakeholder knowledge

Options

- Changing or rotating fishing areas
- Planting shell, spat-on-shell, and reef balls
- Restoring reefs

Outcomes

- Economics
- Oyster biology
- Oyster habitat
- Water quality
Computer model forecasts outcomes and stakeholders consider results

**Options**
- Changing or rotating fishing areas
- Planting shell, spat-on-shell, and reef balls
- Restoring reefs

**Computer Model**

**Outcomes**
- Oyster abundance
- Oyster habitat
- Harvest revenue
- Pollution reduction

**Economics**
- Oyster biology
- Oyster habitat
- Water quality
Stakeholders make recommendations

Policy Options → Simulation Model → Results

Options not able to be modeled

Recommendations to Maryland Department of Natural Resources
May 2018
Stakeholder Options That Were Evaluated

1. Rotational harvest
2. Enforcement
3. Use of assessment of population in management
4. Limited entry
5. Habitat modification/restoration
6. Fees and taxes
7. Spatial
8. Gear type
9. Stocking
10. Marketing and business practices
July 2017

>100 options were evaluated

January 2018

Performance improved over time

March 2018
Management options had a stronger effect on harvest than on oyster populations.

- 44% increase
- 120% increase
Win – win options exist: high abundances and high harvest

Important note: For most options, these strong positive benefits did not start to be realized until around 10 years after implementation.
All but two scenarios showed increased revenues to watermen.
All but two scenarios resulted in higher value of nitrogen removal compared to cost.
**Consensus Solutions process**

**Stakeholders** propose objectives, options, and outcomes

Develop and improve model

Review model results

Revise options and performance measures

Options with >75% agreement advance to package of recommendations

**What options did the stakeholders choose?**
What Options Did the Stakeholders Choose

1. They chose options that increased oyster abundance and harvest.

2. They chose options that increased revenue to fisherman and were cost effective.

3. They chose options that increased nitrogen reduction and were cost effective.
Win-win-win options exist

Strong positive benefits were not realized for 10 years

Combining options led to best overall performance

After 20 years, harvest revenue could be twice that of annual public investments

After 20 years, there could be more than an 8-fold return on public investment for pollution reduction

Choice of options had a stronger control on harvest than on oysters
Package of Consensus Recommendations

The stakeholders support all of the recommendations, and continuing to work with stakeholders using the Consensus Solutions process.
Consensus Recommendations

A. THE NEED FOR CHANGE
The OysterFutures Workgroup recommends that DNR take swift and positive action to change existing regulations and policies regarding oyster management in the Choptank and Little Choptank Rivers. Maintaining the Status Quo (current regulations and policies) does not benefit the oyster resource or the ecosystem and human economies that depend on it. Change is needed.

B. ENFORCEMENT RECOMMENDATIONS
The OysterFutures Workgroup reviewed enforcement options that could be modeled to determine their impact on oyster abundance, habitat, and harvest. The Workgroup found that enforcement and compliance play an important role in ensuring the protection of the oyster resource, and has the following recommendations:
1. In consultation with oyster resource stakeholders, DNR should enhance enforcement presence on the water, address noncompliance by providing funding to increase the numbers and training of compliance officers, and support strategies such as checking oysters where they are bought.
2. To enhance compliance, DNR should modify regulations so a single oyster bar is not divided between gear types, or where parts are open and other parts are closed.
3. To help inform and guide oyster resource participants in the Choptank system, DNR should address, correct and update DNR oyster resource mapping issues such as bottom mapping to better define oyster bars, and provide electronic maps that could be used with GPS chart programs.
4. DNR should provide the necessary resources to make its website more user friendly.
5. To protect the oyster resource, oyster populations, and the oyster industry, DNR should strive for full compliance with the current size laws and sanctuary regulations.

C. LIMITED ENTRY RECOMMENDATION
The OysterFutures Workgroup discussed options for maintaining a level of fishing effort which would improve the long-term viability of the oyster fishery and the health of the oyster resource. The workgroup has the following recommendation:
1. Working together with oyster resource stakeholders, DNR should evaluate a limited entry oyster fishery that can provide access to watermen making the majority of their living from commercial fishing, enables generational succession in the fishery, and should have a way for new participants to gain entry that does not solely rely on having a large amount of capital.

D. ROTATIONAL HARVEST RECOMMENDATION
The Workgroup evaluated opening portions of sanctuaries to rotational harvest where no restoration
How influential were the stakeholder's consensus recommendations?
The Department of Natural Resources shall:

“... convene a stakeholder workgroup to develop a **package of consensus recommendations** for enhancing and implementing the Fishery Management Plan for Oysters...” “...using a facilitated **consensus solutions** process, based on a 75% agreement level...”
Comments From Participants:

• The right people were at the table.
• The Consensus Solutions process promotes collaboration, creative problem solving, and sharing of knowledge.
• This is the best process that we have ever experienced.
• Hopefully the State of MD will find the process and our stakeholders’ recommendations useful.
Conclusions

• Consensus is possible

• Process is important - it can create or alleviate conflict

• The Consensus Solutions process helped create well-thought-out regulations with broad stakeholder support

• Win-win-win solutions for the oyster, the industry, and the environment can be found
Conclusions

• Scientific and local knowledge can be integrated and put in service of consensus.

• The *Consensus* process can help transform relationships and reframe conflict and produce “win-win” solutions.
QUESTIONS, COMMENTS AND DISCUSSION

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CONSENSUS CENTER

http://facilitatedsolutions.org
Key Roles in a Science-Based Stakeholder Consensus Building Process

- Scientists
- Stakeholders
- Facilitators
THE IMPORTANCE AND ROLE OF SCIENTISTS COMMITTED TO COLLABORATION

• Understand the importance of meaningfully involving stakeholders.

• Are committed to the fair and effective involvement of impacted stakeholders.

• Respect and fairly evaluate and include observational data based on stakeholders’ experiences in their data sets.

• Communicate to stakeholders in a respectful and collaborative manner.

• Are responsive to considering the experiences and observations of those who are most impacted by proposed solutions.
THE IMPORTANCE AND ROLE OF STAKEHOLDERS COMMITTED TO COLLABORATION

• Are willing to commit to the process for the duration, and honor consensus developed recommendations.

• Understand the need and are willing to collaborate with different stakeholder groups as well as communicate with their constituents.

• Listen to understand. Seek a shared understanding even if when they don’t agree.

• Will work to achieve common ground on issues, and to address other stakeholder groups’ concerns.

• Are committed to developing consensus recommendations that are sustainable and implementable within realistic constraints.
THE ROLE OF A NEUTRAL IN FACILITATED CONSENSUS-BUILDING STAKEHOLDER PROCESSES

• **Include** professional and neutral process experts in all phases.

• **Consider an assessment phase** to determine viability and who should participate.

• Ensure there is appropriate and credible stakeholder representation.

• Plan & design a **transparent and fair process** that fosters collaboration.

• **Convene and facilitate** a fair and transparent representative stakeholder consensus-building process.

• **Recommend/Require** a super-majority decision making threshold for approval (≥75%) to encourage collaboration and not vote counting.