Stakeholder Engagement

Fisheries decision-making

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Understanding wicked problems in fisheries management

Fisheries management is complex, involving multiple stakeholders and governance viewpoints. Facilitators and scientists should account for these viewpoints when designing stakeholder engagement efforts.

CHARACTERISTICS OF HIGHLY COMPLEX PROBLEMS IN FISHERIES MANAGEMENT

LONG HISTORY

Problems have existed for a long time, often with previous attempts at solutions that may have been unsuccessful or created new challenges.

MULTIPLE STAKEHOLDERS

Numerous stakeholders, each with unique interests, values, and goals, often view problems differently, leading to varied expectations for solutions.

CULTURAL DIFFERENCES

Stakeholders may come from different cultures and diverse backgrounds, leading to differing perspectives and approaches to the problem.

COMPLEX GOVERNANCE

Managing the problem involves navigating intricate institutional structures and regulations.

HIGH STAKES

Decisions made about the problem can have significant economic, social, and ecological consequences.

SCIENTIFIC UNCERTAINTY

Data limitations, conflicting or uninformative data, and high uncertainty in the state of nature make it difficult to predict the outcomes of different management actions.

MULTIPLE POTENTIAL SOLUTIONS

No single, clear-cut solution is readily apparent, and different options may have trade-offs and unintended consequences.

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How do we navigate complexities in fisheries management?

Key points for navigating complexities and providing scientific support for fisheries management:

Embrace the socio-ecological nature of fisheries

Recognize fisheries as complex socio-ecological systems where humans play a key role. Continuous learning and knowledge sharing are crucial for navigating complex socio-ecological systems.

Build on existing frameworks (e.g., U.S. fishery management councils) to enhance participatory approaches for addressing fisheries challenges.

Strengthen existing management processes and institutions

Engage in participatory science

Actively involve stakeholders throughout the scientific process, promoting collaboration and co-learning. This involvement may help to understand the problem jointly and develop common solutions.

Value diverse perspectives in fisheries management, recognizing scientific expertise as one of many valid viewpoints. Foster dialogue across disciplines, fishers, managers, and NGOs.

Respect all perspectives

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Best practices for stakeholder inclusion

Early and ongoing participation

Early stakeholder involvement fosters trust, integrates diverse perspectives, and ensures priorities are addressed

Expand stakeholder definition

Inclusivity brings participants with novel insights.

Open process

Increases transparency and promotes ownership of the process. Essential when legal constraints or high controversy requires strong public engagement.

Communication as the foundation

An effective process requires clear communication that ensures productive and goal-focused discussions.

Role of external facilitators

Neutral facilitators enhance fairness, communication, collaboration, and conflict resolution,

Balance education and efficiency

Balancing education with other workshop goals is challenging. Repeat introductory materials and have scientists address stakeholder questions

Transparency in management options

Analyze public-recommended management options to maintain transparency, inclusivity, and to clarify trade-offs.

Feeney et al. 2019

Hurdles to overcome in effective stakeholder engagement

Hurdle	Some recommendations
Defining representative stakeholders	• Engage stakeholders who are trusted leaders in their communities. • Ensure support from managers early in the process to enhance their commitment to the final recommendations. • Ensure diverse representation (social, economic, political, cultural, biological).
Formal/political negotiations	• Promote open dialogue with stakeholders (e.g., informal, stock-specific workgroups).
Language barriers	• Hire translators
Degree of understanding and support	• Provide a variety of educational opportunities (e.g., use interactive tools and engaging presentations).
Scientific methods new to some participants	• Include an experienced facilitator.
Inconsistent terminology	• Standardize terminology and format for presentations and results; avoid jargon.
Participant turnover and engagement	• Encourage outreach and engagement, consider stipends for attendance, and ensure an interactive meeting facilitator.
Trust building	• Commit to the process (terms of reference), practice active listening, and foster understanding of diverse perspectives.
Objective clarity	• Refine objectives.
Interpreting analyses	• Ensure transparency, use visuals to explain metrics, clarify trade-offs, address legality, and support strategic decisions.

Goethel et al. 2019

General principles for communication

KEY PRINCIPLES	
Transparency and open communication are key to building trust	**Build trust through transparency**
Target communication to key individuals	Focus communication efforts on trusted individuals or groups who can share information with others.
Emphasize key findings and recommendations. Utilize visual aids to explore trade-offs.	**Prioritize key findings and recommendations**
Facilitate two-way communication and iterative dialogue	Use intermediary groups for feedback and guidance and facilitate two-way communication.
Avoid jargon and acronyms. Ensure consistent messaging to reduce cognitive load and keep the focus on outcomes.	**Avoid jargon and maintain consistency in messaging**
Allocate adequate time, funding, and staff capacity to support both technical and non-technical aspects of MSE.	**Dedicate sufficient resources**

Miller et al. 2019

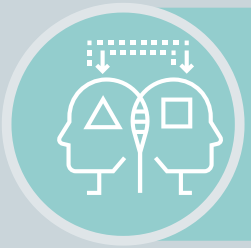
Strategies for communicating technical information

Overcome terminology misunderstandings

Define key terms and identify potential misunderstandings. Provide clear, patient explanations to align interpretations with stakeholder perspectives.

Use understandable Units

Presenting results in absolute units rather than relative units improves accessibility and comprehension for stakeholders.



Use analogies to explain concepts

Analogies simplify complex concepts, helping stakeholders relate to and understand key ideas.

Refine and simplify communication

Clear communication strengthens stakeholder understanding. Pamphlets, educational tools, and key concept repetition simplify ideas and boost engagement.

Incorporate communications expertise

Involving communications professionals from the start ensures that technical outputs are produced in user-friendly formats.

Facilitate dialogue

Use real-world trade-offs, previous success stories, and interactive exercises to foster discussions, clarify decision-making processes, and promote transparency.

Ensure equal opportunities to speak

Emphasize inclusivity and create a supportive environment.

Goethel et al. 2019

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