

# Key Players and Their Roles in Adaptive Management

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ALC3176: Adaptive Management:  
Structured Decision Making for Recurrent Decisions  
Chapter 12

Module Developed by:

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# Roadmap: Where we are headed

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- Key players in the AM process
- Stakeholders: Why bother?
- Stakeholder Analysis: Choosing the right participants
- Stakeholder organization: Developing a governance system
- Roles of stakeholders, facilitators, and technical advisors
- Roles unique to an adaptive process
- Planning a workshop
- Summary



# Key players in the AM process

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- Stakeholders and/or stakeholder representatives
- Facilitator(s)
  - May involve a team (recorder, apprentice, etc.)
- Technical advisors
  - Scientists, economists, statisticians, sociologists, etc...
- Modelers

—————➔ These categories are not necessarily mutually exclusive. For example, a modeler might be considered a technical advisor and/or have facilitation skills. BUT, facilitators, technical advisors, and modelers can NEVER be stakeholders. They are neutral 3<sup>rd</sup> parties to the process.

# Stakeholders: Why bother?

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Because...

➤ Natural resource decisions generally involve trust resources

—————→ Public has a vested interest in decision outcomes

—————→ Multi-use resources can lead to competition and conflict among user groups

Sea otters should be reintroduced into their historic range.



I like sea otters too, but they will eat all of the abalone in my fishery.

# Stakeholders: Why bother?

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Because...

- Stakeholder driven processes increase transparency
  - > Facilitates public support and decision ownership
  - > Values and concerns of users are revealed
  - > Transparency and ownership assure longevity of effort
  - > Makes process defensible
    - representation
    - fairness and equitability
- The law may require SH involvement
- Avoid creating powerful adversaries
  - > Turn “spoilers” into supporters



# *Who could a stakeholder?*

- Any person or organization with a vested interest in the outcomes of a management decision
- For natural resource management decisions:
  - Consumers/users (e.g. hunters, anglers, hikers, boaters...)
  - Public management agencies (e.g. FWS, EPA, state agencies)
  - Non-governmental organizations (e.g. Nature Conservancy)
  - Political (e.g. federal, state, local officials)
  - Economic (e.g. businesses, chamber of commerce)



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# *Who should be a stakeholder?*

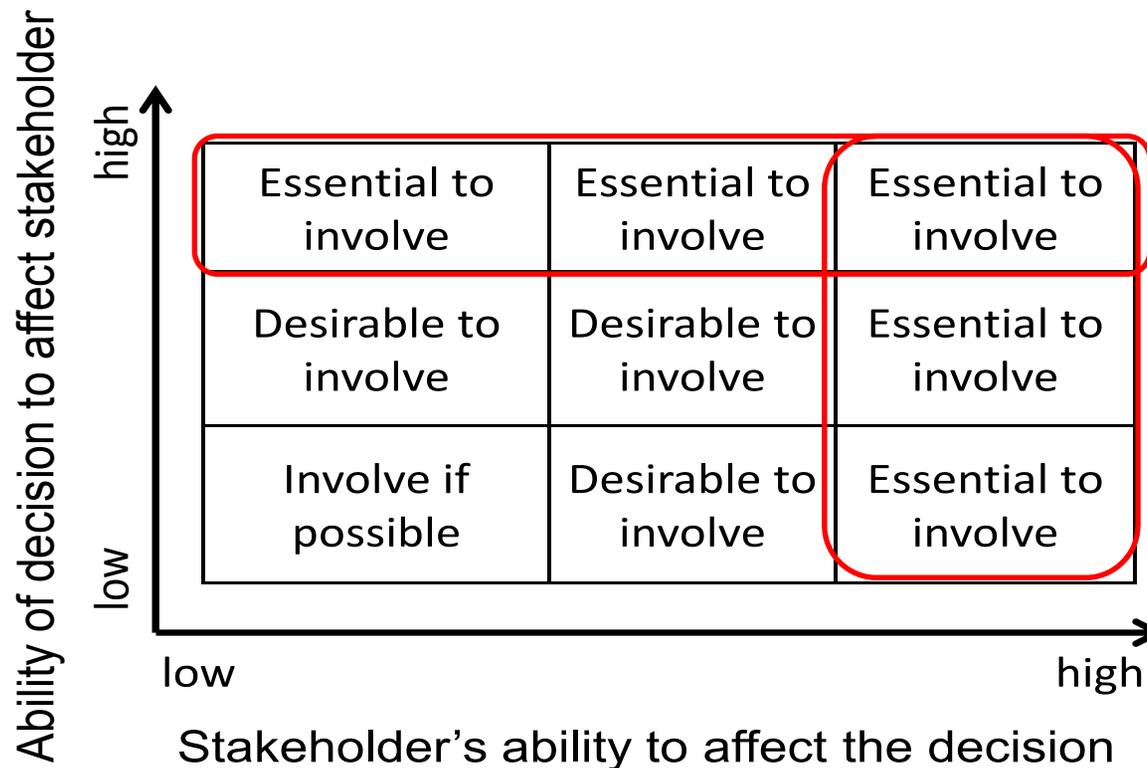
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- All decision makers **MUST** be stakeholders, but all stakeholders are not necessarily decision makers
  - DMs have the authority and resources to implement the decision action
  - DMs have greater responsibility and accountability than other stakeholders
  - Failure to ID and include all decision makers in the process will lead to program failure
  
- Who else?
  - Any whose exclusion would be problematic (e.g. politically connected groups)
  - Those willing to “play nice,” actively engage, and commit to long-term participation

# Stakeholder Analysis

Build a Stakeholder Analysis Matrix to ID and assess the importance potential stakeholders

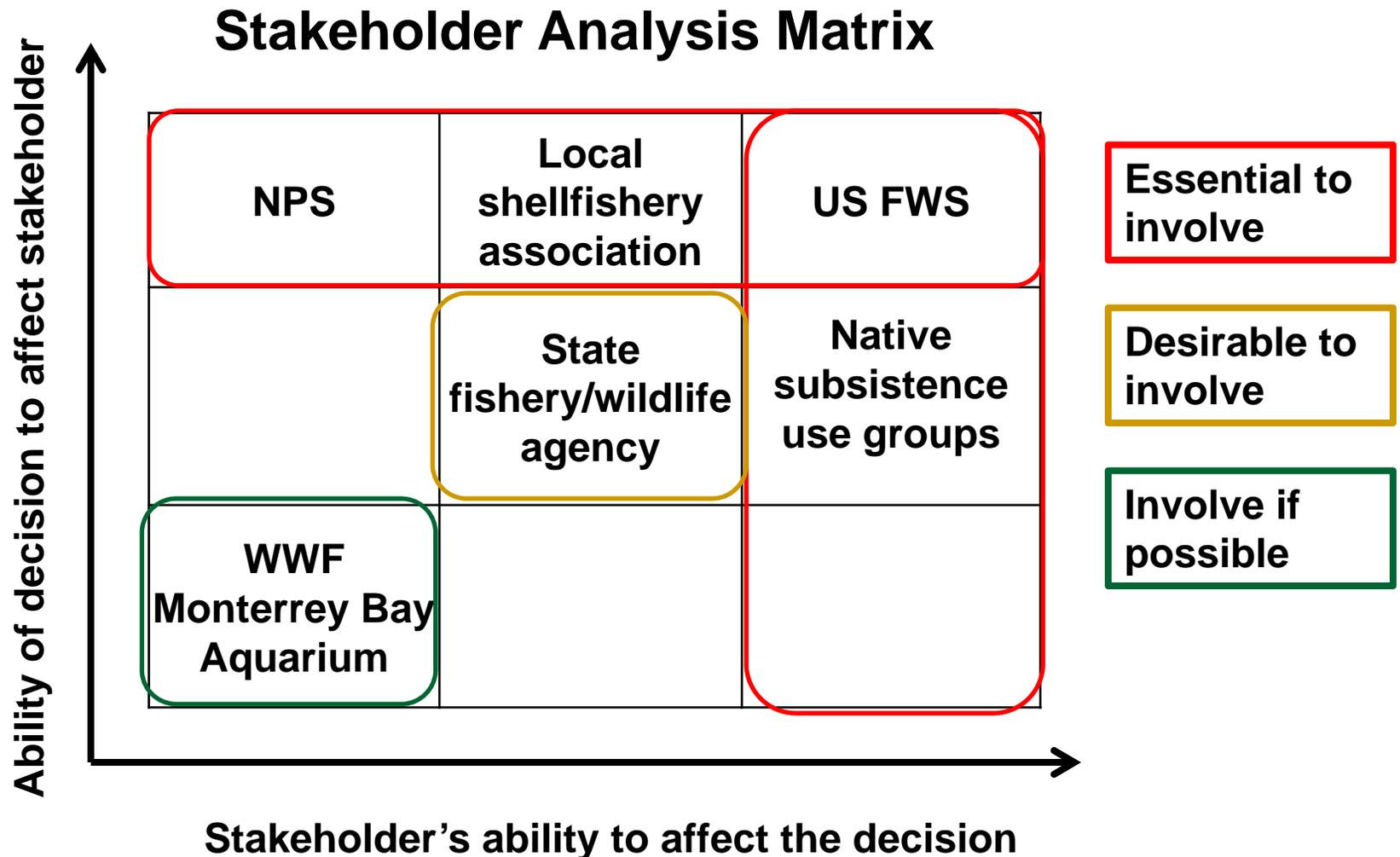


## Example: Stakeholders for sea otter translocation decision

### Stakeholder Analysis

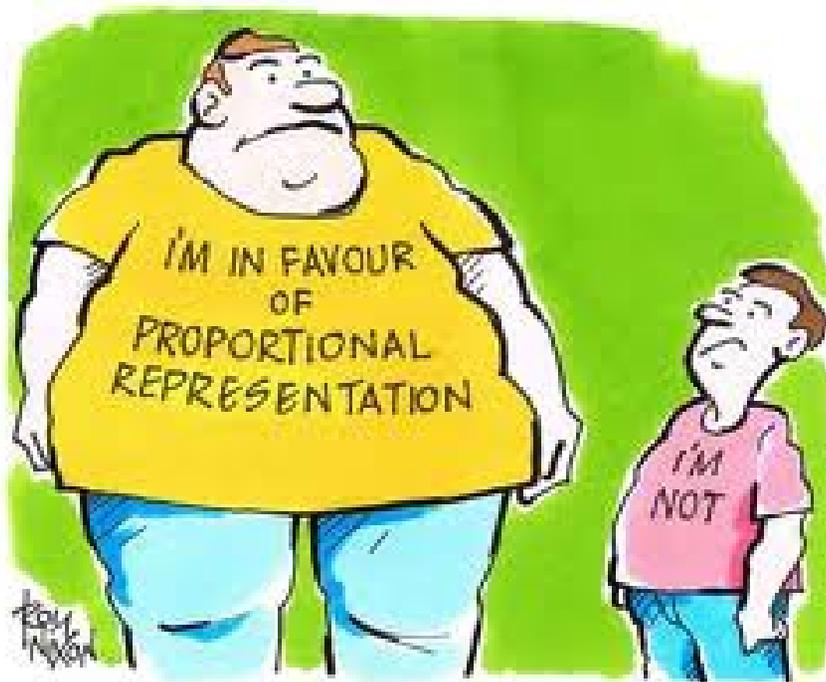
<b>Potential stakeholder</b>	<b>Ability of decision to affect stakeholder</b>	<b>Stakeholder's ability to affect the decision</b>
<b>Monterrey Bay Aquarium</b>	<b>low</b>	<b>low</b>
<b>Local shellfishery association</b>	<b>high</b>	<b>medium</b>
<b>US FWS</b>	<b>high</b>	<b>high</b>
<b>State wildlife/fisheries agency</b>	<b>medium</b>	<b>medium</b>
<b>WWF</b>	<b>low</b>	<b>low</b>
<b>NPS</b>	<b>high</b>	<b>low</b>
<b>Native subsistence use groups</b>	<b>medium</b>	<b>high</b>

## Example: Stakeholders for sea otter translocation decision



# Who should *not* be a stakeholder?

- Avoid duplicate interests
- Establish stakeholder groups with equal representation



# Organizing Stakeholders

- Establish a governance system that defines the way stakeholders interact
- Focus should be on process
  - How will decisions be made?
    - autocratic, democratic, consultative, consensus
  - Who leads the group?
    - facilitator
  - Who speaks for each stakeholder?
    - representatives



# Developing a Governance System

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- Requires consensus – all parties should agree to rules of engagement before conflict arises
- Establish a process for dispute resolution
- Define structure
  - governing board, chairperson, secretary
- ID roles and responsibilities
- Define guidelines for conducting meetings
  - How to conduct discussions
  - How to introduce new topics
  - Length limits for discussions
  - Other limits – e.g. # of times a stakeholder can speak at a meeting



# Stakeholders vs. Technical Advisors

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- Stakeholder involvement key in early design and development stages of decision process
  - Framing the problem
  - Identifying and structuring objectives
  - Developing a set of decision alternatives to achieve desired outcomes
- Modelers & technical experts more important in later stages of process
  - Frame scientific uncertainty with alternative models of system dynamics
  - Consider consequences by describing how well alternatives meet objectives (developing and evaluating models)
  - Optimization (solving the decision problem)

# Roles of stakeholders: Framing the problem

## Identify Essential Elements of the Decision Problem

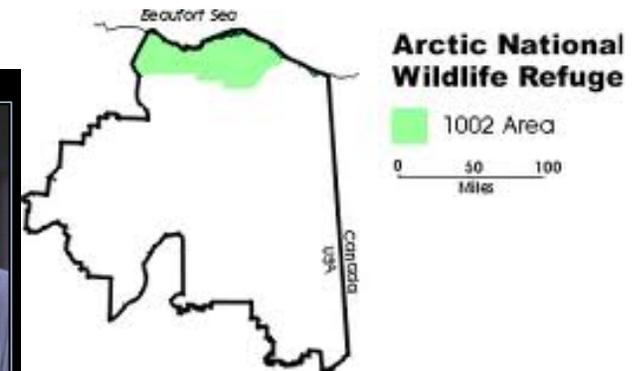
- What is the legal and regulatory context of the decision problem?

Endangered Species Act



- Who is the decision maker?  
Who are the key stakeholders?

- Define the scale, timing and frequency at which decisions will be made.



# Roles of stakeholders: Identifying objectives

Developing objectives helps us decide  
...when AM is appropriate

Agreement on management objectives?  
(where we are headed)

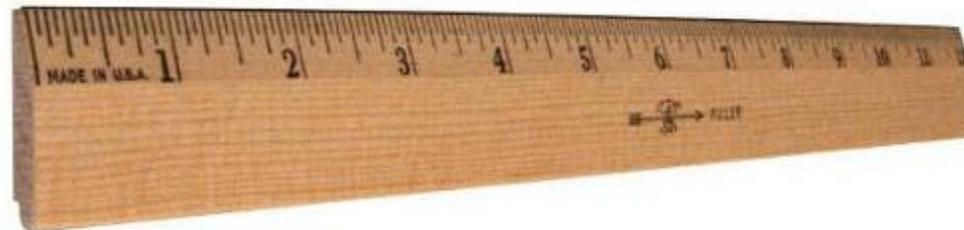
		<u>No</u>	<u>Yes</u>
Agreement on science? (how can we get there)	<u>Yes</u>	Negotiation, compromise, SDM	Routine management science
	<u>No</u>	Conflict resolution, then →	Adaptive resource management
		<i>Politics</i>	<i>Biology</i>

# Roles of stakeholders: Identifying objectives

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- Stakeholders work cooperatively to provide a common, measurable objective of management
  - Translate their personal values into ***measurable*** quantities
  - May have to resolve among multiple competing objectives
  - Mediator / facilitator is almost always valuable, if not requisite (more on facilitators later...)



# Roles of stakeholders: Identifying objectives

## Structuring objectives

Important to identify and separate fundamental and means objectives

### Do this by asking 3 key questions:

- 1) *Why Is that Important?* → Reveals fundamental objectives
- 2) *How can you achieve that?* → Reveals means objectives
- 3) *What do you mean by that?* → Leads to clarity



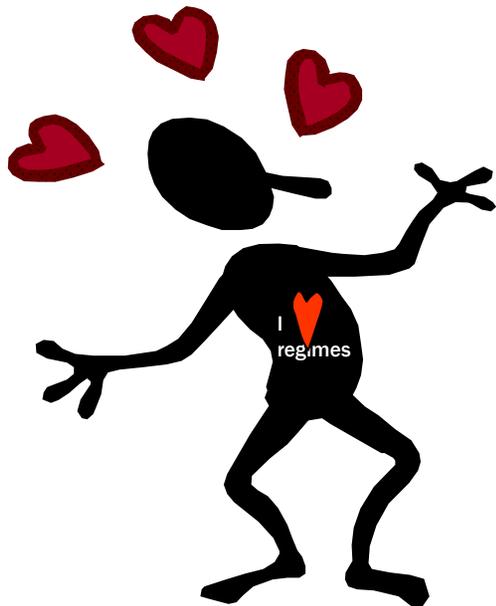
# Roles of stakeholders: Identifying objectives

Means Objectives are Often Confused as  
Fundamental Objectives

For example:

Stated (fundamental) objective of fishery manager:

Natural Hydrologic Regime



# Roles of stakeholders: Identifying objectives

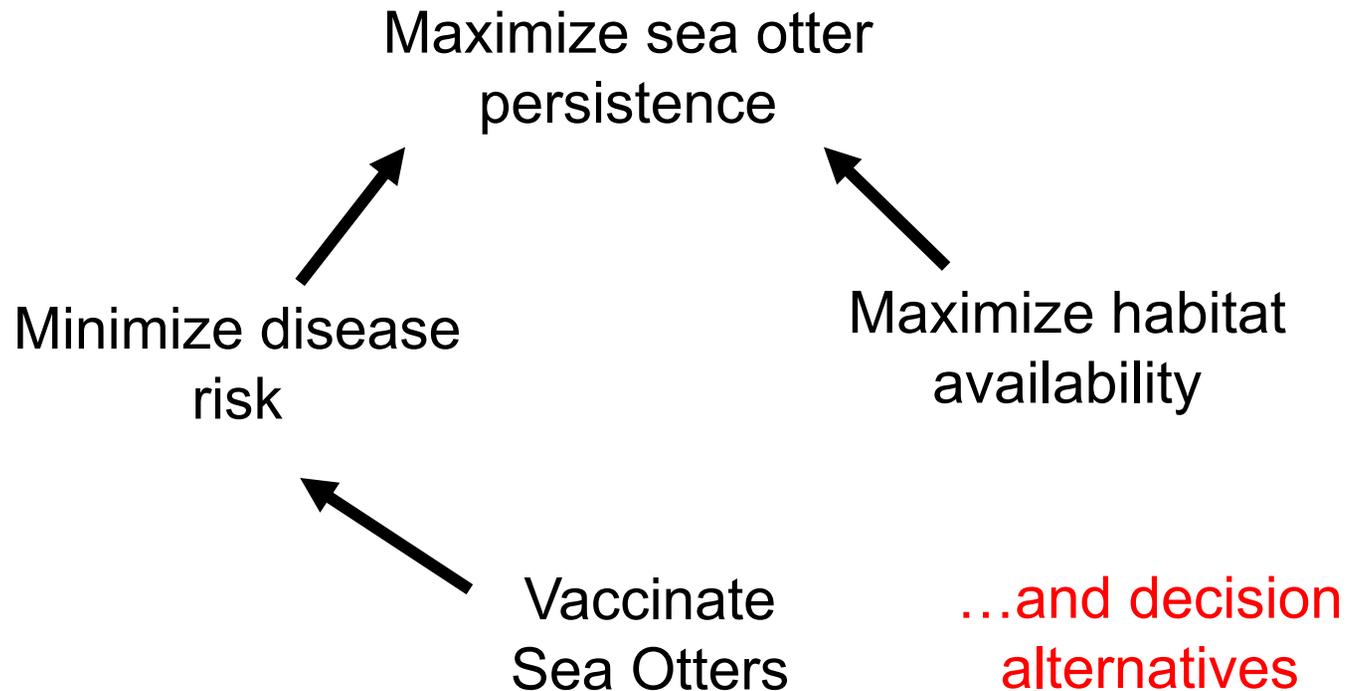
Possible outcome: The flow regime is natural but...  
*all the fish are dead*



*Would the fishery managers be happy with the outcome???*

# Roles of stakeholders: Identifying objectives

*Means* objectives (sometimes) help realize the *fundamental* objective

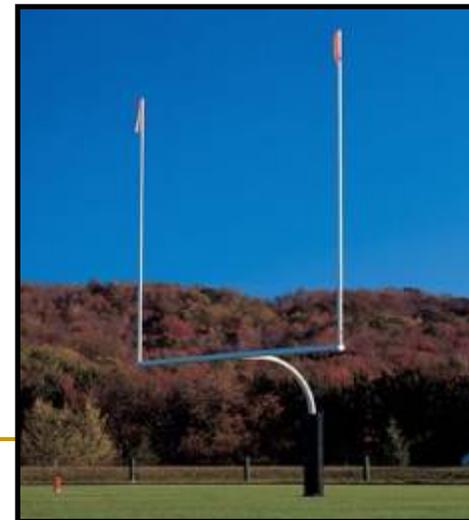


# Roles of stakeholders: Identifying objectives

- Objectives are value statements
  - Reflect social, political, ecological ideals
  - Incorporate both benefits and costs
  - Stakeholders assign a value to each possible outcome of each action

## Example of Values

Action	Outcome	
	Positive	Negative
Do Nothing	100	0
\$\$\$	90	1



# Roles of stakeholders: Decision Alternatives

- Creativity is key early in process
- Refinement in later stages should eliminate...

★ Actions that fall outside of decision maker's jurisdiction  
→ Look back to the problem statement. Think about the legal and regulatory context of the decision problem. The decision-maker must have legal jurisdiction to implement action if it is to be included in final list.



★ Actions that are irrelevant or unreasonable



"On the positive side, down wood will enrich your land by providing a home for beneficial wildlife."

★ Actions that are non-specific, vague or ambiguous  
→ "protect," "conserve," "modify," "sustain"

- Remember, the decision to take no action is still a decision

# What is a facilitator?

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- MUST be a neutral party to the decision → Never a decision maker or stakeholder
- MUST be viewed by stakeholders as neutral party
- Helps stakeholders work effectively and collaboratively
- 1<sup>st</sup> among equals → Not the leader but acts as a guide

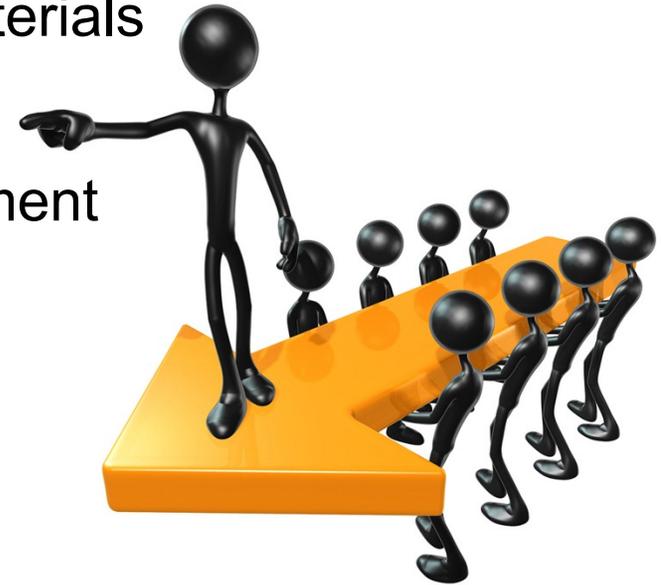


# Role of Facilitator

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- Promotes group participation, trust, mutual understanding, and shared responsibility
- Works closely with stakeholders to plan meetings
  - set time and location, notify participants, develop an agenda, prepare and distribute materials
- Running the meeting
  - Attempt to maintain a civil environment
  - Stick to agenda!

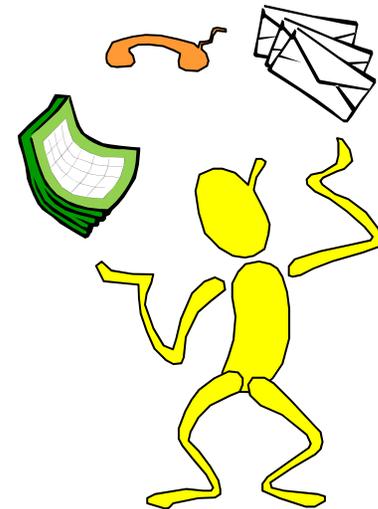


# Characteristics of a good facilitator

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- Able to work with all types of stakeholders
  - General public, technical experts, administrators...
- Can bridge the gap between people with different skills and life experience
- Active listener and able to summarize ideas so that they are understandable to everyone
- Strong organizational skills
  - Maintains order/schedule
  - Keeps group on track

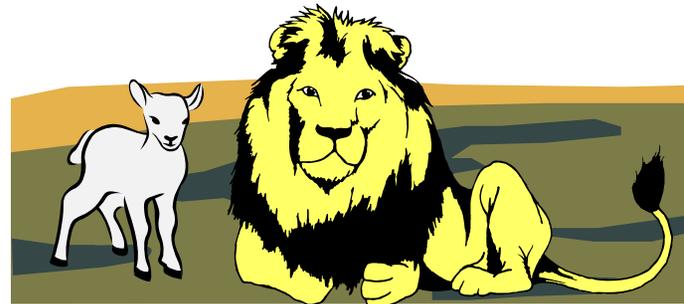


# Characteristics of a good facilitator

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- Sensitive to mood of stakeholders
- Not afraid to take on aggressive and/or forceful personalities
  - “turning lions into lambs”
- Skilled at getting shy or quiet stakeholders to communicate
  - “turning lambs into lions”



- BONUS: Good understanding of natural resource management issues and approaches

# A word about technical advisors...

- Should be viewed by stakeholders as neutral 3<sup>rd</sup> parties (and be willing to act as such)
- Sometimes the line b/w technical advisors and stakeholders is not clear → Must decide which “hat” to wear
- Choose wisely
  - Keep # relatively small
  - Assure relevant experience
  - Avoid duplication of expertise
  - Good communicators



"I know nothing about the subject,  
but I'm happy to give you my expert opinion."

# Unique roles in an adaptive process

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## 1) Framing scientific uncertainty

- For a given objective, choice of best decision differs according to one's understanding of the system
- Explicitly incorporate uncertainty in AM framework as alternative models of system dynamics

## 2) Periodic re-evaluation

- All components of decision framework may be periodically re-evaluated
    - To refine statement of objectives
    - To add/remove decision alternatives
    - To alter model set
- ⇒ “Double-loop learning”

# A word about framing uncertainty...

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- Working group frames uncertainty by contributing (or advocating for) competing models of the system



- Any plausible model that predicts an outcome to a decision action

# A word about framing uncertainty...

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- AM structure enforces transparent separation between disputes about science and disputes over values
    - ❑ Otherwise, “scientific uncertainty” often used as a diversionary tactic to hide a different set of values
      - e.g., using the “burning not effective” model to support an unrevealed desire to not burn
  
  - Understanding of biological mechanisms may be vigorously disputed among stakeholders, technical advisors, and/or both
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# A word about framing uncertainty...

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Boat traffic in nursery areas must be decreased to protect whales.

We want to save the whales too, but the real problem is toxicity.



*A dispute over the science? Or a hidden objective?*

# Planning a stakeholder workshop

- Determine workshop purpose :  
Informational vs. Technical
- Informational – Used to introduce larger stakeholder group to decision problem and SDM process
  - Large group, may be open to general public
  - Foster buy-in and ensure transparency
- Technical – Used to conduct most of SDM process
  - Should be a small group (< 20 people)
  - Access limited to core stakeholder group
  - Maintain consistency in core group



# Planning a stakeholder workshop

- ID and recruit key stakeholders and other team players
  - Stakeholder representatives should be those who are most familiar with day-to-day management issues
  - Administrators good for helping to ID best person to send from agency
  - Technical advisors – biologists, engineers, statisticians, economists...
  - Recorder – assists facilitator with running the meeting.
    - A good way to get hands-on experience.

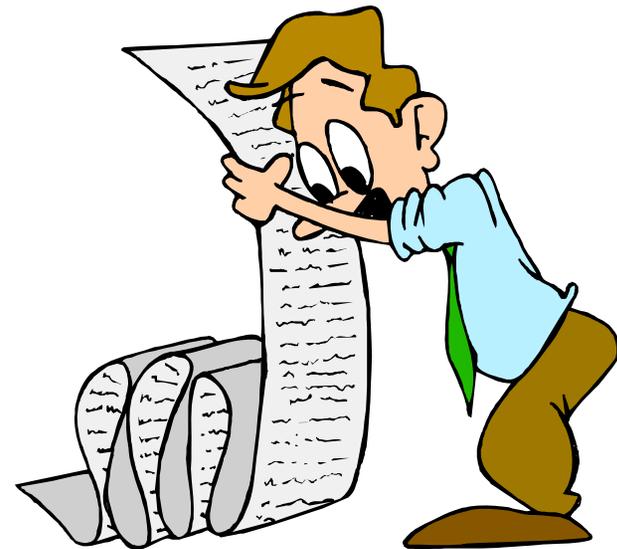


# Planning a stakeholder workshop

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- Meeting location and duration
  - Few multi-day workshops better than many 1-day workshops
  - Very long workshops counter-productive (avoid burn-out)
  - Social event helps to facilitate a team environment
  
- Agenda should include:
  - Progress to date
  - New items for discussion
  - Explicit timelines
  
- Background material
  - Reports/pubs
  - Limit to necessary items
  
- Webinars/websites useful in b/w workshops



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# Summary

- Stakeholder involvement necessary part of SDM process, BUT not all stakeholders are created equal
    - Stakeholder analysis used to ID those essential to process
  - Governance is a process that puts structure behind the stakeholder group
    - Allows for definition of roles, timelines and boundaries
  - Stakeholder involvement important in early design and development phases of process
    - Problem framing, ID and structuring of objectives, decision set development, assigning relative values to potential outcomes
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# Summary

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- Facilitators are neutral parties that help guide the process
- Technical advisors are also neutral parties
  - Need to agree to wear their “expert” hat
  - Involvement important in development of model that links objectives and decisions to system understanding
- Planning a workshop involves determining workshop purpose (informational vs. technical), preparation of background materials (websites useful), “business” matters (location, duration...)