

# An integrated science strategy for the NPRB

April 28, 2014



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# Why integrated science?

Two key assumptions:

- Integrated management is central to effective management & sustainable use
- IM deals with multiple attributes, embedded in social-ecological systems

Through integrated science:

- Identify what decisions need to be made
- Science can better inform those decisions

# Making management & policy decisions

Governance

Decision making

Communication

Values

Justice

Risk

Leadership



# Aspects of social science

Values	Context dependent
Beliefs	Qualitative & quantitative
Culture	Dynamic
World views	Important
Power dynamics	Hard

What matters?

What trade-offs do we make?

*The bookends of integrated management*

# The workshop

## *Integrating science within the NPRB*

Participants were asked:

- What would integrated science in Alaska look like?
- What challenges or barriers stand in the way?
- How do we get there?

# Organizing the questions

## Actions

## Short-term outcomes

## Long-term outcomes

## Goal

SS presentations to Board

Fund high value short term SS research activities

Board's interest in science integration articulated

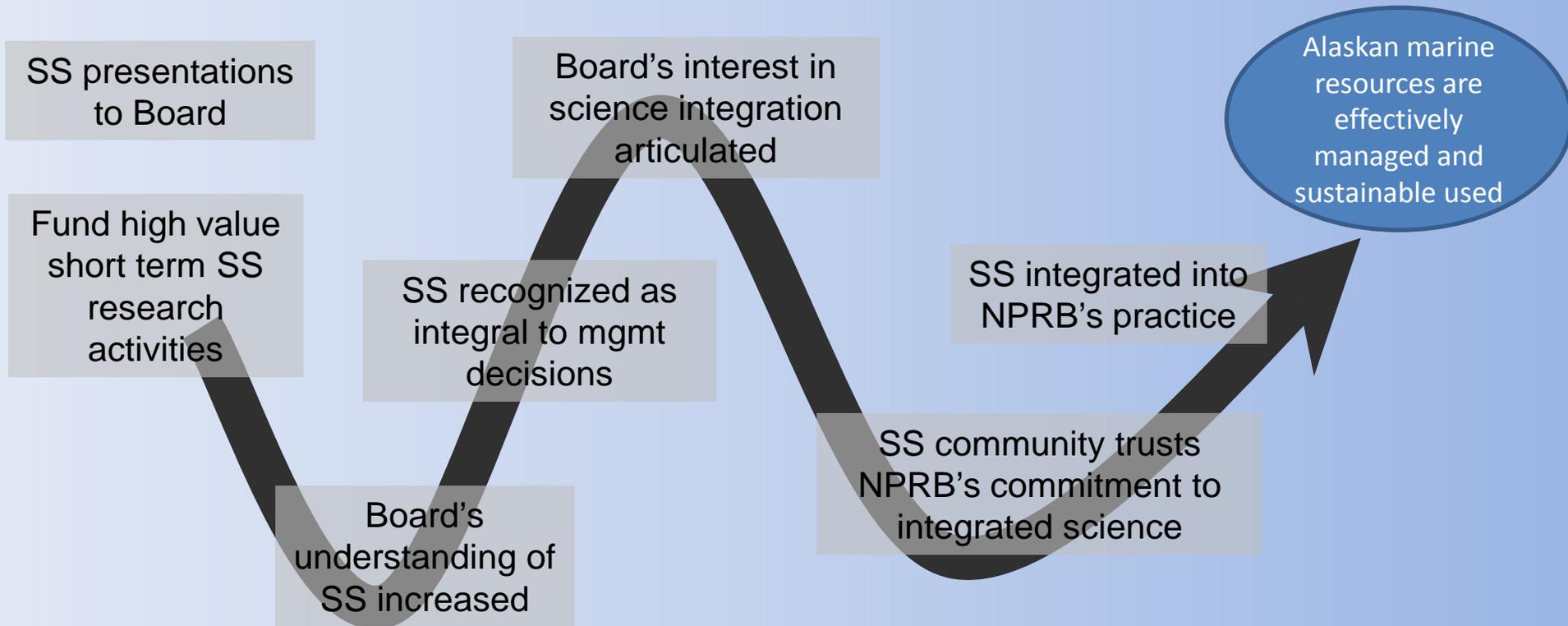
SS recognized as integral to mgmt decisions

Board's understanding of SS increased

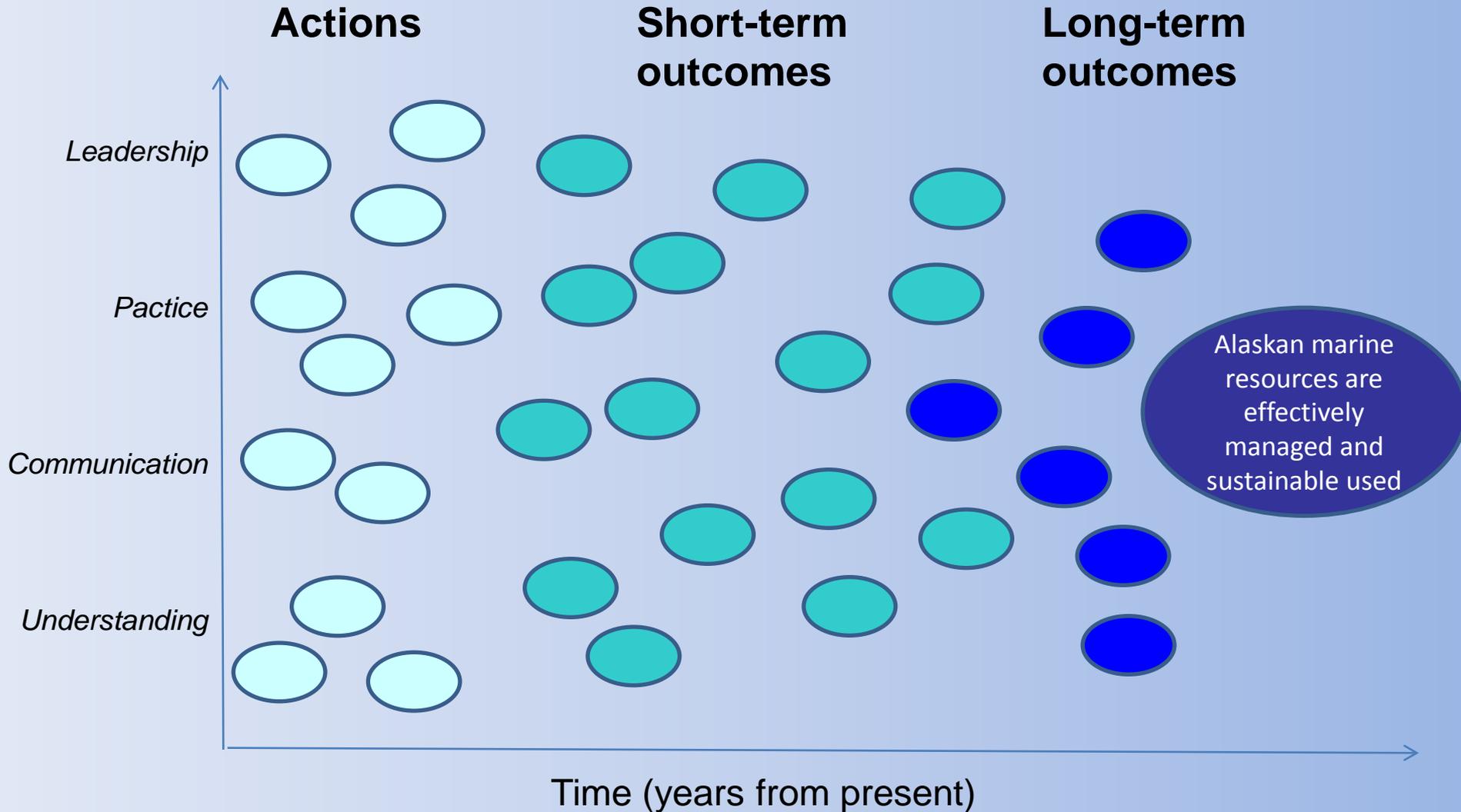
SS community trusts NPRB's commitment to integrated science

SS integrated into NPRB's practice

Alaskan marine resources are effectively managed and sustainable used



# Outcome mapping



# Results

Participants identified 20 key challenges\*  
to science integration

Theme	Actions	Short-term	Long-term
Leadership	14	10	20
Communication	12	3	10
Practice	8	11	15
Understanding	4	4	5

\* These unique challenges were synthesized from a larger number of responses.

# Next steps

1. Encourage social scientists to fully participate in NPRB funding opportunities, Board nominations, and research planning to promote integrated science in Alaska.
2. Establish a workshop series where scientists from various disciplines are brought together to tackle specific challenges.  
*(NCEAS – next slide, provides an example approach)*

With the goal of making ecological science more collaborative, open, integrative, relevant, and technologically informed, NCEAS:

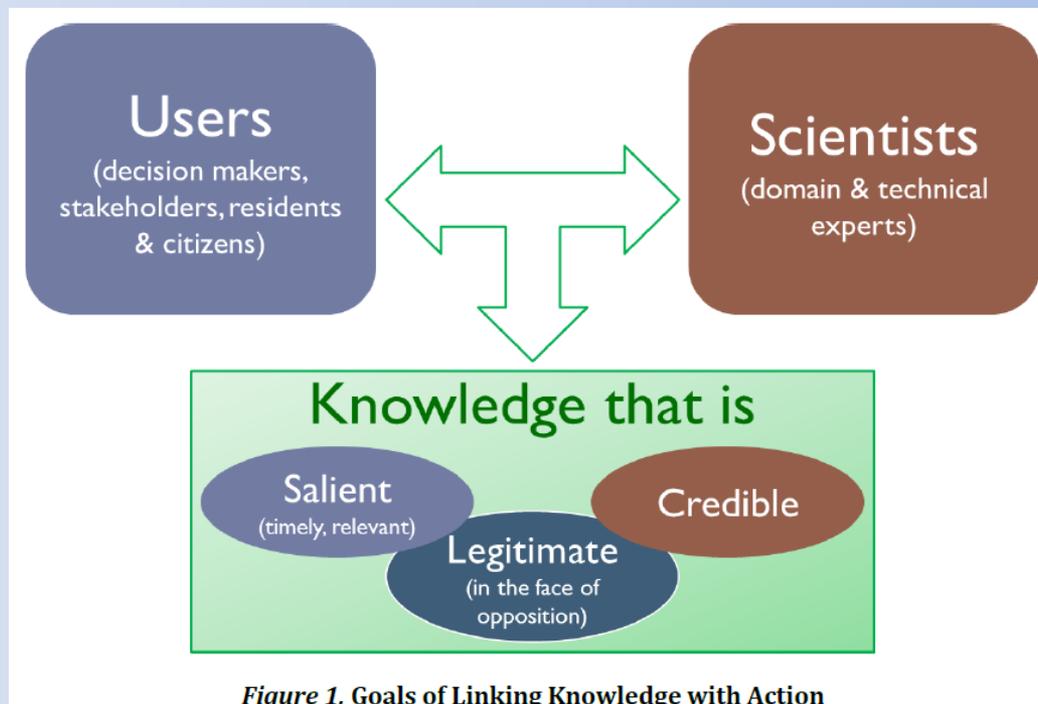
- Brings together interdisciplinary Working Groups to distill existing data, ideas, theories, or methods from multiple fields of inquiry to accelerate the knowledge generation.
- Provides a stimulating "neutral territory" for teams of 10 to 15 researchers for 1 to 2 weeks at a time to focus intensely on the question.
- Funds travel costs and provides the infrastructure for deep analysis and collaboration in a hospitable environment.

# Next steps

1. Encourage social scientists to fully participate in NPRB funding opportunities, Board nominations, and research planning to promote integrated science in Alaska.
2. Establish a workshop series where scientists from various disciplines are brought together to tackle specific challenges.
3. Establish a program to identify the needs and values of all Alaskan stakeholders, including marine resource-dependent communities.

# Next steps

4. Articulate Board's commitment to science integration through conversations about how to make research more salient, legitimate, and credible to decision-makers, communities, and stakeholders.



# Next steps

5. Engage the social sciences community to identify short-term research activities that would demonstrate the value of social sciences to resource management.
6. Consider revisions to the RFP process
  - more targeted social science research questions
  - adjusting reporting requirements
  - extending the time between proposal call and deadline
7. Leverage online social networking tools to share information, and facilitate interdisciplinary communication and network building.

# Next steps

8. Build a common framework of understanding on which effective and meaningful integrated studies can be based.
9. Learn from other initiatives within and beyond fisheries context (e.g., marine spatial planning), especially with regard to aspects of science integration
10. Complete the outcome maps started at the workshop ...
  - Pathways and priorities to achieving integrated science
  - Ensure alignment of processes
  - Provide continuity, track progress, retain institutional knowledge

# Conclusions

- Integrated management is for the long-term
- Integrated science helps make integrated management legitimate
- Clear objectives help guide & track progress
- A science integration strategy would make the NPRB a leader in Integrated Management

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