BALTIC 2nd FORUM MSP

W 1/2 What are the research needs for planning in 21st century?

Genetic biodiversity in Baltic Sea Marine Protected Areas: a study of policy, implementation and platforms for knowledge transfer

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VASAB VISION & STRATEGIES AROUND THE BALTIC SEA

Baltic SCOPE Towards coherence and cross-border solutions in Baltic Maritime Spatial Plans

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Genetic biodiversity in Baltic Sea Marine Protected Areas:

A study of policy, implementation and platforms for knowledge transfer

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BONUS BAMBI WP4:

Identifying governance structures and improving policy instruments for genetic biodiversity

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BONUS

SCIENCE FOR A BETTER FUTURE OF THE BALTIC SEA REGION

1. To what extent is genetic biodiversity considered in national policies and in management of Baltic Sea MPAs?

- 240 documents
  - 55 international level
  - 24 national level: Estonia, Finland, Sweden, Germany
  - 161 management plans for HELCOM MPAs
- Quantitative and qualitative analysis

Findings

- International and national policy stress that genetic diversity should be conserved.
- Goals for genetics are less frequent in policies directed towards marine environments.
- Finnish policy mention genetics most frequently, but qualitatively Sweden has the strongest wordings.
- MPA management plans in all four countries are largely void of goals and strategies for genetic biodiversity.

2. What factors could tentatively explain the observed role of genetic biodiversity in the management of Baltic Sea MPAs?

- Theoretical focus: front-line bureaucrats.
- Empirical focus: Helcom MPAs in Sweden and Finland.
- Method: in-depth interviews with regional conservation managers.

Findings

- Genetic biodiversity is absent, or plays a minor role, in contemporary MPA management

- Explanations:

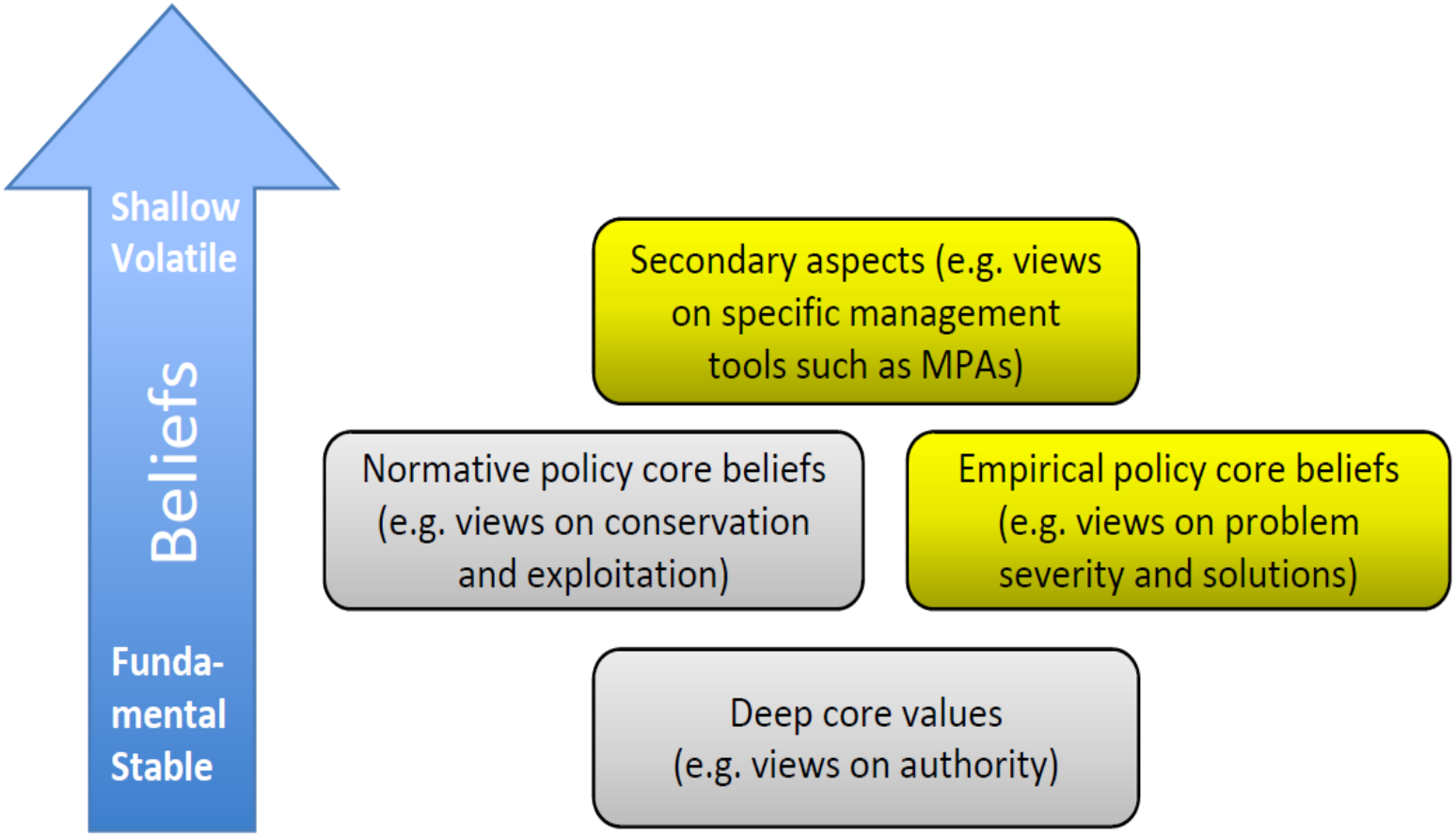
  - Unclear understandings of formal policy
  - Lack of resources
  - Poor knowledge base
  - Managers' policy beliefs, i.e. their views of the problem and its solutions

3. What is the impact of different forms of knowledge transfer on managers' beliefs on genetic biodiversity?

Lecture

Group deliberation

Components of an individual´s belief system



Design of the study

CAB	Forms of knowledge transfer	Number of participants
A	Deliberation	4
B	Deliberation	8
C	Deliberation	9
D	Deliberation	6
E	Deliberation	5
Total no participants for deliberation		32
F	Lecture	12
G	Lecture	6
H	Lecture	10
I	Lecture	16
Total no participants for lecture		44

Findings

- Both forms of communication stimulated knowledge development on the importance of genetic diversity.
- The lecture strengthened the managers' confidence in area protection as a management tool.
- Those who participated in lectures also thought that national authorities and CABs should take more responsibility.
- The understanding of genetic biodiversity appears to have increased more in the deliberative groups.

How to improve regional practice?

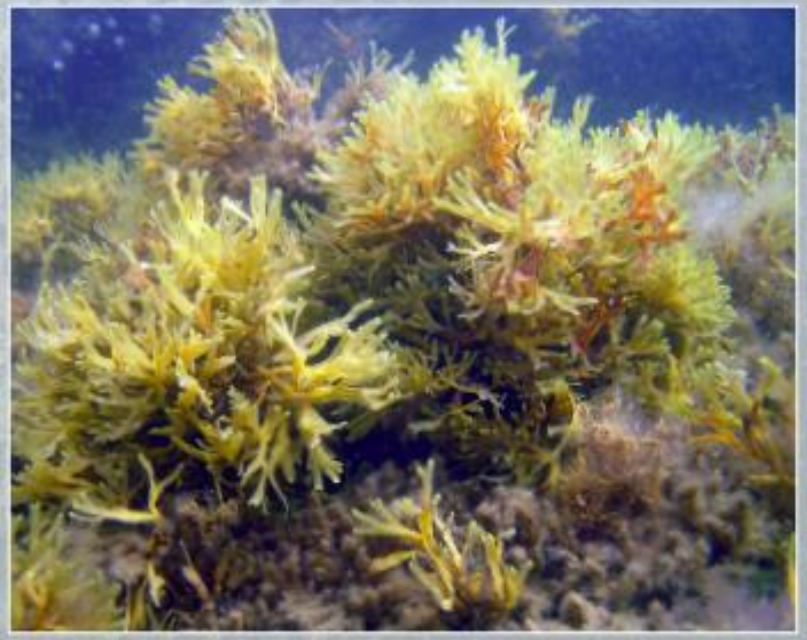
- Beliefs can be influenced through knowledge transfer.
- Platforms and discussions between science and practice are urgently needed.
- Policy makers can clarify policy, assist in its interpretation, and sustain necessary resources.
- Explore what can be learnt from land-based conservation management.

BALT GENE 2017

– where science and management connect

How can the growing knowledge of genetics help ensure the future of Baltic Sea species and ecosystems?

Genetic research is rapidly progressing and now is the time to build good communication between science, policy and practice. Together we seek new ways to approach the severe challenges facing the Baltic Sea today and tomorrow.



Stockholm, 21-22 September 2017

Save the date!

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Further reading

- Laikre, L., Lundmark C., Jansson, E., Wennerström, L., Edman, M. and A. Sandström (2016) Lack of recognition of genetic biodiversity: international policy and its implementation in Baltic Sea marine protected areas. *Ambio. Published online.*

- Sandström, A., Lundmark C., Jansson, E., Edman M. and L. Laikre (2016) Assessment of management practices regarding genetic biodiversity in Baltic Sea marine protected areas. *Biodiversity and Conservation* 25(6): 1187-1205.

- Lundmark, C., Andersson, K., Sandström, A and L. Laikre (Accepted) Effectiveness of short-term knowledge communication on Baltic Sea marine genetic biodiversity to public managers. *Regional Environmental Change*.