



The Ecosystem Approach in MSP: options and challenges

Kerstin Schiele

Leibniz Institute for Baltic Sea Research
Warnemünde Biological Oceanography



The Ecosystem Approach in marine spatial planning: options and challenges

Kerstin Schiele, Institute for Baltic Sea Research Warnemünde

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Ecosystem approach - EA

*„The ecosystem approach can therefore be defined as, **the comprehensive integrated management of human activities** based on the best available scientific knowledge about the ecosystem and its dynamics, **in order to identify and take action on influences which are critical to the health of marine ecosystems**, thereby achieving **sustainable use** of ecosystem goods and services and **maintenance of ecosystem integrity**’. The application of the **precautionary principle** is equally a central part of the ecosystem approach.“*

HELCOM and OSPAR 2003

Aim: health and integrity of ecosystems, sustainable use

condition: respecting carrying capacity of ecosystems

Set screws: human activities

Ecosystem approach - EA

Marine management context

source	aim	approach
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• CBD	Protecting biodiversity	Malawi Principles
• OSPAR, HELCOM	Sustainable use, integrity of ecosystems	Managing human activities, Precautionary principle
• ICES	Sustainable use	Research, consulting
• ICZM	Sustainable development	Stakeholder engagement
• MSFD	Good environmental status	Measures, cumulative effects
• MSP-FD	Sustainable growth	Marine spatial planning

Ecosystem approach - EA

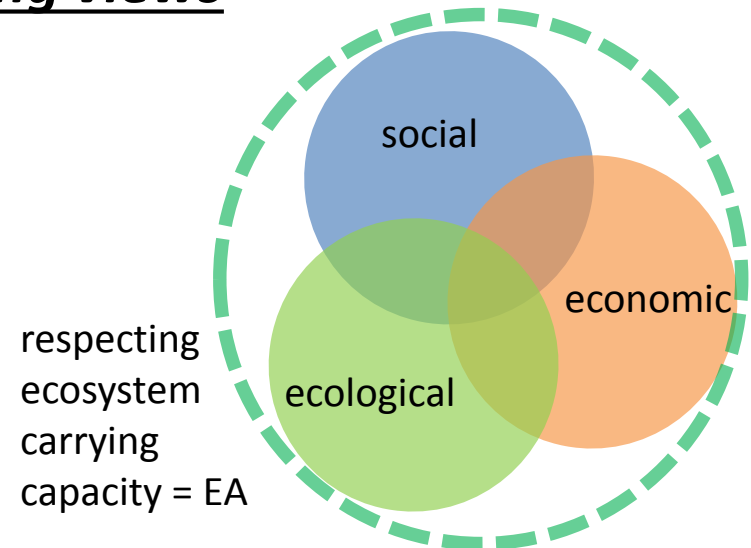
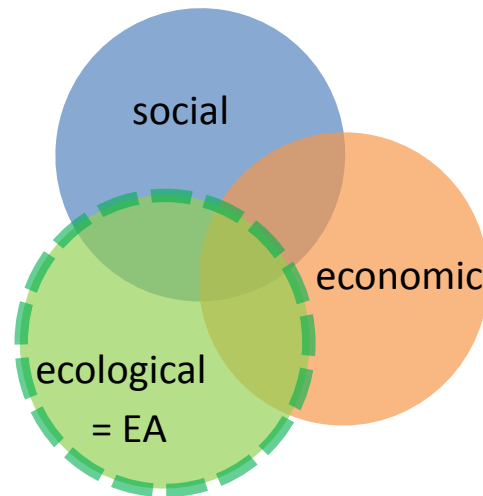
Marine management context

source aim approach

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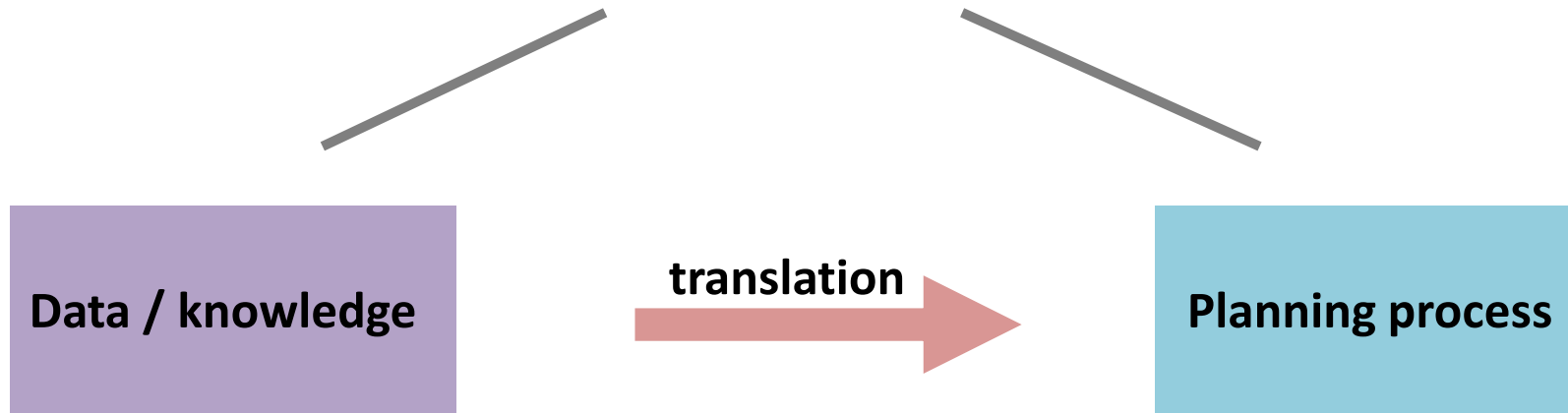
EA – role in marine spatial planning

2 competing views

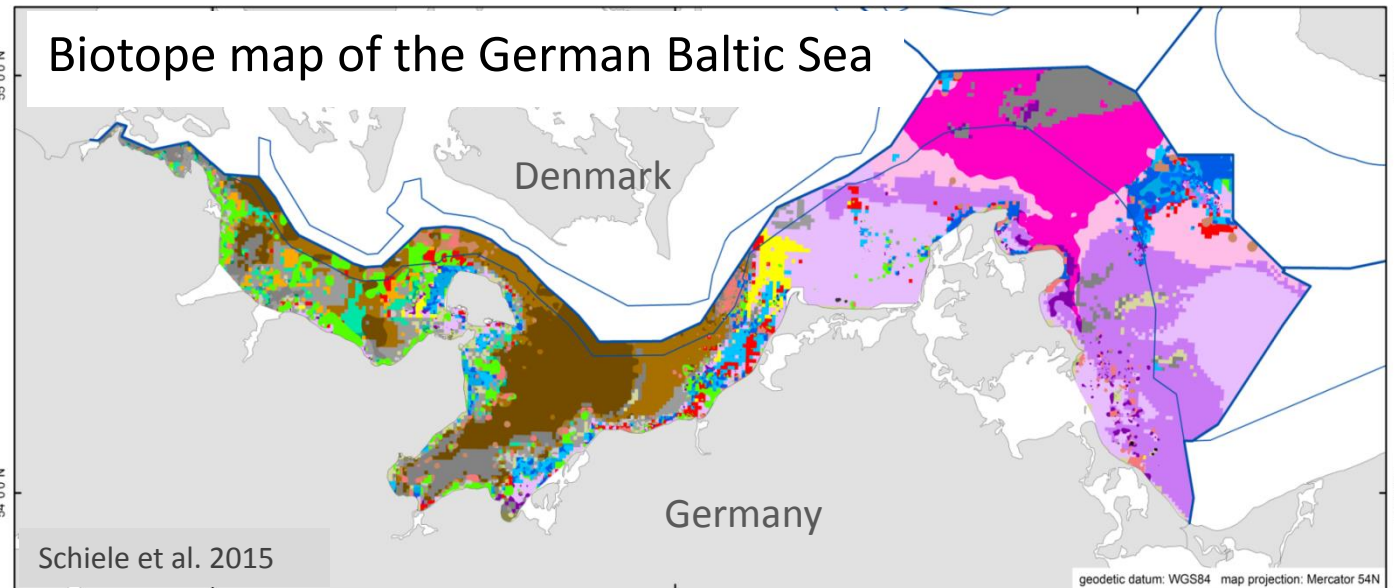
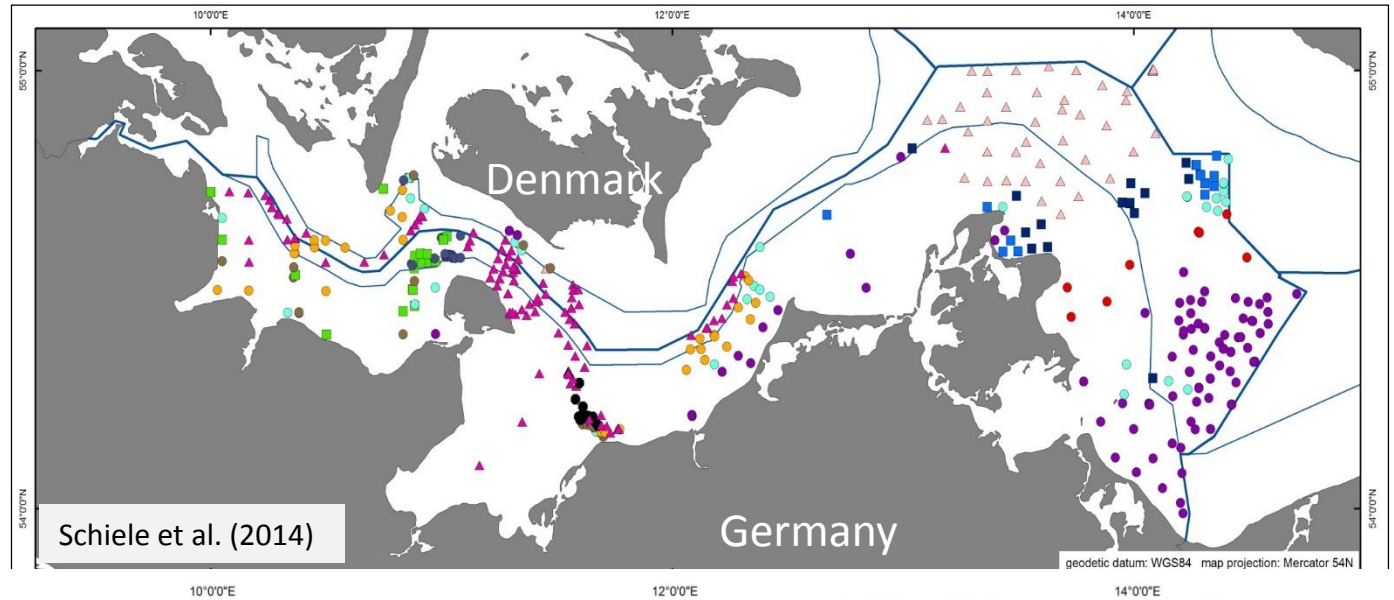


- *Confusion about understanding of EA in MSP*
- *Carrying capacity often not explicit*

EA in marine spatial planning



Challenges: from point data to full spatial coverage



Challenges and options

Data / knowledge

- spatial data required vs. point data collected
 - > *environmental modelling*
- too little information, spatial resolution too coarse
 - > *expand data collection*
- knowledge gaps: cumulative effects, ecosystem functioning
 - > *research, precautionary principle!, ecosystem services*

Challenges and options

Planning process

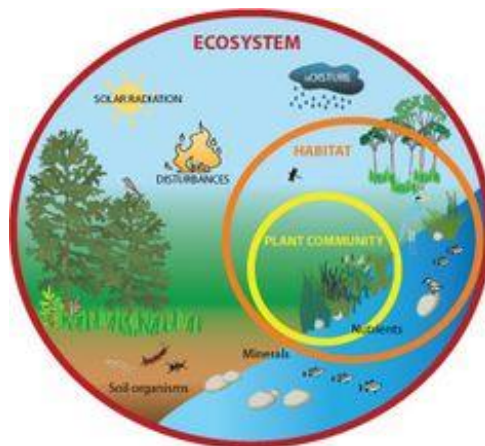
- Nature conservation claims rather weak in MSP
 - *Strengthen position of conservation needs for ecosystem integrity*
- little feedback loops in planning and environmental assessment
 - *Bring results from lower planning levels back*
- transparency & integration
 - *Process of decision-making public*

EA in marine spatial planning

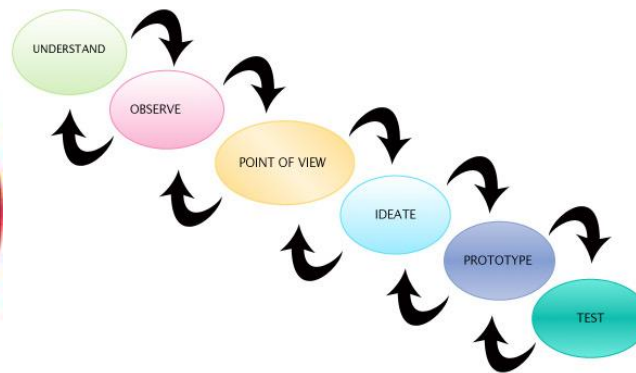
vision

**holistic knowledge
about ecosystems**

**Integrative planning
as ongoing process**



<http://easyscienceforkids.com>



Plattner et al. 2009

EA in marine spatial planning

Data / knowledge

- protected and representative **species, habitats: distribution, connectivity**
- Identify **sensitivities** of species, consider needs for buffer zones
- translate into **spatial claims** and conditions for usage and activities
- **Set priorities** for nature conservation
- Communicate **room to negotiate**
- Consider **cumulative effects**
- Consider **Ecosystem services**
- Identify **carrying capacity**/limits of ecosystems
- **Holistic understanding** of ecosystems: processes, functions, interdependencies
- Consider scenarios of future development and **probabilities**

EA in marine spatial planning

Planning process

- Implementation of **HELCOM-VASAB principles and guidelines**
- **EA as general vision/** aim in MSP processes
- Include **areas for nature conservation** in MSP plans
- Include **data on all activities** in the planning process: e.g. fisheries, mining
- Plan **free space**
- **Transparency** of data basis, stakeholder participation and consideration
- **Compliance** with nature **conservation priorities**
- **Binding compliance** with **carrying capacity/** limits of ecosystems

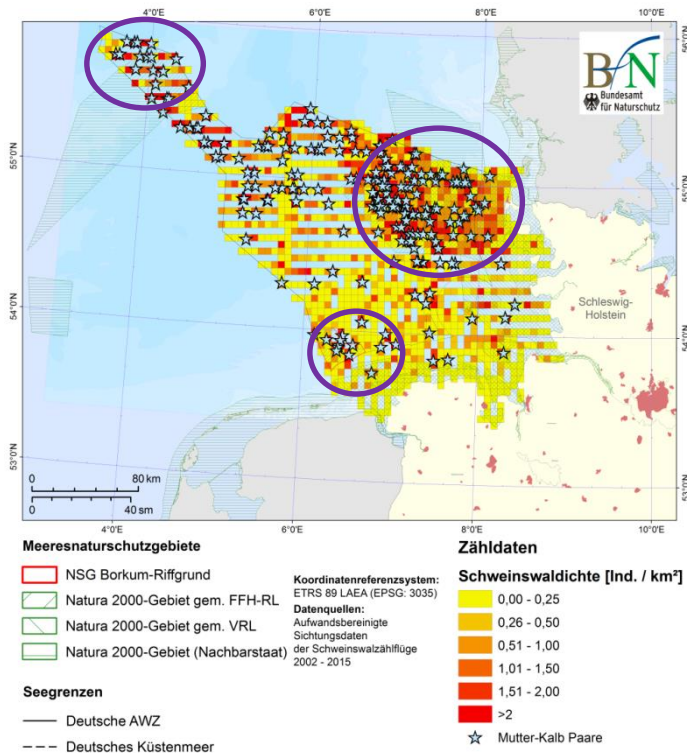
Way forward example



*Project FABENA
2015-2017*

Harbour porpoise (*Phocoena phocoena*)

spatial claims in the German North Sea



Noise
sensitive
species

Building wind farm
foundations
- during **absence** of
harbour porpoise
- use technical **noise
protection**
- **buffer zones** to
sensitive areas



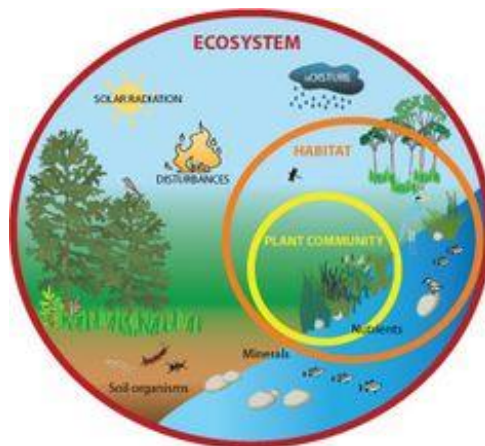
*Project FABENA
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summary

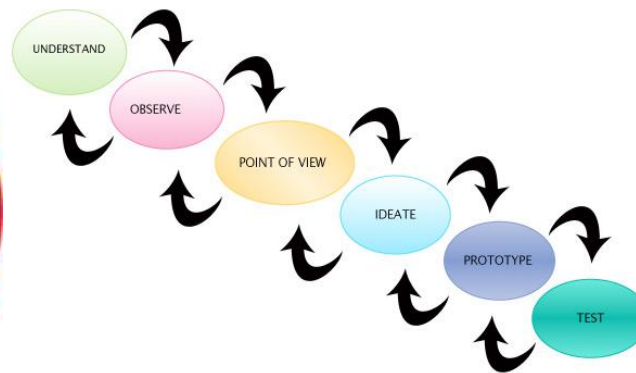
Vision

**holistic knowledge
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Plattner et al. 2009

summary

Way forward: first steps

-> include nature conservation in planning

- Identify occurrence and distribution
- Consider sensitivities
- illustrate spatial claims
- Legal implementation

Thank you

Dr. Kerstin Schiele

Leibniz Institut für Ostseeforschung Warnemünde (IOW)

kerstin.schiele@io-warnemuende.de

Phone: +49 381 5197 423

Fax: +49 381 5197 211



LEIBNIZ INSTITUTE FOR
BALTIC SEA RESEARCH
WARNEMÜNDE



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