



Safeguarding the natural sedimentary processes in the Wadden Sea for biodiversity and people

Merk, V., van der Heide, T., Siebenhüner, B., Balke, T., Dees, N., Eriksson, K., Hendriksen, G., Hillebrand, H., van de Lageweg, W., Lansu, E., Maljers, Y., van Maren, B., Nordhaus, I., Piedelobo Martín, L., Scheiffarth, G., Schäfer, E., Vovides A.G., Walsh, C.

Outstanding universal value Wadden Sea:
Largest unbroken intertidal system worldwide,
with mostly undisturbed natural processes

- **Lack of understanding natural processes: Importance sediment-biota interactions?**
- **Lack of shared definition: What is “mostly undisturbed”?**
- **Lack of understanding and shared views: Consequences for management?**

The logo for SedWay is centered at the top of the slide. It features the word "SedWay" in a large, bold, black sans-serif font. Two small black footprint icons are placed on either side of the text: one to the left of the 'S' and one to the right of the 'y'. The entire logo is set against a light green background with a faint, stylized map of the world.

SedWay

- Synthesize knowledge on bio-physical interactions
- Fill knowledge gaps on sediment disturbance-biodiversity
- Socio-ecology of “undisturbed” and “natural”
- Spatial quality approach on sediment management

Focus I: Ecology

- Abiotic Factors
- Ecosystem engineers



New Wadden Sea-wide model

Meta-analysis of sediment dynamics effects on biodiversity - *Work package 1*

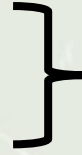
- Collect existing spatial data
- Meta-analyses based on structural equation modelling to include feedbacks

Empirical evidence for bio-physical feedbacks and habitat suitability - *Work package 2*

- Field measurements
- Effect of ecosystem engineers on large-scale sediment dynamics
- Test ecosystem engineer resilience

Focus II: Socio-Economy

- Stakeholder perception
- Stakeholder expectations



**Future management
Protecting OUV**

Socio-ecology of an un-/disturbed sedimentary system - *Work package 3*

- Understand distinct narratives
- Assess influence of key events

Spatial Quality of Wadden Sea sediment strategies - *Work package 4*

- Societal valuation of human impacts on sediment dynamics
- Map quality indicators using literature, GIS-analyses, field visits, interviews

**Meta-analysis of
sediment dynamics effects
on biodiversity**

Work package 1

**Empirical evidence for
bio-physical feedbacks and
habitat suitability**

Work package 2

**Socio-ecology of an
un-/disturbed
sedimentary system**

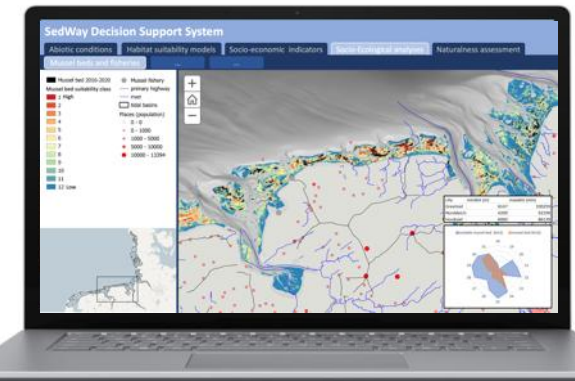
Work package 3

**Spatial Quality of
Wadden Sea
sediment strategies**

Work package 4

Decision-Support System

Work package 5



SedWay Decision Support System

Abiotic conditions

Habitat suitability models

Socio-economic indicators

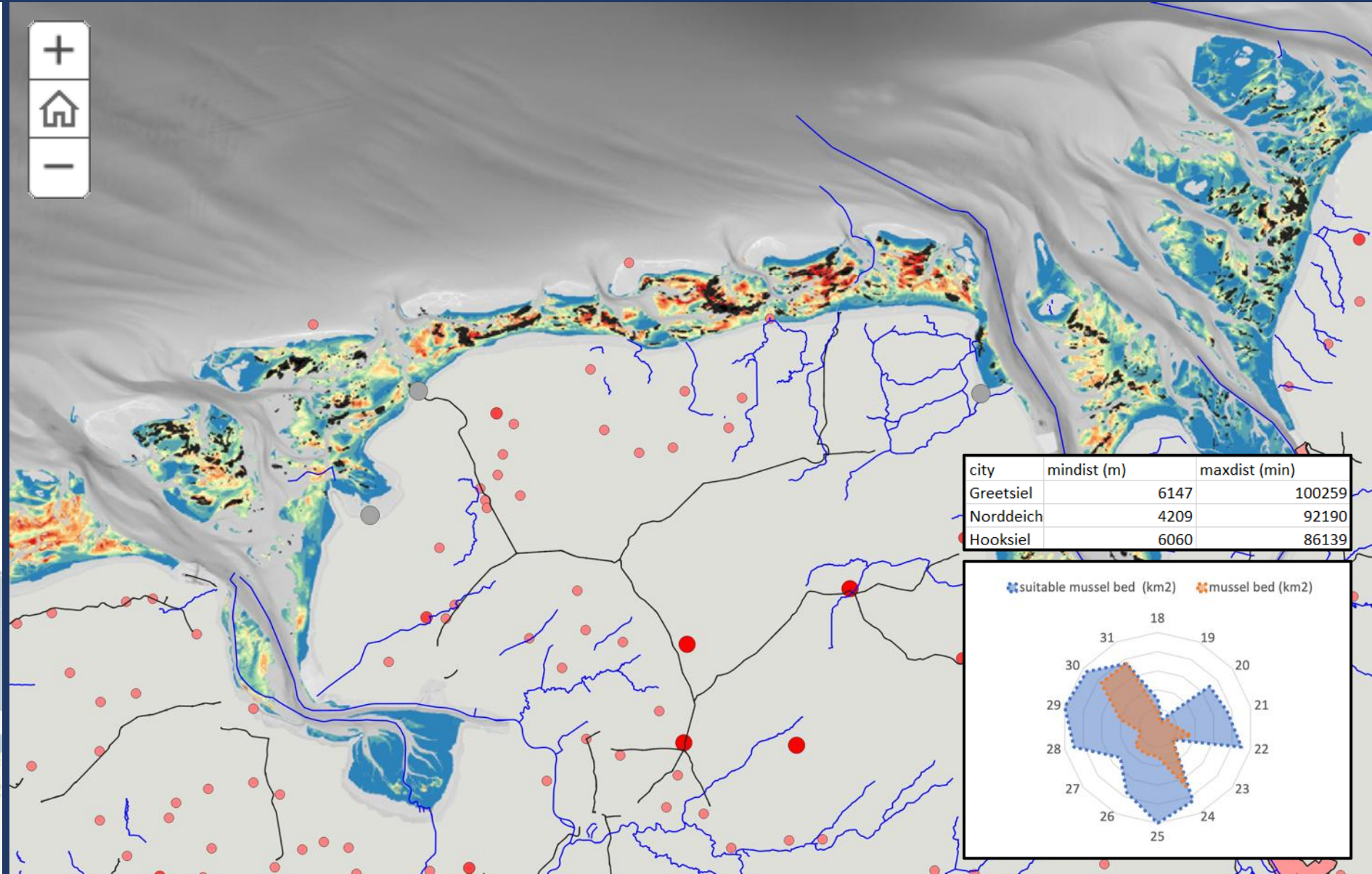
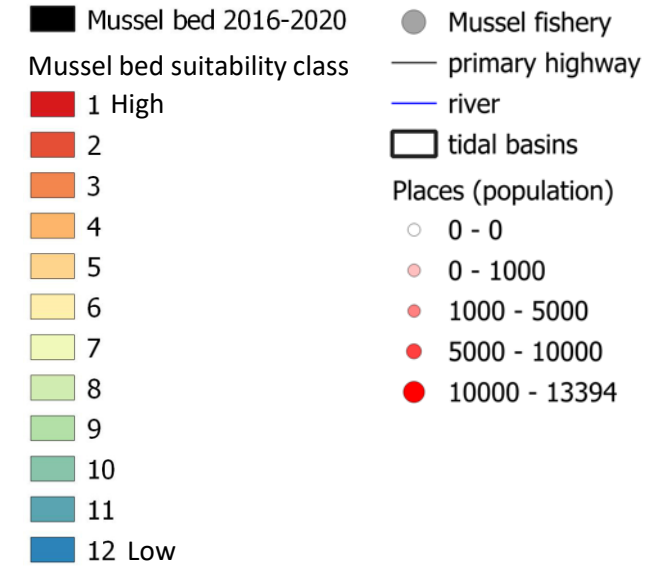
Socio-Ecological analyses

Naturalness assessment

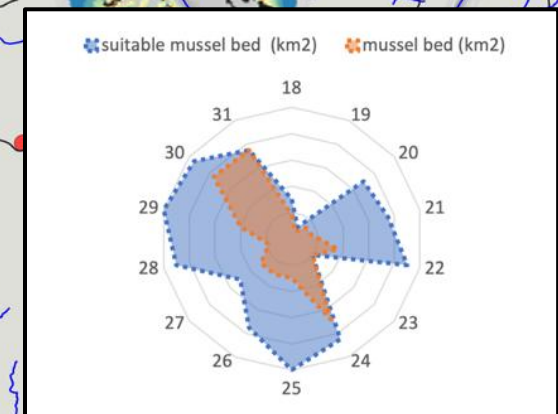
Mussel beds and fisheries

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Greetsiel	6147	100259
Norddeich	4209	92190
Hooksiel	6060	86139





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Thank you!



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Beschermt natuur in Nederland



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