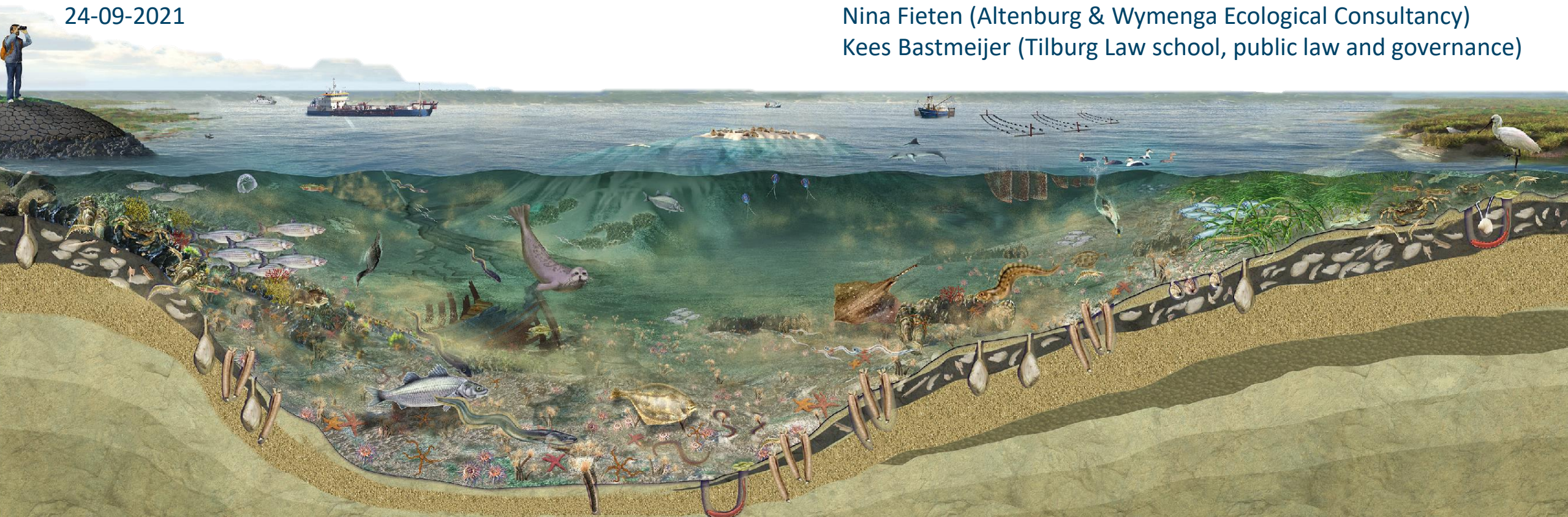


Policy in Practice

Case studies in the Dutch subtidal Wadden Sea

24-09-2021

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- I. Overview legal frameworks and implementation
- II. Natura 2000 in practice
 - i. Individual projects / activities
 - ii. Cumulative impacts
- III. Reflection
- IV. Questions & Discussion


I. Legal frameworks and conventions of the Dutch Wadden Sea



Bird- and Habitat directive (N2000)
Objective: Safeguarding European biodiversity »
“Favorable Conservation Status” of all species and
habitat types (all annexes)



Water Framework Directive
Objective: Ensure that the quality of surface water
and groundwater in Europe meets high standards »
“Good Ecological Status”

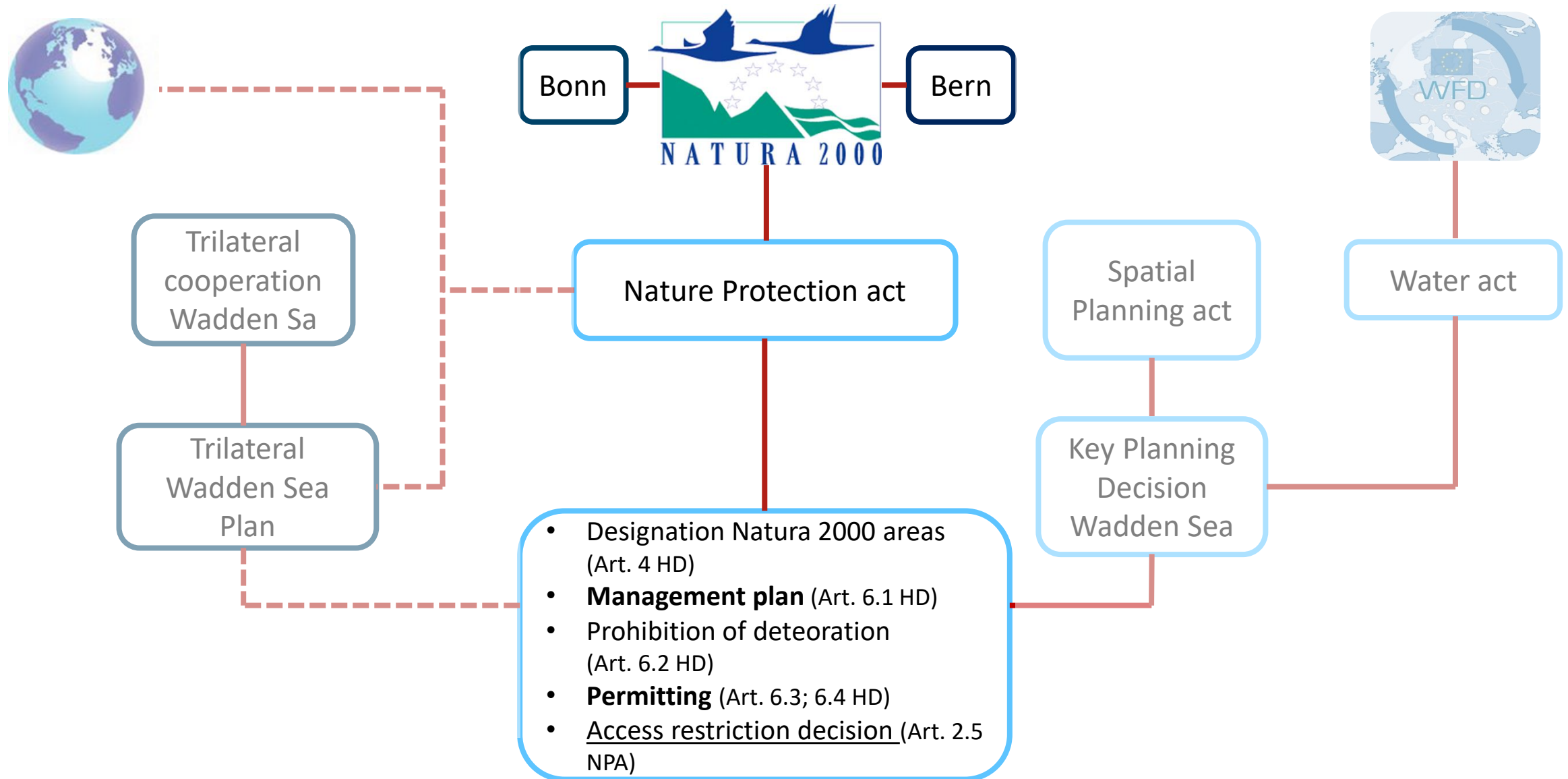


OSPAR
Objective: protect the marine environment from the
adverse effects of human activities and, in doing so, to
safeguard human health and conserve marine ecosystems

Note: No Marine Strategy Framework Directive



I. Legal implementation



II. Natura 2000 in practice

Permitting activities in the subtidal Wadden Sea

i. Individual projects / activities

- Casestudy 1: Prins Hendrik Zanddijk
- Casestudy 2: Salt marsh Restoration Terschelling
- Casestudy 3: Mussel seed fishery

ii. Problem of cumulative impacts



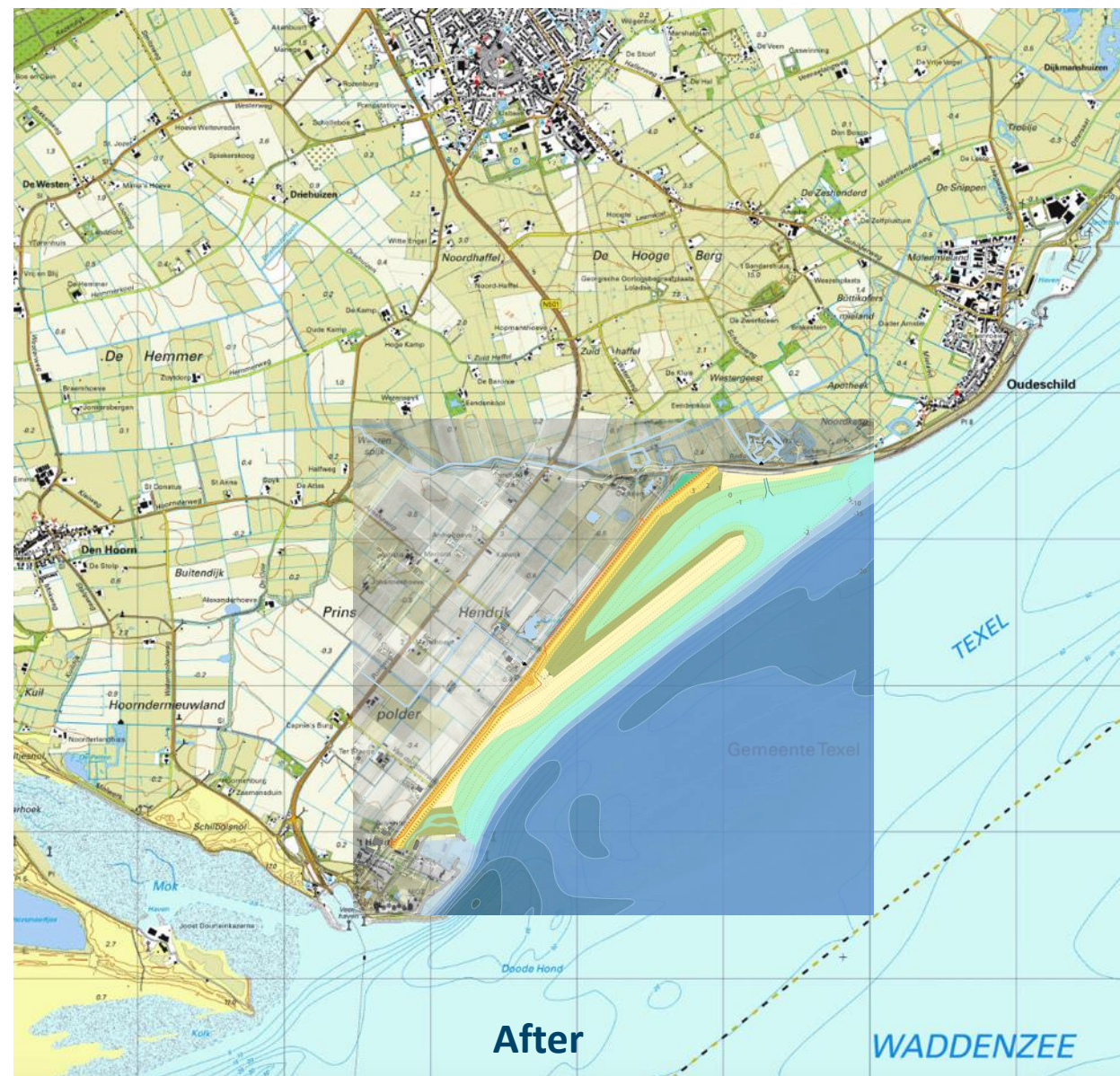
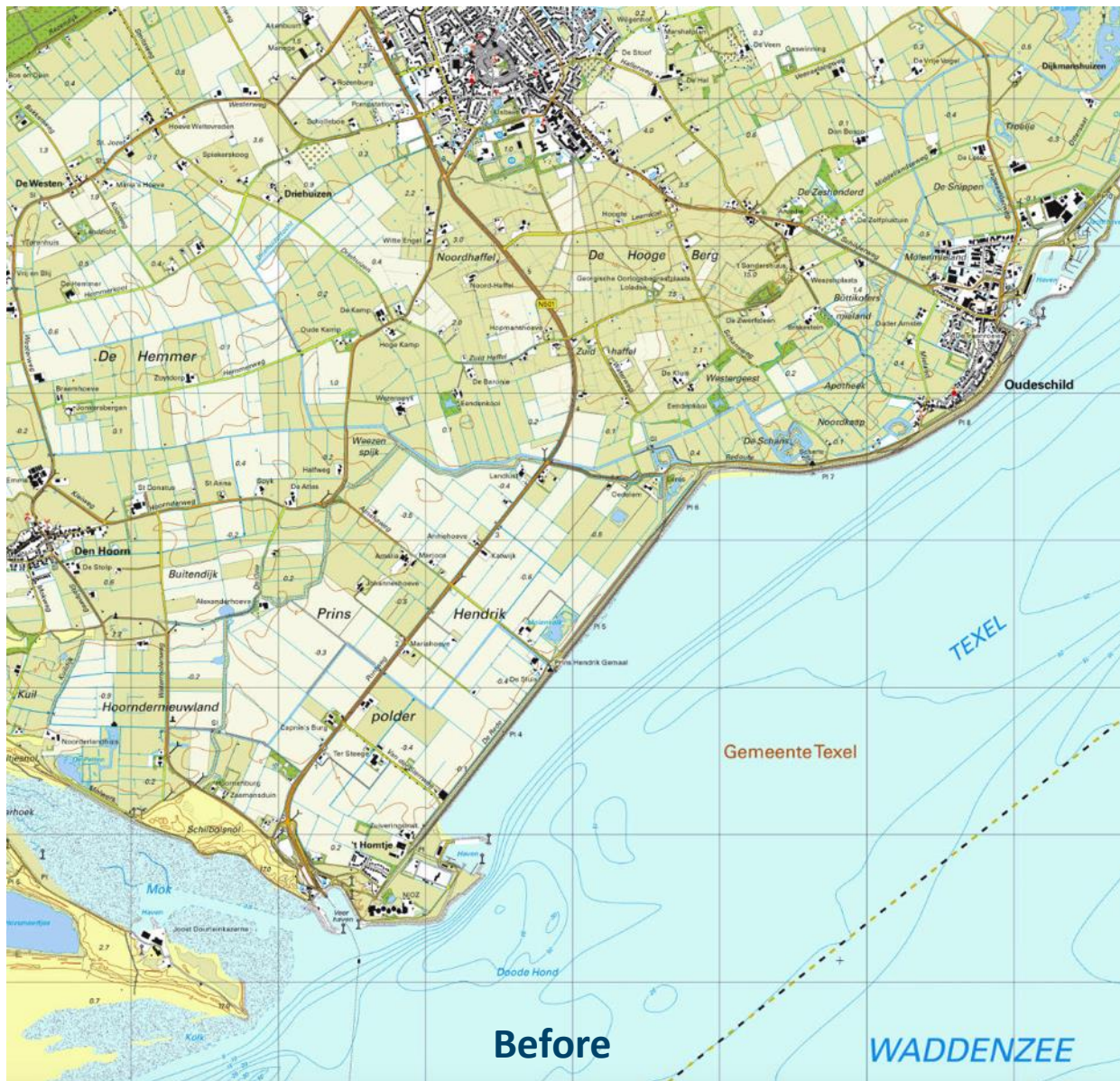
i. Individual projects / activities
Case study 1:
Prins Hendrik Zanddijk, Texel
Noord Holland

➤ Prins Hendrik Zanddijk

- Prins Hendrik Zanddijk no longer met legal safety requirements
- Citizens' initiative
- Unique and innovative idea:
 - » combining coastal defence, nature and experience
- Start: 2018 – Finish: 2019



➤ Prins Hendrik Zanddijk



➤ Prins Hendrik Zanddijk

- 3 km length and 200 ha
- > 10 ha (significant) loss of H1110A
- Gain of H1140A, H1310A, H1320, H1330A, H2120, H2130A, H2160

Effects on habitattypes (Source: Witteveen & Bos 2016)

habitats/leefgebied	huidige situatie		Prins Hendrikzanddijk		netto toe/afname
	opp.	kwal.	opp.	kwal.	opp.
H1110A Permanent overstr. zandbanken <i>getijdengebied</i>	167 ha	matig	45 - 85 ha	goed	-82 tot -122 ha
H1140A Slik- en zandplaten <i>getijdengebied</i>	24 ha	matig	50 - 90 ha	goed	+26 tot +66 ha
H1310A Zilte pionierbegroeiingen <i>zeekraal</i>	0,6 ha	goed	1 - 5 ha	goed	0 tot +4 ha
H1320 Slijkgrasvelden	0 ha	n.v.t.	0 - 5 ha	matig	0 tot +5 ha
H1330A Schorren en zilte graslanden <i>buitendijks</i>	1,2 ha	goed	20 - 60 ha	goed	+19 tot +59 ha
H2120 Witte duinen	0,3 ha	n.v.t.	0 - 40 ha	matig	0,3 tot +40 ha
H2130A Grijze duinen <i>kalkrijk</i>	0 ha	n.v.t.	0 - 40 ha	matig	0 tot +40 ha
H2160 Duindoornstruwelen	0 ha	n.v.t.	0 - 5 ha	matig	0 tot +5 ha
Schelpenrijk zand/strand/strandhaak	0,3 ha	goed	10 - 40 ha	goed	+10 tot +40 ha



➤ Prins Hendrik Zanddijk

- Legal authority:
Province of Noord Holland
- Approved by “Ecosystem approach” in
stead of “Conservation objective
approach”
- Creative interpretation of Art. 6.3 HD
(Mendelts & Boerma 2011)
- **Is this justified for every case?**



Foto: Marc Plomp/ vogelinformatiecentrum

Vreemde vogel bij PH zanddijk




i. Individual projects / activities
Case study 2:
Salt marsh restoration, Terschelling
Friesland



➤ Salt marsh restoration Terschelling

- Decrease of salt marsh due to erosion
- Plan: restoration (KRW objective)
» loss of 20 ha H1140A
- Legal authority: Ministry of LNV
- “Conservation objective approach” in stead of
“Ecosystem approach”
- **How to assess ecosystem effects of an exchange?**





i. Individual plans / projects
Case study 3:
Mussel seed fishery

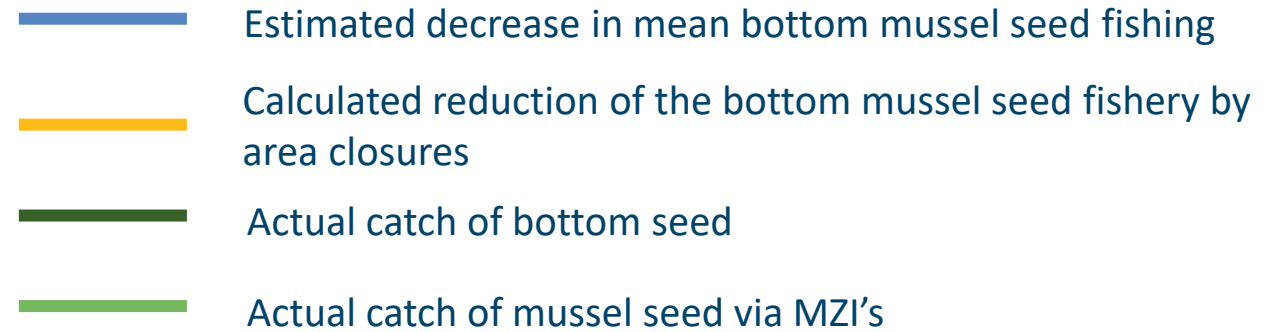
➤ Mussel seed fishery

- Natura 2000 objective: restoring quality H1110A (musselbeds)
- Bottom seed fisheries » negative impact on ‘typical’ species (e.g. *Mytilus edulis*, *Alitta virens*, *Lanice conchilega*, *Zoarces viviparus*, *Pholis gunnellus*) (Van der Zee et al. 2021)
- Mussel Covenant (2008) » stepwise transition to sustainable fishery (bottom fishing vs. MZI) within 10 years.

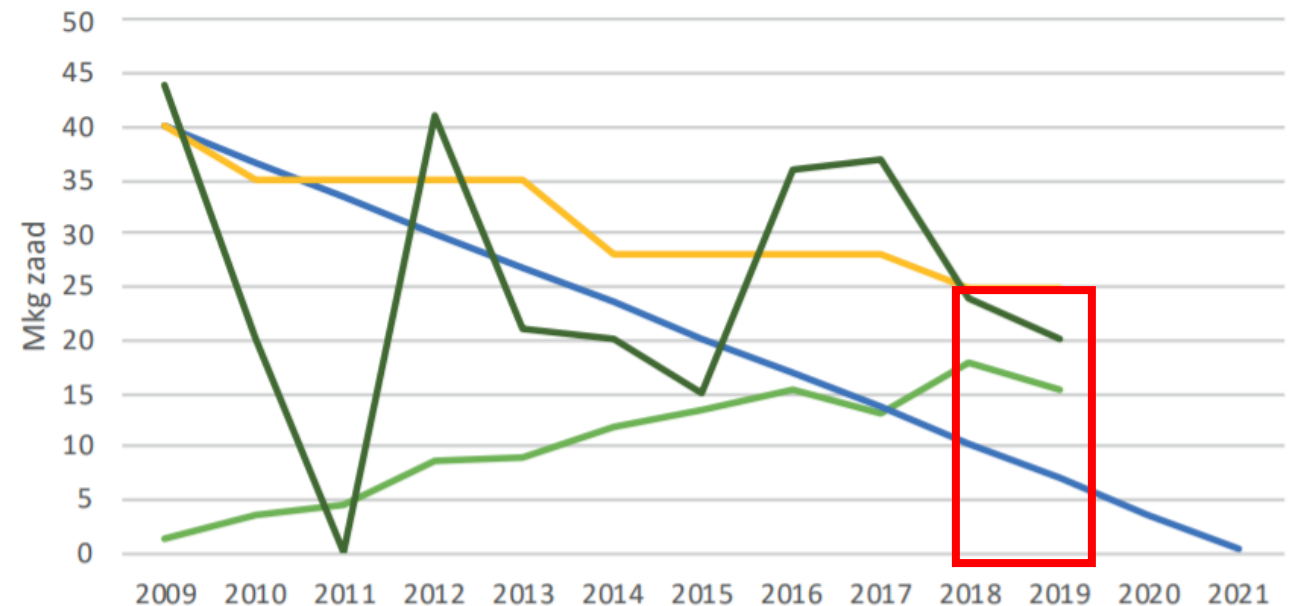


➤ Mussel seed fishery

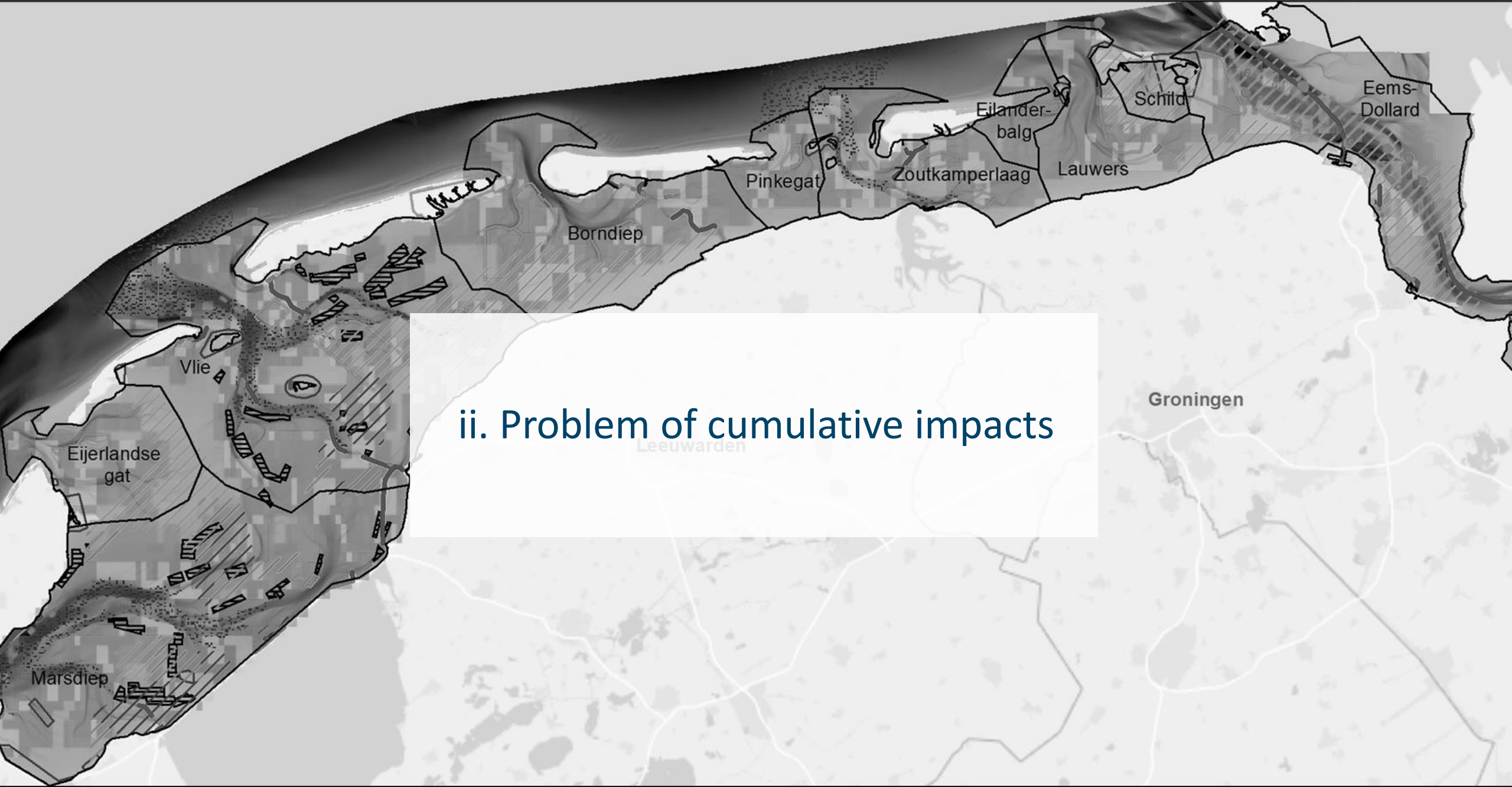
- Extension of agreements:
 - » 2029: 100% MZI
- Legally binding (unless MZI - mussel farming still proves to be uncompetitive)
- **How to determine the timeframe for achieving restoration objectives?**



Progress Mussel Covenant

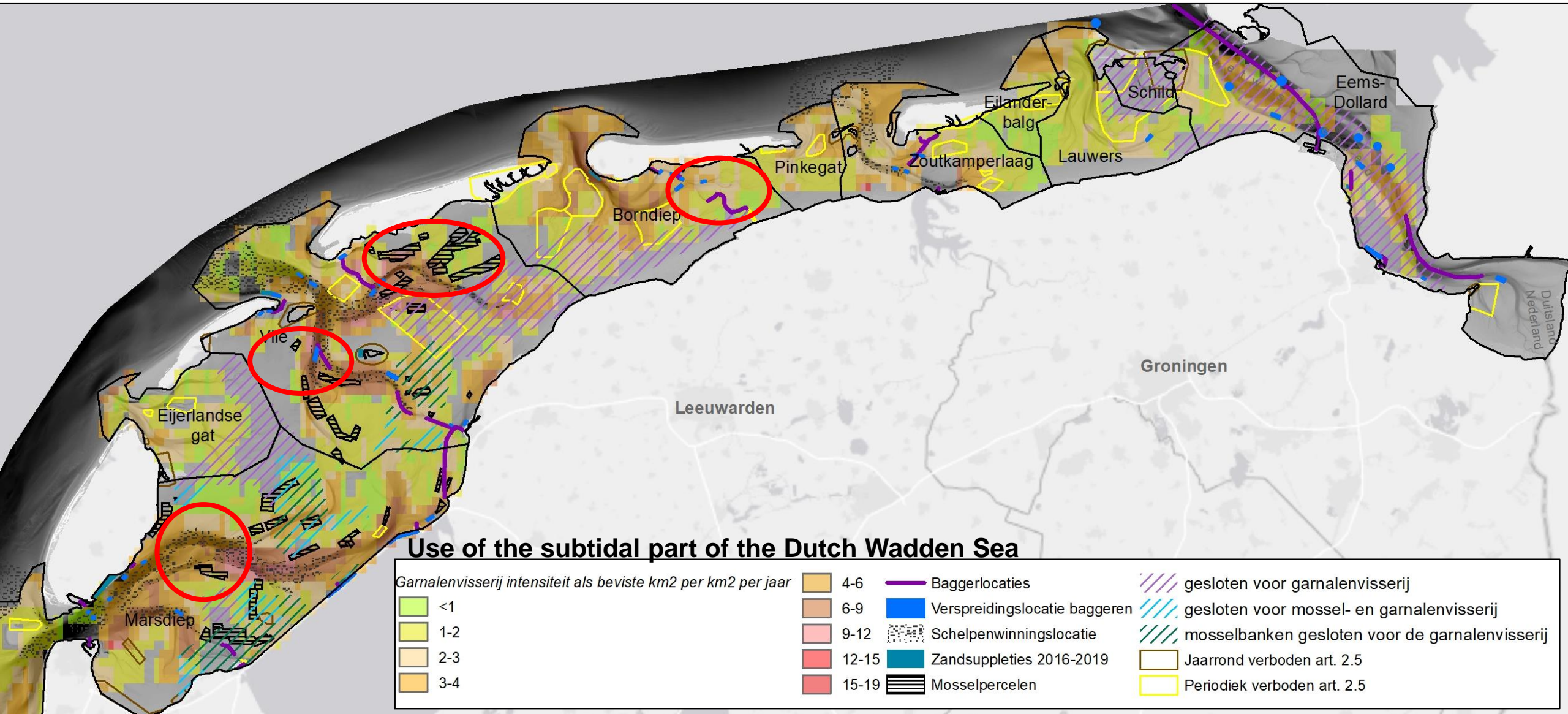


Van Beek & Joost (2021)



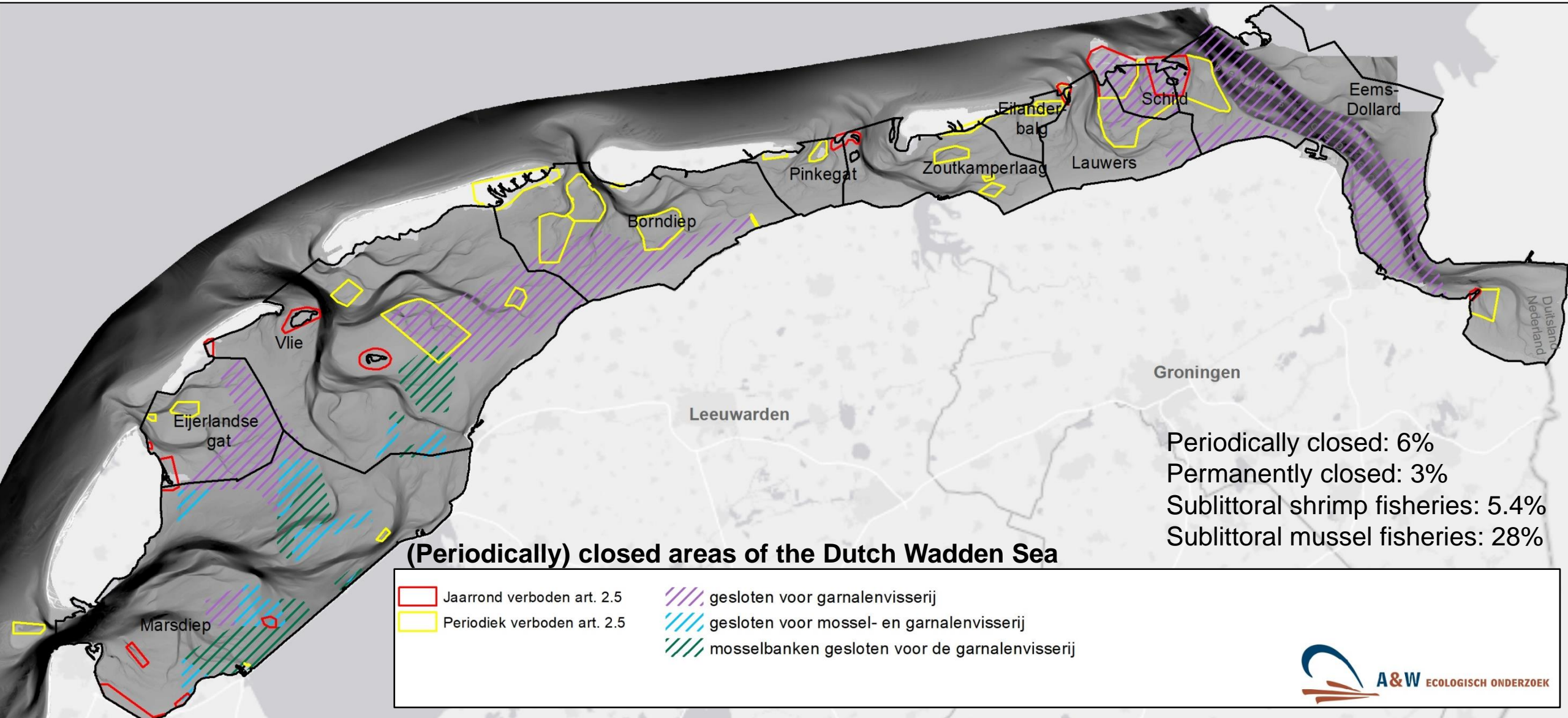
ii. Problem of cumulative impacts

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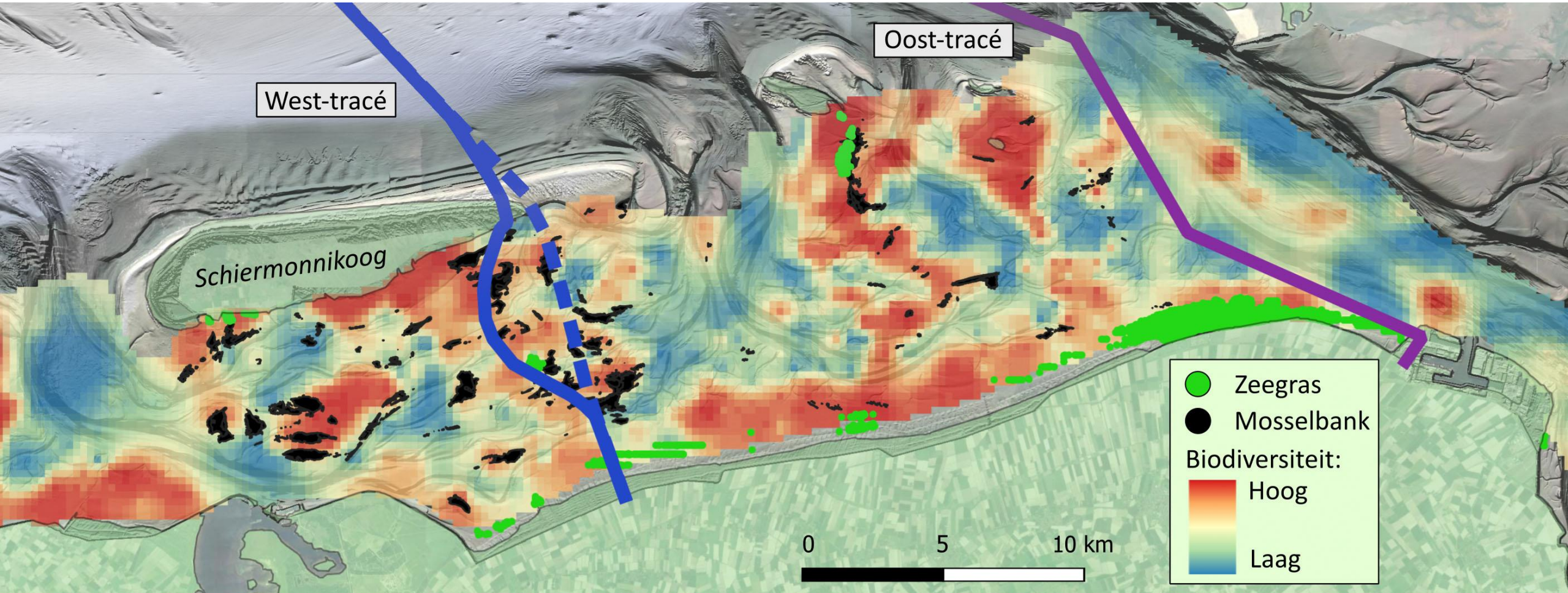
Rippen *et al.* (2020)

ii. Problem of cumulative impacts



ii. Problem of cumulative impacts

- Powercable connecting Windpark to shore
- **Not IF, but HOW?**



Dr. Oscar Franken (University of Groningen & NIOZ)

Permitting activities in the subtidal Wadden Sea

- Ecosystem approach vs. Conservation objective approach (creative application)
- Problem of cumulative impacts
 - » lack of overview and proper assessment
- Uncertainties: limited use of precautionary principle in implementing Art. 6
- Difficulty to say “no” » Not IF but HOW

- Burden of proof often shifted to NGOs/concerned citizens

III. Reflection

Habitat Directive

- Room for creative interpretation
- No time limit for achieving Favorable Conservation Status

Natura 2000 policy documents

- Incompleteness of conservation objectives (general and for subtidal Wadden Sea)
- Quality description for subtidal habitats not sufficient for proper impact assessment
 - E.g. 'typical' species

Management plan

- Sufficient clear policy choices?
- Lack of supervision and enforcement

Decentralisation

- Increased difficulty of preventing cumulative impacts

IV. Questions & Discussion

- Could implementing the MSFD lead to better protection?
- Trilateral Wadden Sea Plan
» base for coordinated policy and management?



Thank you for your attention!

