IPOP Coast and Sea

Sustainable use and climate proof organization of the sea, coastal zones and delta areas

Wageningen UR focus theme 2007-2010





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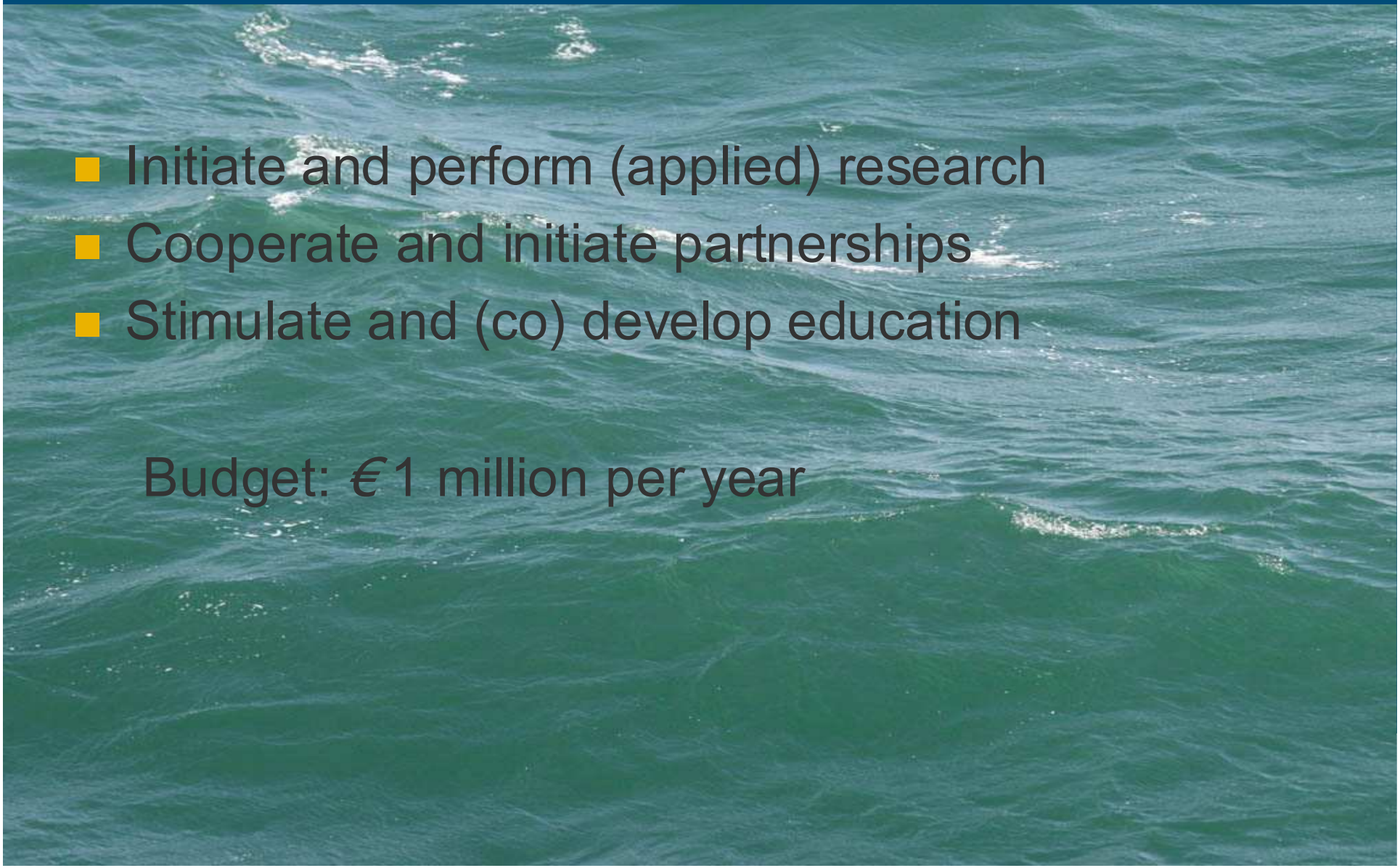
Aim of Coast and Sea program



- Initiate and perform (applied) research
- Cooperate and initiate partnerships
- Stimulate and (co) develop education

Budget: €1 million per year

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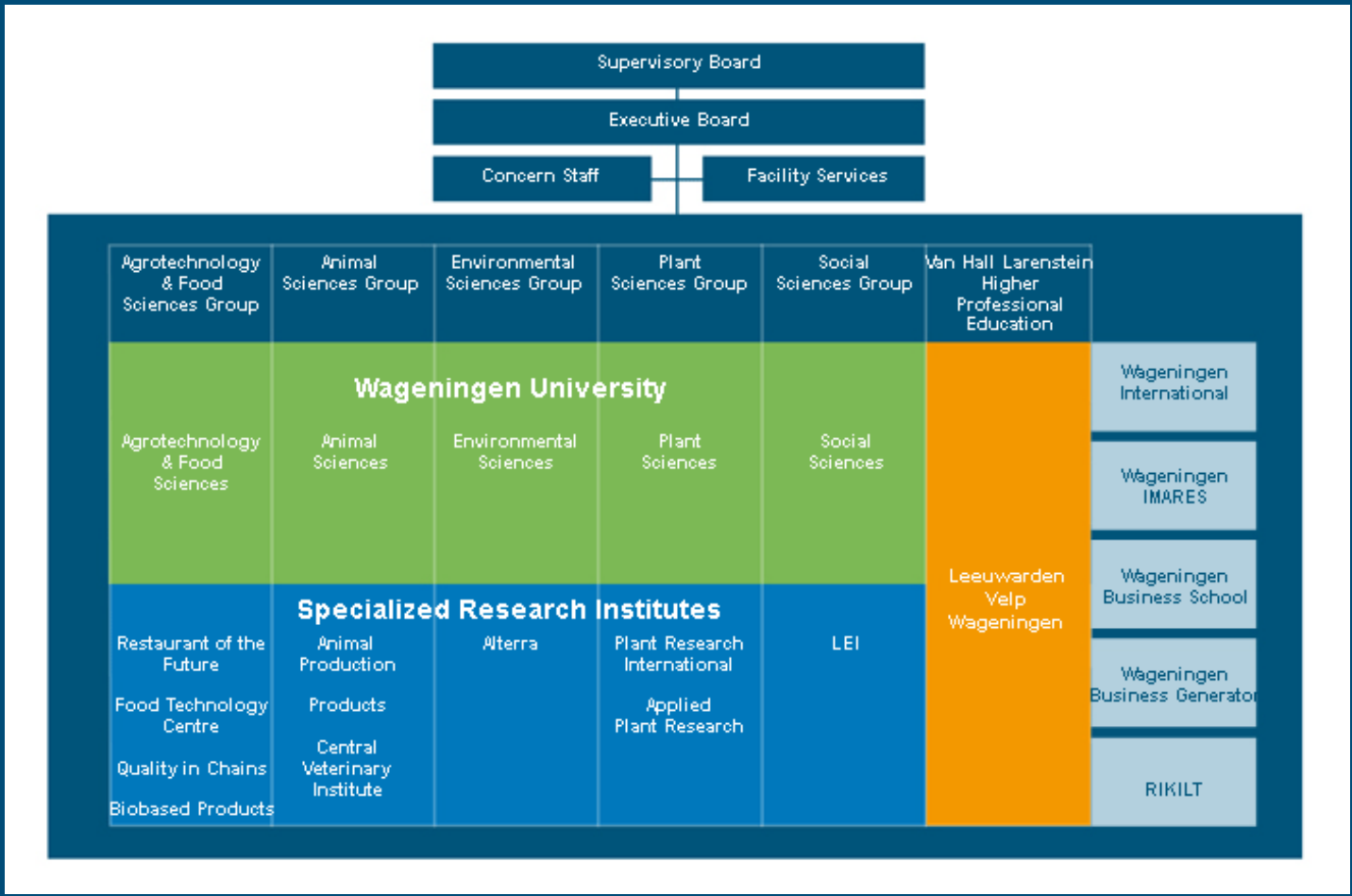

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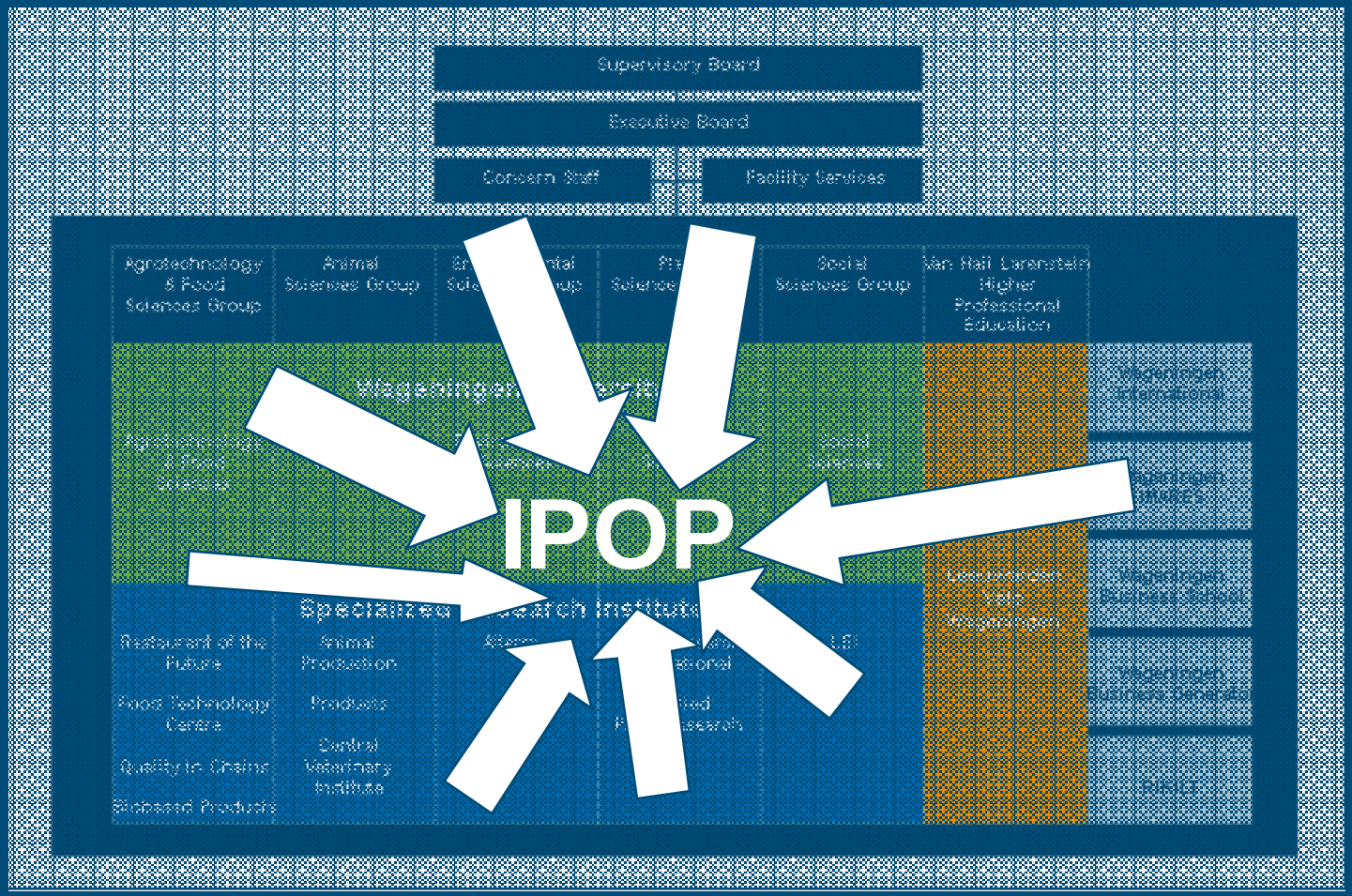
IPOP=Network within Wageningen UR



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IPOP Research themes

1. The changing marine ecosystem
2. Ecologically optimized coastal defense
3. New production in sea and coastal areas
4. Climate proof delta metropolis
5. Governance





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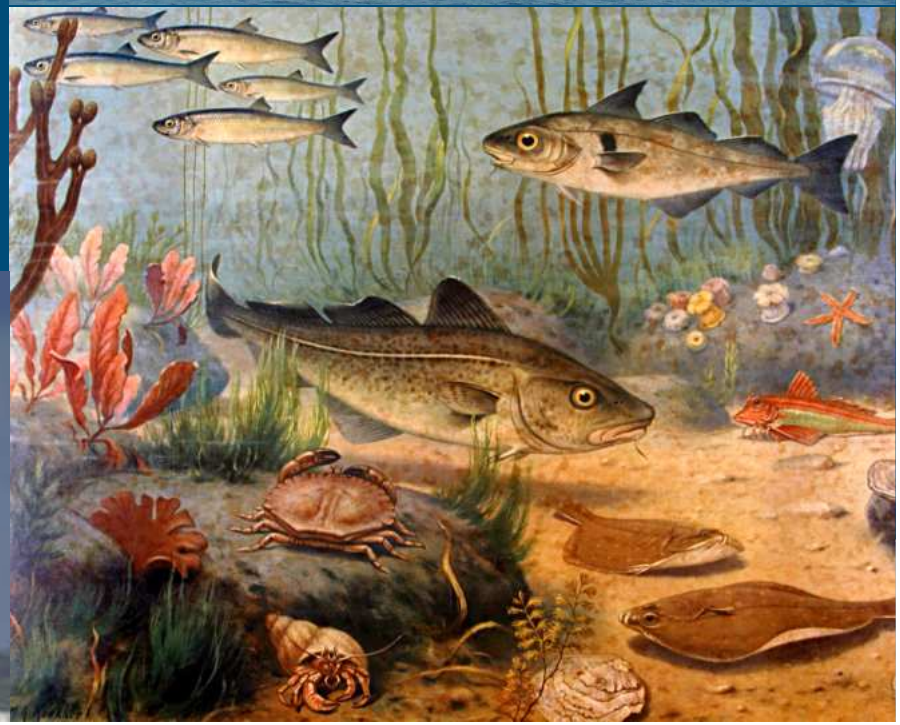
1. Changing marine ecosystem

- The North Sea has greatly changed
- We study effects of climate change and human use
- Study of sustainable exploitation



Project: Metapopulation research on terns

Problem: protected species breed in artificial habitats (harbours)
Q: Can we make the birds move to new (artificial) habtitats?

Method: metapopulation model

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2. Ecologically optimized coastal defense

- How can we use ecological and geological processes to protect the coast?
  - Soft coastal defence (dunes, etc)
  - Hard coastal defence (dikes, etc)

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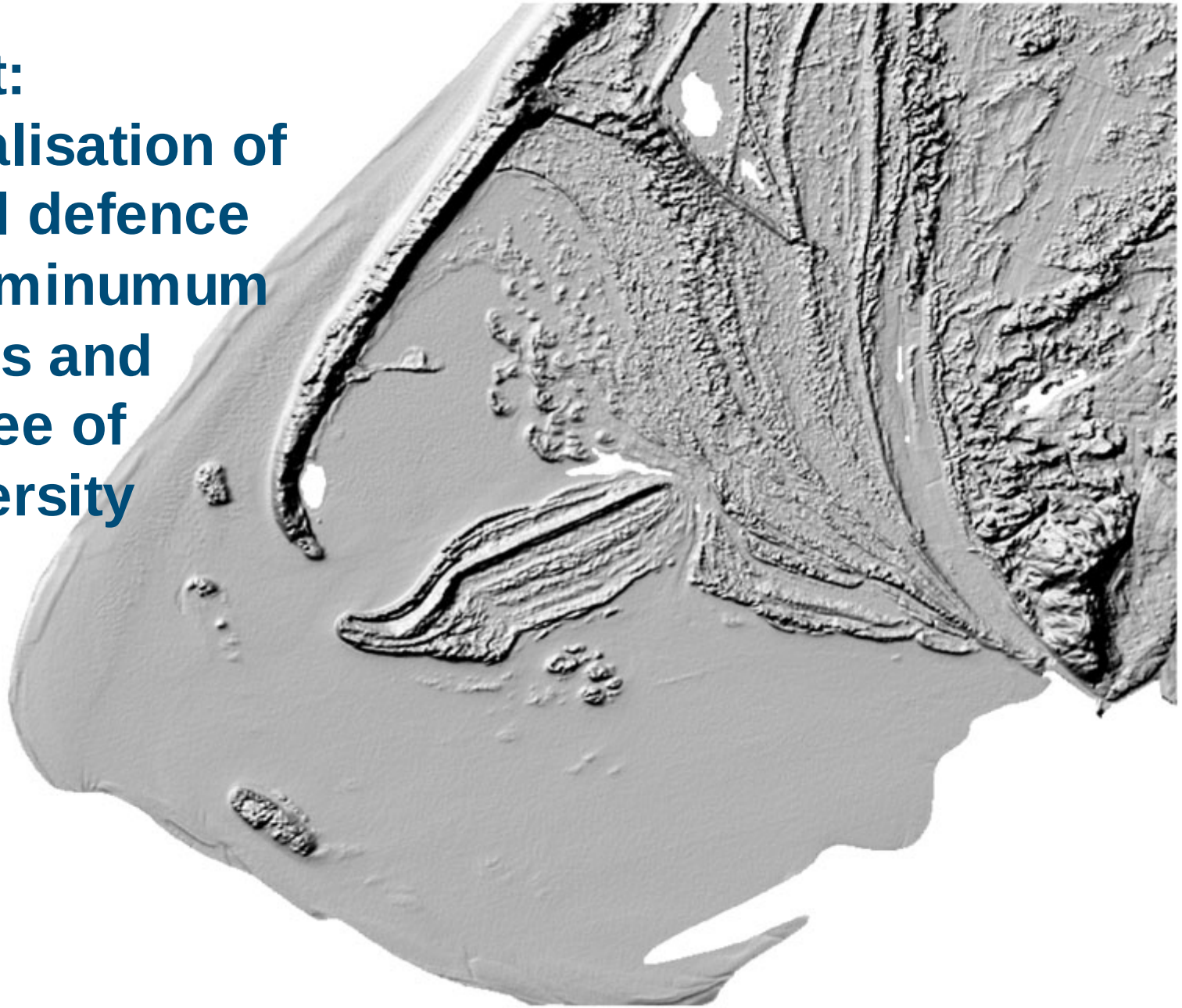
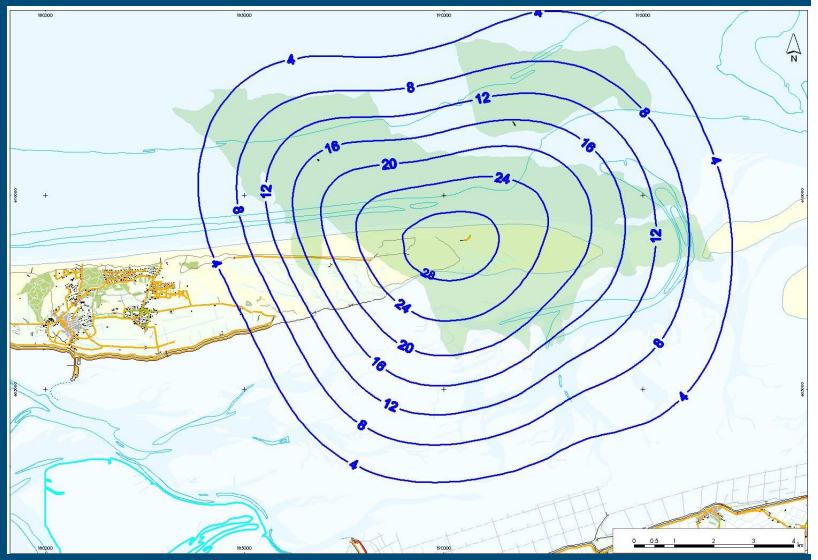
Project: Optimalisation of coastal defence with a minumum of costs and garantee of biodiversity

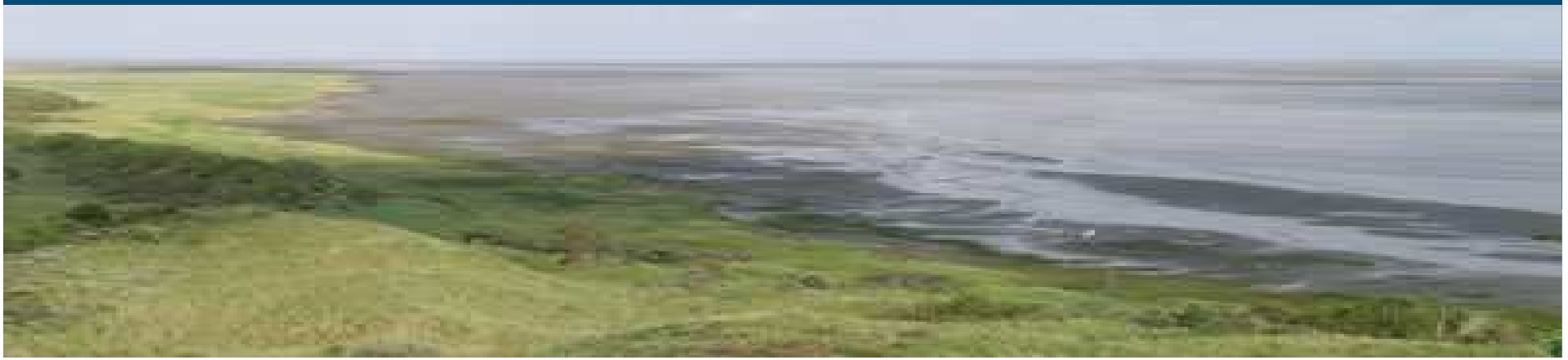


Meters
0 125250 500

Project: subsidence as an example of sea level rise

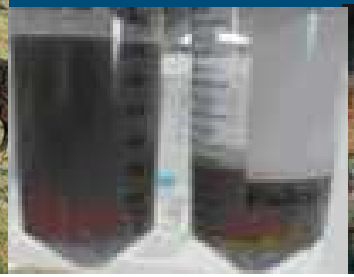


- 30 cm subsidence near island of Ameland
- Same magnitude as sea level rise
- Study of effects on salt marches (since 1980s)



3. New production in sea and coastal areas

- Sea level rise causes increase in salty agricultural land
  - Can we grow different plants and cattle?
  - How was it done in the past?
- Aquaculture in closed systems
- Medicines from sponges

Project: Mixed aquaculture on land (sole)

4. Climate proof delta metropolis

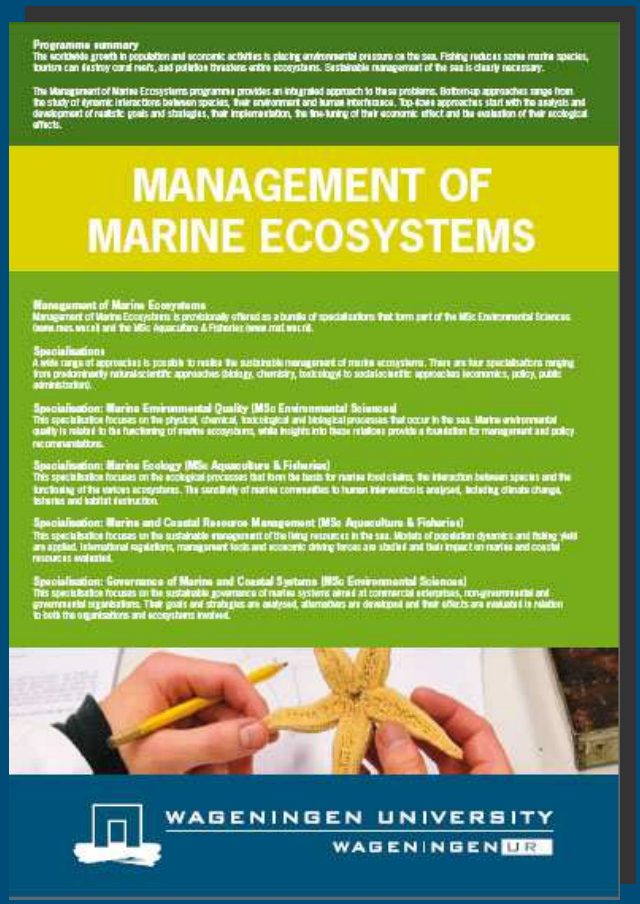
- Climate change and sea level rise:
  - What are consequences for the Netherlands?
  - What are the opportunities?

5. Governance

- Project about climate change:
  - Climate change forces governments to adapt their policy/rules/etc. How do they cope with it?
- Project about fisheries:
  - The government want to stimulate innovation, cooperation and self regulation with help of policy arrangements
  - Do we need new forms of trust and governance for a sustainable fishery?

Newly developed education

- MSc: Management of Marine Ecosystems
- Introduction Marine Ecosystems
- Marine Resources Management
- Saline agriculture
- Green hydraulics
- Advanced marine biotechnology
- Climate studies



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7 PhD projects, 1 Post-doc

Project	Name
1. Informational governance on marine environmental protection: fishing and pollution from shipping at the North Sea	Hilde Toonen
2. Institutional arrangements to reduce decision making uncertainty in the Dutch flat fish sector: a contractual approach	
3. Coping with stochasticity in fish stocks under costly capital adjustment and high information costs	Diana van Dijk
4. Ecological optimization of dynamic coastal defence	Mink Zijlstra
5. Sole bred in captivity	Julia Mas Muñoz
6. Saline threats for agriculture; Saline opportunities for ecology	Esther Vermue
7. Allergen-free mussels	Gerco den Hartog
8. Immortalized sponge cell cultures	Klaske Schippers





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