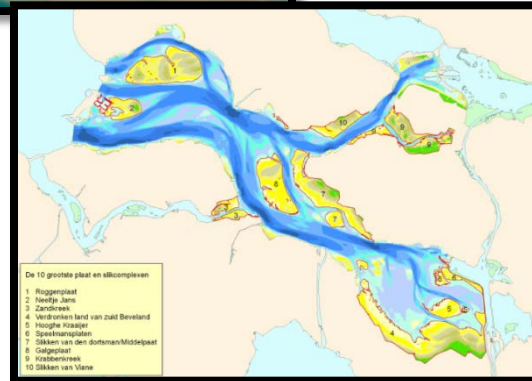
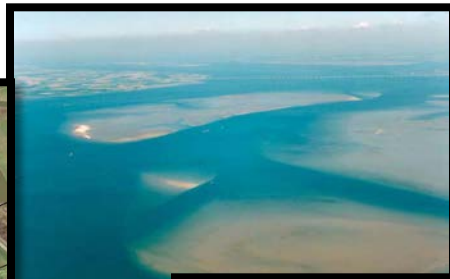


# Preventing erosion of tidal flats a large scale experiment



Bert van den Berg

# Introduction

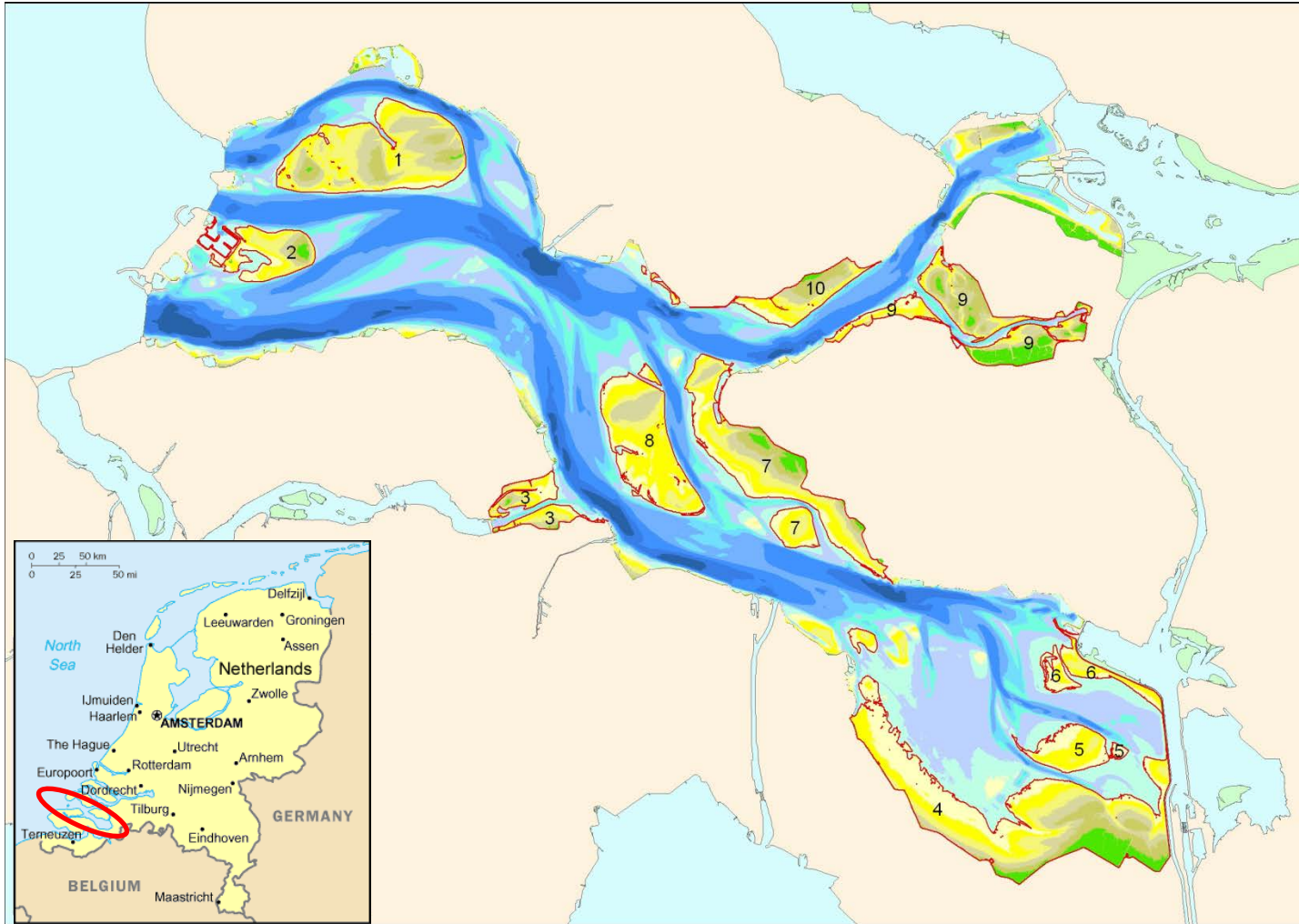


# Contents

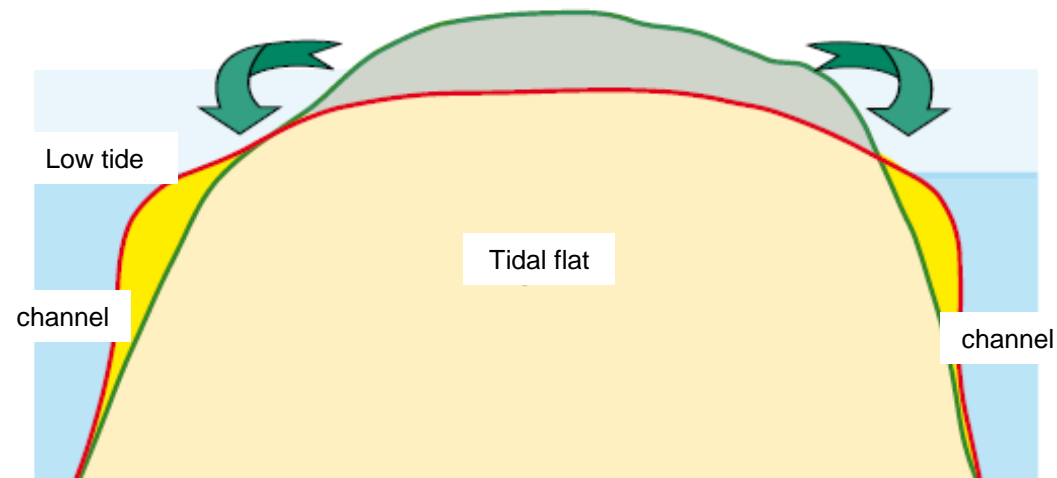
- Sand Demand Eastern Scheldt
- Large scale experiment - Schelphoek
- Monitoring - Schelphoek
- Conclusions



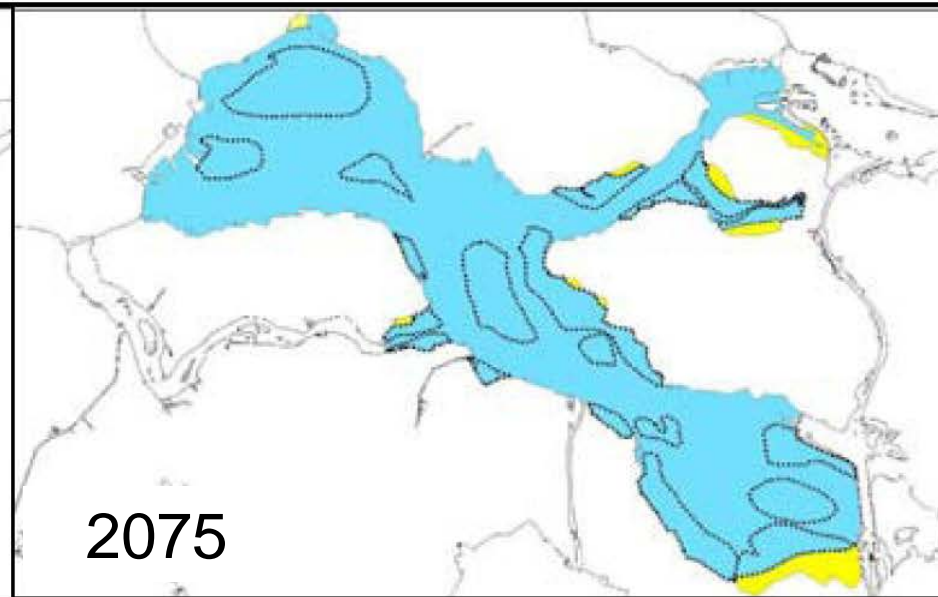
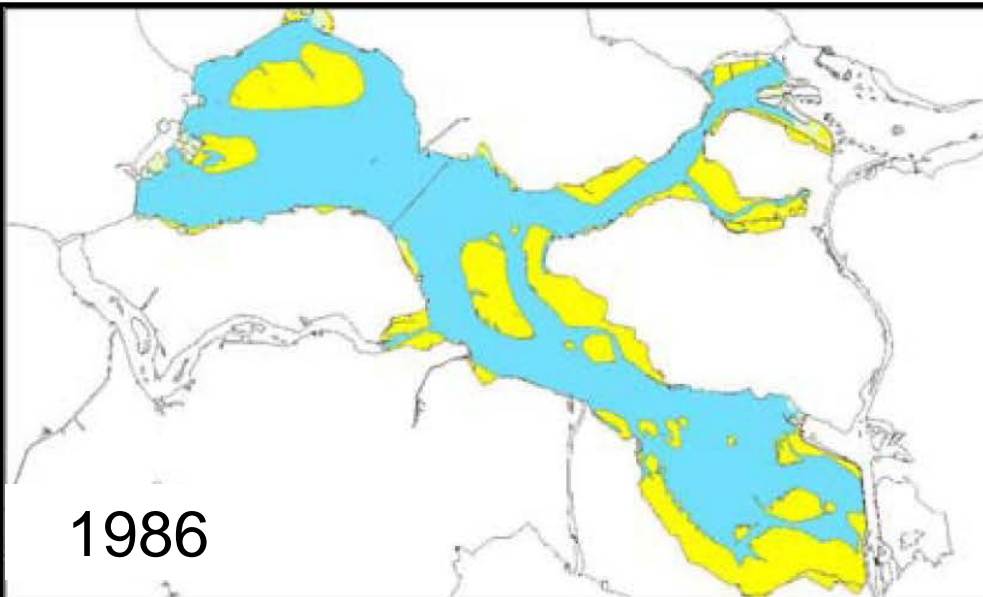
# Sand Demand Eastern Scheldt



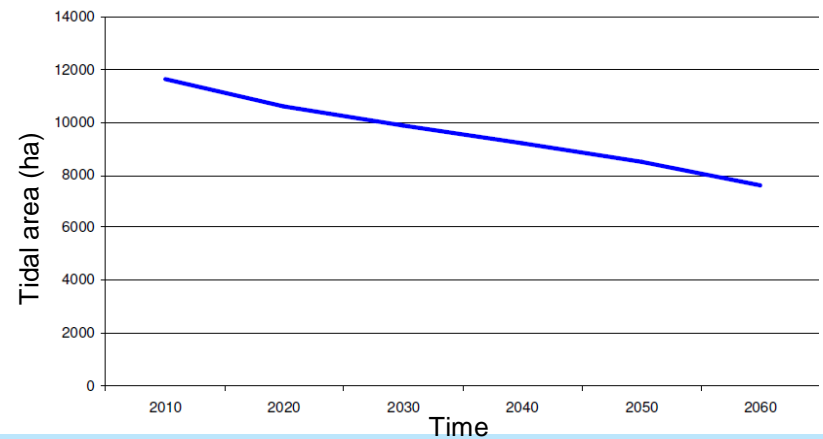
# Sand demand – decrease tidal area



# Sand demand – decrease tidal area

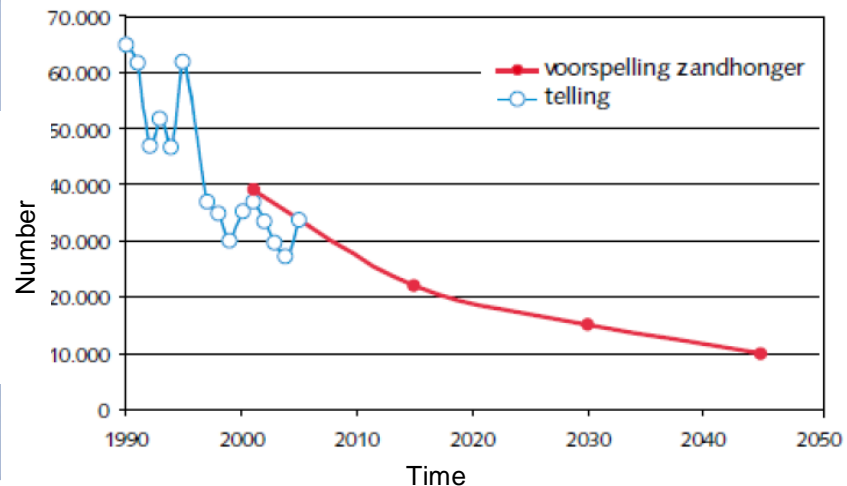


Tidal flats 1986 - 2075 (source – Van Zanten en Adriaanse 2008)



# Sand demand - consequences

- Ecological
- Safety against flooding
- Recreation
- Fishing, shipping etc....
- Conflicts?



# Sand demand - consequences

- Ecological
  - Safety against flooding
  - Recreation
  - Fishing, shipping etc....
  - Conflicts?
- 
- Natura 2000 targets ~ tidal area
  - Value of nature vs €
  - Is there a feasible solution?



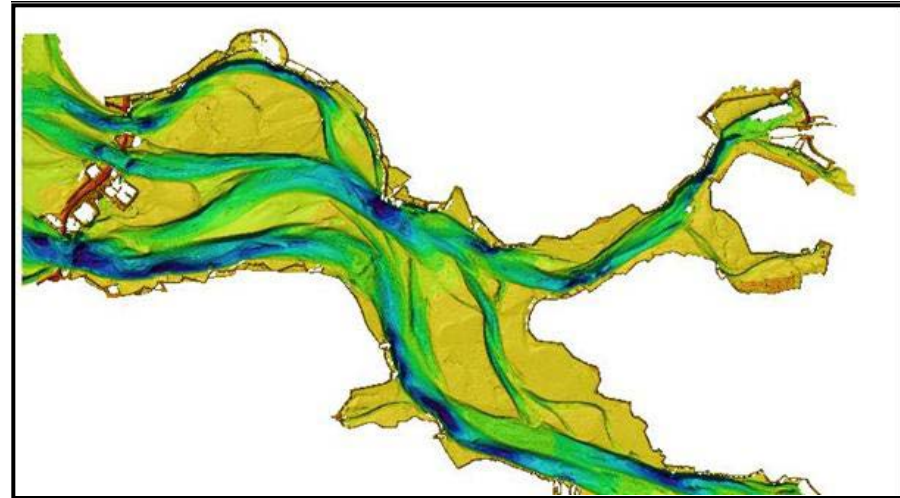
# Sand Demand - solutions

## Solutions

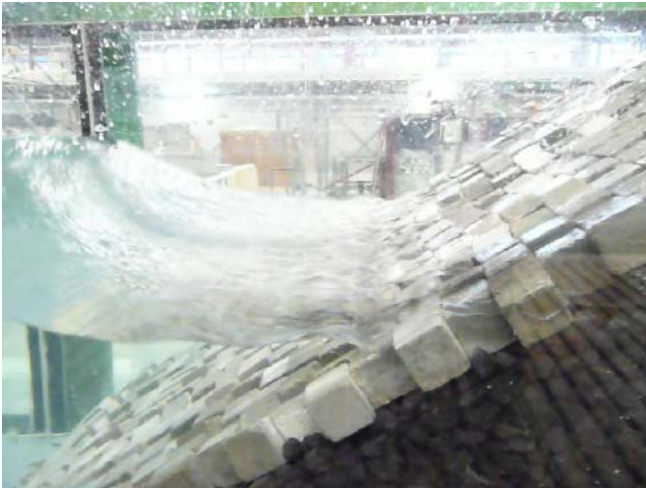
- Sand nourishment
  - 'Strategic' nourishment
  - Erosion decreasing measures

## Lack of knowledge

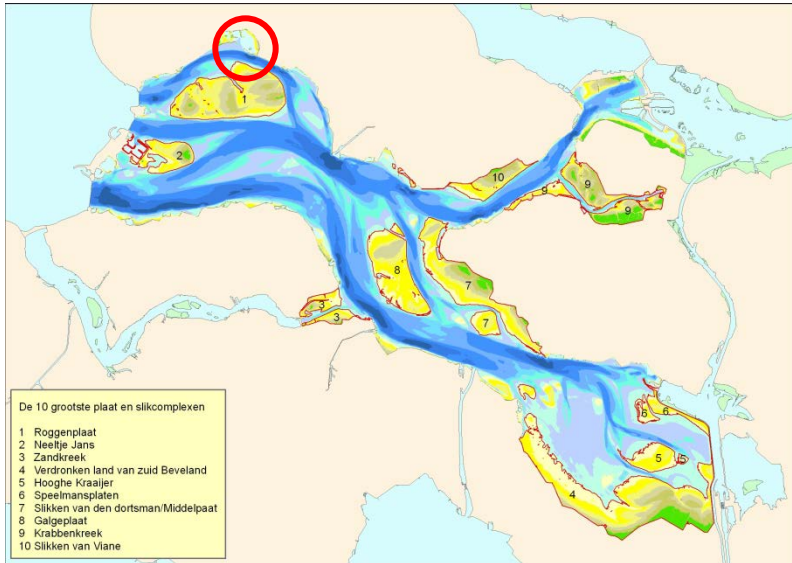
- Costs
- Effectiveness
- Side effects



# Sand demand - experiments

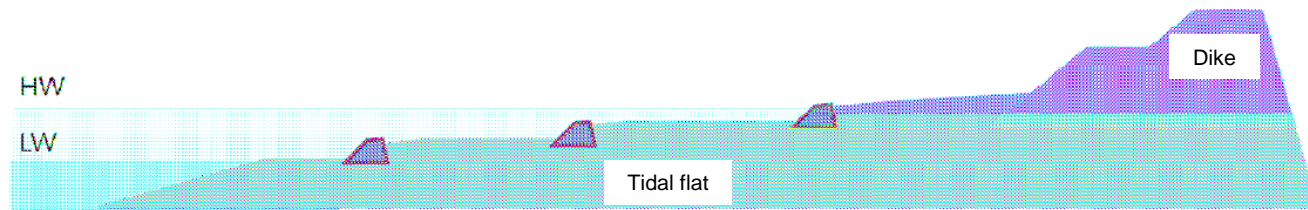


# Large scale experiment Schelphoek



# Large scale experiment Schelphoek

- Nourishment combined with construction of sandtraps



Goal of experiment:

- How will the replenished sand be spread over the present mudflat in the coming years?
- Is the cascade able to slow down this process?
- How will benthos recover?

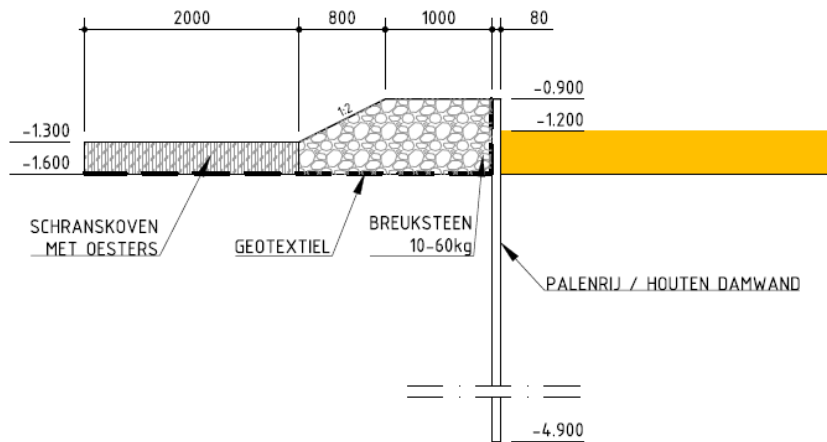
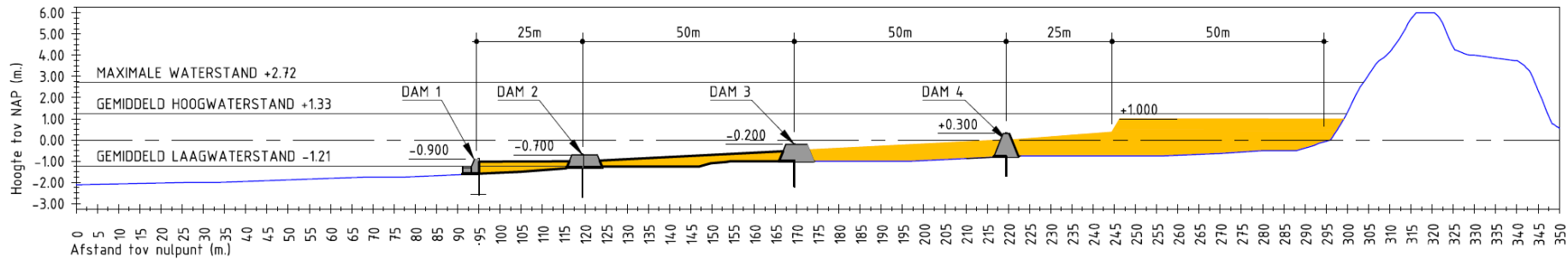


# Experiment design



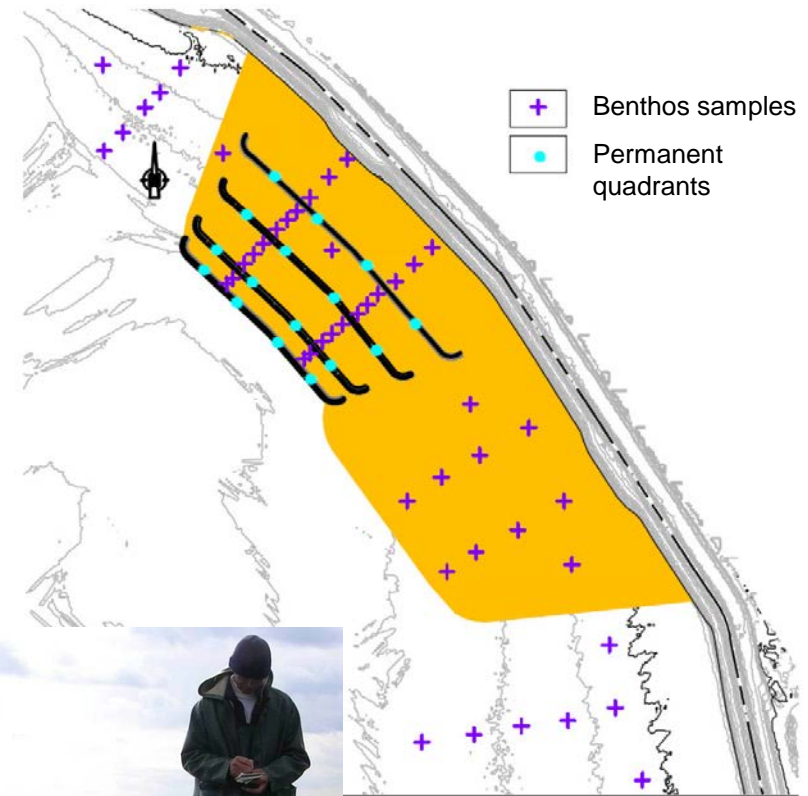


# Experiment design



# Monitoring

- Morphological effects
- Waves and currents;
- Ecological development;
- Mussels/ oysters



# Preliminary monitoring results

- Ecological
- Morphological



# Conclusions

- Solution for the sand demand problem?
- Does the experiment help to a solution?



# Questions

