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# coastman

## Haapsalu Bay case area Estonia

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# Overview

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- Main characteristics of the case area
- Main stakeholders and conflicts



# Map of Estonia



# Haapsalu Bay

- 20 km long and 2 - 5 km wide
- surface area of the Bay is 47 km<sup>2</sup>
- total catchment area - 412 km<sup>2</sup>
- very shallow
- mean depth - 1 meter



# Main environmental problems

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- progressive eutrophication
- widening of reed bed area
- decreasing open surface water area
- decreasing bay depth
- sedimentation



# Main stakeholders and conflicts

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## Coastal municipalities and environmental authorities

- responsible for maintenance of a high quality coastal environment, development of the area and for implementation of relevant management measures.



## Main stakeholders and conflicts

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- Improved waste water treatment efficiency
- decreased point source pollution load to the bay
- Increased number of households and industries connected to the sewerage systems
- continuous drop in the overall per capita consumption of potable water
  - 175 l d<sup>-1</sup> in 1994
  - 70 l d<sup>-1</sup> in 2004



# Main stakeholders and conflicts

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- conflict between the goal to reduce the overall water consumption and fulfilment of national and HELCOM regulations regarding waste water treatment and impact to the water quality of the bay.

## Questions:

- how will different scenarios of infrastructure investment affect future water use
- what will be the impact of different water pricing structures, as well as financial, economic, social, cultural and environmental factors on future water use.



# Main stakeholders and conflicts

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## Fishermen

- Use of the bay area for yachting and professional fishing requires permanent dredging of the bay
- This can cause conflict between ecological/recreational interests and fishing/yachting interests.
- The fishermen need to know what will be the change in the state of the bay under changes in land use, economics, etc., and what is the impact of these changes to the future fish stock.



# Main stakeholders and conflicts

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## Farmers

- The problem is whether the bay can act as a huge bio-pond in the future taking care of “agricultural” nutrients, at the same time providing suitable conditions for other water users.
- Enlargement of the reed bed area will increase pressure for the use of this material as a construction material or for incineration.
- Therefore the ecological potential of higher vegetation to act as a trap for nutrients in the bay should be carefully assessed.



## Conclusions

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- Environmental objectives for the Haapsalu Bay are not yet set up.
- However, different water users (e.g. recreation, industry, fishery sector, nature conservation) need water in accordance with quality standards and norms.
- Having a goal to maintain and improve the ecological status of the bay not only environmental measures has to be implemented.
- The possible social effects of water consumption and agricultural production should also be kept in mind during the planning process



# Methods to minimize conflicts in the future:



- Methods for developing indicators for sustainable development
- Scenario methods
- Creating citizen participation for the future
- Round table discussions
- Risk Assessment for people and the environment in a participatory processes
- Environmental Impact Assessment and Strategic Impact Assessment



# Thank you!

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