Mission Oceans and Waters
Restore Odense Fjord

Restoring the “good ecological status” of a Danish Fjord through a evidence based multi-actor approach
– a bottom up initiative

Strategy & Goal

EUROPEAN UNION

EU MISSIONS
RESTORE OUR OCEAN & WATERS

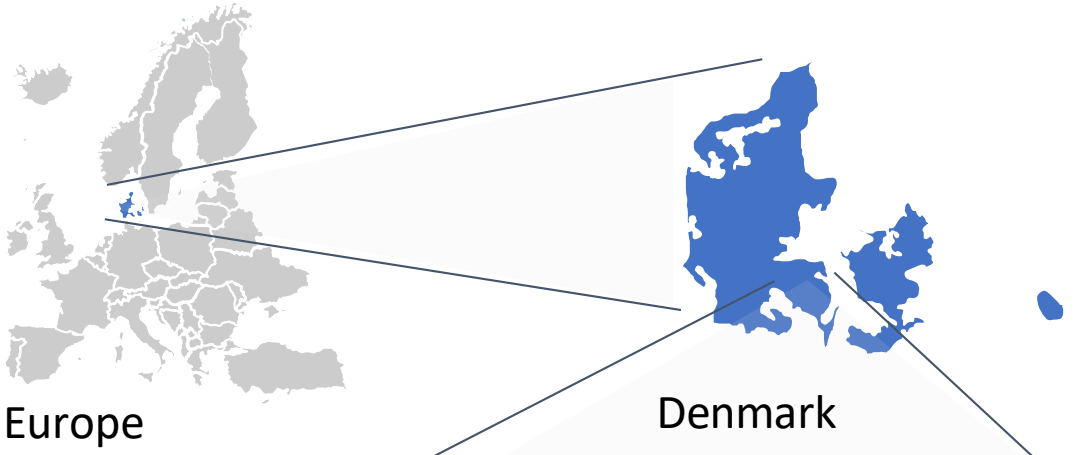
Mission Restore our Ocean and Waters by 2030: objectives and targets

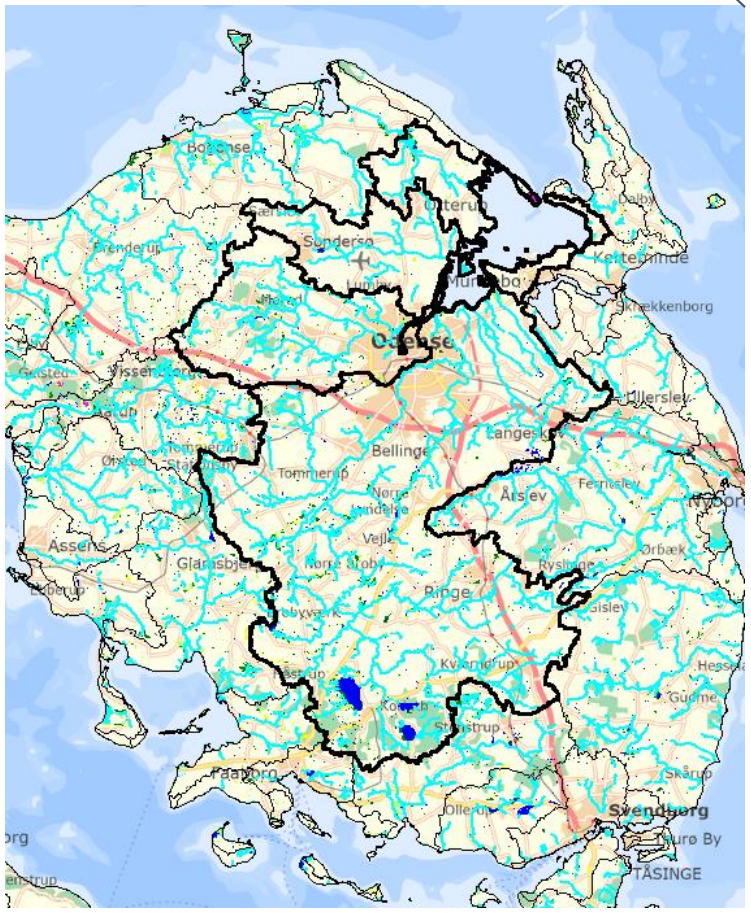
PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY	• Protect at least 30% and strictly protect 10% EU's sea areas • Restore 25.000 km free flowing rivers • Marine nature restoration targets (incl. degraded seabeds, coastal ecosystems)
PREVENT AND ELIMINATE POLLUTION OF OUR OCEANS, SEAS AND WATERS	• Reduce by at least 50% plastic litter • Reduce by at least 30% microplastics • Reduce by at least 50% nutrient losses, chemical pesticides
MAKE THE BLUE ECONOMY CARBON-NEUTRAL AND CIRCULAR	• Net zero maritime emissions • Zero carbon aquaculture, • Low carbon multipurpose use of marine space

ENABLERS: - DIGITAL OCEAN AND WATERS KNOWLEDGE SYSTEM
- PUBLIC MOBILIZATION AND ENGAGEMENT

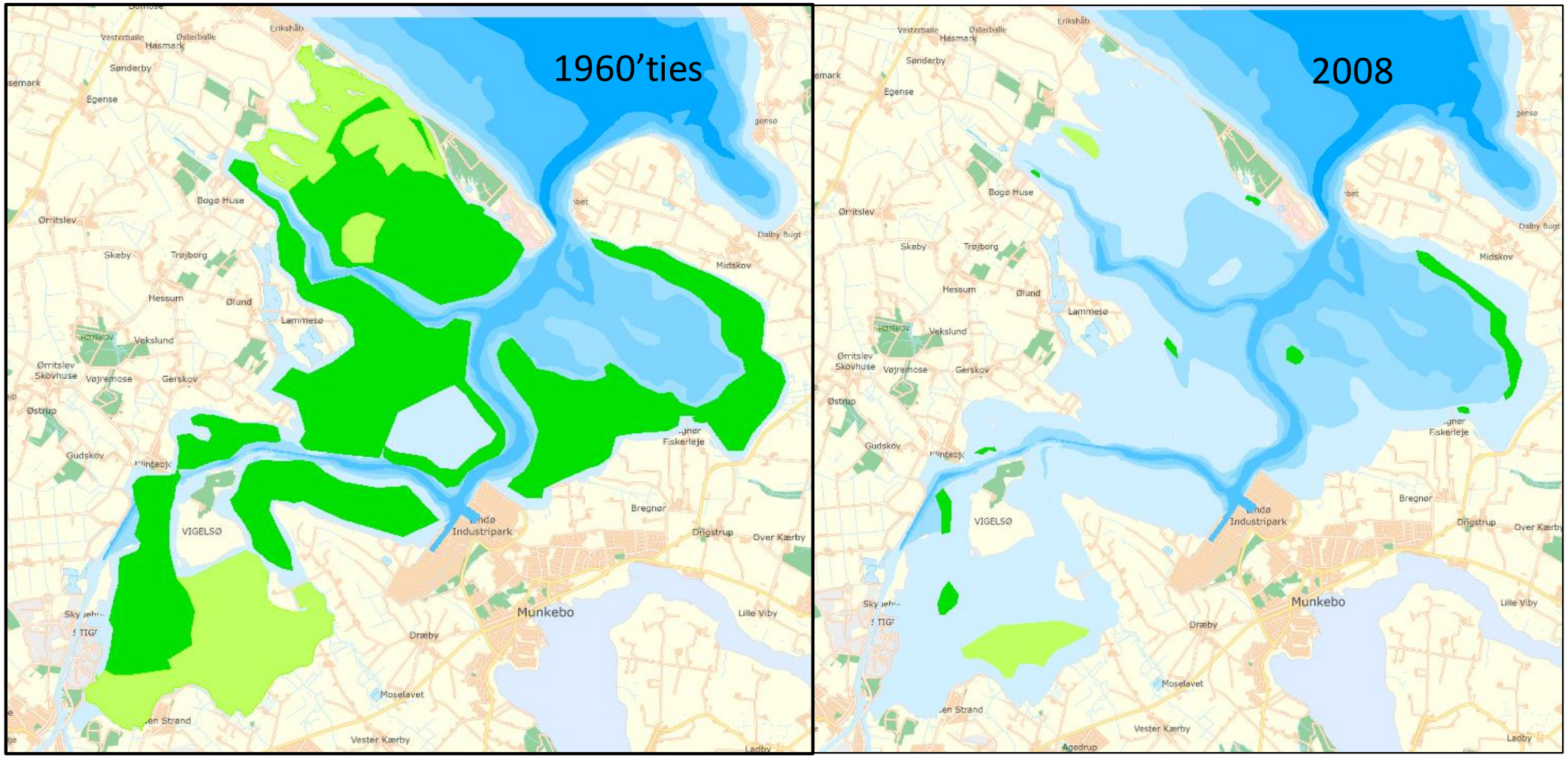
Odense Fjord and catchment

- Odense Fjord - 60 km^2
- Catchment - 1050 km^2

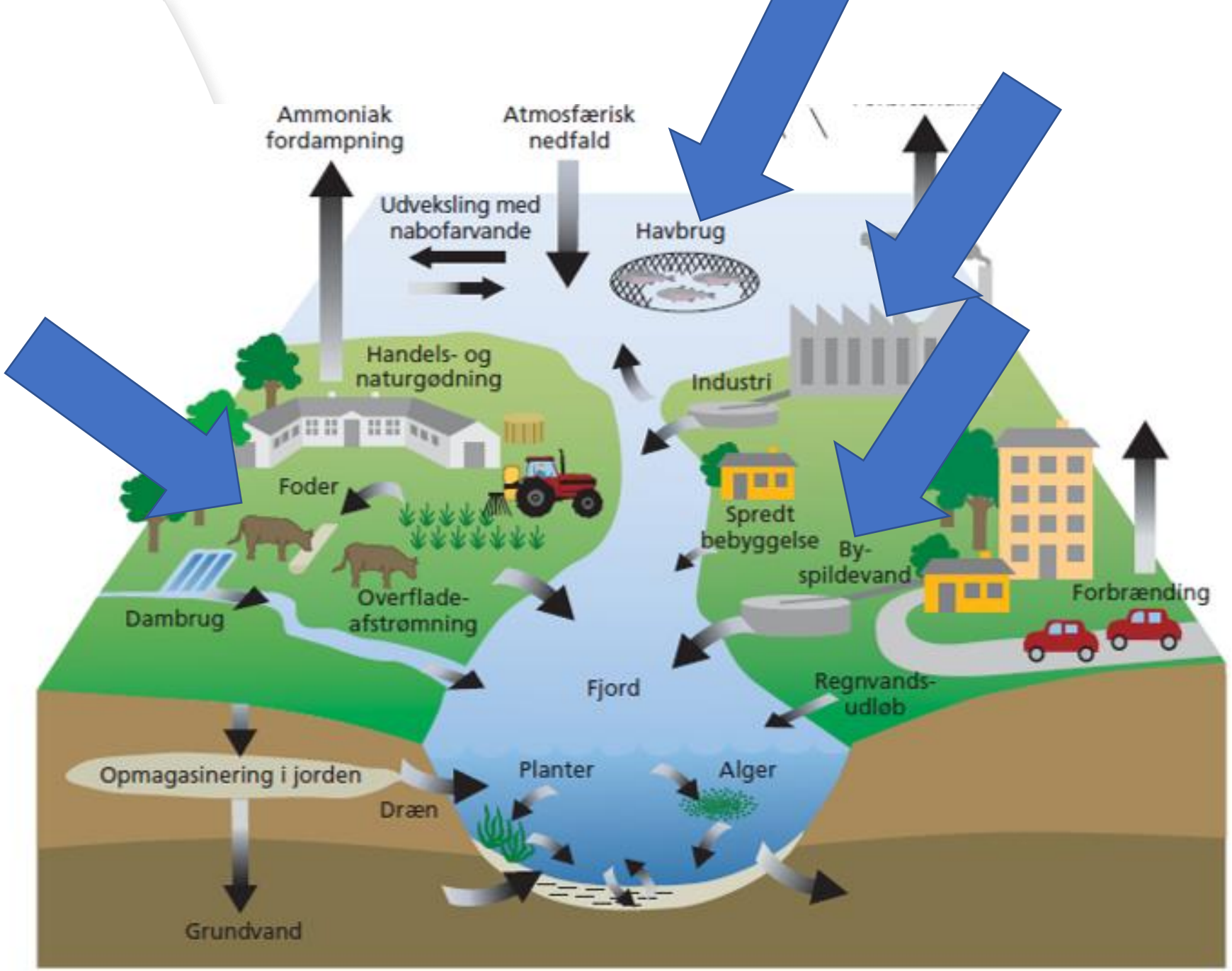




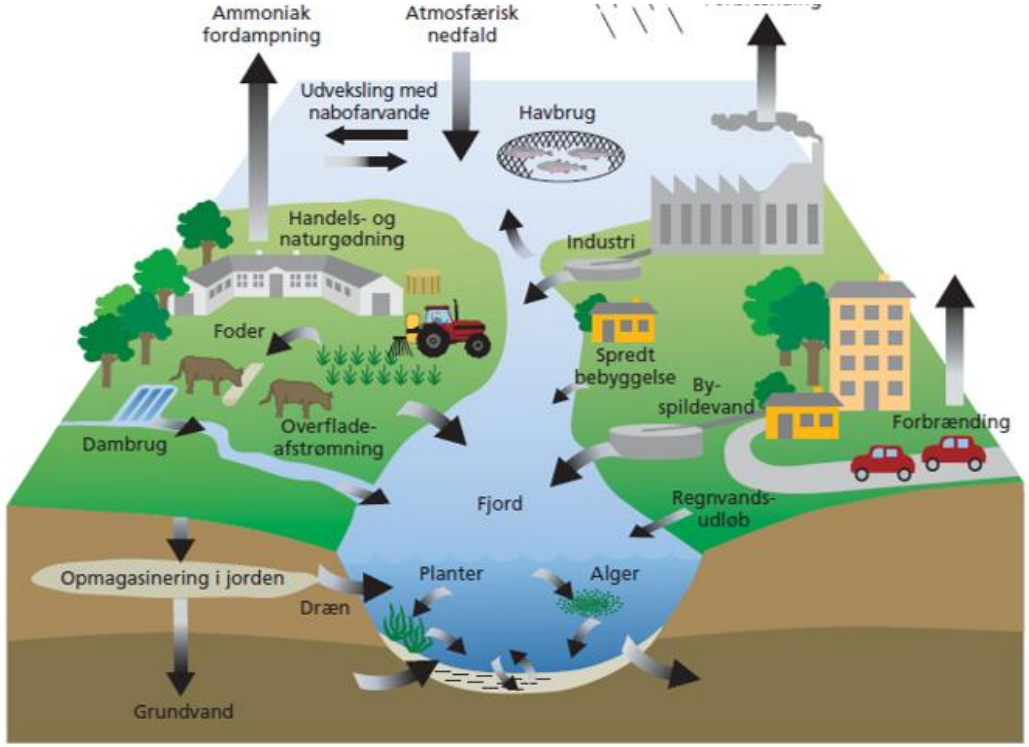
Degraded Ecosystem



Mud-bottom, no fish, no seagrass but high number of crabs;


Ammoniak fordampning
Atmosfærisk nedfald
Udveksling med nabofarvande
Havbrug
Handels- og naturgødning
Industri
Foder
Spredt bebyggelse
By-spildevand
Forbrænding
Dambrug
Overflade-afstrømning
Fjord
Regnvands-udløb
Opmagasinering i jorden
Planter
Alger
Dræn
Grundvand

Holistic approach: The art of solving multiple problems in one go!



ODENSE FJORD SAMARBEJDET

A number of key parties join forces to tackle the Mission Ocean, Seas and waters to **bring Odense Fjord into good ecological condition** in a way that is sustainable for both the environment and business. This is based on the latest available knowledge about the condition of the fjord and its pressure factors.

ODENSE FJORD SAMARBEJDET

Partners in Odense Fjord Collaboration

ODENSE FJORD SAMARBEJDET

Municipalities

ODENSE KOMMUNE

FAABORG-MIDTFYN KOMMUNE

nordfyns kommune

Kerteminde Kommune

Utility & Service

VandCenterSyd

FJERNVARME FYN

Odense Renovation A/S
www.odenserenovation.dk

ODENSE HAVN
ODENSE PORT

Academic

SDU

Business & Innovation

EMMELEV A/S

Marius Pedersen

HJHANSEN

L&F Centrovice
Din fynske landboforening

SEGES

NGO

Danmarks Naturfredningsforening

Examples of meassures and initiatives

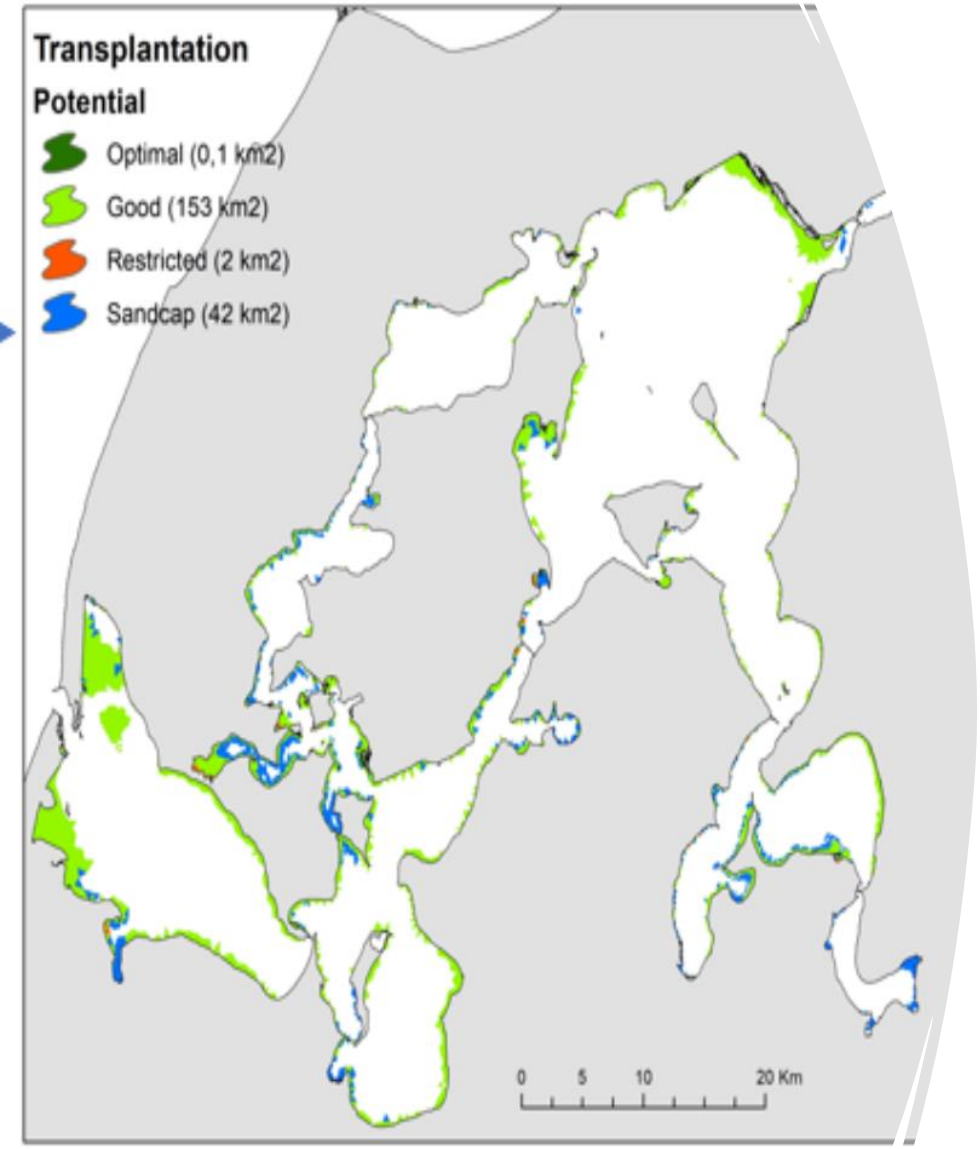
Restoration (sand-capping,seagrass, mussel reefs, islands, stone reefs)

Reduced N og P input (cleaning technologies, overflow, bufferzones, afbrudte dræn, vandmættede randzoner)

Increased sea water inflow by beaking dikes

Repurposing and multi-functional land-use (purchasing of land)

There are many solutions --our approach is to find the ones that fit Odense Fjord and has miximised co-benefits



Mission Blue Carbon - maximise C storage in Danish marine ecosystems

Objectives

Enable site and nature-based-solution selection to maximise spatial and temporal carbon capture, i.e., quantification the overall C capture/storage capacity for a selection of NBSs active at the studied catchment area.

Expected results:

1. Combine machine learning techniques on satellite / aerial images with topographical data and monitored data.
2. Quantify the modelled direct and indirect effects of the existing carbon hotspots.
3. Simulate potential upscaling scenarios.
4. Provide a road map on how to apply and/or scale up blue carbon capture.

VandCenter Syd's contribution the Fjords status

- **Water treatment:**
  Nitrogen input from wastewater treatment plants to the aquatic environment accounts for approx. 7-9% of the total input

- **Rain-related overflow:**
  Nitrogen input from overflows and RBU to the aquatic environment represents less than 1% of the total input

PREP4BLUE

METHODS AND TOOLS FOR MISSION OCEAN & WATERS

Stakeholder Engagement
European Scale

BlueMissionBANOS

Seabasin scale
Citizen engagement
Pilotstudy 2024