

GIS-tools for more cooperative nutrient management

*Sebastian P. Zacho 14.9.2021 - Transnational Online Workshop: Tools
for improving co-governance in water management*

Om kfor

På oversigtskortet ser du, hvor de forskellige drænvirkemidler, der er etableret samt de der har fået tilsvagn til etablering, er placeret. Ovenfor kan du filtrere efter type

SEGES Promilleafgiftsfonden for landbrug

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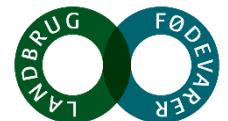
Outline of today - Presentation of 3 tools



- 1) *Kollecto*: Catchment Officer registration and coordination tool
- 2) ~~*Drain Filter Platform*: Overview and status on drain filter solutions in DK~~
- 3) *Nitrate App*: Catchment Officer and farmer nitrate measurement tool

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Brief background info: Local Catchment Officers in DK

23 Catchment Officers organized across Denmark since 2017.

The current main target is to find suitable locations for constructed wetlands, help the wetland process and advisory regarding forestation



Team Sealand Catchment Officers

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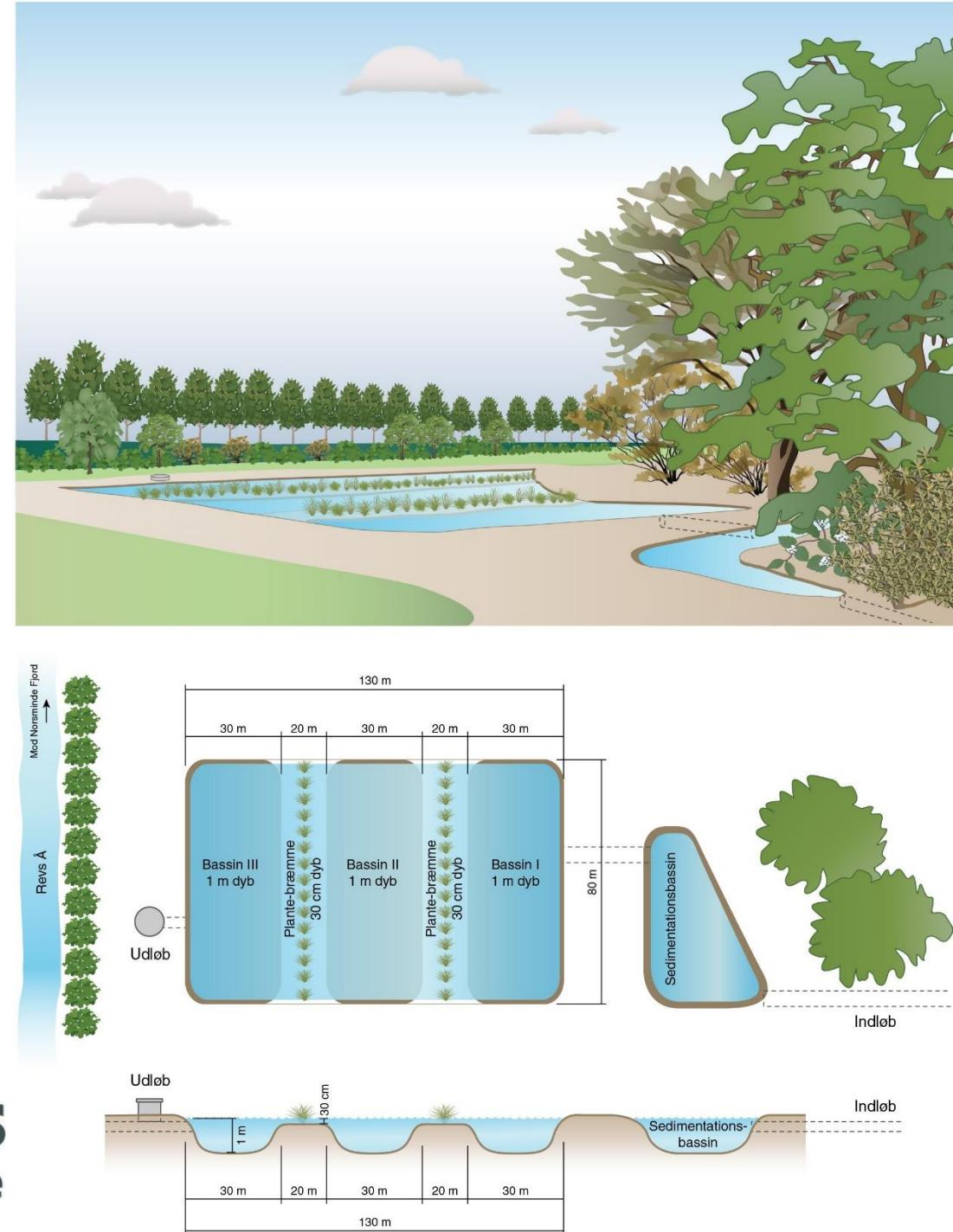


Constructed wetlands in DK

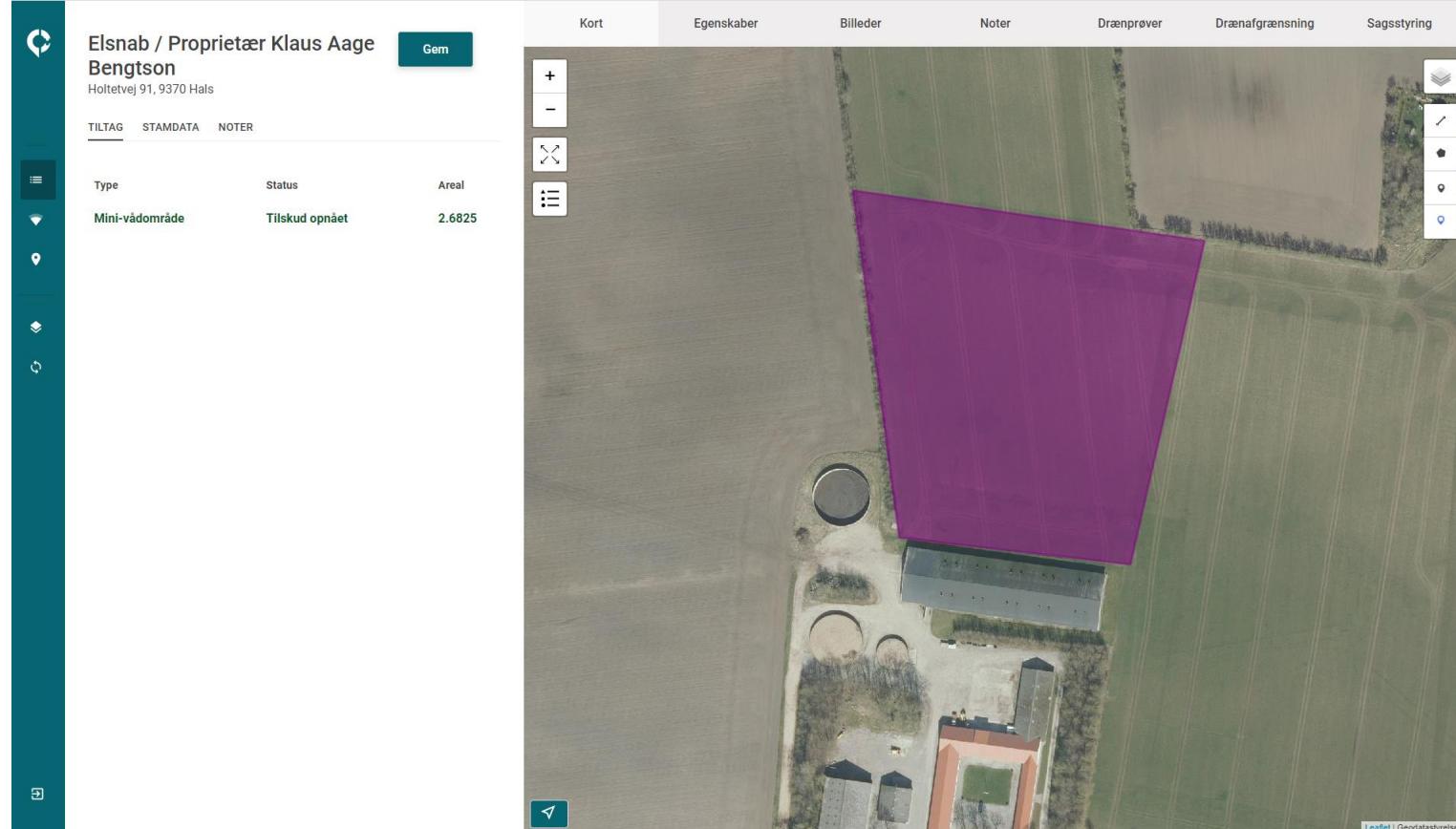
- Main target is to reduce nitrogen loads to Danish fjords by 900 tonnes N before 2021
- The Catchment Officers assists the farmer regarding:
 - Possible location
 - Design of constructed wetland
 - Administrative permits (municipality)
 - Making application for funds

Results

- Approx. 600 applications handed in from 2018-2020 (another 100 applications are expected for the 2021 round)
- Around 100 constructed wetlands have established so far



1) Kollecto: Catchment Officer web application



Web application with multiple purposes

- 1) Registration
- 2) Data collection
- 3) Coordination

1) Kollecto: Registration and data collection

The screenshot shows the Kollecto software interface for registering environmental measures. On the left, there's a sidebar with icons for location, search, and other functions. The main area has a header with the user information: Elsnab / Proprietær Klaus Aage Bengtson, address Holtevej 91, 9370 Hals, and a 'Gem' button. Below this are tabs for TILTAK, STAMDATA, and NOTER. The TILTAK tab is active, showing fields for Type (Mini-vådområde), Status (Tilskud opnået), and Areal (2.6825). The right side of the screen contains several input fields and dropdown menus:

- Slet tiltag** (Delete measure)
- Navn på tiltag**: Constructed wetland
- Type**: Mini-vådområde
- Status**: Tilskud opnået
- Udpegnings**: Ikke valgt
- N-effekt (kg N pr år)**: (empty)
- Virkemidlets areal (ha)**: 2,6825
(Beregnet areal: 2,6825)
- Drænoplandsstørrelse (ha)**: 225
- Bemærkning ved opgivet tiltag**: Tilknyttet bemærkning ved opgivet tiltag.
- Bemærkning ved afslag fra myndigheder**: Bemærkning ved afslag fra myndigheder
- Ansigningsår for tilskud**: 2021

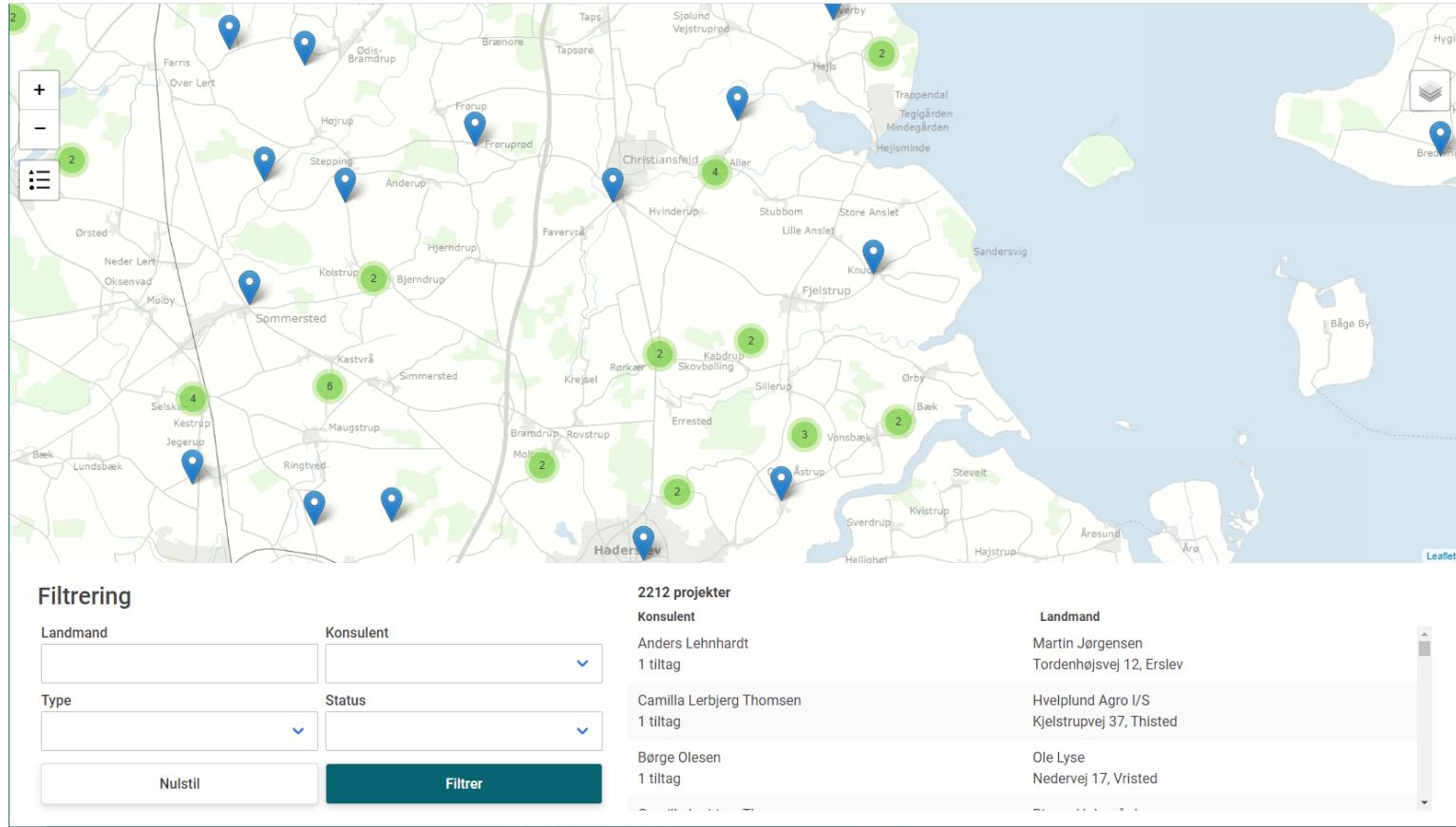
At the bottom, there's a checkbox: Landmanden har givet accept til at oplysninger om placering, størrelse, effekt mv samt evt. fotos må offentliggøres.

Registration and data collection of

- 1) Type of environmental measure
- 2) Size and catchment area
- 3) Storage of pictures
- 4) Content of nitrate in drainage water
- 5) Catchment boundary findings

And many more data

1) Kollecto: Coordination between Catchment Officers



The web application helps coordinate work being done by Catchment Officers

Project overlaps are avoided

Keep track of status in the single catchment

Possible to follow the process from SEGES

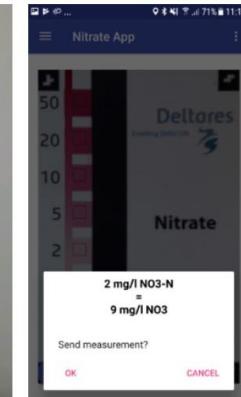
Allows to continue the work if a Catchment Officer

3) Nitrate App

Developed by Dutch company Deltares and SEGES and is based on HACH nitrate strips

Used by Danish Catchment Officers to examine if there is a potential for constructed wetlands on sandy soil

Farmers gets better understanding of nitrate loss from their field + option for log data (location and concentration)



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Thank you for your attention

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