Mapping potential sites for constructed wetlands – Catchment officers tools

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# Background - Potential Map for constructed wetlands

Restriction on nitrogen fertilizer use was reduced back in 2015

In exchange Danish farmers has to implement approx. 1,500 constructed wetlands among other nitrogen reducing initiatives before 2021

29 Catchment Officers assigned to assist

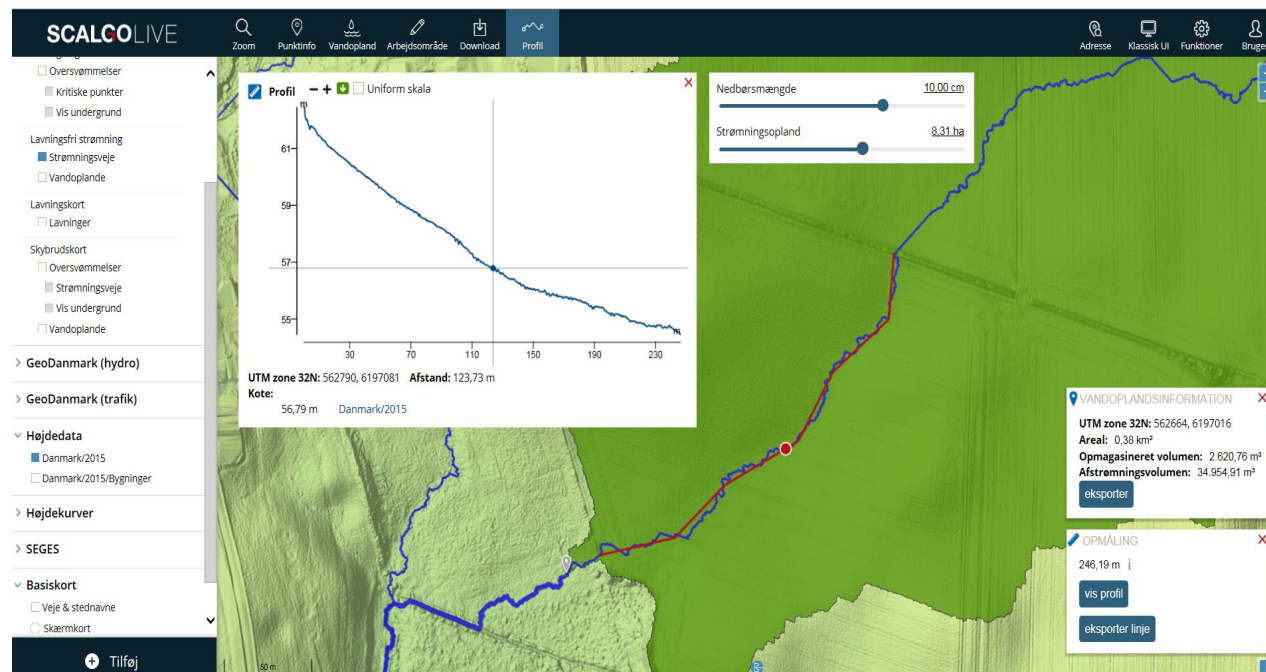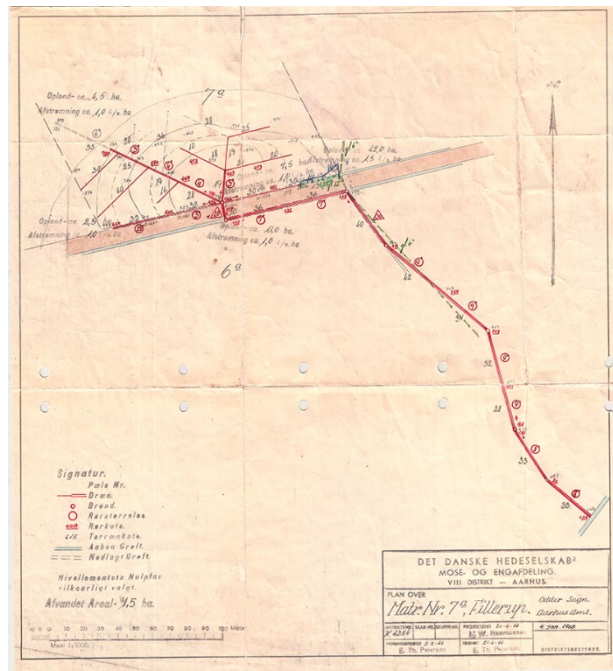An administrative map issued by the Danish authorities to determine where it is possible to get funding

Based on data on soil type, river valleys, likelihood for drainage systems, elevation model and need for nitrogen reduction in recipients. Data modeling conducted by Aarhus University
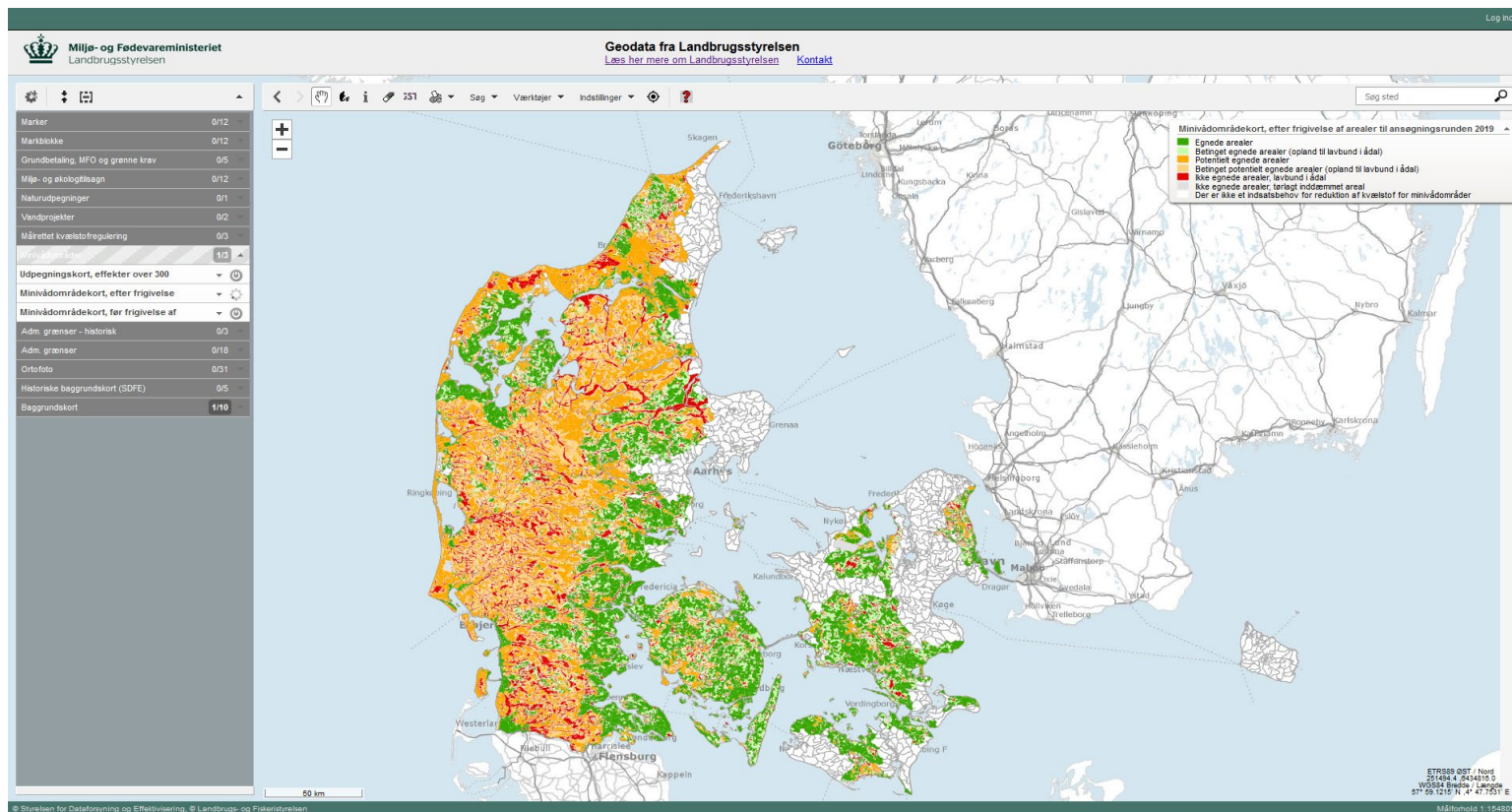
# SCALGO Live – Predicting drainage systems and defining catchments

Originally aimed at flood risk management

Used by the Catchment Officers to estimate catchment sizes and to predict the location of large drainage systems and gain knowledge about the terrain.

The tool is a online web-tool and is based on a digital elevation model from 2018.

Targeted contact to relevant landowners/farmers – combining Potential Map with SCALGO Live in MapInfo
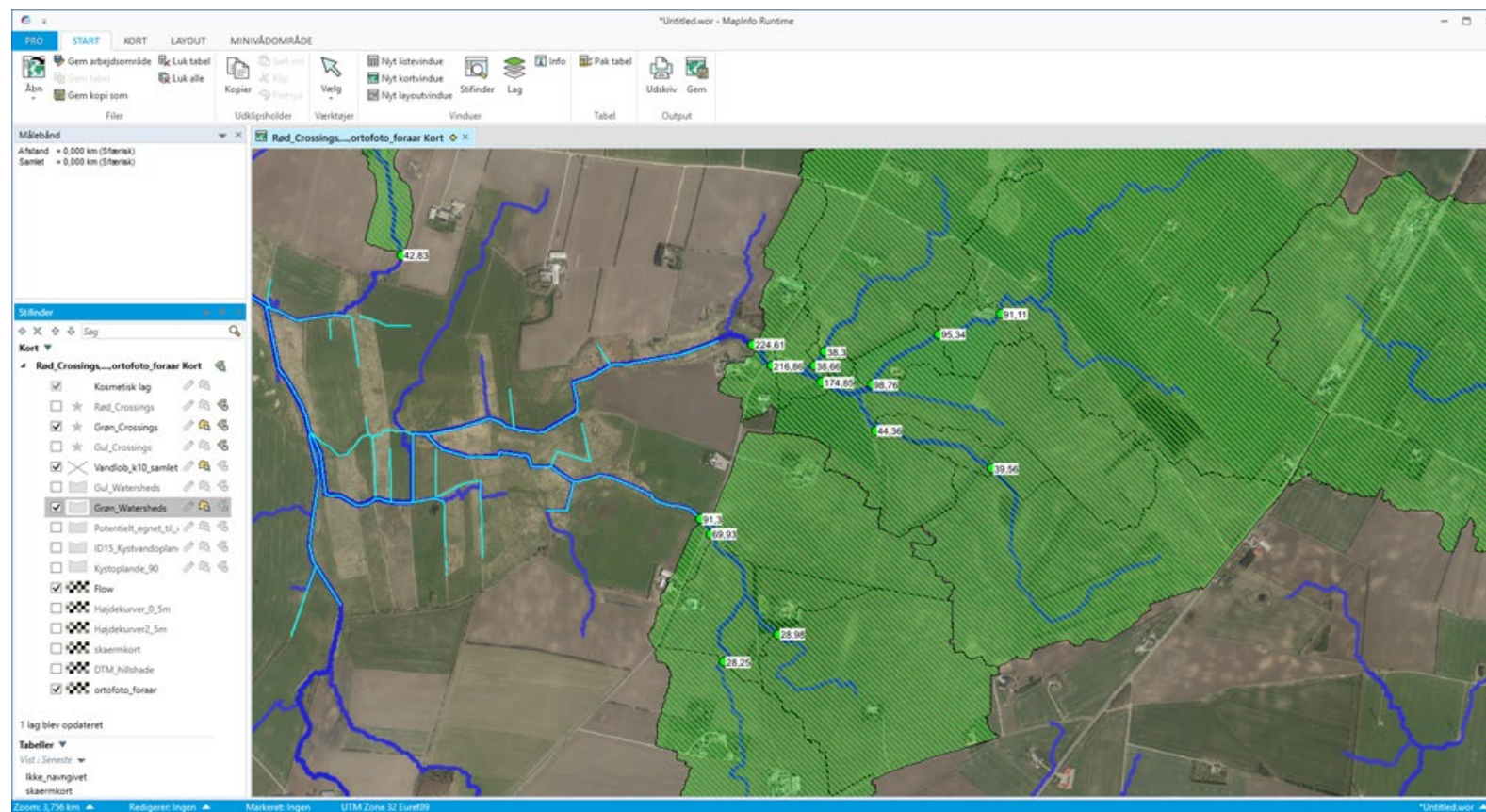
Combination of data from SCALGO Live and the Potential Map and SEGES' farmer-database

GIS layer for Catchment Officers to target communication to farmers with the biggest potential for constructed wetland

Management tool when working more broad on a catchment scale

Used as a dialogue tool with landowners and farmers
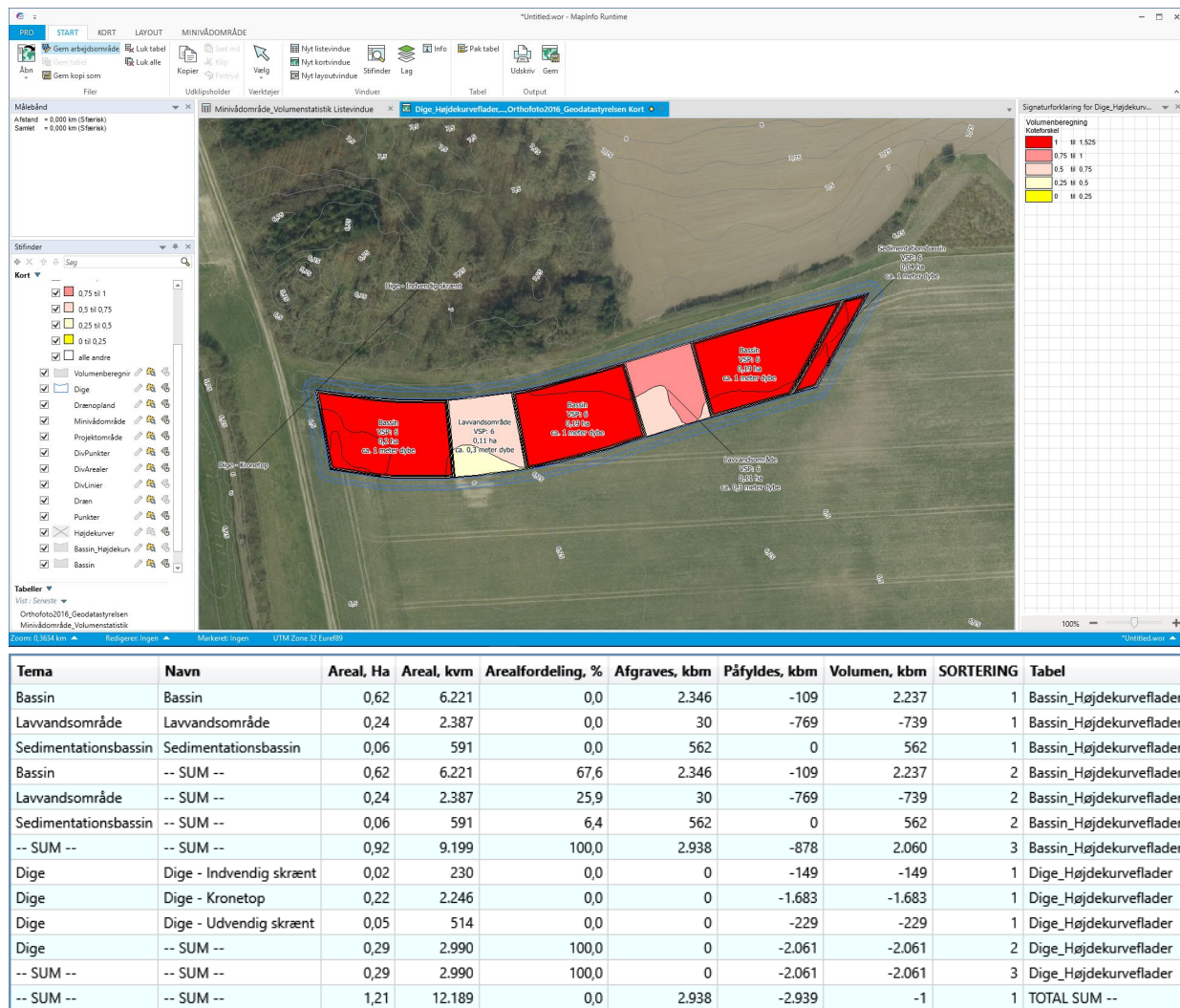
Finding the perfect spot

Soil removal is expensive – finding the best site in the terrain is key for cost-effectiveness

Knowing the exact depth of the drainage system is essential

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Estimating excavation in MapInfo

Add-on tool for MapInfo (digging-tool)

Transforms a digital elevation model into polygons – own produced polygons can then be subtracted

Estimates the requirement of soil for dikes

Excavation is in many cases the factor that defines whether or not a project is realistic

Valuable impute when having contractors bidding for the job

Design and excavation estimation is usually a job for (expensive) external consultants – but having this tools contributes to the overall cost-effectiveness.

Thank you for your attention