



SCALGO Live as a screening tool

# Screening of levees along Odense inlet

In Odense Municipality, SCALGO Live gives the climate workers and the planners an opportunity to work with scenarios in a new way and then contribute to a more qualified dialogue with consultants. This contributes to solutions that have more value than just risk management.

In connection with the climate adaptation plan and the national flood risk management plan for Odense inlet, it was concluded that Odense Municipality had to screen and test all levees to assess their condition, height and whether there were a need for new levees.

## Important screening to ensure protection

Screening of levees are important, as levees may sink over time, and due to the rising sea-level, this can result in a safety issue. To handle this, SCALGO Live is of great value to the municipality. The tool enables the municipality to screen and assess the existing levees. In addition, they can test several scenarios like e.g., investigating whether moving the levees improves safety.

## SCALGO Live offers new opportunities - in both dialogues and solution process

With SCALGO Live, the Municipality's climate workers and city planners work with scenarios in new ways. They can create several

screenings and assessments by themselves, and they are also able to have a more qualified dialogue with advisers. They are able to give tasks to the advisers, test the consultants' suggestions and seek other possibilities for alternative and supplementary solution.

**“By using SCALGO Live, we are able to work with scenarios in a way that has not previously been possible”**

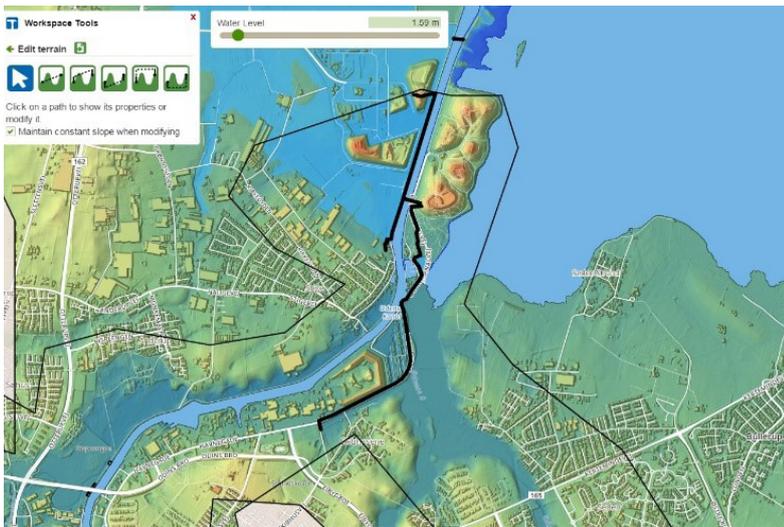
*Gert Michael Laursen,  
Geologist, Odense Municipality*

This increases the municipality's possibility of getting a qualified assessment of where the levees are useful and finding solutions regarding more than just risk management - e.g., by improving the protection of the nature and the well-fare of the citizens.



## SCALGO Live helped with

- Screening for floods
- Scenario analyses of existing and altered levee systems.
- Qualifying the hydrological corrections
- Finding critical points during rising sea-levels

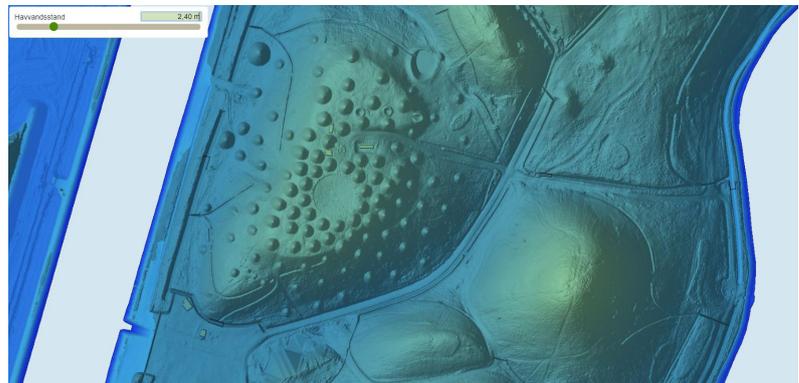


## Screening and Scenarios

SCALGO Live can be used to view possible storm surge scenarios and levee breaches, as well as experimenting with new levee systems. By continuously creating small terrain changes and thereafter assessing whether it has any effect in terms of flood risk, Odense Municipality has gotten a more dynamic work flow. The map shows a scenario where sea-level rise is at 1,59 m. The black lines are terrain changes, which are drawn to investigate the effect of new levees. Thereafter, the analysis is re-calculated, and the effect of the levees is analyzed.

## Improvements of the hydrological elevation model

Gert Laursen experiences that especially finding errors have become easier when using the hydrological correction layer in SCALGO Live. The analyses show where the terrain is open and allows the water to pass through. This makes it easy to spot necessary hydrological corrections which are wrong or missing. The map illustrates the hydrological corrections (black lines) and a sea-level rise at the elevation of 2,4 ..



## Critical points

Odense Municipality's work with screening levees has inspired a new tool in SCALGO Live, and it is now possible to see critical points where the sea may cause flooding. This feature will make it easier to find the weak points of the levees and the natural terrain which protects the hinterland. The map shows a critical point, where water may cause flooding.