

# Using Geodesign to Support Collaborative Planning Workshops

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## 1 Introduction

Geodesign tools can be used to support collaborative processes (STEINITZ 2012). Typical tools combine different methods, such as simulation models, spatial multicriteria analysis, visualization, and optimization. User-friendly interfaces allow multiple users to provide input and generate real-time output to support negotiated spatial decisions (SIEBER 2006; GEERTMAN & STILLWELL 2009; PELZER et al. 2013).

The Province and Waterboard of Friesland have decided to develop a long term adaptation strategy for the peat meadow area of the province. As part of this policy process stakeholder workshops were conducted that had the following objectives: 1. Exchange of information; 2. Validate information and 3. Design three spatial adaptation scenarios. The workshops are exploratory and do not involve a choice for one of the scenarios.

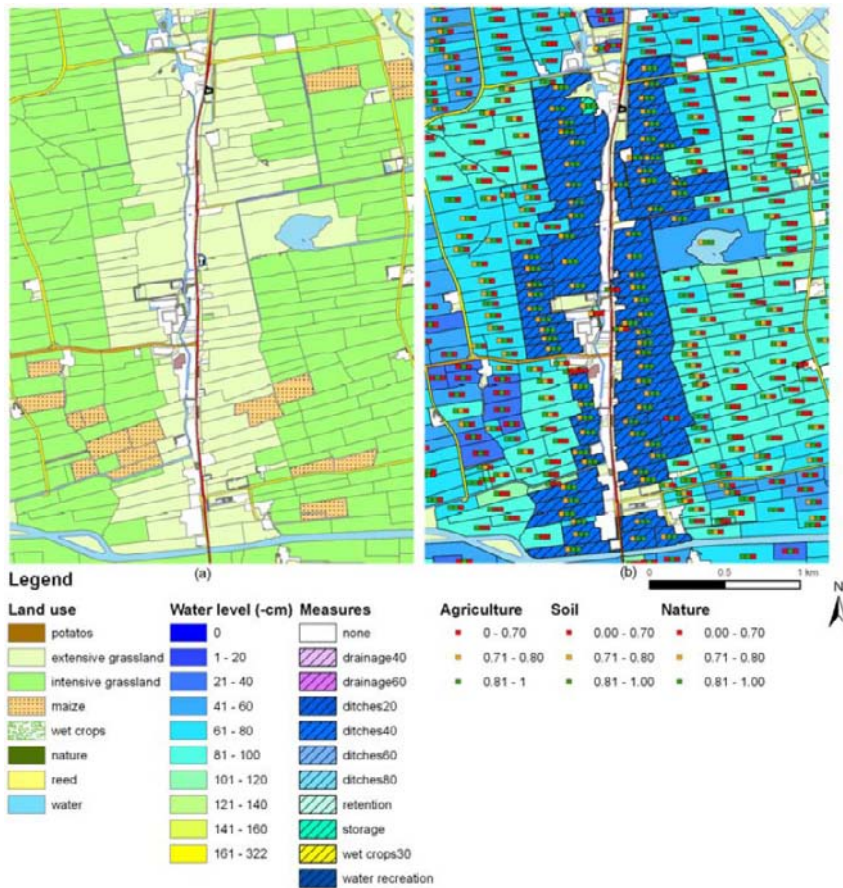
## 2 Geodesign Tools

An interactive mapping device (the “Touch Table”) was used as a common interface (Figure 1). The use of the “Touch Table” made it possible for participants to have direct access to tools and information and provided a common platform for discussion. The geodesign application developed for these workshops included an evaluation tool and a design tool. Both tools were dynamic and provided immediate feedback to any change made by the participants.

The evaluation tool shows within each individual parcel the performance of three policy objectives. This tool is used in combination with the design tool. The design tool has a list of potential measures and types of land use. Figure 2 shows the design tool for one of the regions. The map on the left shows land use and the map on the right water levels. The tool provides a list of measures that affect water levels and land use types. Participants can apply these measures to one or more parcels to improve one or more objectives. Changes in values are shown immediately as changes in the colours of the traffic light boxes in each parcel. Participants can also change the land use of each parcel.



**Fig. 1:** Workshop participants around the Touch Table



**Fig. 2:** Creating a buffer in scenario “Parallel tracks” in the Hommerts region

### 3 Workshop Results

The participants were asked to design a land use and water management plan for three policy scenarios: 1. Business as usual; 2. Parallel tracks and 3. New Horizons. Figure 2 shows part of the plan for scenario “Parallel tracks”. Participants identified damage to houses caused by soil subsidence as a problem. First, participants zoomed in on a long strip of houses on both sides of the central road. As can be seen on the new land use map (left) they created a zone of extensive agriculture along these houses. Next they increased the water level in the ditches to 20 cm (right). The map on the right shows that in this zone the value of agriculture has decreased to average but the scores for soil subsidence and nature have gone up to good. The improvement for soil subsidence solves the problem for the houses.

### 4 Conclusions

Feedback from the participants indicated that they found the exchange of information very important. The opportunities to switch between maps and the opportunities for learning by doing were considered useful. When asked which information was most important eight participants answered that they considered information from the touch table most important, also eight persons named the other participants as the most important source of information while seven preferred information from the experts present during the workshop. This shows that workshop did well in facilitating exchange of information.

Organizing policy workshops is a learning process that requires substantial effort in terms of preparation, logistics and technical challenges. A first lesson is that it is not so easy to convince policy-makers to include workshops in their planning process. There is fear for the unknown and fear that bringing the problem outside the usual setting would change the level of control on the process. A second lesson is that selection of the participants is essential, yet it is not always easy to attract participants to the workshops.

In conclusion; the approach depends highly on a cooperative attitude by participants. This worked well in a Dutch context as it suits the Dutch consensus-oriented way of decision making. Other examples of this approach can be found in ARCINIEGAS & JANSSEN (2012) and ALEXANDER et al. (2012). However, it is uncertain if the same approach would also work in situations of sharp conflict or in contexts with a more power-based style of decision making.

### References

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