



Towards informed interactions in Dutch peatlands: Reconciling analytical and interactive support tools for interactive governance modes

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Shifting governance modes

Social-ecological systems lack consensus on norms and values among stakeholders, which pose 'wicked' management problems.

To achieve sustainable, effective and credible management centralized governance modes are replaced more and more by interactive modes of governance.

Such an approach is better suited to deal with complex sustainability issues.

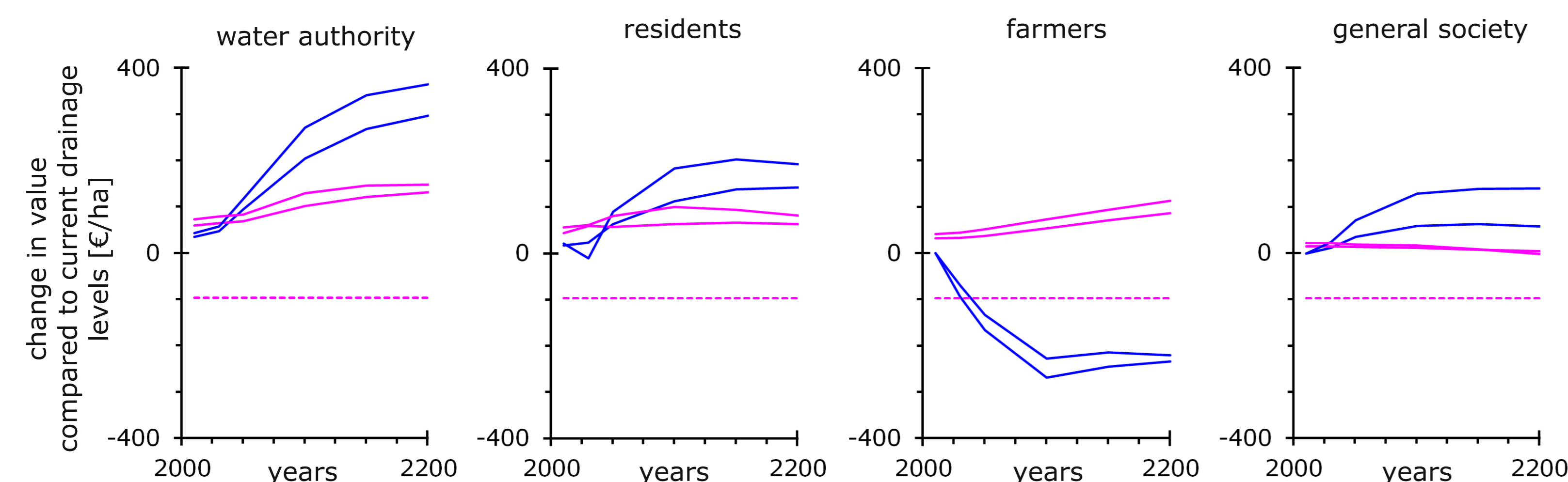
However, implementation problems are manifold especially how to improve the usability of the knowledge exchanged between researchers and practitioners.

Costs and benefits

We developed: GIS-based models that simulate spatial explicit impacts of soil subsidence for all major stakeholders.

We valued and evaluated: impacts with an extended and modified approach to Cost-Benefit Analysis (long term trends, distribution of costs and benefits among stakeholders).

We applied: these tools for collecting, organizing and discussing information relevant to interactive policy making.



impressions of future management options



business as usual increasing scales transformations

Engage and win!

Until October 31st you can engage in the research at www.waarderingveenweide.nl. Take 5 - 10 minutes to value the Dutch peatlands and maybe you'll win a trip in a balloon over the peatlands.

Reconciling support tools

Data-driven analytical tools aimed at evaluation of performance or ranking of alternatives are often badly received by stakeholders, resulting in 'superfluous knowledge'.

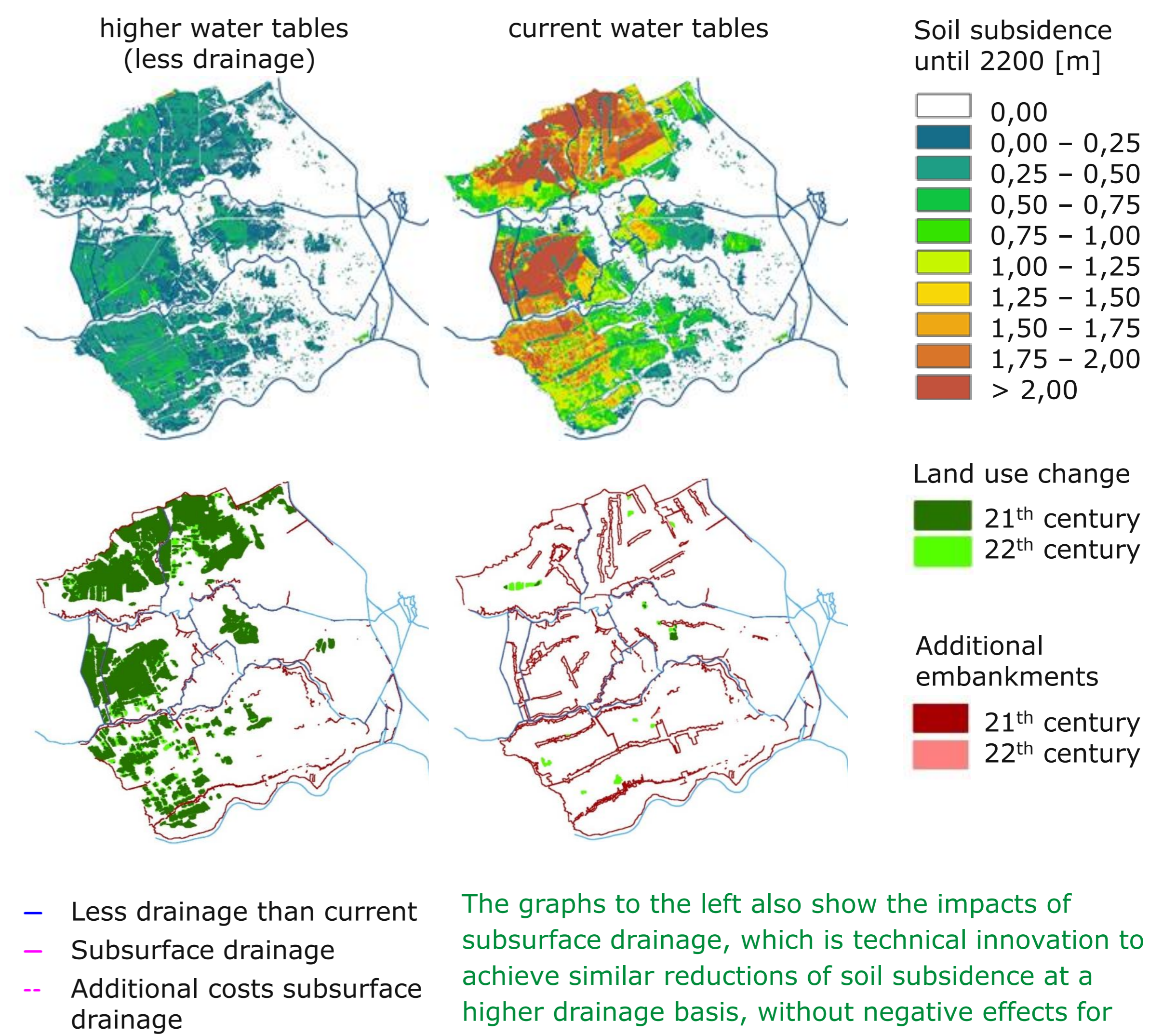
Interactive tools aimed at revealing preferences and defining alternatives usually don't suffer this predicament, but may lack adequate scientific validity, risking 'negotiated nonsense' as an unfortunate result.

We aim to improve support tools for interactive modes of governance by reconciling the qualities of analytical and interactive support tools.

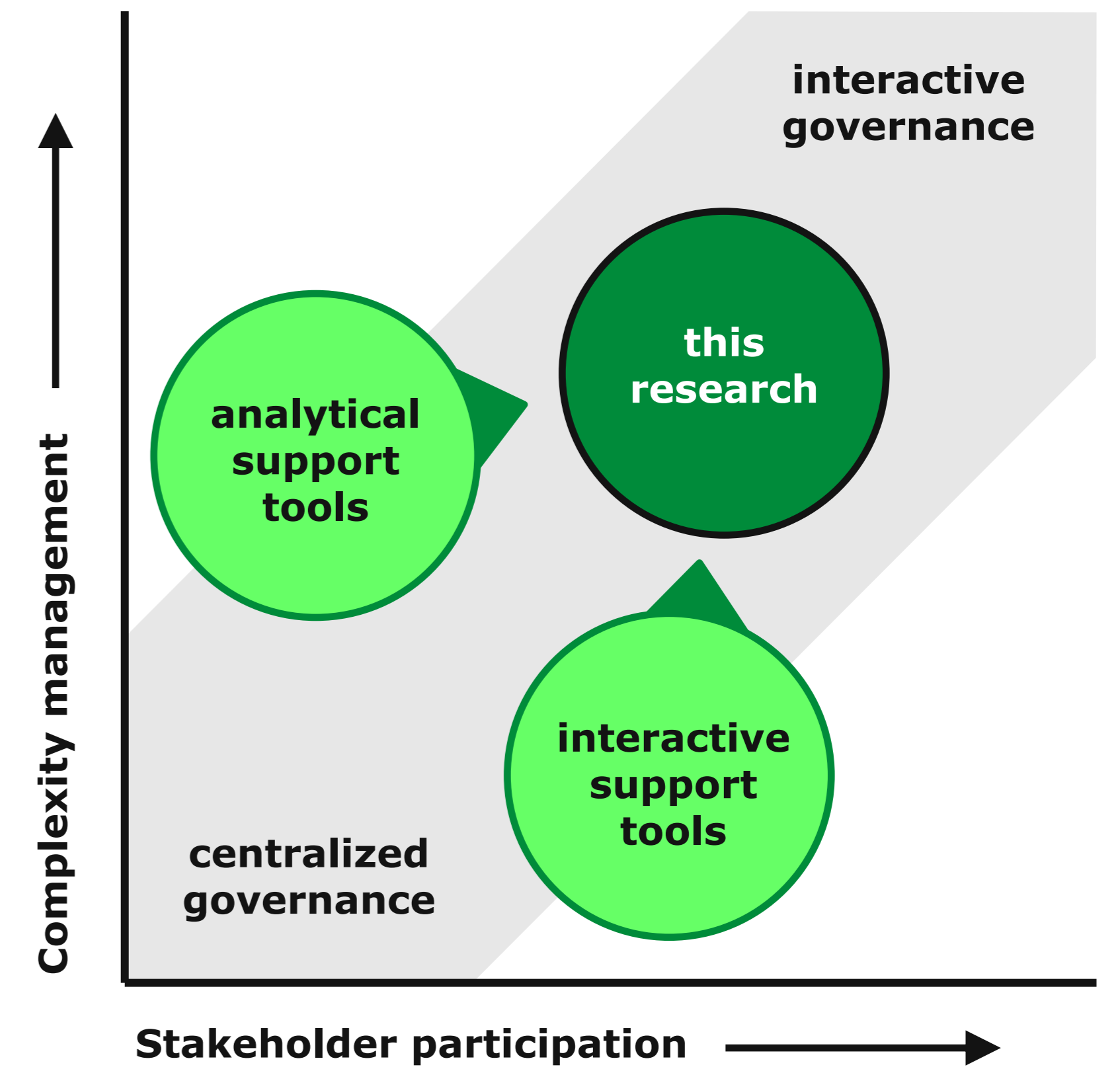
Case: Management of peatlands by the regional water authority 'Hoogheemraadschap De Stichtse Rijnlanden' (the Netherlands)

To the right cumulative soil subsidence till 2200 and ensuing impacts on land use and embankments are shown. Below the change in costs and benefits is shown.

Less drainage limits soil subsidence. This requires changes in land use (switch from dairy farming to biofuel crops) and diminishes the need for additional embankments to cope with increased elevation differences. Therefore the management costs of the regional water authority compare favorably, whereas farmer profits drop.



The graphs to the left also show the impacts of subsurface drainage, which is technical innovation to achieve similar reductions of soil subsidence at a higher drainage basis, without negative effects for farmers. However, none of the stakeholders receives benefits large enough to singlehandedly fund this technique. Therefore collaboration and negotiation between stakeholders is necessary to achieve a solution.



What's next?

- advancements in the interactive elements of the envisaged support tool (inclusion of non-monetary **cultural ecosystem services** such as bequest and existence values of landscape, nature and cultural heritage).
- web-based **survey** to explore how different groups of stakeholders regard the impacts of several management options on cultural ecosystem services (pictures to the left show a selection of photos used in the survey).
- presenting the results for all groups of stakeholders in **valuation maps** to fuel debate.
- template for **serious games** in which previously mentioned elements are implemented allowing multiple stakeholders to simultaneously access the information and interactively explore scenarios.

We hypothesize that the serious game will provide a platform to better negotiate trade-offs among stakeholders and achieve 'informed interactions'

Project partners:

