Leibniz-Centre for Agricultural Landscape Research (ZALF) e.V. , Müncheberg

CIVILand-Subproject 3:

Analysis of the nature of the remunerated ecological and cultural landscape services and the use of ecological models in the course of the instrument design

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Background

- appropriate policies and instruments are needed to control environmental problems
- in general, there are mainly state instruments of control available
- but these are often seen as inefficient, inflexible, less innovative, and insufficiently participative

Against this backdrop, CIVILand wants to examine to what extent can non-government initiatives, especially civil society initiatives (CI), deliver better and more innovative approaches for rewarding ecological services than governmental initiatives (SI).

The CIVILand-subproject 3 is therefore devoted to answering the following research questions ...

Research Questions

1. Which types of environmental services are actually rewarded by CI?
2. Which remunerating instruments ("Payments for Ecosystem Services" – PES) are used in the process?
3. Do civic initiated PES cover all current environmental problems, or are there gaps which government initiatives must fill?
4. To what extent are modeling approaches used in the design of PES to evaluate PES in terms of environmental effectiveness and cost efficiency.
5. What participation opportunities could arise from the designing of PES, particularly with regard to approaches to participatory modeling?

Goals

- Overview of currently funded ES and PES used in each case
- Development of a typology of ES
- An analysis where the current environmental problems can be reached through civil initiated PES and what SI should cover additionally
- Overview of the areas, in which modeling approaches are used in the design of PES
- Testing of participatory modeling methods in the design of PES in one (or more) of the selected case studies in the U.S.
- Compilation of a manual on participatory modeling as a handout for practitioners

Methods and Data

Method triangulation:

- Data and document analysis,
- Surveys
- Use of models in case studies

Why use models?

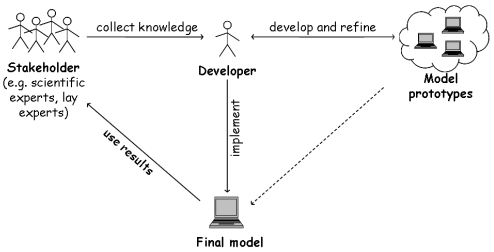
- To help structure problems and to improve understanding of problems
- It allows an ex ante assessment of different problem solving options
- It allows the testing of extreme cases (scenarios: "best and worst cases"
- To give support in the decision making process

Why participatory modeling?

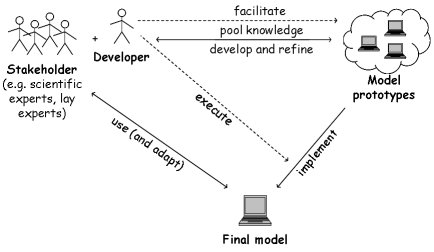
In conventional modeling, the modeler is at the center: the knowledge is communicated through the modeler, who designs and implements the model based on this.

The end users usually have no influence on the development process of the model and can not adapt the model according to their needs.

They are actually "only" users and the model itself is often just a "black box" for the user , which is not comprehensible in its entirety.



„Traditional" modeling



Interactive „participatory" modeling

In participatory modeling in contrast:

- Subsequent users will become co-developers of the model and the developer will become the facilitator who technically accompanies and supports the process
- This is how it becomes a continuous learning process for everyone, where all the available knowledge components could be incorporated in the model development
- Experiences from all stakeholders, including innovative and creative ideas can be used as well

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Claudia Sattler studied horticulture at the University of Hanover. She earned her doctoral degree from the Humboldt University Berlin at the faculty of Agriculture and Horticulture, Institute of Economic and Social Sciences of Agriculture.

Her recent research among others include the use of decision support systems for the environment-friendly management of agricultural ecosystems, modeling of environmental effects of agricultural land use practices, processing of uncertain knowledge in modeling (Fuzzy logic) and sustainable development and multi-functionality agriculture.

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