

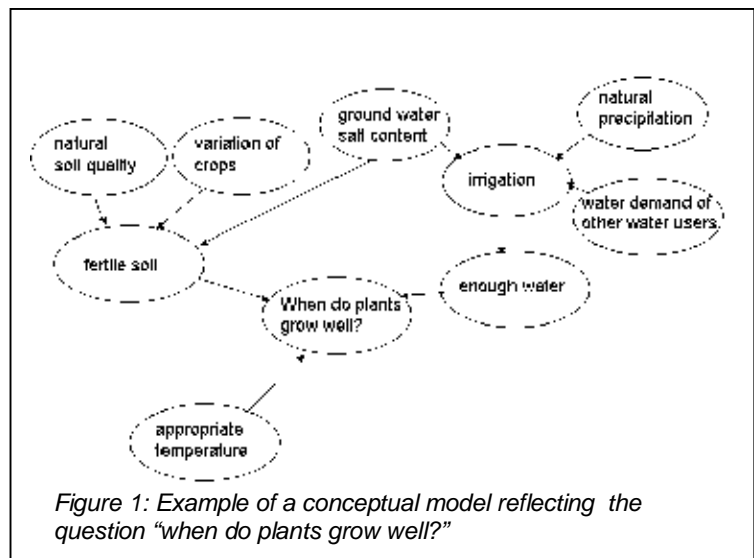
Cognitive Mapping and Group Model Building: Tools for Adaptive Water Management

Cognitive mapping and group model building are presented here as techniques that can support the building of stakeholder commitment to and enhancement of Adaptive Water Management (AWM). For this purpose:

- § Those engaged need to understand the (management) system in which they operate: its purpose and the different factors/ interests must be taken into account.
- § Those engaged need to be able to provide their own views and see how their input was taken up.

Cognitive Mapping & Group Model Building: What is it?

Cognitive Mapping and Group Model Building help us to visualize the views ('mental models') of individuals (cognitive mapping) or groups (group model building). A conceptual model of cards and arrows represent relevant factors and their connection to each other that are considered important in addressing a specific question (see also causal loop modeling - Vennix (1996). See the example in Figure 1.



How can it aid the development of stakeholder commitment & enhancement of AWM?

Cognitive mapping and group model building aid the development of commitment and adaptive measures by allowing stakeholders to understand the issue and its diverse effects, to obtain an overview of the knowledge and perspectives of other stakeholders and to see where their own perspective fits in. The group model that evolves can serve as a commonly accepted basis for further analysis, discussion and decision-making.

Basic steps in cognitive mapping and group model building

Cognitive mapping	Group model building (Classic)
Interviewee considers the question	The participants are given a central question (goal card)
Interviewee writes a factor on a card that is perceived as important and that is directly linked to the question	Each participant writes important factor on a card that he/she would like to be included in the group model related to the question
For each card: <ul style="list-style-type: none"> o the interviewee explains it to the interviewer o adds it to the model o sketches in the relationship The interviewer may ask for further explanation	Then one by one each participant can <ul style="list-style-type: none"> o present one card to the group, o add it to the board o and link it to other elements of the model Other members may ask questions and discuss
Interviewee adds more cards with causes behind factors that are already in the model	Each participant can prepare further cards.
Interviewee can add more relationships among cards	The group can add more cards / relationships
Interviewee gives model a name and signs it	The group agrees on the model. They give it a title, sign it and present it to the plenary
The resulting model can be used for further analysis and discussion by the participants, experts or modelers (e.g. identifying possible solutions / important actors or integrating the new knowledge into existing computer models).	