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Supporting deliberation processes within complex decisions in natural resources management

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Abstract

Decisions regarding water management issues are by nature complex; they involve balancing the three interconnected pillars of sustainability: social welfare, economic needs and the needs of an ever-changing environment. Moreover, such decisions may include controversial or poorly understood issues, such as the role of equity or property rights, as well as conflicts of interest. Due to the uncertainty about facts of matter or simply due to differences in goals, different stakeholders (people or interest groups that are directly affected by or affecting a management problem) often have quite different perspectives on what should be done. Only by taking into account these different perspectives and trying to balance the needs of society, environment and economics, can a manager reach any type of sustainable decision: one generally acceptable and beneficial to all sectors.

Sharing perspectives, i.e. finding a group consensus on weights and scores before entering them into the model is an ambitious goal but sometimes not feasible in conflicting situations. We need tools able to incorporate inputs from different people in order to compare and aggregate different perspectives. Thus, we aim to support stakeholders in making just such a complex decision.

We can start off the process by stating that the goals of such a tool include

- solutions to problems of resources use.
- solutions that are generally acceptable (for which there is a consensus amongst participants,
- solutions that are relevant worldwide and thus adaptable to other regions
- solutions that can be carried out within timelines appropriate to the length of a project
- sustainable solutions.

We suggest a methodological approach based on deliberative valuation and supported by the software tool called, *AquaDT* that facilitates the process of decision making when adaptive, participatory and multi-level management arrangements have been or are likely to be critical to success.

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