



Web based collaborative decision making in flood risk management

Mariele Evers (1), Adrian Almoradie (1), and Andreja Jonoski (2)

(1) University of Bonn, Geography, Bonn, Germany (mariele.evers@uni-bonn.de), (2) UNESCO-IHE Institute for Higher Education, Delft, The Netherlands

Stakeholder participation in the development of flood risk management (FRM) plans is essential since stakeholders often have a better understanding or knowledge of the potentials and limitation of their local area. Moreover, a participatory approach also creates trust amongst stakeholders, leading to a successful implementation of measures.

Stakeholder participation however has its challenges and potential pitfalls that could lead to its premature termination. Such challenges and pitfalls are the limitation of financial resources, stakeholders' spatial distribution and their interest to participate. Different type of participation in FRM may encounter diverse challenges. These types of participation in FRM can be classified into (1) Information and knowledge sharing (IKS), (2) Consultative participation (CP) or (3) Collaborative decision making (CDM)- the most challenging type of participation.

An innovative approach to address these challenges and potential pitfalls is a web-based mobile or computer-aided environment for stakeholder participation. This enhances the remote interaction between participating entities such as stakeholders.

This paper presents a developed framework and an implementation of CDM web based environment for the Alster catchment (Hamburg, Germany) and Cranbrook catchment (London, UK). The CDM framework consists of two main stages: (1) Collaborative modelling and (2) Participatory decision making. This paper also highlights the stakeholder analyses, modelling approach and application of General Public License (GPL) technologies in developing the web-based environments.

Actual test and evaluation of the environments was through series of stakeholders workshops. The overall results based from stakeholders' evaluation shows that web-based environments can address the challenges and potential pitfalls in stakeholder participation and it enhances participation in flood risk management.

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