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Flood risk management: Experiences from the Scheldt Estuary case study

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There is an increasing awareness that a valid flood risk assessment requires the involvement of the local public living in the area liable to flooding. Indeed, the new EU Flood Directive stipulates that all stakeholders must be given the opportunity to participate actively in the development and updating of flood risk management plans. Designing and achieving a satisfactory level of public participation, however, remains a challenge. Examples of good practice in participatory flood risk management are still scarce and theoretical guidance is developing slowly. One of the key problems concerns accessing and using different types of knowledge in discussions on flood risks between stakeholders, scientists and policy makers. Moreover, flood risk itself forms only one aspect of regional development plans and policies.

The Scheldt Estuary case study of the FLOODsite project was designed first to explore the role of individual perceptions and knowledge in determining the policy preferences of three actor groupings in the region: the scientists, local citizens and regional and local policy makers, and then to explore how new model-based knowledge influences these preferences. Information was gathered initially through semi-structured interviews with local citizens and scientists, followed by a questionnaire and three different workshops with scientists, policy makers and citizens conducted over a four year period. Model-based scenario analysis was used to generate new scientific insights on future flood risks. Additional insights were garnered from reliability analyses of existing flood defences and evacuation simulation studies.

The case study provided valuable insight in differences and commonalities regarding flood risk perceptions among the different actor groupings participating in the study. We found a body of local knowledge regarding the environment of the Scheldt, including a deep acceptance of living with the risk of flooding amongst citizens. We found a lack of local knowledge amongst scientists and some differences between local citizens and scientists with regard to preferences for future risk reduction measures. There was also a marked difference between respondents from Belgium and the Netherlands regarding their expectations of their governments following a flood.

In explaining the observed differences it is of utmost importance to place the flood risk issue in a broader context. Important contextual and causal factors, which are briefly introduced in this paper, include the international character of the Scheldt Estuary, flowing from Belgium to the Netherlands, the role of EU legislation, such as the Habitat Directive, and the historic flood of 1953. This flood played a decisive role in determining the way flood risk has been was managed in the Netherlands over the past 50 years. Although much of this past policy agenda remains valid, we are able to distinguish that other flood risk management concepts are gaining importance in policy discussions. Signs of transition towards a new policy can thus be identified.

Keywords: Flood risk perception, public participation, local knowledge, flood modelling, transition