

Sharing Geographic Information and Technologies for Policy Integration of Spatial Planning and Flood Risk Management

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Abstract

The policy integration of spatial planning (SP) and flood risk management (FRM) is a promising approach to mitigate flooding. The absence of appropriate information base and technological capacity is among the factors impeding this integration. In this paper, we conceptualize a Spatially Integrated Policy Infrastructure (SIPI) which shares not only spatial information but also models and analysis tools for policy integration. The design of SIPI is informed by policy review, pre-design interviews and desktop research. The goals of SIPI are to provide access to flood and planning data and tools for assessing customized scenario input. Functions and components of SIPI which support these goals are then defined and described. They include: (1) data and information, (2) decision support and analysis tools, and (3) access tools. These components enable a two-way consideration of the impact of flooding on human environment and the impact of human activities on flood features such as depth and extent.

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