

## Evaluating the state of flood adaptation in Europe

The adverse impacts of floods are on the rise. Hence, effective adaptation to flood risk is urgently needed. However, defining and quantifying adaptation progress remains challenging. Flood Risk Management Plans (FRMPs), required by the EU Floods Directive (2007/60/EC), are intended to improve and document adaptation progress in Europe. Member States are required to prepare and update these plans every six years in accordance with a common framework for the entire Union. However, a systematic assessment of FRMP quality remains limited, and if there is a correlation between the quality of management plans and flood risk remains unanswered.

This study develops a comparative index of FRMP quality, as a means to evaluate adaptation planning and implementation within the broader effort to quantify adaptation measures effects over space and time. Using directed qualitative content analysis, the FRMPs for the first (2010–2015) and second (2016–2021) reporting cycles are coded, based on six well-established quality principles from literature: fact base, objectives, measures, implementation and governance, monitoring and evaluation, and participation, across three dimensions, including breadth, depth, and expert-judgment. A composite quality index is created for each Member State, and for each of the two reporting cycles. In the next stage we explore links between management plan quality and flood indicators, such as reported flood losses, exposure, and protection standards, to assess whether improvements in planning are associated with reductions in risk.

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