



Applying the Risk-Tandem Framework for Disaster Risk Management and Climate Change Adaptation: Lessons Learnt from the DIRECTED project

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The growing frequency and intensity of climate-related hazards have amplified the urgency of effective disaster risk reduction, yet a persistent implementation gap remains, particularly in translating scientific knowledge into inclusive, locally grounded action. This contribution presents the applied development of the Risk-Tandem Framework within the DIRECTED project, demonstrating how stakeholder-centred governance processes can strengthen the integration of Disaster Risk Management and Climate Change Adaptation.

The Risk-Tandem Framework was operationalised across four Real World Labs, namely the Capital Region of Denmark, Emilia-Romagna (Italy), the Danube Region (Austria and Hungary), and the Rhine-Erft Region (Germany, following four iterative phases - Foundation, Growth, Learn, and Sustain. Central to the application was a refined indicator set, co-developed with local stakeholders, enabling systematic assessment of governance capacities, interoperability challenges, and participation gaps. The framework draws on transdisciplinary foundations, combining institutional analysis, risk governance, and knowledge co-production approaches, and is implemented through qualitative and mixed methods including workshops, interviews, and collaborative design processes.

Results highlight how the Risk-Tandem Framework supports locally led identification of governance bottlenecks (e.g., inter-institutional coordination, stakeholder communication, and access to actionable risk information) and facilitates tailored technical and governance solutions, including interoperable data infrastructures and co-designed communication tools. Across Real-

World Labs, the iterative use of the framework fostered reflection, mutual learning, and capacity development, contributing to more robust and inclusive decision-making.

By moving from a conceptual model to an operational, modular, and context-sensitive process, the Risk-Tandem Framework demonstrates strong potential to address implementation gaps. The findings underscore the value of citizen and stakeholder engagement, interoperability, and sustained learning in advancing transformative, place-based risk governance.

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