

EGU23-15176, updated on 27 Apr 2024

<https://doi.org/10.5194/egusphere-egu23-15176>

EGU General Assembly 2023

© Author(s) 2024. This work is distributed under the Creative Commons Attribution 4.0 License.



## Evaluation of resilience-building interventions according to resilience measurement frameworks: Empirical findings from the Flood Resilience Alliance communities

Jung Hee Hyun<sup>1</sup>, Stefan Velev<sup>1</sup>, Naomi Rubenstein<sup>1</sup>, Magdalena Richter<sup>2</sup>, Dong Kun Lee<sup>3</sup>, and Reinhard Mechler<sup>1</sup>

<sup>1</sup>International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

<sup>2</sup>Concern Worldwide, Dublin, Ireland

<sup>3</sup>Seoul National University, Department of Landscape Architecture and Rural Systems Engineering, Seoul, South Korea

The Flood Resilience Measurement for Communities (FRMC) framework and tool was developed with the aim to measure community level resilience to flooding in a reliable and useful way when “no general measurement framework for disaster resilience had been empirically verified yet.” (Winderl, 2014) Since its inception in 2013, the framework and tool has been implemented in more than 226 flood prone communities across the world and has been used as an evaluation metric to measure progress and helps to identify the possible areas for intervention. Discussing the results of the FRMC with the community can ideally empower them to take ownership of their flood resilience path by identifying goals and actions.

This study uses an inventory of more than 140 unique interventions implemented in the Flood Resilience Alliance communities to assess whether the FRMC was indeed informative in selecting and evaluating resilience-building interventions. We first conduct a ground truthing analysis of whether interventions correspond to each communities’ needs (lower grades of different sources of resilience). We further align and cross-check our empirical findings to field interview results. Second, we assess FRMC’s applicability to measure interventions using correlation analysis and applying scenario analysis to project flood resilience paths. Our study will contribute to developing resilience measurement frameworks that intentionally provide self-assessment information for decision-making.