



Unlocking Global Insights: Opportunities for Multi-Hazard Risk Management from a Unique Empirical Database

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The past decade has seen significant advancements in understanding multi-hazards and their associated risks, particularly in identifying interrelationships between different hazards. However, the effective management of multi-hazard risks and understanding of its challenges remains underexplored. This gap in understanding is partly due to the relative novelty of the topic and the scarcity of detailed case studies on past multi-hazard events. To address this gap, this work presents the first global database of past multi-hazard events, comprising 57 in-depth cases contributed by over 150 experts worldwide. The database includes compound, concurrent, and consecutive events spanning meteorological, hydrological, geological, environmental, and biological hazards. It provides detailed descriptions of the physical characteristics of the events, examines changes in exposure and vulnerability during multi-hazard scenarios, analyzes the synergies and trade-offs of implemented risk reduction measures, and identifies both bottlenecks and good practices in multi-hazard risk management based on past experiences. This presentation will synthesize key insights from the database and explore how it can be utilized by researchers, practitioners, and decision-makers to further integrate multi-hazard risk management into practice.