

Background

- Quantitative risk analysis
- Technical resilience
- Cascading effects modelling for extreme physical events

Objects

- Development of a transdisciplinary, multi-scale modelling approach for disaster forecasting and preparedness

Expectation from a future partner

Quantitative **modelling approaches** for a broad spectrum of disaster-influencing factors **in geophysical sciences, sociology, mathematics**

Seeds and Needs

- The severity of any disaster depends on a multitude of interdependent factors, each of which can be described in analytical models (climate models, demographic models, supply chain models, etc.)
- To provide a straight-forward answer to a question like, “how well are we prepared for a natural or man-made disaster in 5-10 years time?” is nearly impossible, due to the different geospatial and temporal scales, uncertainties, and qualities of the individual models
- What is needed is a new transdisciplinary modelling approach that combines the individual models with the goal to produce a quantified metric for disaster preparedness to support the decision-making process for efficient mitigation measures.
- Fraunhofer EMI is looking for partners as well as interested funding entities
 - Partners should supplement EMI’s strong background in physical sciences and engineering