‚Costs of Natural Hazards': Modelling direct economic costs

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Poster-
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CONHAZ
Costs of Natural Hazards

Objective

The EU-project ConHaz has the objective to compile and systemise methods, data sources and terminology for the assessment of costs due to natural hazards. Similarities and differences between the approaches concerning droughts, floods, coastal hazards and alpine hazards will be identified. Recommendations for best practice of cost assessments will be given and research needs identified.
This poster focuses on direct economic costs, which have a great importance for risk management. Besides, direct costs are considered a good indicator for the severity of natural hazards and are used by some approaches to estimate indirect damages.

Project

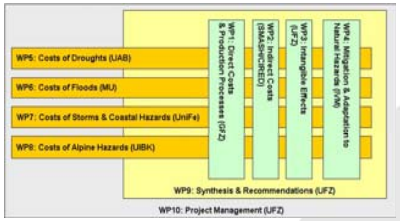


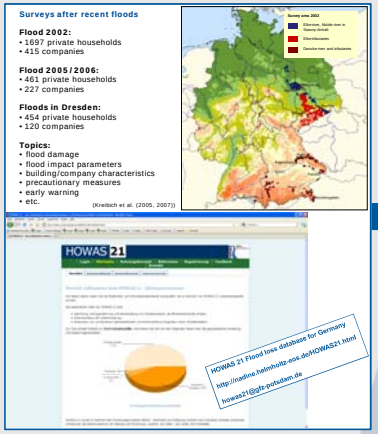
Figure 1 ConHaz structure and partners: German Research Centre for Geosciences (GFZ); Société de Mathématique Appliquée aux Sciences Sociales (SMASH-CIRED); Helmholtz Centre for Environmental Research (UFZ); Vrije Universiteit Amsterdam (VM); Universitat Autònoma de Barcelona (UAB); Middlesex University (MU); University of Ferrara (UniFe); University of Innsbruck (UIBK).

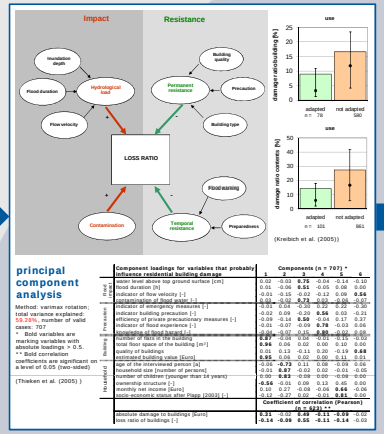
Preliminary findings – knowledge gaps

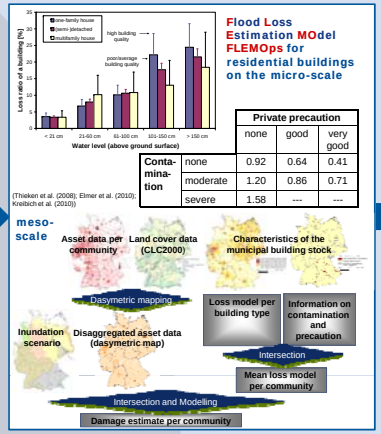
- There is no common terminology used across various hazards. This makes it difficult to compare cost assessments.
- The lack of reliable, consistent and publicly available data has been continuously identified as a major obstacle to develop, improve and validate methods for direct cost assessments.
- Many damage-influencing parameters are hardly reflected by current models.
- The quantitative individual and combined effect of damage influencing parameters on damages is largely unknown.
- The fact that resistance factors, such as the level of precautionary measures, are rarely taken into account by current cost assessment methods hampers the evaluation and development of effective adaptation strategies.
- Validations and uncertainty analysis of damage models are hardly performed.

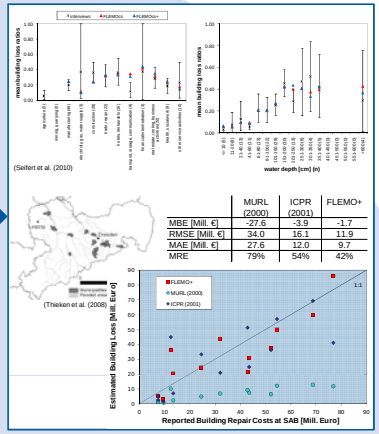
Preliminary recommendations for damage model improvement for different hazards

Example: Flood damage modelling in Germany









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