Geophysical Research Abstracts
Vol. 17, EGU2015-1674, 2015
EGU General Assembly 2015

How useful are Swiss flood insurance data for flood vulnerability assessments?

Veronika Röthlisberger (1), Daniel Bernet (1), Andreas Zischg (1), and Margreth Keiler (2)

(1) University of Bern, Oeschger Centre for Climate Change Research and Institute of Geography, Mobiliar Lab for Natural Risks, Bern, Switzerland (veronika.roethlisberger@giub.unibe.ch), (2) University of Bern, Institute of Geography, Bern, Switzerland

The databases of Swiss flood insurance companies build a valuable but to date rarely used source of information on physical flood vulnerability. Detailed insights into the Swiss flood insurance system are crucial for using the full potential of the different databases for research on flood vulnerability.
Insurance against floods in Switzerland is a federal system, the modalities are manly regulated on cantonal level. However there are some common principles that apply throughout Switzerland. First of all coverage against floods (and other particular natural hazards) is an integral part of every fire insurance policy for buildings or contents. This coupling of insurance as well as the statutory obligation to insure buildings in most of the cantons and movables in some of the cantons lead to a very high penetration. Second, in case of damage, the reinstatement costs (value as new) are compensated and third there are no (or little) deductible and co-pay. High penetration and the fact that the compensations represent a large share of the direct, tangible losses of the individual policy holders make the databases of the flood insurance companies a comprehensive and therefore valuable data source for flood vulnerability research.
Insurance companies not only store electronically data about losses (typically date, amount of claims payment, cause of damage, identity of the insured object or policyholder) but also about insured objects. For insured objects the (insured) value and the details on the policy and its holder are the main feature to record. On buildings the insurance companies usually computerize additional information such as location, volume, year of construction or purpose of use. For the 19 (of total 26) cantons with a cantonal monopoly insurer the data of these insurance establishments have the additional value to represent (almost) the entire building stock of the respective canton.
Spatial referenced insurance data can be used for many aspects of vulnerability and resilience assessments. For instance, the collation of insurance loss data with event documentations containing information on flood intensity allows to develop damage curves. Flood damage curves are fundamental for many risk analysis methodologies but to date only few are published and the spatial and temporal scope of their applicability is subject of discussion. Another possibility of using insurance data lies in the field of assessment exposure, where the analysis of comprehensive insurance portfolio data can improve the understanding of the physical but also the socio-economical vulnerability of a society. The poster spotlights key opportunities and challenges scientists are facing when using insurance data for flood vulnerability assessments.