

How costly are natural hazards?

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Flood in Meissen, April 2006. Credit: U.Herrmann, GFZ

Costs of natural hazards are at historically high levels, and show an increasing trend. Cost assessments of natural hazards often only cover direct costs and even these are assumed to be at least 50% higher than international assessments report. However, besides direct damage, also indirect damage is relevant. For example, the Thailand flood in 2011 shut down scores of factories and damaged global car manufacturing and

electronics industries. But, an improved precaution requires better understanding of the total costs, which comprise besides damage also risk mitigation costs. Only like that an efficient risk management of natural hazards can be achieved.

An international group of scientists led by Heidi Kreibich (German Research Centre for Geosciences GFZ) has now for the first time suggested an integrated cost assessment in [risk management](#). In the current issue of "nature climate change" the group drafts the new cost assessment cycle.

"Cost-benefit analyses that exclude certain cost categories lead to sub-optimal decisions," Heidi Kreibich explains the approach, "The cost assessment cycle involves the continuous monitoring of [costs](#) associated with [natural hazards](#) risk management, thus enabling the early detection of inefficient risk mitigation strategies." A close link between the cost assessment cycle and the risk management cycle lead to an improved assessment of the real costs and as such to a stable basis for an improved decision making in risk management.

The possibility to make better, more efficient decisions for natural hazard risk management will gain even more importance in view of global environmental change.

More information: H. Kreibich et al. "Costing natural hazards", *Nature Climate Change*, Vol.4, 25.04.2014, pp. 303, [DOI: 10.1038/nclimate2182](#)

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