



Comparative analyses of detailed paired-event-studies for attributing flood risk changes

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Commonly, flood impact attribution studies are based on rather coarse data focused at large scales, where exposure and vulnerability that influence risk can only be roughly accounted for over time. To make progress in attributing changes in flood impacts it seems reasonable to undertake more detailed, local to regional analyses, i.e. considering various hazard, exposure and vulnerability aspects, as well as the broader context, including risk management and specificities of the affected location.

Thus, a complementary approach is suggested, i.e. to collect a large number of one or multiple paired event case studies from different hydro-climatic and socioeconomic settings around the world, undertake detailed analyses of changes in impacts and drivers, and carry out a comparative analysis (for an example see Kreibich et al. 2017). The approach is analogous to the concept of 'paired-catchment studies'. Advantages of this approach are that it allows detailed context and location specific assessments due to the paired event case study analyses and reveals general, transferable conclusions due to the comparative analysis of various case studies. Additionally, it is quite flexible in terms of data. I hope to motivate a broader international initiative to collect and analyse a large number of paired event studies, for example, in the framework of the IAHS Panta Rhei initiative.

Reference:

Kreibich, H., Di Baldassarre, G., Vorogushyn, S., Aerts, J. C. J. H., Apel, H., Aronica, G. T., Arnbjerg-Nielsen, K., Bouwer, L. M., Bubeck, P., Caloiero, T., Do, T. C., Cortès, M., Gain, A. K., Giampá, V., Kuhlicke, C., Kundzewicz, Z. W., Llasat, M. C., Mård, J., Matczak, P., Mazzoleni, M., Molinari, D., Nguyen, D., Petrucci, O., Schröter, K., Slager, K., Thielen, A. H., Ward, P. J., Merz, B. (2017): Adaptation to flood risk - results of international paired flood event studies. - *Earth's Future*, 5, 10, pp. 953-965. DOI: <http://doi.org/10.1002/2017EF000606>