



What approaches and data are needed to better understand trends in drought and flood impacts?

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Impacts due to droughts and floods are high. The observed increasing trend of flood impacts is mainly determined by exposure increase, while an effect of change in hazard due to anthropogenic climate change has hardly been observed to date. However, the climate signal might be masked by a counteracting decrease in vulnerability due to effective risk management and other formal measures like land use planning. A decrease in drought impacts cannot be detected, even though a decrease of vulnerability to drought might be expected, due to technical development and implemented risk reduction strategies. On the other hand, vulnerability to droughts may have increased because societies have become more dependent on water, grow more risky crops, etc. Many factors and processes influence vulnerability to droughts and floods, and detailed knowledge about temporal trends in vulnerability and impacts are largely lacking.

With this presentation, we aim to raise awareness and encourage a more in-depth exchange between drought and flood experts about attribution of impact changes based on historic assessments, with a view to project future changes in risk. We will present an overview of expected main drivers of impact changes and discuss how these could be monitored. We argue that the main obstacles to scientific advancement in this area is a lack of common concepts and approaches as well as of detailed, consistent time series of hazard, exposure, vulnerability and impact data. We present an overview of available impact information, discuss their advantages and disadvantages, and propose which types of data are needed for making progress in attributing temporal changes of impacts. With this presentation we hope to trigger further discussion and activities of drought and flood experts to jointly advance our knowledge about past and future trends in vulnerability and impacts.