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How to ensure that the results of climate risk analysis make a difference? - Experience from applied research addressing the challenges of climate change

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Changing climate conditions may have beneficial or adverse effects on the social-ecological systems we are living in. In any case, the possible effects result from complex and interlinked physical and social processes embedded in these systems. Traditional research addresses these bio-physical and societal issues in a separate way. Therefore, in general, studies on risks related to climate change are still mono-disciplinary in nature with an increasing amount of work following a multi-disciplinary approach. The quality and usefulness of the results of such research for policy or decision making in practice may further be limited by study designs that do not acknowledge appropriately the significance of integrating or at least mixing qualitative and quantitative information and knowledge. Finally, the acceptance of study results – particularly when containing some kind of assessments - is often endangered by insufficient and / or late involvement of stakeholders and users.

The above mentioned limitations have often been brought up in the recent past. However, despite that a certain consensus could be achieved in the last years recognising the need to tackle these issues, little progress has been made in terms of implementation within the context of (research) studies. This paper elaborates in detail on reasons that hamper the application of
- interdisciplinary (i.e. natural and social science),
- trans-disciplinary (i.e. co-production of knowledge) and
- integrative (i.e. combining qualitative and quantitative approaches)
work. It is based on the experience gained through a number of applied climate change vulnerability studies carried out within the context of various GIZ-financed development cooperation projects, a consultancy project for the German Environment Agency as well as the workshop series INQUIMUS, which tackles particularly the issues of mixing qualitative and quantitative research approaches. Potentials and constraints of possible attempts for solutions to solve the existing limitations are discussed. Conclusions drawn underline the importance to involve stakeholders from the very beginning (i.e. the study design) and to communicate the various uncertainties (at the levels of data and methodologies) as well as the subjective components of the study (i.e. for the value system of the assessment) in a transparent way. It is also stated that truly interdisciplinary approaches – though often demanded by programs and research managers – is yet to be supported by breaking-up traditional structures in research institutions and administrative departments.