



## **Disaster resilience assessment and the global agenda: A journey from India to South America**

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Governments and stakeholders worldwide are placing great emphasis on fostering the resilience of communities to natural hazards and disasters. This is partially because communities that can increase their resilience are in a better position to withstand the adverse effects of damaging hazard events when they occur. With disaster risk reduction having emerged as a global challenge, the Sendai Framework for Disaster Risk Reduction 2015-2030 has recognised the need to invest in enhancing disaster resilience as a priority on the international agenda. In order to successfully build community resilience to natural hazards, it then becomes essential to first understand, identify and assess all sets of conditions that contribute to resilience. The ability to measure resilience is increasingly being identified as a key step towards disaster risk reduction as a result. Relatively few studies, however, have been conducted to develop guidelines for measuring the concept, and more research is needed to develop effective tools for assessment of resilience in developing countries. This is because various environmental, built-environment, and social factors will operate and interact differentially across disaster and development contexts. This paper presents preliminary findings from two large projects in which the authors have been involved, namely the 'Enhancing Natural Hazards resilience in South America' (ENHANS) and 'Deltas, Vulnerability & Climate Change: Migration & Adaptation' (DECCMA) projects. In collaboration with the Global Earthquake Model (GEM), the Understanding and Managing Extremes (UME) School of the Institute for Advanced Study (IUSS) of Pavia and the University of Southampton, UNESCO is working on the development of methods for disaster resilience measurement in developing nations. The studies build on the available literature to provide an ad-hoc conceptual framework for the quantification of community resilience in each study site by means of a bottom-up, indicator-based approach with direct stakeholder engagement. Here, a model is being developed to explore the interactions between different social, economic, environmental and technical drivers of resilience, with the ultimate goal of evaluating how community resilience is reinforced or weakened under different contexts to inform decision making for policy and planning. Case studies are being conducted in the Mahanadi delta, India as part of DECCMA and in four countries of South America (Ecuador, Chile, Peru and Uruguay) as part of ENHANS.