Measuring Community Resilience on Disaster Risk Management: River Flooded Settlement Areas in Nepal

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Abstract: Considerable research efforts have been made in defining community resilience including those in the hazard/disasters. While the concept of resilience always concerns about the ability of a social system to respond and recover from disaster, it requires the social system within community to be dynamic as much as possible to re-organise, change and learning in response to a threat due to the disaster. However, the challenges remain to measure those factors/ indicators that directly relate to the land and people into such dynamic social system. After the disaster due to the flooding, the people in the community often become landless, and they also become unable to claim their land ownership, because the land boundaries are no longer visible or land are unusable. In such situation, most vulnerable people are those who depend upon land with insecure land rights, and they do not have abilities to re-organise, change or even learn themselves to the threat for their livelihood.

The purpose of this paper is to come up with a reliable approach for measuring community resilience in dynamic social system and consists of three folds. Firstly it discusses issues related to the community resilience within the broader view of the dynamic social system, and it highlights the resilient factors/indicators that enhance the ability of community for resisting the effects of flood disasters and recovering the livelihood of victims. Secondly the paper presents qualitative approach to measure those factors/indicators using the household survey and spatial analysis in combination of Remote Sensing high-resolution images. Field study is conducted in the vicinity of a river in Chitwan District of Nepal. Lastly we analyze and present the results in details.

This paper finally reveals the approach should include the responsible organizations for increasing the disaster resilience of the community within dynamic social system in Nepal, improving land tenure security in the broader context by bringing land policy into implementation, and interaction among the organizations involved complementing the DRM activities by sharing timely relevant data.