

Flood Disaster Impacts and Responses in Nepal Tarai's Marginalised Basins

Location: Nawalparasi and Rautahat Districts, Nepal

Date: May 2007

Sector focus: Flood related disasters

Spatial focus: Village in the Northern Gangetic plains

Organization

The Institute for Environmental and Social Transition (ISET) in Nepal is a registered NGO in Nepal. Although legally an independent organization, ISET-Nepal is also an extension of ISET. By linking together the two organizations, they bring together synergies that exist between resources and capabilities available to both, and share a commitment to environmentally sustainable development and poverty alleviation. Wherever possible, ISET and ISET-Nepal collaborate closely on the development and implementation of joint programs and projects.

Bibliographical details

Dixit A. et. al., *Flood Disaster Impact and Responses in Nepal Tarai's Marginalised Basins*, in: *Working with the Winds of Change. Towards Strategies for Responding to the Risks Associated with Climate Change and other Hazards*. M.Moench, Dixit, A, (eds), ProVention Consortium, Institute for Social and Environmental Transition-International and Institute for Social and Environmental Transition-Nepal, second edition, Kathmandu, 2007, chapter 6, pp. 119 -157. Case study can be downloaded from: (http://www.proventionconsortium.org/themes/default/pdfs/winds_of_change.pdf)

Language availability

This publication is available in English.

Abstract

The Gangetic plain is home to the poorest of the world. Their impoverished living conditions are often attributed to regular floods and drought-like conditions. Flash floods, inundation for prolonged periods, bank cutting and sand-casting devastate life, livelihoods and property for the already poor, especially within marginalized river basins. Each disaster makes the poor more vulnerable to the next and, consequently, each single disaster is converted into a series of disasters. The problem of flooding is exacerbated by built systems including flood control embankments and urbanization

which constrains natural drainage. Communities have experienced increasing intensities of rainfall often at unexpected times, especially in the last few decades.

This paper presents preliminary findings of a program in the Nepal Tarai on disaster risk reduction and adaptation to climate change. The study includes pilot testing some of the strategies identified in all four sites within the Bagmati and Rohini River basins. Adaptive strategies for four communities in these two river basins have been drawn using a number of tools. These are segregated as adaptation specific interventions and underlying systems for adaptation.

Intended users

This publication is intended for **humanitarian aid workers, risk researchers.**

Background and context of country, location and project

- The eastern Tarai political unrest has intensified despite a peace accord between the parties to end a decade-long insurgency. Protests - mostly violent, unexpected and continuous strikes have affected accessibility to the communities and delayed visits to communities since January 2007. In the third week of March, about 30 people were beaten to death in Gaur alone, the district headquarters of Rautahat. Brahmapuri, one of our study sites, is situated 5 kilometers east of Gaur.
- Frequent shifting of rivers has caused homes to be permanently displaced in Bhasedwa and Brahmapuri village development communities (VDCs) in the last two decades. In Devgaun and Rampur Khadauna VDCs, displacement of families is temporary. People take shelter at their relatives or in public buildings such as schools during periods of high floods.
- Prior recovery attempts in all four VDCs were mostly limited to distributing petty relief materials such as food and blankets. In some VDCs, organizations such as the Nepal Red Cross Society, Oxfam GB and a couple of local NGOs have initiated works such as group formation, distribution of information kits, some communication equipment, wooden boats and construction of small shelters.
- Construction of physical infrastructure such as canals, roads, railways and efforts in “taming” rivers has had negative consequences. Structures, built along the Indian border, have in many instances been related to the cause of flooding. People commute long distances in search of daily labor.

Technical description

Hazard/risk type: Flooding

Type of assessment: Research to understand the factors that constrain and enable local communities to reduce risk and adapt to climatic and other sources of vulnerability.

CRA process

For the current adaptation/DRR pilot phase, the selection of VDCs was based on the following criteria:

- Presence of a partner organization
- Incidence of human induced flood hazards and
- Characteristics of the rivers

On the basis of the above criteria, four VDCs, two in each river basin were selected, Rampur Khaduana and Devgaun in Rohini Basin, and Bhasedwa and Brahmapuri in Bagmati Basin. A vulnerability assessment was conducted by doing household surveys, and holding shared learning dialogues. Tools used include doing a reconnaissance visit (direct observation), transect walk, social (community) map, topographical map, hazard map, vulnerability map, timeline recording, key informant interviews, meetings, and ranking.

Notes on Methods and Tools

Key Insights Generated for Vulnerability Reduction & Capacity Enhancement:

- In all four project sites, poor access to information and gender issues emerged as the major factors contributing to vulnerability. Information refers to policies, news, radio, knowledge about relief activities, information on floods/rainfall and knowledge of selling price for local produce in nearby towns.
- Women, particularly pregnant women, lactating mothers, women who have recently given birth, elderly women and menstruating women are more vulnerable. The disabled are also vulnerable.
- Spontaneous measures of adaptation have been observed, such as building flat roof houses, two-story houses and houses on raised plinths. Those livelihoods not likely to be much affected by inundation or flooding are increasingly pursued. One example is the increasing preference for water buffaloes over cows and ducks over goats. Young men migrate in search of alternative livelihoods.
- Adaptive strategies can be categorized into climate adaptive interventions and underlying systems of adaptation.

Lessons learned

The study has provided three main lessons.

First, in the last 50 years there has been reliance on the structural or macro or engineering approach to mitigate flood damage. The concerns of affected individuals, families and communities have not been systematically woven into decision- and policy-making. Government policies have not contributed to building resilience for coping with floods.

Second, cooperative efforts of the governments of the region have been technologically guided in a project-centric mode. Despite repeated references to flooding and the need for its mitigation in public discussions, cooperative efforts have not aimed at building institutions for mitigation.

Third, institutional dysfunction is widespread as state agencies fail to innovate in effective responses to flood disasters.

Finally, it was also found that disasters can be used as opportunities for creating new avenues to allow vulnerable groups to reduce their vulnerability.

Key words

Floods, Marginal Rivers, Disaster Risk Reduction, Climate Adaptation, Nepal Tarai, North Gangetic Plains.

Resource people

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The ProVention Consortium contracted Dr. Ben Wisner and Stephanie Bouris to author this guidance note.

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