Pakistan

Herders of Chitral
The Lost Messengers?
Local Knowledge on Disaster Preparedness in Chitral District, Pakistan

Location: Chitral, Pakistan

Date: October-November 2006

Sector focus: Floods

Spatial focus: Mountain villages in Chitral, northwestern Pakistan

Organization

The International Centre for Integrated Mountain Development (ICIMOD) is an independent 'Mountain Learning and Knowledge Centre' serving the eight countries of the Hindu Kush-Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and the global mountain community. Founded in 1983, ICIMOD is based in Kathmandu, Nepal, and brings together a partnership of regional member countries, partner institutions, and donors with a commitment for development action to secure a better future for the people and environment of the extended Himalayan region.

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Bibliographical details

Dekens, Julie. *Herders of Chitral The Lost Messengers? Local Knowledge on Disaster Preparedness in Chitral District*, Pakistan ICIMOD, Kathmandu, Nepal (2007)

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Language availability

This publication is available in English.

Abstract

The mountain ranges of the Himalayan region are young, unstable in geology, have steep slopes, and a climate that is difficult to predict. The region is highly susceptible to natural hazards such as floods, flash floods, landslides, and earthquakes. The deep narrow valleys and glaciated mountains ranges of Chitral District, Pakistan, were historically likely effective protection against invaders, however today, the geomorphologic and climatic processes are probably the major enemies for the growing population. The river plains are susceptible to recurrent floods and are precarious locations for human and livestock settlement.

The title of this case study questions if the herders of Chitral are the lost messengers of traditional and local knowledge. Historically, the priorities of the Chitral people revolved around water harvesting, hunting, grazing land and fodder and the herders acted as an informal early warning system to flash floods. Nowadays, the scouts and districts are using technology to establish early warning systems, however these systems are not yet fully functional. This case study looks at the importance of valuing local knowledge be it from the physical landscape, religious leaders, elders, and community members themselves. It looks at the combinations of factors including historical, environmental, socioeconomic, demographic, institutional, technological and political that influence the community's knowledge and practices in relation to natural hazard preparedness.

Intended users

This case study can help **practitioners** to build confidence by providing methodological guidance on how to integrate local knowledge into disaster preparedness activities. The intention is that by improving understanding of local communities, this will help both **national and international organizations, governments, and non-government organizations** empower the communities they serve.

Background and context of country, location and project

Pakistan is bordered by Afghanistan, Iran, India and China and has the world's sixth largest population. Pakistan has witnessed invasions and settlement by the Persians, Greeks, Arabs, Turks, Afghans and the Mongols. It was a part of British India until 1947, when the Pakistan Movement for a State for Muslims and the Muslim League resulted in the independence and the creation of the state of Pakistan from the provinces. The country adopted its constitution in 1956, however military rule, deposed leaders and political instability have plagued its independence. In 1971, civil war resulted in East Pakistan establishing independence as Bangladesh. Pakistan experiences monsoon, flooding, drought and earthquakes.

The name Chitral can be translated as "field" and is found in the northwest of Pakistan at the foot of the highest mountains in the Hindu Kush range. Chitral remains closed to the rest of Pakistan for about six months of the year because the winter snow can reach as much as several meters deep and the temperatures plunge to –15'C. Land scarcity and water access often compel the Chitral people to stay close to the streams and glaciers. With the growing population, land fragmentation reduces people's options and their flexibility to choose safe locations and to resettle during the rainy season. In some cases, people used to live in safe places but the local rulers confiscated their land. They were resettled in a vulnerable place and/or they simply lost part of the land upon which they used to fall back during the rainy season. Stories about land resettlement during the times of former local rulers, or currently following construction of infrastructure (e.g., hydropower stations), are common in the region.

Kalash elders have witnessed at least one or more major earthquakes however they are not concerned about the threat. Traditional houses are built combining wood, stones and clay and are resilient to seismic activity. This is changing however as deforestation is making access to wood significantly more difficult and many modern houses are no longer built with wood. The deforestation, largely due to overgrazing by goats, contributes to the serious hazard of flash floods. The community experienced a flood disaster in 1978 that destroyed houses and livelihoods. Based

on this experience and the local knowledge of a flood 100 years before, in 2006 the community twice warned an engineering company to relocate their camp since it was on the flood plane. The company did not heed to the local knowledge, and a foreign engineer lost his life to a flash flood on July 14th, 2006, which also destroyed millions of rupees worth of equipment.

Technical description

Hazard/risk type: Flash floods,

Type of assessment: Participatory Rapid Assessment

CRA process

Eleven villages in Chitral District were selected following a one-day workshop organised in collaboration with the Aga Khan Rural Support Programme and following discussions with key informants in the field. Semi-structured interviews, group discussion, key informant interviews, direct observation, transect walk and oral history were conducted in each village and focused on both community and household preparedness strategies during the rainy season.

Data collection according to this publication involves four major steps: 1) understanding the nature of local knowledge; 2) understanding how local knowledge is being (or not being) produced, used, transmitted, and adapted; 3) understanding the four pillars of local knowledge on disaster preparedness; and 4) understanding the wider context, that is the linkages between local knowledge, disaster management, sustainable livelihoods, and poverty reduction. The researchers developed a framework for local knowledge on disaster preparedness which relates to four major dimensions of knowledge: observation, anticipation, adjustment, and communication.

Vulnerability analysis: vulnerability is defined as “the condition determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.”

Capacity analysis: The people of Chitral have knowledge about the history and nature of flash floods in their own locality which has been past from one location to another, and from one generation to another. This has been achieved through folklore, songs, proverbs, and traditional ceremonies which serve as repositories of collective and family memories of past events. Similarly, local religion, key leaders and elders often have key knowledge about hazards and historical events. One such example is cited in the publication as many Kalash elders have witnessed at least one or more major earthquakes however they are not concerned about their threat. Traditional houses are built combining wood, stones and clay and are resilient to seismic activity.

The case study also talks about how livelihood diversification has been a key coping mechanism for facing the environmental conditions, physical isolation, natural hazards and economic hardship.

Notes on Methods and Tools

The publication does not cover how to use the information collected, only to facilitate understanding about local knowledge on disaster preparedness.

Lessons learned

According to the publication, the people of Chitral have been able to reduce human losses from flash floods as well as the economic, environmental, social, and psychological impacts of flash floods, based on daily observation of their local surroundings, experience of past and recurrent flash floods,

and the internalisation of some practices over generations. Local knowledge and practices on flood preparedness that are particularly vivid in Chitral include the following:

- Interpretation of their landscape and the indicators of past flash floods such as the past location of streams or floods by looking at the shape and nature of the slopes and the location of rocks
- Identification and monitoring of early warning signals of flash floods based on environmental indicators, weather predictions and interpretations, specific smells and sounds, location and types of rain, and the unusual appearance and movement of wildlife
- Evaluation of time thresholds concerning when to run out (or stay) and move key belongings or take emergency measures during the rainy season such as staying awake, sleeping with shoes on, or having a 'go-bag' ready
- Development of technical, structural, and non-structural strategies to accommodate their lives in the longer term such as house construction, developing social support systems, informal rules for the sustainable use of forests, and livelihood diversification strategies.

Key words

Floods, indigenous knowledge on disaster preparedness, oral history, mitigation and adaptation

Cross references to other CRA Toolkit case studies (optional)

Julie Dekens, *The Snake and the River Don't Run Straight: Local knowledge on disaster preparedness in the Eastern Terai of Nepal*. ICIMOD, Kathmandu, Nepal (2007)

Khan, F. and Mustafa, D. (2007), *Navigating the Contours of the Pakistani Hazardscapes: Disaster Experience versus Policy* in Moench, M. and Dixit, A. (2007) 'Working with the Winds of Change: Towards strategies for responding to the risks associated with climate change and other hazards" ProVention Consortium, Institute for Social and Environmental Transition-International and Institute for Social and Environmental Transition-Nepal. Kathmandu, Nepal, second edition.

Resource people

Julie Dekens, jdekens@icimod.org, Mats G. Eriksson (Series Coordinator), Greta M. Rana (Consultant Editor), A. Beatrice Murray (Senior Editor), Dharma R. Maharjan (Technical Support and Layout Design)

Author of Explanatory Note

The ProVention Consortium contracted Stephanie Bouris to author this explanatory note.

Contact: cra@ifrc.org