

## **Community Response to Climatic Hazards in Northern Pakistan**

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# Community Response to Climatic Hazards in Northern Pakistan

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Chitral is a landlocked and mountainous region of northern Pakistan located in the Hindu Kush mountains, with a total population of around 400,000 in 50,000 households. The inhabitants of Chitral face a variety of problems associated with climatic hazards throughout the year, such as heavy snowfall in winter, flash floods in summer, glacial outbursts, soil erosion, landslides, occasional earthquakes, and subsequent outbreaks of disease. In such a fragile envi-

ronment, the collective action of local communities through grassroots institutions—Village and Women's Organizations (V/WOs) and the second generation of these institutions, Local Support Organizations (LSOs)—has been instrumental in effectively tackling these problems. LSOs play the role of a laboratory for engagement by civil society and developing institutional mechanisms to address development challenges, including natural hazards and disasters in the area.

## Recent climatic hazards in Chitral, northern Pakistan

In October 2004, Chitral was hit by an unexpected and untimely snowfall (Figure 1), which left unprecedented destruction in its wake, including loss of human life. October in Chitral is normally the driest month of the year. But this time, severe precipitation began on 8 October and continued for about 40 hours, resulting in heavy snowfall throughout the entire district—an unheard-of record in the history of Chitral. The two land route exits to Chitral were suddenly blocked due to this freak snowfall.

**FIGURE 1** Heavy snowfall in the driest time of the year in Chitral, northern Pakistan, often poses major problems for the population, even leading to loss of human life. (Photo by Miraj-ul-Haq; Booni, Chitral)



This caused food insecurity in the coming months. Indeed, no food had been stored by wholesalers in Chitral market, as this would not have been necessary in normal times. All 32 valleys in Chitral were cut off and some remained blocked for about 5 months. Roads, irrigation channels, and micro-hydropower stations in the valleys constructed by the local communities with financial and technical assistance from the Aga Khan Rural Support Programme (AKRSP) were badly damaged. Altogether, 9 human lives were lost and around 1000 head of livestock (mostly small animals) on high pastures in different valleys were killed. In dual cropping areas, standing crops of maize and paddy rice were completely damaged and fruit crops, including ripe grapes and apples, were also ruined. In single crop areas, the communities were left with no food at all, as their only crop had either just been harvested but not threshed and stored, or not harvested at all, depending on the altitude.

Communities in these remote areas store grain for use in the winter; when they lose crops, they face food shortages in subsequent months. These areas are already affected by food shortage: harvested yields last only for about 9 months, leaving a deficit of around 3 months per year, which inhabitants make up for by purchasing food from the market with cash. Cash income is earned from the sale of fruit (apples, walnuts, pears, etc). Grain deficits and the inability to purchase food for cash constitute the worst-case scenario of vulnerability for these mountain communities.

The unanticipated rain and snowfall of October 2004 was not a one-off event; it was followed by more frequent and heavy

snowfall in the winter of 2005. The valley roads remained blocked for almost 3 months and shortages of food, fuel, and fodder, with consequent huge increases in the prices of these items, were reported to be major problems.

The very frequent and unexpected heavy snowfall in 2004 had an additional destructive impact: flash floods hit almost all the valleys of Chitral during the summer of 2005. Flash floods in the valleys completely destroyed roads (Figure 2) and washed away cultivable land, standing crops, fruit trees, and forests. Once again there were human, livestock, and property losses; bridges collapsed and schools, shops, and houses were washed away.

Snowfall followed by flash floods occurred again in 2006. In April 2007 there was another unusually heavy snowfall in Chitral, which resulted in blockage of almost all the valleys of Chitral. But most importantly, there were snow avalanches in various valleys. One whole village was washed away by an avalanche, killing around 40 people, including women and children. In another valley, an avalanche hit 10 households with a loss of 12 human lives. Hundreds of animals and property worth millions of rupees were destroyed overnight. In addition, 2 glacial outbursts occurred in 2 different villages in upper Chitral—one in the village of Brep in 2005 (Figure 3), and another more recently in the village of Sonoghur (June 2007)—leading to the displacement of 100 families and destroying valuable cultivable land and other property in both villages.

### Local institutional mechanisms: civil society's coping strategies

The situations and events mentioned above show the extent of the vulnerability to which mountain communities in areas like Chitral are exposed. Decades of efforts to help mountain people improve their living standards through diversification of livelihood options can be completely undone by natural disasters in a few hours. But the local communities in Chitral are aware that waiting for public institutions to address emergency situations in such fragile and vulnerable areas might mean that help comes too late.



These mountain communities have been mobilized and organized by the Aga Khan Rural Support Programme (AKRSP) during the last 2 decades. The organized communities come together in village-based institutions—the Village Organizations (VOs or men's organizations) and the Women's Organizations (WOs) to formulate village-level plans, prepare for emergency situations such as those described above, and respond to emergencies at the right time. FOCUS Humanitarian Assistance—a specialized agency—has been working with the VOs and WO on awareness and emergency response to natural disasters in the area.

When the above-mentioned disasters occurred in Chitral, organized communities in some of the valleys made a well-prepared and well-informed response to the situation. Emergency aid, tents, blankets, and food were available. This proactive planning by FOCUS and preparation on the part of the communities went unnoticed a few years ago, but local government authorities were amazed to discover the communities' response when these emergency situations occurred during

**FIGURE 2** Heavy snowfall in winter causes rising rivers and floods in summer, which wash away the roads to the valleys in Chitral. Local inhabitants, especially women, are the major victims as they travel to and from the valleys. (Photo by Sherzad Ali Hyder, AKRSP, Chitral)

**FIGURE 3** The natural environment in the Hindu Kush region is so fragile that glacier lakes sometimes burst, leading to destruction of the built environment and natural resources downstream. (Photo by Sherzad Ali Hyder, AKRSP, Chitral)



2004 to 2007. The local government then realized that engaging local communities in preparedness is a sustainable way of addressing developmental challenges in fragile mountain areas like Chitral.

### The local tradition of collective action in Chitral

The story of collective action through village-based institutions and the second generation of these institutions is a modified and modernized manifestation of the centuries-old tradition of these mountain communities (Figure 4). As an independent princely state both prior to 1896 and under British colonial authority from 1896 to 1947, as well as under the government of Pakistan from 1947 to 1969, the state of Chitral had traditional institutions run by local communities to manage the existing resources of the state.

Although the entire population—with the exception of a negligible few—was poor during this period and relied heavily on natural resources, the gap between rich and poor was insignificant, with less frustration associated with the realities of poverty and vulnerability. The traditional local institutions that existed at that time

were responsible for planning and for management of existing environmental resources, conflict resolution, social protection, cultural preservation and development, and ensuring a collective response to emerging social, political, and economic issues in the area.

After abolition of the princely state of Chitral in the late 1960s, local communities were left with the impression that the government of Pakistan was responsible for providing them with all facilities and managing all resources. In fact, this resulted in deprivation, as traditional local institutions faded away and local communities became more vulnerable. With the passage of time, socioeconomic development in the area was responsible for a continually widening gap between rich and poor, resulting in denial of social protection to the disadvantaged strata of society. People felt that state institutions failed to serve the poor. A variety of socio-cultural and environmental issues came to the fore as a result, and the amount of social capital—once the greatest strength of these communities—became negligible. An institutional vacuum was created in the course of socioeconomic, political, and cultural transition in this remote part of the world.

### Bridging the institutional gap

Building upon the rich experience of the VOs and WOs in constructing and maintaining various projects and running schools and rural health centers in the last 2 decades, local communities in Chitral made a strategic shift by federating these village-based institutions into larger valley or Union Council-level institutions called Local Support Organizations (LSOs).

### The emergence of Local Support Organizations (LSOs)

In the late 1990s community representatives from different valleys of northern Pakistan approached AKRSP with a request for guidance in making use of the tacit knowledge they had gained through their village-based institutions. This thinking was also backed up by the frustrations created by the diversity of development needs and challenges such as recent cli-

matic hazards in the region, management, equitable distribution of natural resources and associated social conflicts, urbanization and related issues, and delivery of social sector services at the larger valley level, which village-based institutions did not have the capacity to deal with. This period of transition in local communities generated a series of discussions and a new dimension in debates about participatory development.

Cluster Organizations were formed to undertake joint ventures by 2 or more VOs and WOs, and various models of Supra-Cluster Organizations were tested in some valleys. After an evolutionary period lasting almost a decade, the concept of LSOs was introduced in 2004 and the first LSO in Chitral was formed in 2005. The broader objective of establishing LSOs is to capitalize on AKRSP experience of institutional development in the area and be able to make a collective response to the major valley-level issues as well as the emergency situations cited above. The LSOs are registered with the government, under the company ordinance of the government of Pakistan, and are therefore legal entities working in partnership with the government, NGOs, and donor agencies. The institutional structure of LSOs has 3 levels—the Board of Directors (BoD), paid management staff, and the General Body. As decided by the communities, 70% of the membership of an LSO is from village-based institutions fostered by AKRSP and the remaining 30% is from other civil society organizations in the area.

With specific reference to responding to disasters and emergency situations, these LSOs formulate strategies in planning workshops, board meetings, and development forums that they hold in their respective program areas. In one recent emergency resulting from a glacial outburst in the village of Sonoghur in upper Chitral (July 2007), the Biyar Local Support Organization (BLSO)—the LSO in the area—was instrumental in timely utilization of the services of FOCUS Humanitarian Assistance and the local government. The LSO itself collected monetary donations, food, and clothing from the local communities, and distributed this aid to families affected by the disaster.

**FIGURE 4** After disaster leaves villagers with nothing, Local Support Organizations identify appropriate space to accommodate the affected families in collaboration with development organizations and government representatives. (Photo by AKRSP, Chitral)



#### Multi-stakeholder forums (MSFs)

The most important aspect of the emergence of these valley-level community institutions is the organization of Multi-Stakeholder Development Planning Forums in each valley. In these multi-stakeholder forums (MSFs) all stakeholders get together with a sense of common purpose and develop an understanding of the key issues, challenges, and priorities. A 5-year development plan is then elaborated and strategies are formulated to address the major issues of concern, for example afforestation, conservation of natural resources, and the search for alternative energy sources such as hydropower stations.

In the emerging urban centers, which are at high risk from a multiplicity of urban-related socioeconomic and cultural issues, the LSOs organize MSFs to formulate strategies and prepare comprehensive 5 to 10-year plans to manage the issues associated with the process of urbanization. These forums provide all key players with an opportunity to respond collectively to the issues of environmental degradation, rapid demographic growth, poverty, the increasing demand for better services in the social sector, and the increasing vul-

**FIGURE 5** Harsh climatic conditions and the difficulties associated with it affect people of all ages. Elders are included in the process of reconstruction, offering moral and social support such as sharing a cup of tea and encouraging younger community members to work hard. (Photo by Miraj-ul-Haq; Booni, Chitral)



*“LSOs provide the basic institutional infrastructure for FOCUS to effectively deliver its services to the local communities.... This approach is one of the best replicable models of the world.”* Mr. Amir Mohammad, newly appointed head of FOCUS Humanitarian Assistance in Chitral

nerability of local people associated with the process of change—from a rural society to the realities of a more complex urban environment.

This year, in view of the recent occurrences of natural disasters in the area, the multi-stakeholder forums cited climatic change in the region as a major developmental challenge. The LSOs, including other actors such as local government institutions, NGOs, and development organizations working in the area, formu-

lated strategies to be implemented by the LSOs. These strategies include awareness raising among the communities and disaster preparedness with the support of FOCUS Humanitarian Assistance, which also offers LSOs training in emergency relief operation and disaster risk management skills, and provides them with all the necessary equipments and stockpiles. Also foreseen are a variety of interventions and projects for natural resource management with the support of AKRSP, IUCN, WWF, and other development organizations; and preparing a considerable number of volunteers at the local level in each of the 32 valleys of Chitral who will offer their services in emergencies (Figure 5).

Social mobilization of the local communities and formation of Local Support Organizations (LSOs) has proved to be a sustainable institutional mechanism for collective response to any kind of challenge or major natural disaster. To date, 9 LSOs have been formed in Chitral, covering over 60% of the population, and are functioning at different levels of institutional maturity. This model of civil society engagement can be replicated in other mountain regions of the world facing similar development challenges such as susceptibility to natural disasters. The local communities of Chitral can offer human resources to replicate the model in other parts of the world, provided that local communities in these areas are truly interested in this approach.

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Ehsan-ul-Haq is a data integration specialist for planning, monitoring, and evaluation (PM&E) with the UN, Pakistan. He has extensive experience in working with rural communities in different parts of Pakistan. Before joining the UN system he worked with the Aga Khan Rural Support Programme (AKRSP), Pakistan, as an economist and manager in monitoring and evaluation, and with the Rural Support Programmes Network (RSPN), Pakistan, as a rural economist. In 2007, he joined the UN Office of the Resident Coordinator, Pakistan, where he is mainly responsible for developing a comprehensive system for integration of development statistics as an integral component of PM&E.