



Global Network
of Civil Society Organisations
for Disaster Reduction



VIEWS FROM THE FRONTLINE 2013

Draft Country Report: Pakistan



Pattan Development Organisation
April 2013

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Glossary and Acronyms

CBDRM

Community-based Disaster Risk Management

CSO

Civil Society Organisation

DDMA

District Disaster Management Authority

DRR or Disaster Risk Reduction

Minimising vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

DRR/M

Disaster risk reduction/management

GNDR

The Global Network of Civil Society Organisations for Disaster Reduction, responsible for the global implementation of the 'Views from the Frontline' project.

Global Platform – Disaster Risk Reduction (GP-DRR)

The UN-ISDR periodic review process convened every two years to report on progress towards implementation of the Hyogo Framework

HFA

The Hyogo Framework for Action - adopted by 168 governments at the World Conference on Disaster Reduction, held in 2005 in Hyogo, Japan, focusing on building the resilience of nations and communities to disasters

(<http://www.unisdr.org/wcdr/intergover/official-doc/L-docs/Hyogo-framework-for-action-english.pdf>).

NAC

The National Advisory Committee is made up of selected stakeholders who will support the NCO in implementing the project at the national level.

NCO

The National Coordinating Organisation is tasked with implementing the project at the country level. It is led by a Country Coordinator assisted by a supporting team.

NDMA

National Disaster Management Authority

NDMC

National Disaster Management Commission

PDMA

Provincial Disaster Management Authority

PO

Participating organisation in the VFL project, typically one of several CSOs in a country working with an NCO

VFL

Views from the Frontline – A participatory monitoring process conducted biennially by GNDR

Executive Summary

Pattan Development Organisation has been working with flood prone communities since 1992 super floods. Its two-pronged approach is based on: 1st, building [multiple] capacities of flood prone communities (women and men) in order to enhance resilience to cope with periodic flood disasters and resistance to make officials accountable. 2nd, conducting research for advocacy. Pattan is a founding member of Asian Disaster Reduction and Response Network (ADRRN) and its focal point for Pakistan.

Pattan conducted the Views from the Frontline (VFL) survey in 2011 and then in 2013. Pattan staff was trained about VFL i.e. its objectives, methodology and questionnaire. The questionnaire was translated into the local language Urdu to ensure that the community is fully able to understand and respond to the questions fully. For the VFL 2013 altogether responses from 210 people from 3 districts of South of Punjab (where five rivers meet, poverty is rampant and big landlords rule) were recorded. A total of 158 males and 52 males were interviewed and of the total number of respondents 71% were from the urban area while 29% were from the rural area belonging to four informant group categories namely, community, local government, civil society and others. The VFL was conducted in 2012.

Overall score that derived from the global analysis of VFL 2013 shows that the average score for Pakistan is 2.02, which is lower than the global average of 2.55 and the regional average of 2.43. This shows that overall progress of DRM at the local level has been 'to a limited extent'. Communities, local government personnel, civil society members and other stakeholders in the vulnerable locations surveyed in the country believe that the threat of disasters is very high with a substantial height in the risks and vulnerabilities of people and changes in the disaster losses over the last years have increased substantially while the ability of people and communities to combat the detrimental effects of these disasters remains substantially low.

Key recommendations that have come forward after analysis of VFL data, consultations at the local and national level as well as after engagement with the community are:

- a) Introduce autonomous elected local government without any further as CBDM is not possible without it.
- b) Improve early warning dissemination system.
- c) Inform communities about the national DRR system, its associated agencies and their mandate.
- d) The NDMA and PDMA should develop and update hazard and vulnerability atlas of all areas.
- e) Make DRR an integral part of development planning and execution.
- f) Train officials in DRR and DRM and appoint them in each tehsil and district.
- g) Disaster Preparedness Plans (DPP) should be rehearsed (drills) and should be constantly reviewed.
- h) Make NDMA and PDMA autonomous and free them from the political interference.

Introduction

Pakistan is a country with diversity not only of people, cultures, and traditions but also of physiography. A phrase from the Pakistan Handbook (Mannheim and Winter 1996) states that it has “an almost unbelievable range of landscapes and environments; mighty rivers and huge deserts; and fertile plains, thick forests, and towering mountains.” From another perspective, this landscape is a perfect recipe for disasters caused by natural hazards. The country is vulnerable to multiple disasters from a range of hazards including avalanches, cyclones/storms, droughts, earthquakes, epidemics, floods, glacial lake outbursts, landslides, pest attacks, river erosion and tsunami. Human induced hazards that threaten the country include transport, industrial, nuclear and radiological accidents, oil spills, urban and forest fires, civil conflicts and internal displacements of communities due to multiple factors. High priority hazards in terms of their frequency and scale of impact are: - earthquakes, droughts, flooding and transport accidents that have caused widespread damages and losses in the past.

A number of factors lay behind vulnerabilities of Pakistani society to hazards. These include poor construction practices, poor livestock and agricultural management, fragile natural environment and poverty. Poor communication infrastructure and lack of critical facilities aggravate vulnerabilities of communities. In mountainous regions the non-availability of safer land for construction, scattered settlement patterns and harsh climatic conditions further aggravate vulnerabilities. The size and growth of human and animal population, environmental degradation resulting from poorly managed urban and industrial development processes, climate change and variability are major dynamic pressures that aggravate vulnerabilities of Pakistani society. In the coming decades frequency, severity and impact of certain hazards may increase which might lead to greater social, economic and environmental losses.

Unsurprisingly, in the light of the prevalent hazards and vulnerabilities, there is a long and growing list of recent disasters in Pakistan. During the 1990’s there was a series of riverine floods, the most severe of which occurred in 1992. Although seismic events are commonplace, the 2005 Kashmir and KPK earthquake stands out as the most destructive in modern times and was recognized as a major international disaster. Intensified conflict in the north of the country, including Federally Administered Tribal Area (FATA) and Khyber Pakhtun Khwa (KPK) has caused a crisis of internal displacement since 2009. The displacement of 2,000,000 people during the Swat operation of that year was only the most extreme episode in this protracted humanitarian crisis. Natural disasters threaten sustained economic growth by causing shocks, as the October 2005 earthquake did. The quake caused a loss of 5.2 billion USD, which is staggering when compared to national budget for 2006-07, which was about USD 25 billion.¹ This amount was much higher than the total allocations for social sector development. Similarly, in recent times floods have occurred continuously for 3 consecutive years in 2010, 2011 and 2012 bringing a huge blow to the economy of the country. The 2010 floods brought on the most devastation affecting The 2010 monsoon flood disaster in Pakistan was massive and unprecedented, killing more than 1,700 persons, affecting over 20percent of the land area, more than 20 million people, and causing loss of billions of dollars through damages to infrastructure, housing, agriculture and livestock, and other family assets. Essential infrastructure including roads, bridges and markets has been severely damaged and many remain impassable.

¹ Pakistan Economic Survey and Budget 2005

Table 1: Flood Damages and Reconstruction Cost (Rs. in Billion)

Province/ Area	Damages	Reconstruction Cost
Azad Jammu Kashmir	7	13
Balochistan	53	27
Federally Administered Tribal Area	6	8
Islamabad Capital Territory	93	96
Gilgit Baltistan	4	7
Khyber Pakhtun Khwa	100	106
Punjab	219	93
Sindh	373	228
Total	855	578

Source: National Flood Reconstruction Plan 2010

Floods reoccurred both in 2011 and 2012 inflicting further destruction and devastation of already impoverished and deprived districts of Pakistan. In 2011 severe monsoon rains triggered floods in southern Pakistan of an unprecedented scale, both in terms of volume and amount of land flooded. Despite forecasts of below-average rainfall, heavy downpours began in mid-August, engulfing all 23 districts of Sindh province¹ and adjoining areas of northern Balochistan province causing damage to crops, infrastructure and human settlements, thus affecting the national economy. According to the World Bank and Asian Development Bank (ADB) Damage and Needs Assessment (DNA) report, approximately, 9.6 million people were affected in Sindh and Balochistan as a result of the floods; 520 people were killed and more than 1,180 people were injured. Devastation repeated it self in 2012 affecting approximately 5 million people and 2.6 million USD in damages.²

A reactive, emergency response approach has remained the predominant way of dealing with disasters in Pakistan till 2007. The Calamity Act of 1958 was mainly concerned with organizing emergency response. A system of relief commissioners at provincial level was established. An Emergency Relief Cell (ERC) in the Cabinet Secretariat was responsible for organizing disaster response by the federal government. The awareness of policy makers, media, civil society, NGOs, UN agencies and other stakeholders remains low about disaster risk management. The situation is relatively better with regards to flood and drought mitigation. A number of government agencies and NGOs have been implementing mitigation measures for these hazards. However, until recently, country lacked a systematic approach towards disaster risk management. Realizing the importance of disaster risk reduction for sustainable social, economic and environmental development, the GOP has embarked upon establishing appropriate policy, legal and institutional arrangements, strategies and programmes to minimize risks and vulnerabilities. In this regard, National Disaster Management Ordinance was passed and the National Disaster Management Commission would ensure implementation of which. The National Disaster Management Authority (NDMA) became the focal point for coordinating and facilitating the implementation of strategies and programmes on disaster risk reduction, response and recovery. Similarly, Disaster Management Authorities were

² Figures taken from NDMA website updates on floods 2012, accessible at <http://www.ndma.gov.pk/flood2012.php>

established at provincial, district and municipal levels. NDMA was to provide technical guidance to national and provincial stakeholders about formulation of plans, strategies and programmes for disaster risk management. NDMA also worked towards capacity development of national, provincial and local stakeholders in collaboration with PDMA and DDMA.

This report is structured as follows:

Section I: presents the VFL 2013 project, including background, objectives and approach as part of the broader global project.

Section II: contextualizes the report by providing a background on DRR in the Pakistan with risk maps.

Section III: presents the main findings of the survey data, community consultations and national workshop.

Section IV: consists of two case studies that explain current community level mechanisms for disaster response, preparation and planning.

Section V: summarizes the main constraints, opportunities and recommendations developed by consultation participants as part of the VFL 2011 project.

I. Views From the Frontline’ - Project Background and Approach

When the UN established a ten year programme for improvement in Disaster Risk Reduction in 2005, the 'Hyogo Framework for Action' (HFA); many NGOs were concerned that the high level policy would not be matched by effective implementation at the 'Frontline' in the millions of communities round the world exposed to natural disasters. This in turn led to the formation of the 'Global Network for Disaster Reduction' (GNDR) to collaborate in securing a stronger voice for communities and more effective implementation of the Framework.

The Network's key action has been 'Views from the Frontline', a project in which the assessments of stakeholders at the local level are gathered in order to assess their views of progress. By doing so, the project highlights the areas where more action is needed, and also builds local level partnerships to mobilise more effective action. The 'Views from the Frontline' (VFL) project, initiated in 2009, has been highly effective at the international level, where the presentation of views from respondents from 69 countries in 2011 made a major impact at the UN 'Global Platform for Disaster Risk Reduction', and at the local level, where dialogue, collaboration and action have been promoted. VFL 2013 now aims to prepare the way for a HFA Post -2015 discussion

Goal and Objectives

The main goal of 'Views from the Frontline' is to support the effective implementation of the HFA to build the resilience of vulnerable people and communities *at-risk* to disasters.

The VFL 2013 specific **objectives** are:

1. To provide a global overview of progress in Local Level Action to reduce “*extensive*” disaster risk
2. To model a local change process and build local capacities for *action and learning (reflection>learning>action)*
3. To raise awareness and understanding of disaster risk reduction and community resilience
4. To increase participation, dialogue and relationships between different state and non-state actors responsible for reducing risk

The project **outputs** at the country and regional level include:

- ✦ To provide evidence from these local level activities to make a strong case at the global level that local level reflection, knowledge and action is *the starting point for the global post-HFA strategy*
- ✦ To promote active communities and address underlying risk factors, building community resilience
- ✦ To build understanding, engagement and local partnerships for action through action learning
- ✦ Joint advocacy and strategy at the national, regional and international level
- ✦ Sharing of practical experience, knowledge and learning
- ✦ Increased political commitment for disaster risk reduction investments at the local level

VFL 2013

Pattan Development Organisation previously participated in the VFL 2011 round. VFL 2013 marks Pattan’s second participation in the VFL project. The project was initiated in June 2012 in Pakistan. To familiarise the staff with the project process, objectives and methodology a meeting was organized and the VFL questionnaire was shared and translated into the local language Urdu to ensure that the community is fully able to understand and respond to the questions fully. At the meeting, objectives of VFL survey and action and learning component was also discussed while process and selection of vulnerable locations were discussed in detail as well.

Altogether responses from 210 people from 3 districts of South of Punjab province were recorded. A total of 158 males and 52 females were interviewed and of the total number of respondents 71% were from the urban area while 29% were from the rural area belonging to four informant group categories namely, community, local government, civil society and others.

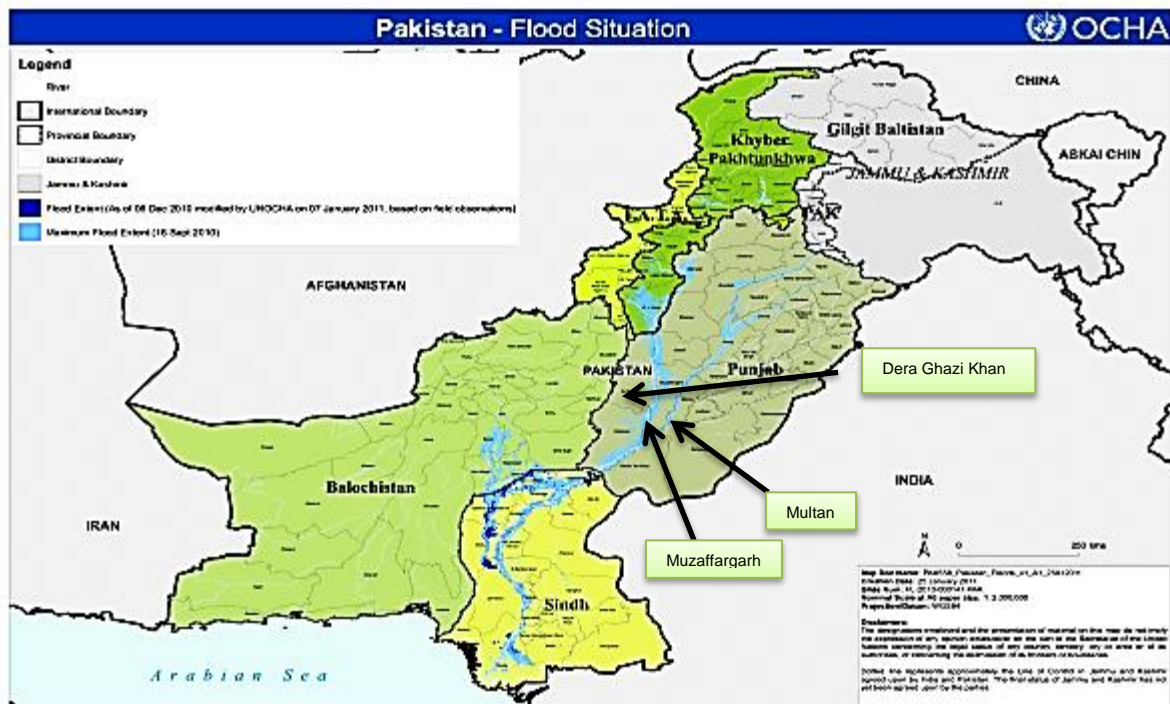


Figure 1: Pakistan map indicating VFL 2013 Survey Districts³

Informant Group	Number of Respondents
Community	65
Civil Society	25
Local Government	61
Others	59
Total	210

Table 2: Break down of participants of survey by type of informant group

³ Source: UNOCHA Database

Districts	Number of Respondents
Dera Ghazi Khan	87
Muzaffargarh	58
Multan	65
Total	210

Table 3: District wise break down of participants of survey

II. Overview of Disaster Risk Reduction in Pakistan

Disaster Context of Pakistan

Pakistan covers a total land area of 796,095 sq. km and has a population of 187 million. The country is geographically divided into three areas: the northern highlands, the Indus river plains and the Balochistan plateau. Pakistan's geographical location, its topography, the nature of its economy, rapid urbanization and high population levels make it vulnerable to natural and human induced disasters. Natural disasters that have repeatedly affected Pakistan include: earthquakes, floods, landslides, cyclones, and droughts. In addition, industrial disasters, disease epidemics, fires, accidents (road, rail, and air), and civil and military armed conflict also contribute to the list of disasters faced by the country. The effects of these disasters are exacerbated by poor infrastructure, scant emergency response services and high levels of poverty, particularly in rural areas lowering coping mechanisms at all levels. The most affected are the vulnerable groups including women, children, elderly and the disabled; this is in part due to the lack of support services available for these groups. The human impact of natural disasters in Pakistan can be judged by the fact that 6,037 people were killed and 8,989,631 affected in the period between 1993 and 2002 only (World Disasters Report 2003, Geneva). The table below shows a brief over view of the types of disasters that have occurred in Pakistan and their subsequent effects on the lives of people and the economic damage associated with them.

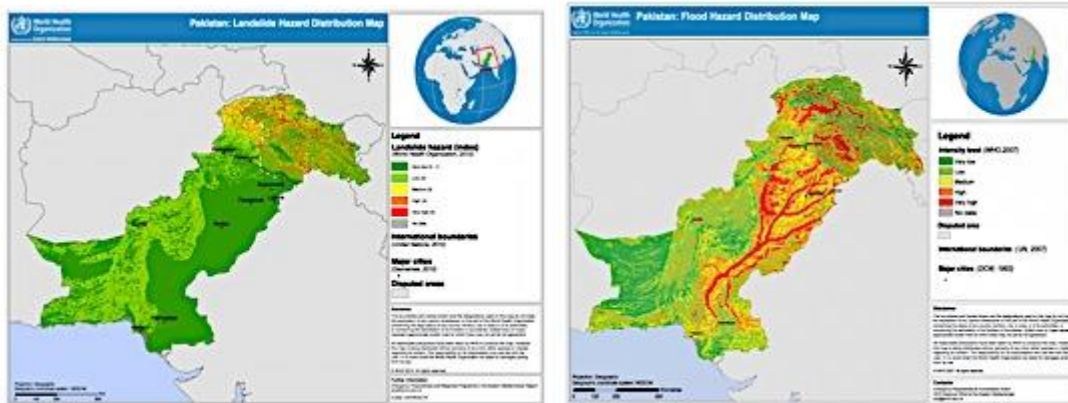
Table 4: Overview of disasters in Pakistan and their effects

		# Of Events	Killed	Total Affected	Damage (000 US\$)
Drought	Drought	1	143	2200000	247000
Earthquake (seismic activity)	Earthquake (ground shaking)	24	142980	6571597	5229755
Epidemic	Unspecified	5	131	371	-
	Bacterial Infectious Diseases	3	142	11103	-
	Parasitic Infectious Diseases	1	-	5000	-
	Viral Infectious Diseases	1	10	12	-
Extreme temperature	Cold wave	3	18	-	-
	Heat wave	12	1388	574	-
Flood	Unspecified	24	4372	20671883	1170030
	Flash flood	14	3006	22097725	10073118
	General Flood	37	8515	30934490	6365030
Mass movement dry	Avalanche (dry)	1	50	-	-

Mass movement wet	Avalanche (wet)	11	558	4322	-
	Landslide	10	222	29719	18000
Storm	Unspecified	7	184	2988	-
	Local storm	9	180	1385	-
	Tropical cyclone	7	11555	2599940	1715036

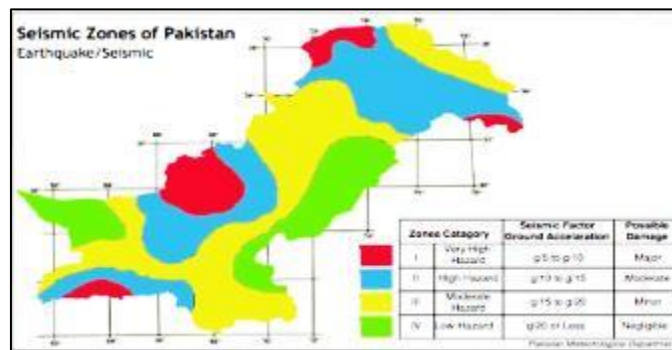
Source: "EM-DAT: The OFDA/CRED International Disaster Database

Figure 2: Pakistan landslide and flood hazard distribution map



Source: World Health Organisation

Figure 3: Pakistan seismic zones⁴



Disaster Risk Reduction Governance

The HFA provides the intellectual foundations for the national DRR system of all signatory countries. However, a national DRR system evolves within the political processes of a country and an array of political and non-political processes help shape the politics of disaster management. Thus, the effectiveness of the national DRR system is a reflection of the quality of governance and political processes of the country, which can only grow when political actors acknowledge and pay sufficient interest to reducing disaster risk. As in many other developing countries, natural disaster management in Pakistan had historically focused on rescue and relief until the 1960s since major disasters until then were rare in Pakistan. The Pakistan Army was called in to the rescue and to provide immediate relief but little was seen necessary in the way of preparedness, recovery and reconstruction given the limited scale of disasters. The responsibility for disaster management, especially in mitigation, preparedness,

⁴ National Disaster Risk Management Authority Pakistan, 2007

and prevention, was not given to any specific agency. The major floods in 1970s and 1990s and the large-scale earthquake in 2005 encouraged the government to gradually lay the groundwork for more comprehensive disaster risk management in the country.

In December 2006, Pakistan promulgated the temporary National Disaster Management Ordinance, paving the way for establishment of the National Disaster Management Commission (NDMC), which is a policy-making forum consisting of the Prime Minister, key ministers, provincial Chief Ministers and opposition representatives. The ordinance also provided for the establishment of the National Disaster Management Authority (NDMA) to act as the implementing, coordinating, and monitoring arm of the NDMC for disaster management as well as provincial and district disaster management agencies (PDMAs and DDMA respectively). A permanent Act of Parliament replaced the ordinance in 2010. However, it would be useful to link the Act to the constitutional provisions enshrined in Pakistan's constitution which require that the government safeguards and protects the lives and properties of all citizens so as to develop a rights-based, constitutionally-mandated perspective on disaster management. A more participatory and consultative approach in developing the Act would also have been helpful.

In 2010, Pakistan's parliament also passed a landmark legislation devolving significant authority from the federal government to the provincial governments. As a result of these pieces of legislation, the NDMA is mandated to provide technical guidance to national and provincial stakeholders about formulation of plans, strategies, and programmes for disaster risk management and work towards capacity building of national, provincial, and local stakeholders while the provincial and district disaster management agencies have implementation roles in DRR. However, it is important to provide greater clarity about the specific roles of NDMA and PDMAs to avoid friction among them and to properly align the NDMA Act with the constitutional devolution amendment. To its credit, the NDMA is adjusting to its reduced post-devolution authority over the PDMAs by developing a collaborative relationship with them based not on formal authority but on highlighting the value it could provide. Recently, the NDMA has been transferred from reporting directly to the Prime Minister's Secretariat into the recently created Climate Change Ministry. While this may provide it with a dedicated budget and staff and help link the DRR process with climate change adaptation better, it may also reduce its authority. The NDMA, PDMAs and DDMA also need greater funding and skilled staff. The NDMA has many skilled staff but most of them are deputed temporarily from other departments increasing the risk of high turnover and low institutional memory. The PDMAs have mixed capacity. The KP and Punjab PDMAs have reasonably good implementation capacity but the Sindh and Balochistan PDMAs are still in the process of enhancing their capacity. Finally, the DDMA generally consist of one part-time person deputed from another district-level department, except in the case of around 30 highly vulnerable districts where the UNDP has funded one full-time but time bound position for each district⁵

In addition to these NDMA, PDMAs and DDMA, a number of other federal government agencies also play critical roles in the overall DRR cycle.⁶

Rescue and relief agencies: The National Crisis Management Cell operates under the Interior Ministry and is assigned the responsibility of monitoring emergencies, including those caused

⁵ This section is based on a review of policies, reports and documents issued by NDMA

⁶ Disaster Preparedness for Natural Hazards in Pakistan, ICIMOD, Nepal

by natural hazards, on a round the clock basis through an operation room in coordination with Provincial Crisis Management Cells and relevant security agencies. The Emergency Relief Cell focuses on planning and assessment of relief requirements for major disasters; stockpiling of basic necessities for emergencies and establishing a central inventory of resources; establishing an emergency fund upon the declaration of any part of the country as affected by a calamity; coordinating the activities of federal ministries, provincial governments, and government, semi-government, international, and national aid agencies in carrying out operations for disaster relief; maintaining contact with international aid agencies and voluntary organizations and providing assistance to calamity-stricken, friendly countries. The Pakistan Army has an efficient system of peacetime disaster management, including first-hand damage assessment, search and rescue, immediate relief in terms of food, medical assistance, and re-establishing the communication and road network. The Civil Defence Department is assigned to assist local administration and the army in rescue, evacuation, and relief measures; supplement the anti-flood equipment of the army; and to provide personnel for anti-flood training in rescue and relief work.

Risk analysis and reduction agencies: The Pakistan Meteorological Department (PMD) functions under the Ministry of Defence and provides meteorological expertise to ensure traffic safety in the air, on land, and at sea; and provides weather forecasts for agricultural development and disaster management purposes. The Flood Forecasting Division, a subsidiary of the Pakistan Meteorological Department, plays a central role in providing flood forecasting and warning to the NDMA, PDMA and DDMA and various flood management and relief organizations. With help from the Asian Development Bank, a comprehensive Indus Flood Forecasting System has been developed since the heavy floods of 1992. The system involved installation of radar in the upper catchment area for rainfall estimation, and a decision support system for improved flood management. A flood warning manual was prepared that defines the tasks of various government departments in the event of flood emergency. The Water and Power Development Authority is a semi-autonomous body carrying out accelerated and unified development of water and power resources. The authority contributes to flood management by 1) reservoir management through regulating the release of water from the country's reservoirs such as the Mangla and Tarbela dams and 2) contributing to flood forecasting by collection and dissemination of rainfall data. The Federal Flood Commission of Pakistan (FFC) is the lead federal agency providing the necessary institutional framework to support provincial flood mitigation measures through provincial irrigation departments such as construction of added embankments and spurs along major rivers and review of plans for restoration and reconstruction of irrigation channels. The Indus River Commission is an Indo-Pak official body, which coordinates the flow of rivers and related information between the two countries. Most of the catchment area for the Indus River system lies in India, China, and Afghanistan. If upstream controlling structures such as dams and barrages occur outside the territory of Pakistan, their water release is beyond its government's control. Effective flood-control management in Pakistan is not possible, therefore, without rainfall and floodwater data from across its borders, especially from India. In addition, the Dam Safety Council, Pakistan Engineering Council, and the Geological Survey of Pakistan play crucial roles in monitoring and managing physical hazards in Pakistan.

III. Analysis of Data

Overview of Score

Overall score that derived from the global analysis of VFL 2013 shows that the average score for Pakistan is 2.02, which is lower than the global average of 2.55 and the regional average of 2.43. This shows that overall progress of DRM at the local level has been 'to a limited extent'. Communities, local government personnel, civil society members and other stakeholders in the vulnerable locations surveyed in the country believe that the threat of disasters is very high with a substantial height in the risks and vulnerabilities of people and changes in the disaster losses over the last years have increased substantially while the ability of people and communities to combat the detrimental effects of these disasters remains substantially low.

Perception of Threat

Respondents believed that impending threat from a disaster is quite high with 10% from the total stating it to be very high while 19% from the total stated it to be high. A majority of the respondents at 42% of total believed the threat of a disaster to be at medium level, which indicates that the intensity of threat may lower by a minute degree, but the perceived threat exists continually for the people. Furthermore, the breakdown of responses according to informant group category shown in figure 5 the majority in all groups considered the threat of disasters to be medium while a viable percentage of the community believed the threat to be high as well. According to the global and regional data Pakistan averages for perception of threat are lower at 2.89 however, the average exceeds that of Nepal. The locations surveyed represent the south of the Punjab province in Pakistan; these districts are the most deprived and impoverished and have been engulfed by floods time over time with immense losses both economic and physical occurring in floods 2010 and floods 2012 therefore they believe that threat from a disaster is imminent and will be bordering at a severe level.

Figure 4: Perception of threat of total respondents

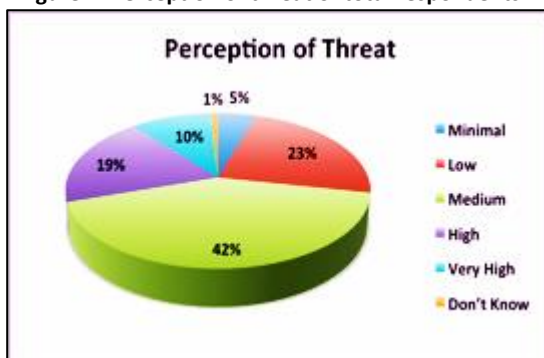
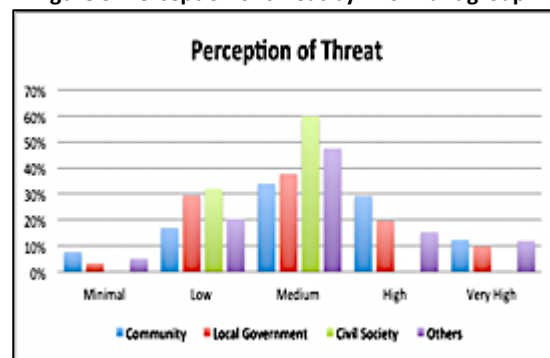


Figure 5: Perception of threat by informant group



Change in disaster losses

As per the overall score compared to the global and regional levels for changes in disaster losses Pakistan exceeds both the averages by scoring 3.67. The survey findings also indicate that the change in losses has been increasing with a majority of the total respondents at stating there to be a slight increase 49% and 19% stating there to be substantial increase. All informant groups were of the opinion that disaster losses had increased over the time period

however there were still a 19% of the total (as shown in figure 6) that believed that these losses had decreased and among these the majority were civil society members (as shown in figure 7). This perception is fuelled by the extensive damages caused in the 2010 floods of Pakistan in which as per the Economic Survey of Pakistan 2010-2011 a total of 20% of land area and 20 million people were affected and project reconstruction costs of the affected infrastructure, housing, communications and agriculture were around 578 billion Pakistan Rupees.

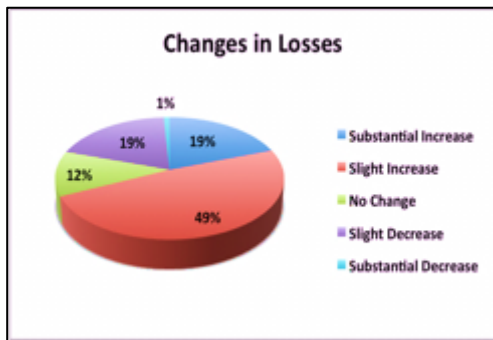


Figure 6: Change in losses of total respondents

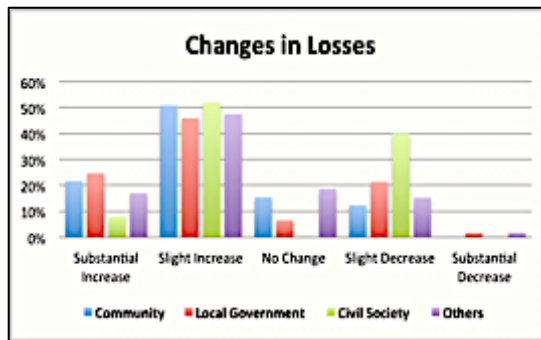


Figure 7: Change in losses by informant group

Question 1: Multi-risk Resilience: does the community tackle multiple factors that lead to different types of disasters?

Majority of the respondents at 37% of total believe that the community is not equipped to tackle the multiple factors leading to different types of disasters. The gender wise break down of the data also indicates that majority of both males and females believe that such protections and systems are not in place to allow the community to reduce their vulnerabilities and tackle disasters. Furthermore, informant wise break down of data shows that majority of all informant groups except the local government were of the opinion that the community can not manage and be resilient to the multiple risk factors associated with disasters. However, compared to the global and regional averages 2.52 and 2.39 respectively, Pakistan has a lower score at 2.25.

Figure 8: Multi-risk resilience of total respondents



Figure 9: Multi-risk resilience by gender

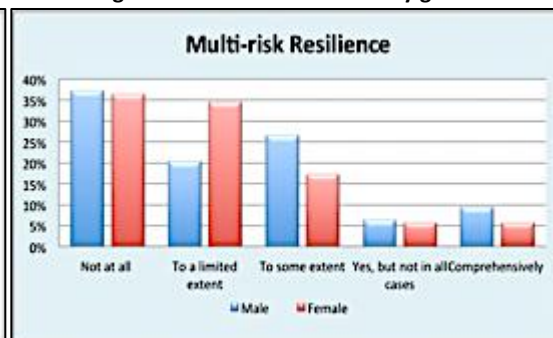




Figure 10: Multi-risk resilience by informant group

Question 2: Underlying Causes: to what extent does the community find its progress (on tackling factors leading to disasters) is restricted by factors beyond the community’s control? (For example government decisions about financial resources, environmental management, agricultural development, building and planning)

Majority of the respondents at 34% believe that the progress is limited to a certain extent while 25% stated it is affected to some extent, 2% stated to a great extent while 10% stated it was affected comprehensively. Informant wise responses indicate that a greater percentage of community members felt that this progress is not hampered by factors beyond community’s control while it is interesting to note that majority of the local government believed that the progress is hampered by external factors to a limited extent while majority civil society respondents were of the opinion the progress is affected comprehensively. In the over all analysis Pakistan scores lowest in the region at 2.33 and lower then the global (2.49) and regional (2.51) averages.

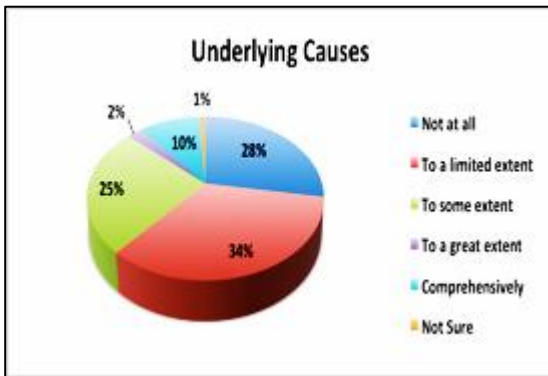


Figure 11: Response Q-2 by total respondents

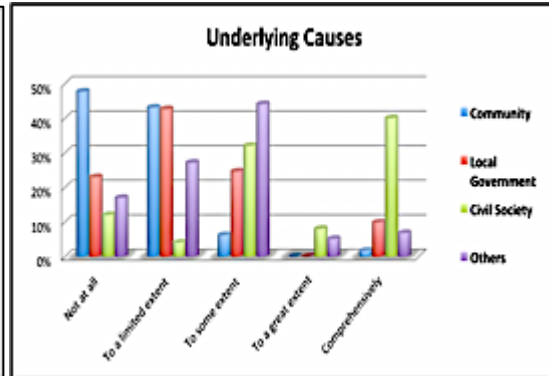


Figure 12: Response Q-2 by informant group

Question 3: Risk Assessment: to what extent are representatives of the local community involved in risk assessments?

A majority of 44% of total respondents (as shown in figure 13) stated that the community is not involved at all when making risk assessments with the second majority at 33% of the total respondents stated that community representatives are involved to a limited extent. However, when we look at figure 14 it is evident that there is difference when it comes to rural and urban representation with a higher majority from the rural area saying that they are not involved in risk assessments and a higher majority of urban area dwellers from the respondents stating that they are involved in assessments to a great extent and comprehensively. This indicates that the rural area dwellers that bear the brunt of disasters

the most as can be seen in the recent floods of 2010, 2011 and 2012 are not consulted in terms of defining and eliminating risks. As far as global and regional analysis are concerned Pakistan has scored lower than both averages as well as in South Asia Pakistan scores lower at 1.86 as compared to its counterparts.

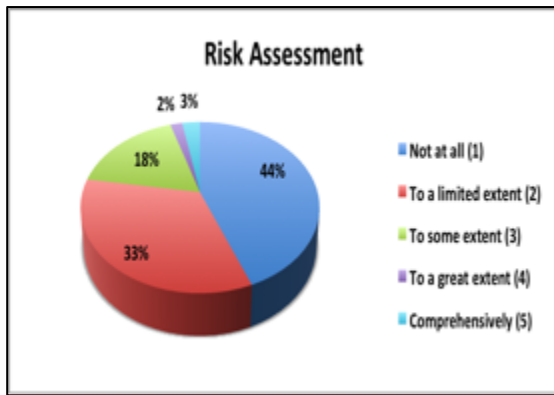


Figure 13: Response to Q-3 by all respondents



Figure 14: Response to Q-3 by geography wise breakdown

Question 4: Monitoring: does the local government regularly monitor progress to reduce disaster risk?

The informant group wise breakdown of responses as shown in figure 15 shows that majority of the community believe that such monitoring efforts on part of the local government do not exist, what is interesting to know in the same response category the second majority affirming this are respondents belonging to the local government. Majority of the members from the civil society indicated that such monitoring efforts do exist to a limited extent, which can indicate that the geographic coverage of such a monitoring mechanism is not widespread. Furthermore, geography wise breakdown as shown in figure 16 shows that most monitoring efforts are more common in urban areas showing that disaster authorities are not reaching out to the poor and deprived rural areas which suffer the most at the hands of disasters in Pakistan. As far as global and regional analysis are concerned Pakistan has scored lower than both averages (2.41 and 2.28 respectively) as well as in South Asia Pakistan scores lowest at 1.98 as compared to its counterparts

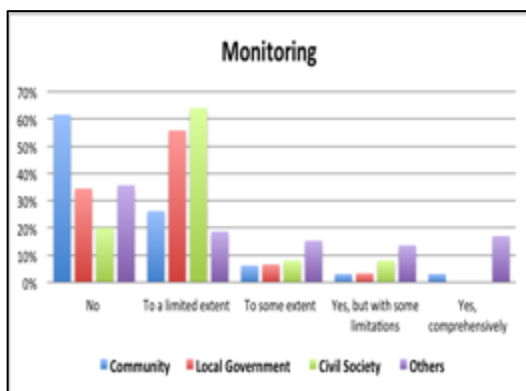


Figure 15: Response to Q-4 by informant group

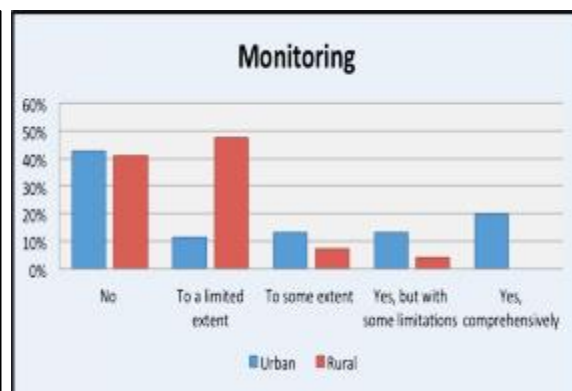


Figure 16: Response to Q-4 by geography wise breakdown

Question 5: Communications / Public Awareness: to what extent does the local government ensure information on local risk trends and risk reduction measures is regularly communicated to communities?

The data shows an appalling lack of communication and public awareness campaigns with regards to risk factors and DRR. The informant wise responses of figure 18 show that majority of all informant groups state that no such communications are in place with the second majority being in the category of limited extent. Furthermore, figure 19 shows that urban areas receive such awareness and communication campaigns while the majority of the rural area dwellers are devoid of any such communication. In the overall analysis Pakistan scores lower at 1.76 then the global (2.45) and regional (2.24) averages.

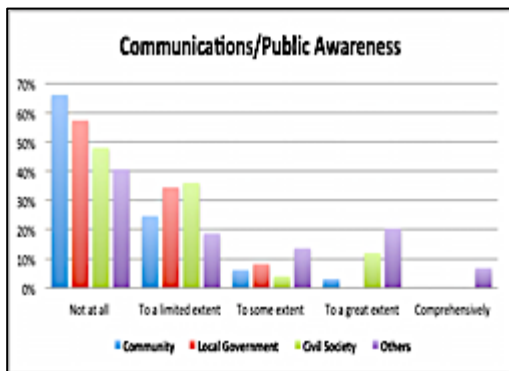


Figure 17: Response to Q-5 by informant group

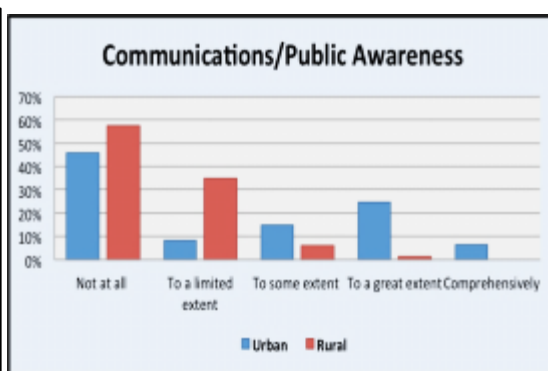


Figure 18: Response Q-5 by geography wise breakdown

Question 6: Connecting: to what extent does the local government combine traditional and scientific knowledge in decision-making?

The response from total respondents (figure 20) and informant wise break down of responses (figure 21) both indicate that majority believes that the local government does not combine traditional and scientific knowledge in decision-making clearly indicating that formalization of DRR when local knowledge and specialized knowledge are combine to create DRR strategies that best suit the affected communities is a dire need for the DRR framework in place in the country. In the over all analysis Pakistan scores lower at 1.68 then the global (2.32) and regional (2.18) averages.

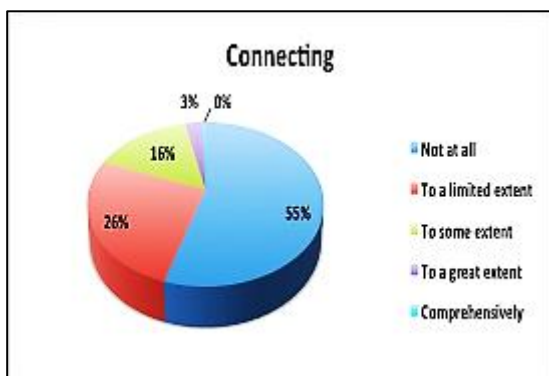


Figure 19: Response to Q-6 by all respondents

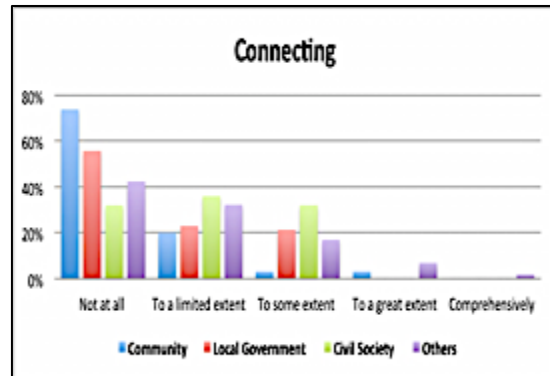


Figure 20: Response to Q-6 by informant group

Question 7: Learning: to what extent do local leaders (state / non-state) discuss, share and analyse disaster risk information?

A majority of 57 % respondents from the total (figure 22) state that local leaders are not involved in any discussion or analysis of DRR information and neither any such information is shared with them. A very small percentage of 7% and 4% stated that such consultations and information sharing are existent to a great extent and comprehensively respectively. In this case Pakistan scores lower at 1.80 then the global (2.46) and regional (2.31) averages. The DRR framework and mechanisms have not acquired the decentralized nature and structure in true letter and spirit specifically the key stake holders that is those who suffer at the hands of disaster the most or whose community is affected by disaster more frequently are not involved in any key DRR decision making and information sharing.

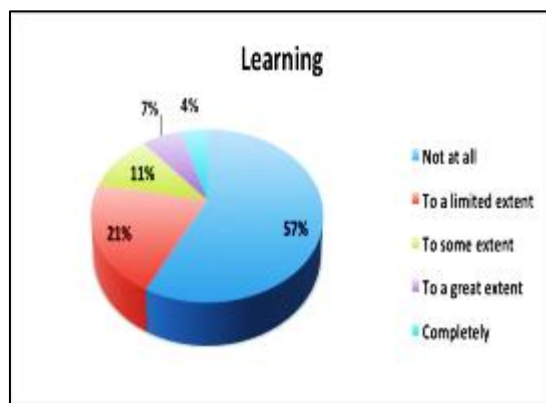


Figure 21: Response to Q-7 by all respondents

Question 8: Negotiation: to what extent are local authorities and community representatives able to work together in decision making about risk reduction?

A majority at 57% respondents state that no such negotiations are in place while when we look at the geography wise break down a majority of rural dwellers indicate that no such negotiations are in place while when it comes to the existence of such negotiation processes a higher number of urban dwellers state that they exist ‘to a great extent’ and comprehensively. This shows that engagement with and demand/supply of services in urban areas are greater than rural areas. The overall score for Pakistan as per global and regional analysis is 1.76, which is the lowest in the region as well as lower then the global (2.45) and regional (2.38) average.



Figure 22: Response to Q-8 by all respondents

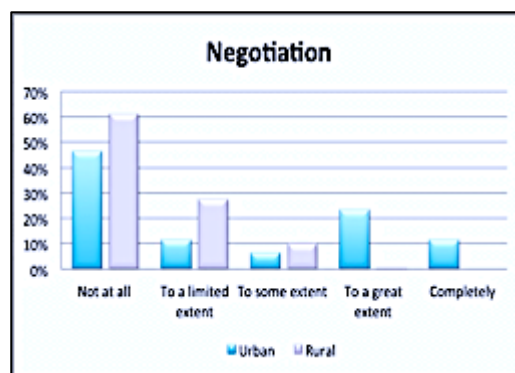


Figure 23: Response Q-8 by geography wise breakdown

Question 9: Conflict Resolution: to what extent are key stakeholders (e.g. local authorities, community representatives) able to resolve conflicts? (For example by applying sanctions against those who break rules and agreements)

Majority of 56% of total respondents stated that conflict resolution does not happen at all and in the geography wise breakdown a higher percentage of respondents from rural areas corroborate this; while a higher percentage of respondents from urban areas indicated that such conflict resolution is in place 'to a limited extent', 'to some extent', 'to a great extent' and 'comprehensively' as compared to respondents from rural areas. According to past experiences conflicts have existed in the recovery, relief and rehabilitation process where affectees needs and dignities have been compromised especially in relief camps. The overall score for Pakistan as per global and regional analysis is 1.77, which is the lowest in the region as well as lower than the global (2.53) and regional (2.53) averages.

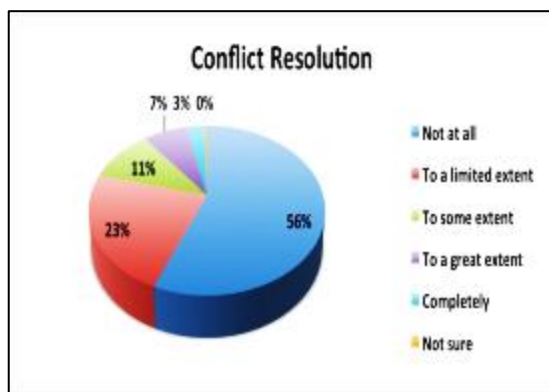


Figure 24: Response to Q-9 by all respondents

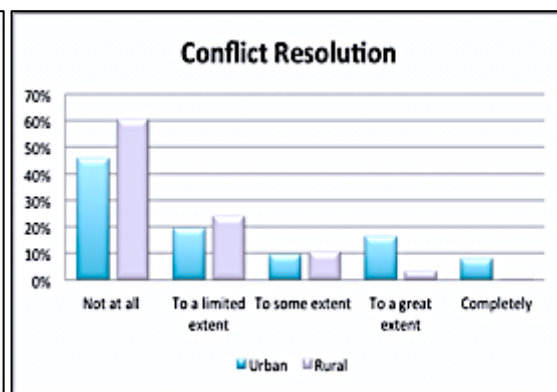


Figure 25: Response Q-9 by geography wise breakdown

Question 10: Building Partnerships: to what extent do partnerships (to reduce disaster risk) exist between communities, private sector and local authorities?

There is no collaboration among communities, private sector and local authorities for DRR as indicated by data. A majority of total respondents at 59% corroborates the complete inexistence of such partnerships while the geography wise breakdown indicates that rural dwellers feel that such partnerships are inexistent the most. The overall score for Pakistan as per global and regional analysis is 1.75, which is the lowest in the region as well as lower than the global (2.46) and regional (2.47) averages.

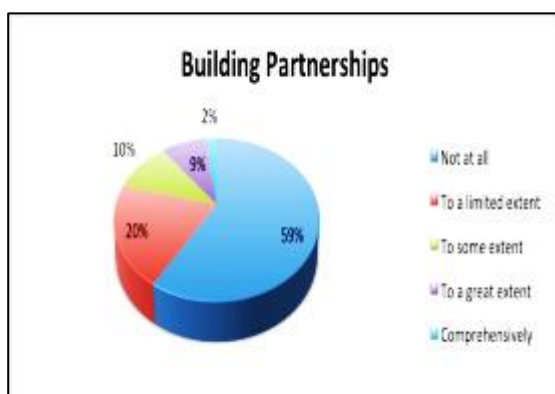


Figure 26: Response to Q-10 by all respondents

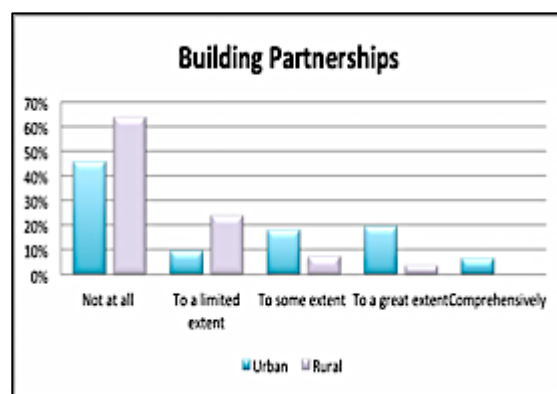


Figure 27: Response Q-10 by geography wise breakdown

Question 11: Resources: to what extent do resources available (financial and other assistance) meet the needs for risk reduction activities?

A Majority of 50% of the total respondents state that resources are not available to meet the needs of risk reduction activities while a small percentage of 10% and 2% of total respondents believe they are available 'to some extent' and 'to a great extent' respectively while none of the respondents stated that resources are available completely. Majority male and female respondents areas believed that resources are not available at all or are available to a limited extent with a higher percentage of females stating that they are not available at all. The overall score for Pakistan as per global and regional analysis is 1.63, which is the lowest in the region as well as lower then the global (2.09) and regional (2.09) averages.

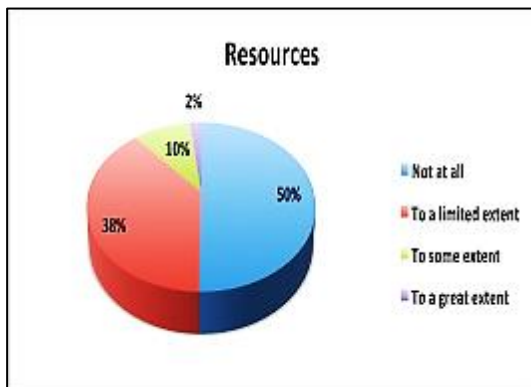


Figure 28: Response to Q-11 by all respondents

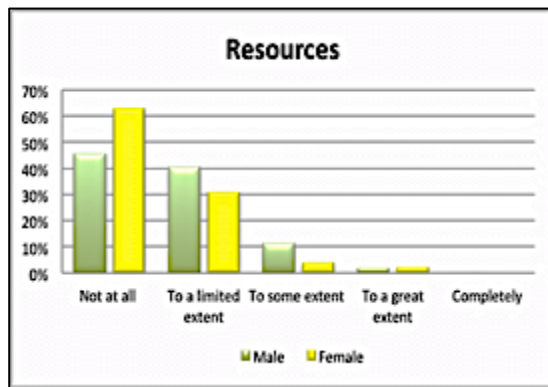


Figure 29: Response Q-11 by gender

Question 12: Early Warning: Are there effective local early warning systems in place? (Systems, which alert all sections of the community)

An astounding majority of 68% respondents from total stated that no early warning systems are in place while a higher percentage of rural area dwellers stated that such warning systems are not in place as compared to urban area respondents. Of the 7% of the total respondents who stated that early warning systems are available 'generally but with some exceptions' a higher percentage was that of those belonging to urban areas indicating that rural area inhabitants generally are devoid of early warning systems increasing their vulnerability. The overall score for Pakistan as per global and regional analysis is 1.60, which is the lowest in the region as well as lower then the global (2.28) and regional (2.09) averages.

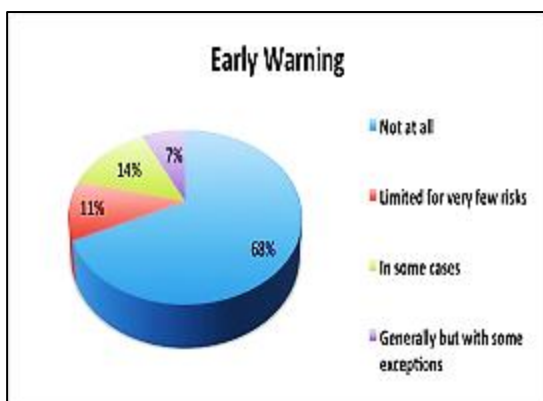


Figure 30: Response to Q-12 by all respondents

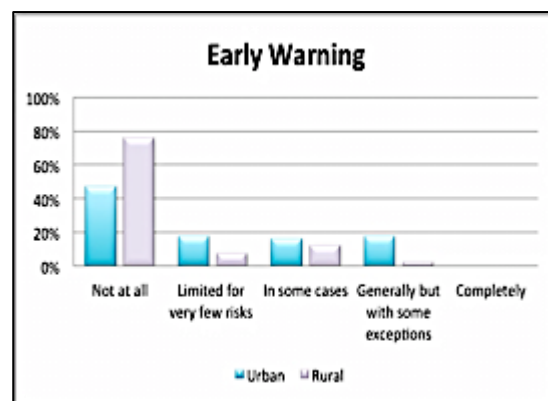


Figure 31: Response Q-12 by geography wise breakdown

Question 13: Local Actions: Is there adequate capacity to prepare for and mitigate disaster risk? (For example accessed by local authorities and community representatives)

Capacity of the local level to prepare and mitigate disaster risk is non-existent as corroborated by the 46% majority of the total respondents who state that it does not exist at all while 25% stated that it exists to a limited extent and 25% stated that it exists to some. The informant-wise responses indicated that local community feels most vulnerable in this aspect along with the local government. Majority civil society respondents stated that there is limited capacity, which is probably due to the existence of locally based CSOs that specialize in DRR at a limited capacity and are able to help the community. Overall the data shows the ability of the local institutions in terms of technical and financial capabilities and capacities to handle the disasters at the local level needs dire improvement. The overall score for Pakistan as per global and regional analysis is 1.89, which is lower than the global (2.34) and regional (2.19) averages.



Figure 32: Response to Q-13 by all respondents

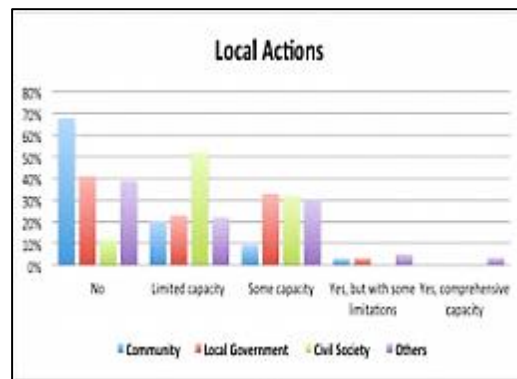


Figure 33: Response to Q-13 by informant group

14. Everyday disasters: When everyday disasters strike (e.g. seasonal floods, regular droughts, pest attacks, fires) to what extent do resources provided by government (local or national) meet response needs?

There is a strong view that resources and relief for everyday disasters are not enough at all with majority of all informant groups as shown in figure 35 stating that these are not available at all with majority of urban and rural area respondents corroborating the trend. Most of the rural community's view is it's not at all while higher percentage of urban people stating that it is happening to some extent and to a great extent as compared to respondents from the rural area. This clearly indicates that communities are ill-equipped to combat disasters with adequate resources. The overall score for Pakistan as per global and regional analysis is 1.65, which is the lowest in the region as well as lower than the global (2.25) and regional (2.09) averages.

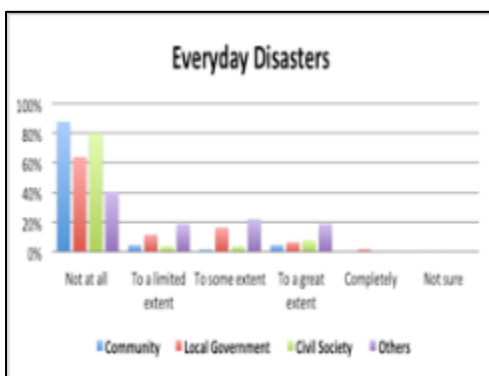


Figure 34: Response to Q-14 by all respondents

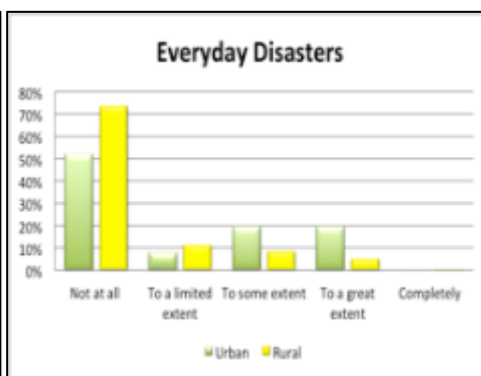


Figure 35: Response to Q-14 by geography

IV. Case Study

Inability of Local Community to Combat Disasters

Background

The case study focuses on highlighting the perils faced by people residing in the village named Basti Lukwala. How disasters now have a new meaning for them and how over the years coping mechanisms have changed. The focus is specifically on the aftermath of the floods 2010 experienced by Pakistan that led to unimaginable destruction and havoc.

Community Profile

A village comprising of 35-40 households, Basti Lukwala with the river located at its North represents one of the most deprived and disaster-ridden locations in district Multan, province Punjab. Flood disasters terrorise the inhabitants of this village with the village being inundated in the most major floods of the country of the year 1992, 1996 and 2010. The main occupation of the inhabitants is that of farming with mostly small land holdings or no land holdings at all. Around 7-8 households own 25 acres of land, which they are at times, forced to sell off due to incessant flooding which leads to economic vulnerability and depravity of the people. The inhabitants are dependant on farming for their survival and sustenance as none of them are able to procure jobs outside their village due to limited education and limited opportunities. To fully understand the location of the village and the surroundings encompassing a PRA exercise was done in which the inhabitants drew the map for their village on the floor indicating the river embankment, the bridge, the location of the river and the location of the main city. As can be seen below in the picture.



Community drawing local flood maps

Disaster Occurrence and Risks

The last flood of 2010 inundated their village completely, destroying homes, drainage, animals, crops and infrastructure. The community attributed devastation to lack of early warning systems, as they believed that being warned beforehand would have significantly reduced their losses. Most of the houses were destroyed in all the villages as they were made of mud or mud bricks. Household items were invariably lost with the houses. Saving people's own lives, animals and other high-value items was the priority for people. Even so, a large number of animals were lost. In the past there were safety mechanisms in place outside the flood zones where people would take their animals and stay with host communities. 'With so-called development we have lost all' said a local farmer. People also complained about the fact that landlords and government officials had connived to divert floodwater away from the lands of rural elites and towards the lands of poor communities. People also identify limited livelihoods opportunities as one reason for their vulnerability. They went further to highlight that their economic depravity is due to the landlords who ensure that the population in the village never thrives and they only turn to the village people to secure votes.



Destruction brought on by floods 2010 is still evident in the village

The community members went further to highlight that their multi-risk resilience is close to none increasing their vulnerability day by day especially due to recent constructions of a bridge on River Chenab five Kilometres upstream at 'Head Muhammad Wala', which they pointed out increased the vulnerability of the village by forcing the river water to flow in reverse its way back to the village thus increasing chances of flooding in the village. Such a construction highlights how communities are not involved in decision-making and negotiations that affect their safety and capability of disaster resistance. Due to incessant flooding the life of the people has come to a stand still with farmers being overly cautious and petrified of investing in cultivating crops due to the fear that the investment will be washed away by the floodwater; this in turn not only effects their economic strength by reducing their livelihoods but also reduces their food security and subsistence as they are unable to grow food for themselves thus leading to a lack of essential nutrition.

With respect to causation, people often presented the floods as an act of God. Such statements are often interpreted as evidence of fatalism and unwillingness to act proactively among communities. However, more in-depth probing reveals that this reference to godly acts is more in line with the idiom, "Man proposes; God disposes". Thus, the reference to acts of God is used more to come to terms with the floods-related losses after the floods rather than as an excuse for doing nothing before and during floods. People do assign more active worldly agency to floods and to their own role in dealing with them, and are keen to receive help from agencies to strengthen their own coping mechanisms. While communities have only vague notions about how global climate change may be increasing the frequency of disasters and what preventive steps could be taken to reduce the frequency of floods, they are well aware of the immediate causes that are increasing their own exposure to floods and local mitigation measures to deal with them.

The community identified the following risks:

- Feudal lords as they are involved in local crimes, protect criminals and do not allow social development in their area of influence.
- Poor maintenance of flood embankments.
- Changing weather patterns.
- Flawed public policy, which causes poverty and inequality. Hence vulnerabilities increased.

Setbacks for the Community

The community says that currently a mechanism for disaster preparedness and risk reduction is not in place and the people of the village are on their own in the advent of a flood. It was shared that previously in 1996 when the flood occurred the village was given a prior warning by the 'Patwari' who went to each household to inform them but in the last devastating floods of 2010, which destroyed the village, there was no such early warning or any other precautionary measures. People shared their astonishment that in such a digital age there wasn't even a single radio warning. Currently, the people of Basti Luckwala are living in nothing but the fear of the next flood disaster bringing their lives to a stand still and with no formal awareness or training regarding managing their risks and devising a coping mechanism the people are truly left at nature's will.



Lukwala: Electricity meter fixed on a tree by electricity department has created risks

V. Conclusion, Recommendations and Way Forward

Conclusion

The results of the VFL survey 2013 bring forward what various actors in the country think regarding disaster risk reduction and preparedness. The respondents have clearly brought forward that neither does the community have the ability to combat risks associated with future disasters and nor are the vulnerabilities of the affectees being reduced with a lack of early warning systems, communications and awareness campaigns, collaboration among all stakeholders to devise DRR strategies and lack of information sharing at the community level regarding impending disasters and the risks, hazards and vulnerabilities associated with them. Furthermore, disaster preparedness has been mainly focused on preparedness for emergency

response, and that too, with focus on Tsunami like disasters. So far, with a few exceptions, not enough attention and investment has gone into early warning, preventive and mitigation measures and recurring disasters like floods and droughts. DRR work is mainly being done as part of emergency work and has not been fully incorporated in development work. This means that DRR work, which needs to be on-going and sustained, will reduce significantly once the emergency work is over. It also means that the linkage of DRR work with issues like ecological change, conflict, and other aspects of long-term agency programming are weak.

In light of recent calamities engagement with community and local consultations brought forward some formidable gaps and challenges. Communities described the 2010 and 2011 floods as the biggest that they had experienced themselves or even heard about from their elders. While most of the villages had experience of dealing with minor floods using their own individual and community resources, these resources were clearly overwhelmed by the scale of the 2010 and 2011 floods. None of the villages received authentic, unambiguous and prior information about the floods from government officials. After the advent of such horrific calamities communities expressed their keenness to enhance their resilience in working together with NGOs both through software and hardware programs. However, community women highlighted that they were generally less familiar with NGOs programs and less involved in CBDRM activities in almost every village. The involvement of women in CBDRM activities is generally low even where women CBOs have also been set up. Women are less aware about the details of contingency planning exercises as well as DRR concepts and strategies. At the same time, women are acutely aware of their higher vulnerability to disasters due to their lower education, mobility, access to services and opportunities, and involvement in village and household decision-making but higher work burden related to household chores, child-bearing and rearing and assisting in livelihoods activities. The vulnerability of female-headed households with limited support from extended family members is even higher since women in households with male heads can indirectly access greater opportunities. Women are also more acutely aware of their poor family nutritional status, especially of children, and are particularly interested in receiving health, hygiene promotion, nutrition and livelihoods support.

For other hazards, e.g., earthquakes and landslides, the status of preparedness is even bleaker than for floods. Disasters from these hazards can be avoided or at least minimised through vulnerability mapping. In the case of earthquakes, formulation and implementation of building codes ensuring earthquake resistant dwellings, especially in seismically vulnerable areas, forms the basis of preparedness. The British Government implemented strict building codes following the disastrous Quetta earthquake in 1935. Yet, instead of continuously revising, upgrading, and ensuring implementation of building codes, Pakistan made the building codes virtually redundant. Collapse of government buildings was ten times greater than the rates of collapse for private buildings in the Kashmir earthquake of 2005. This clearly demonstrates the status of earthquake preparedness in Pakistan. In the case of landslides and the related disasters of debris flows and mass movements, Pakistan's preparedness is again restricted to the supply of relief as and when the need arises. Every year hundreds of lives and large amounts of property are lost to landslides. Like earthquakes, landslides can be completely unpredictable. However, in most instances fissures and cracks start developing hours and sometimes days in advance, with the commencement of rock falls and dust rises. Not a single occasion has come to light in which an area or road segment has been declared vulnerable and evacuated or barred for use in response to such warnings. Firstly, such phenomena are highly localised and it is only the local population that can judge these warning signs, and they do not have the necessary authority or equipment to make decisions. Despite the existence of local governments at village, sub-district, and district level, somehow there seems to be no effective

mechanism in place to use the local knowledge about prediction of landslides and related hazards and to decide in advance to ban activities in vulnerable areas and road segments to avoid frequent mishaps.

Recommendations and Way Forward

While Pakistan has set up the DRR governance system, it needs greater funding, political support, and coordination to work more effectively. Most of the focus is on avoidance and response, the least sustainable form of DRR and even these activities are not highly efficient or effective. More durable forms of DRR, such as mitigation and prevention need more attention but development projects often result in reducing mitigation and undermining prevention activities. The main areas of improvement of the national system are:

- a) The DRR legislation must be materialised through strong implementation mechanism
- b) The National Disaster Management Plan and strategy is dependent on local elected government. However, the local government does not exist in the country since 2008. Therefore we urge the authorities to introduce an autonomous elected local government system.
- c) The government agencies particularly the Planning Commission, NDMA and PDMA should give equal importance to risk and vulnerability reduction. Due to flawed development policies poverty and inequality has been spreading fast - mother of all vulnerabilities and marginalisation. Therefore, poverty must be addressed on priority basis. This is in our view the most effective way to make communities resilient.
- d) The DRR system is divided across multiple institutions with close, overlapping mandates some of which could be merged into a single, fully mandated DRR authority with oversight over other agencies and overall DRR activities to ensure synergy. The NDMA, PDMA and DDMA require more resources and dedicated staff
- e) Coordination and cooperation between various departments has been very weak. This must also be improved. Moreover, DRR experts should be deployed all levels of government.
- f) The NDMA is active in undertaking awareness-raising and capacity-building activities on DRR in Pakistan. It has held a large number of workshops and meetings to raise awareness among government departments and other key stakeholders with a view to mainstreaming DRR concerns in regular developmental work. However, there is a need to collate information about actual DRR mainstreaming in regular development work of the government. Awareness-raising activities are mainly happening at institutional level federally and provincially and do not cover grass-roots communities and local stakeholders. Another major area of importance should be the integration awareness raising for DRR in educational curricula. The NDMA had also set up a National Institute of Disaster Management to enhance training and awareness-raising activities in DRR nationally. Unfortunately, the activities of the institute had to be scaled back significantly due to the lack of funding. Finally, there is a need for the government to provide information to communities about the national DRR system and the associated agencies' mandate and work.
- g) The NDMA was developing a detailed hazard and vulnerability atlas for Pakistan. However, this effort has been suspended due to the lack of funding. In the absence of such an atlas, information about the hazard and vulnerability risks across the different regions of the country either does not exist or is spread across many different government agencies. Thus disallowing risk reduction through prevention and mitigation needs to be more comprehensive.

- h) Early warning flood information must come earlier, and in language that is easily decipherable by local authorities into specific mapping of floods geographically and temporally. The focus of DRR work at PDMA and DDMA is on contingency planning for emergency response. However, capacity even for this is not adequate and the ultimate reliance is on the army and NGOs.
- i) The search and rescue operations remain bleak and unplanned. Practically all the concerned, including the communities affected, local government, the police, army, and civil defence participate in this phase; however, this stage lacks clear unity of command and the efforts are badly coordinated. There is no rescue force trained in search and rescue for special disaster situations arising out of earthquakes, landslides, and debris flows.
- j) The DRR work mostly focuses on avoidance and response stages and ignores the more strategic and durable forms of prevention and mitigation, e.g., the CBDRM work is mainly about contingency planning rather than the full spectrum of DRR work. Agencies must also centralize DRR in their sectoral selection decision-making for recovery and development phases and conduct deeper community vulnerability analyses to facilitate more sophisticated livelihoods and other DRR work and address deeper issues like power inequities within and beyond villages, resource conflicts, ecological changes etc.
- k) Increase the number of villages covered through CBDRM work Several strategies could be employed to achieve this recommendation, e.g., through the use of mobile resource centers, development of networks of communities which help train other communities and by undertaking CBDRM work at the level of clusters of 4-5 nearby villages with similar hazard profiles who may be able to deal with disasters more effectively by pooling their efforts and resources within the framework of cluster-level CBDRM plans.
- l) Disaster Preparedness Plans (DPP) should be rehearsed (drills) and should be constantly reviewed. DPPs should include a comprehensive outline for coordination between all the relevant agencies and for communication with vulnerable communities. The future DPPs must evolve by gradually shifting disaster response, recovery, and rehabilitation responsibilities from the army to the civilian government, from the civilian government to local governments, and, finally, from local governments to the communities themselves. These plans should ensure greater involvement of communities in decision-making as well as disaster response, recovery, and rehabilitation.
- m) One type of actor, which cropped up frequently in the flood narratives in local consultations was the community entrepreneur. These were flood affectees who took the initiative in contacting the administration or NGOs, mobilizing external assistance for their communities, articulating their communities' entitlements and facilitating rationally targeted distributions. Survivors made a distinction between this community entrepreneur role, which they generally saw as positive, and the role of traditional power brokers in trying to capture assistance. As lack of local knowledge and organizing skills has been a key constraint to so many humanitarian initiatives, the success of community entrepreneurs suggests that local administrations or NGOs preparing for future disaster response should identify and strengthen those who emerged during the 2010 experience, developing them as a resource for the future.
- n) The single most important avoidable cause of flood devastation in recent years has been the negligence in the management of the flood and irrigation infrastructure by the

responsible public authorities. Given the population density in the hilly areas and the riverine kacha, the intense and sustained monsoon rain in the Indus catchment area is bound to cause flooding in these areas. However specifically in 2010 the damage done by the flood was greatly exacerbated by catastrophic failures of embankments, which could have been averted if adequate maintenance had been carried out. The most destructive infrastructure failures were the breach of the Abbas Wala Bund on the left bank of the Taunsa barrage, the breach of the Tori Bund on the right bank of the Indus in Kashmore District and the breach of the Molchand-Surjani bund in Thatta. 7.75 million people were displaced or otherwise affected in the districts close to these major infrastructure failures. Much of the displacement in these areas was as a direct result of this avoidable infrastructure failure, as confirmed in the descriptive accounts given by survivors. There is a need for an overhaul in the approach to managing and maintaining the barrages, embankments and secondary infrastructure to avoid repetition of the 2010 catastrophe. Departments responsible for maintaining structures should be accountable for completion of the work before the flood season. A key element of infrastructure management overhaul should be enhanced transparency, with regard to pre-flood maintenance, with regard to the planning for breaches and with regard to the decisions taken on managing the floodwater during the season. Not only should it be possible to avoid much of the kind of destruction people experienced in 2010, enhanced transparency should reduce the number of rumours about political breaches and interference of local power-brokers.