

SECTION ONE: Understanding Social Dimensions of Disasters:
Conceptual Analysis

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SECTION ONE

UNDERSTANDING THE SOCIAL DIMENSIONS OF “NATURAL” DISASTERS: A CONCEPTUAL ANALYSIS



What is disaster?

"A serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of affected society to cope using only its own resources."

Natural disasters are caused by extreme occurrences in nature for which society is unprepared. They destroy the basic conditions of life for the victims, who lack the resources to recover in the short or medium term. Disasters often have a very significant detrimental impact on past development efforts.¹



Disaster is a situation or event, which overwhelms local capacity, necessitating a request to national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human sufferings. Wars and civil disturbances that destroy homelands and displace people are included among the causes of disasters. Other causes can be: building collapse, blizzard, drought, epidemic, earthquake, explosion, fire, flood, hazardous material or transportation incident (such as chemical spills), hurricane, nuclear incident, tornado, or volcano.²

Types of disasters

The most widely recognized types of disasters are those listed below. Disasters related to extreme weather events (floods, cyclones, tornadoes, blizzards, droughts) occur regularly. Events related to extremes of the earth's geology (earthquakes, volcanic eruptions) occur less frequently, but result in major consequences when they happen. Tsunamis often result from earthquakes. Avalanches result from massive accumulations of snow.

Disasters are commonly categorized by their origin; natural or man-made. Most disasters investigated in the literature are natural disasters. Recently, however, industrial accidents have been categorized as disasters. The Bhopal gas release and the Chernobyl nuclear accident are two examples of a man-made disaster. Forest fires (initiated by man) may be another example.

Disasters may occur suddenly in time (a quick onset), or they may develop over a period of time (a slow onset). Most occur suddenly and perhaps unexpectedly. However, some events develop gradually, including some floods and famines related to drought.³

1-<http://www2.gtz.de/dokumente/bib/02-5001.pdf>

2-<http://www.emdat.be/ExplanatoryNotes/glossary.html>

3-<http://www.pitt.edu/~epi2170/lecture15/sld006.html>

Following is the list of the types of disasters:⁴

Hydrological Disasters -- Flood hazards, dam bursts, tsunami and El Nino, water and groundwater hazards and Sea level rise.

Atmospheric Disasters -- Greenhouse effect and global climate, air pollution and acid rain, Ozone depletion, Global warming.

Land Related Disasters -- Land degradation, droughts and famines, desertification, groundwater over-exploitation, dryness and wildfires.

Forest Related Disasters -- Biodiversity extinction, deforestation and loss of biological diversity, biotechnology and genetic manipulation.

Geological and Mass-Movement Disasters -- Earthquake, Volcanism, Mass-movement hazards.

Wind and Water Driven Disasters -- Flood, Tropical cyclones, storms, hurricanes, tornadoes, lightning and frost disasters.

Coastal and Marine Disasters -- Health and marine environment, Coastal and marine degradation, Marine pollution.

Human Population Disasters -- Population explosion and poverty, Population growth and Habitat related problems

Technological Disasters -- Mining disasters, war, chemicals and accidents

Biological Disasters -- A biological hazard or biohazard is a biological substance that poses a threat to (primarily) human health. This can include medical waste, samples of a microorganism, virus, or toxin (from a biological source) that can impact human health.⁵

A comparative analysis of data for 2005 reveals that more people were killed in epidemics than landslides in Afghanistan, India and Pakistan – with 748 reported killed in epidemics and 287 in landslides.⁶ The major epidemics in the reporting year (2005) were identified as Japanese encephalitis, Leptospirosis, Diarrhea and Tetanus.

What is the difference between hazard and disaster?

Hazard is natural but disaster is not⁷. Hazards are extreme natural events with a certain degree of probability of having adverse consequences. A distinction also needs to be drawn between a real natural hazard and a socio-natural hazard. Given the complex set of influences this distinction is difficult to make, but it is useful in helping define disaster risk management measures.⁸

4- <https://www.vedamsbooks.com/no12824.htm>

5- Wikipedia http://en.wikipedia.org/wiki/Biological_hazards

6- On the basis of data provided by CRED <http://www.cred.be>

7- Duryog Nivaran www.duryognivaran.org

8- <http://www2.gtz.de/dokumente/bib/02-5001.pdf>



Amartya Sen a renowned economist has explained the difference between hazard and disasters by saying that “No less importantly it has to be recognized that even when the prime mover in a famine is a natural occurrence such as a flood or a drought, its impact on population will depend on how society is organized.”⁹

Table 1 Types of natural hazard¹⁰

Type	Description	Examples
Hydro-meteorological	Natural processes or phenomena of atmospheric, hydrological, oceanographic or climatologically nature.	<ul style="list-style-type: none"> ■ Floods, debris and mudflows ■ Tropical cyclones, storm surges, wind, rain and other severe storms, blizzards, lightning ■ Drought, desertification, wild fires, temperature extremes, sand or dust storms ■ Snow avalanches ■ Earthquakes, tsunamis ■ Volcanic activity and emissions ■ Mass movements, landslides, rockslides, liquefaction, submarine
Geological	Natural earth processes or phenomena	<ul style="list-style-type: none"> ■ slides ■ Surface collapse, geological fault activity
Biological	Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances	<ul style="list-style-type: none"> ■ Outbreaks of epidemic diseases, plant or animal contagion and extensive infestations

9- Dreze J, Sen A, Poverty and Famines, Hunger and Public Action. Oxford University Press, New Delhi (1989)

10- Guiding Note//////////



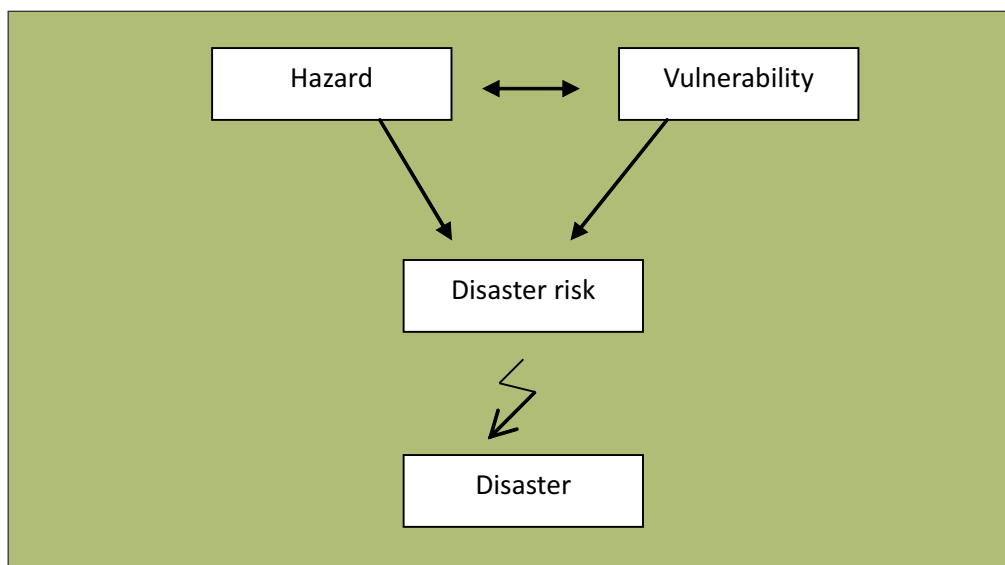
What is disaster risk?

The following formula is used to calculate disaster risk:

$$\text{Disaster Risk} = \text{Hazard} \times \text{Vulnerability}$$

In this equation risk is the product of the two factors, hazard and vulnerability. Therefore, it is clear that a risk exists only if there is vulnerability to the hazard posed by a natural event. For instance, a family living in a highly earthquake-resistant house would not be vulnerable to an earthquake of 6 on the Richter scale. So, they would not be at risk. If the hazard approaches zero, because, for example, buildings have been constructed in areas far away from continental plate subduction zones and tectonic faults, a house built with minimum precautions will be a safe place for the family, because they would only be vulnerable to very extreme events.

Figure 1 Calculating disaster risk



Natural events only become potential hazards when they threaten people, property or infrastructure. An earthquake will cause little damage if it takes place in an empty desert. It may also cause little damage if it takes place in a city like San Francisco, where people can afford to be well protected. A natural event only causes serious damage when it affects an area where the people are at risk and poorly protected. Disasters occur when these two factors are brought together...

- people living in unsafe conditions
- a natural hazard such as a flood, hurricane or earthquake



The natural hazard is often blamed for the disaster but, in fact, the real cause may be that the people were poor and unprotected. Many poor people know that they are living in areas with a high risk of, for example, regular flooding or earthquakes. Often they simply cannot afford to live anywhere else. They have no choice but to take these risks.¹¹

Figure 2 Components of a disaster¹²



What are the social dimensions of disasters?

If hazard is a natural agent of disaster, vulnerability is the social dimension of a disaster. As discussed earlier disasters are a result of natural hazards impacting on people who are vulnerable – physically, economically and socially. Analysis of the causes of disasters clearly indicates that the root causes of vulnerability are the social and economic processes leading to poverty.¹³

Poverty and vulnerability are twins of modern times. Vulnerability is defined as the capacity to anticipate, cope with, resist and recover from the impact of a hazard. Vulnerability can be further divided into physical, social, economic and attitudinal categories.¹⁴

A scoping study¹⁵ on links between disaster risk reduction, poverty and development explains: “Vulnerability’ tends to mean different things to different people, and is sometimes loosely defined in relation to different ‘vulnerable groups’ and their risk of outcomes such as

11- <http://tilz.tearfund.org/Publications/Footsteps+11-20/Footsteps+18/What+makes+a+disaster.htm>

12- *ibid*

13- Livelihood Centred Approach to Disaster Management: a Policy Framework for South Asia, ITDG, RDPI, 2005

14- Wisner, Ben et al. *At Risk*, 2nd Edition. London: Routledge, 2004, p. 12. <http://www.unisdr.org/eng/library/lib-select-literature.htm>.

15- DFID, *Disaster Risk reduction: a development concern, A scoping study on links between disaster risk reduction, poverty and development*, London: DFID, 2004 <http://www.dfid.gov.uk/pubs/files/disaster-risk-reduction.pdf>.

destitution or famine. In a disasters context, 'vulnerability' is applicable only in relation to specific hazards or interactions thereof, and can be seen to have two basic elements: *exposure* and *susceptibility* to harm. Exposure is determined by where and how people live and work relative to a hazard. Susceptibility takes into account those social, economic, political psychological and environmental variables that intervene in producing different impacts amongst people with similar levels of exposure.”

People become vulnerable due to a multitude of factors like:¹⁶

- **physical** (unstable locations of living, closer proximity to hazards, fragile unprotected houses);
- **economic** (no productive assets, limited income earning opportunities, poorly paid, single income avenue, no savings and insurance);
- **social and organizational** (low status in society, gender relations, fewer choices and decision making possibilities, oppressive formal and informal institutional structures and political, economic and social hierarchies);
- **psychological** (fears instigated by religious and other belief systems, ideologies, political pressures; mental illness; mental retardation);
- **physiological** (status in life- young, elderly, adolescent, pregnant, lactating mothers); chronic illness; disability; and sexual (exposure to sexual violence and harassment, HIV aids and other infections).

Do disasters discriminate?¹⁷

The Asian tsunami and Kashmir earthquake clearly demonstrated that while the hazards themselves do not discriminate between the various cleavages in society, the severity of impacts, and the speed of recovery of various individuals and groups differs vastly. These variations in impact and recovery are easily traced back to existing vulnerabilities and capacities. — 'Tackling the Tides and Tremors', South Asia Disaster Report 2005'

Indeed, discrimination has its seeds in the structures and systems of our society. However, it becomes more pronounced and visible in times of calamities and emergencies. A closer look at the processes and procedures of earthquake relief, recovery and reconstruction would suggest that existing patterns of discrimination were accentuated by the October 2005 earthquake.

In hindsight, these lessons can be taken as a baseline for the future to avoid or minimise rampant discrimination in post-disaster deliveries.

16- South Asia Disaster Report 2005, Tackling the Tides and Tremors, Duryog Nivaran, Practical Action and Rural Development Policy Institute: Islamabad, 2006.

17- www.dawn.com/2007/10/09/op.htm - 41k



Box 1

Discrimination in disaster relief: Lessons of October Earthquake¹⁸

In the first place, local power relationships at the community level played a crucial role in cultivating discrimination in the wake of earthquake disaster. In tribal and semi-tribal localities in the NWFP, local khans (lords) were reported to be influencing the decision-making process of relief distribution.

For example, the water and sanitation team working with the International Federation of the Red Cross and Red Crescent Societies (IFRC) was not allowed to talk to communities in Allai without the presence and permission of the local khan.

Elected representatives and the non-elected local 'elite' became self-appointed interlocutors between affected communities and the government and non-government relief administration. Nazims and other local influentials were reported to have intercepted relief trucks and hoarded relief supplies for their own kith, kin and constituencies.

Widows, the elderly, the disabled and tenant women had to undergo multiple discrimination in terms of access to information, relief assistance and reconstruction subsidies. A majority of such women could not pursue their claims for different reasons. At the procedural level, particularly in the cases of tenant women, they could not provide documentary evidence to confirm their identity and 'eligibility' to prove their claims. Mukhtar Bibi known in the community as Taro Masi of Garhi Habibullah is one such case. Her parents bought the land from the local khan (lord), but the Property Transfer Order (PTO) was not handed over to her parents.

After the earthquake, she was asked to pay 50 per cent of the reconstruction subsidy to the khan if she wanted a PTO to register her claim with the Earthquake Reconstruction and Rehabilitation Authority (Erra). However, she could not manage the required money to pay.

In the Pashtun-dominated areas of Mansehra, Abbottabad, Battagram, Kohistan and Shangla districts of the NWFP, women were strictly not allowed to articulate their demands or negotiate with the relief and recovery administration.

On the contrary, in the Hindko-speaking areas of the NWFP and Azad Kashmir, women were found to be relatively assertive and mobile in accessing resources and subsidies provided by the Pakistani government and other organisations.

Ghulzar Khan of Kaghan valley asserted that 'a woman cannot be the head of the family; the security of a woman is the responsibility of her family'. This attitude discriminated against women-headed households in the quake-hit areas

18- Ibid



where male members of the family had been killed in the earthquake.

The relief machinery was led by men, and the access to relief and recovery packages was denied or made difficult for such women who could not participate in the public sphere because of religious and ethnic customs. Therefore, the elderly and single women were forced to undergo multiple discrimination owing to their inability to assert their rightful demands for relief and reconstruction.

Fatima Jan, a widow whose husband was injured in the earthquake and died after 10 months of medical treatment, is now living in a camp in Hafizabad near Balakot. Her damaged house was not assessed as she was attending to her wounded husband in Abbottabad hospital during the survey process. 'We got only one tent and a cheque of Rs25,000. Most of the money was spent on the medical treatment of my husband who died later,' Fatima said.

Geographical location was another factor contributing to discrimination. In the aftermath of the earthquake, the base camps of medical services and other relief assistance were largely established in urban centres down the valley. It was difficult for the people living in high-altitude areas to carry patients down for emergency medical treatment. To address this problem, mobile medical units were established in high-altitude areas by some organisations.

Are disasters destined or designed?

Disaster is not destined,¹⁹ it is designed. It is designed by conscious and unconscious human interventions adversarial to the course of ecology and the natural environment. It is exacerbated by reactive thinking, policy failures and institutional neglect. It is also designed by power relations in economic, social, cultural, and political relations that oppress and marginalise groups of people. Development pursuits that ignore the subsequent emergence of related risks in social and environmental domains play a critical role in shaping every day disasters as well as cataclysmic events. Human desire to consume more and conquer nature through unsustainable patterns of natural resource management paves a painful way to disasters. To prevent disasters the patterns of inequitable and unsustainable development have to be reversed. The rights of nature like rivers, forests and oceans have to be recognized along with rights of humans.²⁰



19- Dennis Mileti, ed, Disasters by Design, Washington, D.C: Joseph Henry Press, 1999.

20- South Asia Disaster Report 2005, Tackling the Tides and Tremors, Duryog Nivaran, Practical Action and Rural Development Policy Institute: Islamabad, 2006.



What are disaster-environment linkages?

“The environment and disasters are inherently linked. Environmental degradation affects natural processes, alters humanity's resource base and increases vulnerability. It exacerbates the impact of natural hazards, lessens overall resilience and challenges traditional coping strategies. Furthermore, effective and economical solutions to reduce risk can be overlooked.... Although the links between disaster reduction and environmental management are recognized, little research and policy work has been undertaken on the subject. The concept of using environmental tools for disaster reduction has not yet been widely applied by practitioners.” (ISDR 2004).

Around the globe, land use and land cover changes are eroding the natural buffers that protect communities from hazard risk. These same changes often erode people's capacity to recover from disaster. Other environmental changes, such as anthropogenic global warming, promise to create new challenges to the security and sustainability of communities around the world. There are, however, opportunities to reduce disaster risk, and enhance community resilience. The impacts of disasters, whether natural or man-made, not only have human dimensions, but environmental ones as well (UNEP 2005).

Environmental conditions may exacerbate the impact of a disaster, and vice versa, disasters have an impact on the environment. There are many adverse impacts of the environment degradation on human vulnerability and disaster, among which the impacts of deforestation, forest management practices, agriculture systems, etc. exacerbate the negative environmental impacts of a storm or typhoon, leading to landslides, flooding, silting and ground/surface water contamination.

What is relationship between disaster and climate change?

The impacts of Global Climate Change include sea-level rise affecting coastal areas and island states, greater intensity of cyclones and probably enhanced precipitation in monsoon areas. These have their reinforcing feed-back mechanisms.

Elaborating the relationship between climate change and disasters a report by the International Institute of Sustainable Development (IISD) notes:

“The poor are already vulnerable to climate risks. Settlement on marginal or unstable lands such as steep slopes or floodplains heightens their exposure to the impacts of climate hazards. Heavy dependence on ecosystem services can place their welfare and survival at the mercy of environmental conditions. As the availability and quality of natural resources decline due to natural and human-induced pressures, so does the viability and security of their livelihoods. With limited capacities and resources at their disposal to respond to stresses such as droughts and floods, their ability to meet basic needs and move out of poverty is constrained. Climate change, therefore, threatens to exacerbate existing vulnerabilities and further entrench development disparities. Those with the least stand to



suffer the most. Thus, with regional changes and impacts already being observed, the need for adaptive response measures is imperative. For the poor and other vulnerable people, the need is urgent.”²¹

Policies and interventions aimed at increasing adaptive capacities of vulnerable communities towards climate change in the region is what are critically missing in current disaster management thinking. Though South Asian governments are signatories to most of the climate related treatise, declaration and protocols, but these commitments are yet to be translated into reality.

In Pakistan, officials report that more than 530 people have died in 2005 in northern, as well as southern areas due to heavy snowfall and rain. Several hundred thousand people got also stranded in areas of Azad Kashmir due to heavy snow and avalanches. In Afghanistan also at least 267 deaths were reported due to avalanche.²²

Box 2 The Movement of Heat and Cold Waves in South Asia

The human body is acclimatized to a particular combination of temperature and humidity. Long exposure to extremes of cold or heat may lead to severe thermal strain and ultimately to death. This needs monitoring of daily minimum temperature in winter and daily maximum temperature in summer as well as humidity and wind speed (especially because wind produces a “chill” effect). During March to July, normal temperatures over most parts of India are very high. Any abnormal increase leads to disastrous consequences. In each season we may expect two or three hot spells with temperature much above the normal. Similarly, during the period of November to March, when the winter is in full swing, two to three cold spells may be experienced. Both the hot and cold spells appear to migrate from one area to another, though their movement is not systematic. The heat and cold spells are called heat waves and cold waves respectively, though they have nothing in common with wave motion as is normally understood. Widespread heat waves normally occupy about 10 percent of the Indian land mass. Generally they develop over northwest India and north Pakistan and extend towards east and south.²³

Livelihood-disaster linkages²⁴

A livelihood, as it is considered generally, is not just a means of living or income generating activities. These can be the basic components of any livelihood system, though. Livelihoods involve other apparently invisible dimensions. At the very outset, they require a set of assets comprising of means of production, skills and knowledge to combine these assets and a corresponding market mechanism with a regulated system of transactions.

Strong asset base provide a buffer against hazards. The coping capacity of a hazard-hit household or community is directly linked to the asset portfolio of the same. A pattern of asset ownership, availability of required skills and knowledge to deploy these assets into a

21- http://www.iisd.org/pdf/2003/envsec_livelihoods_1.pdf

22- Reliefweb <http://www.reliefweb.int/rw/RWB.NSF/db900SID/HMYT-69WQQG?OpenDocument&rc=3&emid=ST-2005-000018-PAK>

23- High Powered Committee (HPC) on Disaster Management, Ministry of Agriculture, Report, 2001, Government of India

24- South Asia Disaster Report 2005, Tackling the Tides and Tremors, Duryog Nivaran, Practical Action and Rural Development Policy Institute: Islamabad, 2006.



productive process and a provision of conducive market mechanisms is what constitutes the livelihood systems.

In most of the examples from South Asia, the most disaster-prone communities, living at fragile ecologies possess meager resources for their subsistence. When a disaster hit, after life, it is the insecurity of livelihood assets, which compounds threats to the survival of affected communities.

Quite recently, it was taken as a matter of surprise for many relief workers when October 2005 earthquake survivors declined to leave the debris and come down to relief camps set up by various international organizations. Accepting high altitude sufferings in cold, they did not want to leave whatever was left with them after the quake devastation. Some say it was cultural concern for the survivors to leave their abodes. Some would add it was a strong sense of belongingness that people of Alai did not listen to warnings from the government of Pakistan. It may be partially true but it is not that simple. People do not leave their neighborhoods in such uncertain situations largely because they fear livelihood insecurity; for they had to leave their traditional assets behind. “We go but where to leave our buffaloes”, earthquake-hit communities posed as a counter question to official directions.

Similarly, the tsunami survivors belonging to fishing communities of India and Sri Lanka were again back in boats to catch fish from the sea. They can not be separated from their resource base on which their livelihoods depend. Off course, coastal communities are vulnerable to tsunamis and cyclones as mountain communities are vulnerable to earthquakes and landslides but that is not the only reason which could persuade them to leave the 'fragile' ecologies. It is like trading with risk because there lies their livelihood base too.

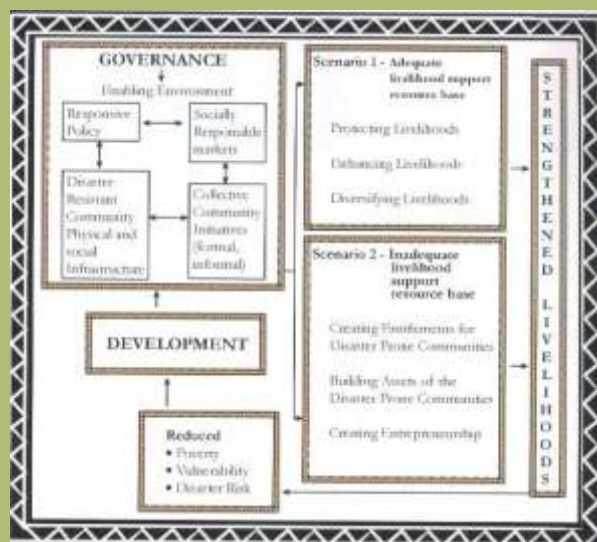
While assessing disaster-induced damages, generally, macro-economic indicators are applied for rapid and follow up assessments. Disruption in micro, subsistence and livelihood economies are not accounted for with the same detail and depth as it is done in, for instance, assessing damages to infrastructure. As a matter of plain fact, after human life, it is the livelihood which disaster prone communities strive most to protect against varied hazards. Yet, disaster response policies and practices hardly bring this issue to their priority agenda.

A recent study - understanding linkages between livelihood enhancement and disaster risk reduction by Practical Action (formally ITDG)- South Asia and Rural Development Policy Institute, Pakistan - presented a generic framework for Disaster-Resistant Sustainable Livelihoods (DRSL) (see Box 3). The framework identifies the social dimensions of disasters through a nexus between poverty and vulnerability, natural resources and livelihoods, and livelihoods and disasters.²⁵

There is a development- though slow and isolated – in recognizing and mainstreaming livelihood concerns in overall disaster management. Lately, IFRC in Sri Lanka and UNDP in Pakistan have supported few initiatives addressing disaster-resistant sustainable livelihoods in post-tsunami and post-earthquake rehabilitation.

25- Sumith Pilapitiya (Senior Environmental Engineer, South Asia Environment and Social Development Sector Unit, The World Bank), Towards comprehensive community development; <http://www.dailynews.lk/2005/05/27/fea07.htm>

Box 3

Disaster Resistant Sustainable Livelihoods (DRSL) Framework²⁶

This framework captures the major issues for consideration in achieving sustainable disaster risk reduction and poverty reduction. The framework recognizes that assets (natural, physical, financial, social and human) are the foundations of livelihood **strategies** and **outcomes**. It outlines that in South Asian countries there are two major scenarios observed in relation to livelihood assets:

Scenario 1: Among communities, households and individuals who have access to assets such as land, water, skills and whose assets are functional in terms of carrying out various livelihood activities, and have the potential to generate livelihood outcomes.

During disasters, the assets and livelihood outcomes come under threat. If remedial measures are not taken in time, the asset base can collapse. In such a scenario there is a need to:

- Protect livelihoods
- Strengthen livelihood assets, and
- Diversify livelihood options

Scenario 2: Among communities, households and individuals who possess minimum assets, who are deprived of an inadequate livelihood base and where livelihood options are too marginal to support subsistence.

During disaster they become extremely vulnerable. In this scenario there is need to:

- Create entitlements
- Build assets
- Encourage diversified livelihood options

26- Livelihood Centred Approach to Disaster Management: a Policy Framework for South Asia, ITDG, RDPI, 2005



Most importantly, the DRSL framework notes that assets do not turn into livelihood automatically. An enabling environment is essential for this. For instance, the availability of land and the skills possessed by an individual do not ensure household livelihood security unless the land is arable and brought under productive use by employing the requisite skills.

There are four pre-requisites for creating the desired 'enabling environment' for disaster-resistant sustainable livelihoods:

1. *Disaster-resistant physical and social infrastructure*: Physical infrastructure includes: culverts, bridges, buildings, water structures, drainage, channels and roads. Social infrastructure includes knowledge, information, life-saving services, access to productive resources, marketing and social networks.
2. *Collective interest community institutions*: There are formal and informal groups and networks aimed at articulating the community's and household's interests and demanding government's accountability. These include kinship, family, faith groups, ethnic groups, political organizations, welfare organizations, local government bodies, NGOs and CBOs.
3. *Responsive governance*: It should be emphasized that a mere mobilized community or a self-help group may not be able to win back its basic rights (entitlement to assets, land rights, health, education and other services) unless governance structures and systems are sensitive to its needs and responsive to its demands. Governance principles, policies and practices are the most fundamental elements in ensuring an enabling environment that turns assets into livelihoods.
4. *Socially responsible markets*: Monopolistic and discriminatory market mechanisms negatively affect especially agricultural economies. The livelihoods of rural communities who are connected to the global economy are vulnerable to fluctuations in world commodity prices. When low commodity prices coincide with natural hazards, rural livelihoods come under high stress. Fluctuations can be felt directly by those who extract a livelihood from the same of primary resources (farmers, fishermen and foresters), but also by the rural landless who are reliant on selling their labour and may be the first to suffer in an economic downturn. Therefore, market regulations in favour of agricultural economies are required to stabilize rural livelihoods.

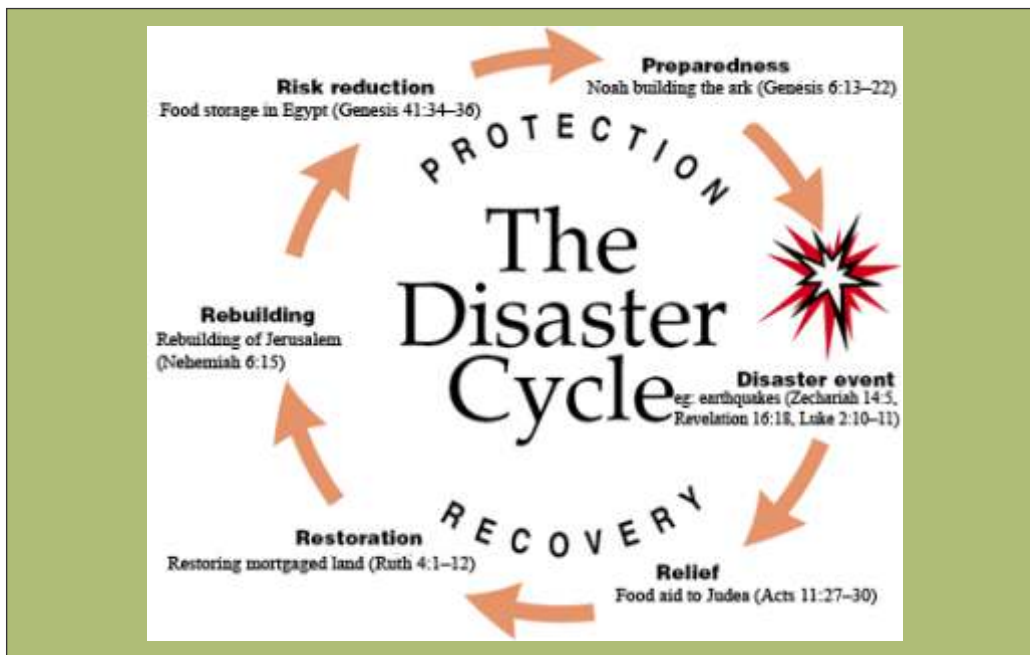
What is disaster cycle?²⁷

Disaster has a two major phases which has further sub-phases. These major phases include before and after the disaster. The cycle below explains the various stages as what can be done before disaster and what is needed once the disaster has already occurred.

27- This argument is adapted from material in the manual Christian Perspectives on Disaster Management. Ian Davis is the Managing Director of the Oxford Centre for Disaster Studies – PO Box 137, Oxford, UK – with 20 years' experience in disaster management, disaster shelter and in training and consultancy work. <http://tilz.tearfund.org/Publications/Footsteps+11-20/Footsteps+18/What+makes+a+disaster.html>



Figure 3 The disaster cycle²⁸



The Recovery Process

- **Relief** Once a disaster has taken place, the first concern is effective relief – helping all those affected to recover from the immediate effects of the disaster. This is known as *relief work* and includes providing food, clothing, shelter and medical care to the victims. Relief work takes place immediately after the disaster – usually for several weeks. With disasters such as droughts, it may last several months or even years.
- **Restoration** This phase involves helping to restore the basic services which the people need so that they can return to the pattern of life which they had before the disaster. For example: providing seeds for farmers or helping businesses to restart.
- **Rebuilding** This is linked to restoration. It involves the rebuilding of homes and businesses. Safety is important in the design of stronger buildings, able to withstand future disasters.

The Protection Process

It is not simply enough to respond to the immediate disaster. Attention needs to be given to preparing for any future disasters. This process is known as protection – enabling the

28- Ibid



community to protect itself. All protection measures need to be available to those most at risk – the poorest in the community.

- **Risk reduction** This phase follows on from rebuilding. It describes things which will help to reduce the risks of damage from similar events in the future. For example, this phase could include the building of walls to prevent flooding or including safety features into houses to strengthen them against collapse during future earthquakes. It could include building grain stores to store surplus food during good years. Many actions in development programmes could also be thought of as risk reduction.
- **Preparedness** There is a close link between risk reduction and *preparedness*. Risk reduction involves helping to reduce the risks faced by the community. Preparedness helps the community to be able to cope better should another difficult situation develop. Preparedness includes planning measures such as making an evacuation plan for a community living near a possible source of flooding. It could include leadership training or community participation in planting windbreaks.

What is disaster risk management?

The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.²⁹

Disaster risk management includes risk assessment, disaster prevention and mitigation and disaster preparedness. It is used in the international debate to underscore the current trend of taking a proactive approach to hazards posed by extreme natural phenomena. The intention is a comprehensive reduction in disaster risk accounting for all the factors that contribute to risk (risk management), as opposed to a focus on each individual danger.³⁰

Figure 4 Minimising disaster³¹



29- <http://www.unisdr.org/eng/library/lib-terminology-eng%20home.html>

30- <http://www2.gtz.de/dokumente/bib/02-5001.pdf>

31- <http://tilz.tearfund.org/Publications/Footsteps+11-20/Footsteps+18/What+makes+a+disaster.html>



Disaster risk management is a proactive approach to reduce the toll of disasters which encompasses both pre-disaster risk reduction and post-disaster recovery. It is framed by new policies and institutional arrangements that support effective action. Such an approach involves the following set of activities:

- risk analysis to identify the kinds of risks faced by people and development investments as well as their magnitude;
- prevention and mitigation to address the structural sources of vulnerability;
risk transfer to spread financial risks over time and among different actors;
- emergency preparedness and response to enhance readiness to cope quickly and effectively with an emergency; and
- post-disaster rehabilitation and reconstruction to support effective recovery and to safeguard against future disasters.

How disaster risk management is different from emergency management?³²

The dominant disaster management thinking is largely confined to emergency management. The prevailing perspective in this regard fails to address the underlying causes of disaster-induced casualties. For instance, it views disasters as isolated and rare events which break the 'normalcy' for a while. It believes the disaster is supposedly an interim intermission that can efficiently be reversed with emergency interventions largely based on rescue and relief. However, some alternative discourses on disaster do not buy this argument. Contrarily, they view the natural hazard as of nature; while disaster is the dialectical upshot of development failures and socio-economic imbalances as they manifest themselves in the built and natural environment. In South Asia, Duryog Nivaran- a network of individuals and organizations campaigning for disaster risk reduction - has premised its perspective on disaster by looking at it as a result of social, political and economic development processes instead of interpreting it as a 'natural event' or the 'wrath of God' or the 'punishment to sins'.

Table 2³³

Dominant perspective	Alternative Perspective
Disasters/conflicts viewed as an isolated event	Disasters/conflicts are part of the normal process of development
Linkages with conditions in society during normal times less analysed	Analysing linkages with society during normal times is fundamental for understanding disasters/conflicts
Technical/Law and Order solutions dominant	Emphasis on solutions that change relationships/structures in society. The

32- South Asia Disaster Report 2005, Tackling the Tides and Tremors, Duryog Nivaran, Practical Action and Rural Development Policy Institute: Islamabad, 2006.

33- Duryog Nivaran, Disasters and Vulnerability in South Asia, ITDG Sri Lanka, 1996



<p>Centralised institutions dominate in the intervention strategies. Less participation of people, who are treated as "victims"</p> <p>Implementing agencies less accountable and their processes less transparent to people</p> <p>Interventions are made after the event occurs</p> <p>The objective of intervention is to return to the situation before the event</p>	<p>objective is to reduce peoples' vulnerability and strengthen their capacity</p> <p>Decentralised institutions dominate in the intervention strategies. Participation of people paramount in intervention strategies; people treated as "partners" in development</p> <p>Ensuring accountability and transparency emphasized in implementation</p> <p>Mitigation of disasters/conflict the fundamental aim</p> <p>Disasters/conflicts viewed as opportunities for social transformation</p>
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Why disaster is a development issue?

The link between disasters and development is now apparent to everyone, and disaster risk management is gaining increasing currency as an effective form of investment. But, most developing countries are limited in their ability to effectively integrate a strategic approach to the theme into national policy. It is the poor populations in the disaster areas that are hardest hit by losses and setbacks.³⁴

Disasters are the pending issues of development and governance, therefore the managements of disasters should be made part of the overall governance and development planning and implementation. Decision-makers who ignore these relationships between disasters and development do a disservice to the people who place their trust in them. Increasingly, around the world, forward thinking Ministries of Planning and Finance with the support of United Nations and Non-Governmental Organization (NGO) officials are assessing development projects in the context of disaster mitigation and are designing disaster recovery programs with long term development needs in mind.

34- <http://www2.gtz.de/dokumente/bib/02-5001.pdf>



Box 4 Dreads of inappropriate development: Example of Kashmir earthquake³⁵

“All what we had developed over last 50 years was lost within less than one minute,” said Sardar Sikandar Hayat, prime minister of Pakistani - administered Kashmir while reflecting back on October 8th earthquake. It was realized by many policy makers in retrospect that damage triggered by the October quake in Pakistan would have been reduced substantially had there been the patterns and procedures of appropriate development in place. Dr. Akhtar Naseem, chairman Civil Engineering Department, University of Engineering and Technology, Peshawar states that seismically designed structures in AJK and Hazara district could have saved thousands of lives in the wake of devastating October 8 earthquake. He indicates that a lack of construction guidelines for the residents living in active fault regions which are capable of generating earthquakes, has resulted in a national catastrophe. The inconceivable deaths of children in public school buildings are the somber evidence of 'financing disaster' through faulty construction methods, material and designs applied by the contractors and approved by the respective government authorities.

What are the disaster-development linkages?

Disasters are linked with development in many ways (See Table 1).

First, hazards turn into disasters where there is low level of [appropriate] physical and social development. Indicators may include: poverty, vulnerability, lack of access to risk information and basic services and absence of disaster-resistant physical infrastructure etc at local level.

Second, development itself becomes cause of increase in vulnerability and disasters. In certain cases, for example, an unexamined pursuance of inappropriate, rushed and rapid growth models have increased disaster risk and vulnerability.³⁶ UNDP (2004) asserts that hazards are being reshaped and new hazards introduced by contemporary development trends. It explains that the conversion of mangrove coasts into intensive shrimp farming pools in many low-lying tropical coastlines in Southeast Asia and South America has increased the level of local hazards through coastal erosion and loss of the coastal defense provided by the mangrove stands. The introduction of new technology such as chemicals into agriculture, rising energy demands of urban centres and the international trade in hazardous waste, are all processes that has increased the complexity of hazard.

For example a common practice among road designers is to make the road higher than the expected design flood level, thereby ensuring uninterrupted access while floods are

35- South Asia Disaster Report 2005, Tackling the Tides and Tremors, Duryog Nivaran, Practical Action and Rural Development Policy Institute: Islamabad, 2006.

36- *ibid*



in full flush. Sometimes this creates a dilemma because the road embankment itself creates higher flood levels on the uphill side of the road and which can exacerbate flooding of homes and other property.

Table 3

Disaster-Development Linkages³⁷		
	Economic development	Social development
Disaster limits development	Destruction of fixed assets. Loss of production capacity, market access or material inputs. Damage to transport, communications and energy infrastructure. Erosion of livelihoods, savings and physical capital.	Destruction of health or education infrastructure and personnel. Death, disablement or migration of key social actors leading to erosion of social capital.
Development causes disaster risk	Unsustainable development practices that degrade the environment and create wealth for some at the expense of unsafe working or living conditions for others.	Development paths generating cultural norms that promote social isolation or political exclusion.
Development reduces disaster risk	Access to adequate drinking water, food, waste management and a secure dwelling increases peoples' resiliency. Trade and technology can reduce poverty. Investing in financial mechanisms and social security can cushion against vulnerability.	Building community cohesion, recognizing excluded individuals and social groups such as women, and providing opportunities for greater involvement in decision-making, enhanced education and health capacities increases resiliency.

37- UNDP, A Global Report, Reducing Disaster Risk, a challenge for development, Bureau for Crisis Prevention and Recovery, UNDP, New York: 2004

Why disaster management should be integrated into the development planning?

Successful integration of disaster risk reduction, environment management and development is not something that can be achieved by the addition of a new program, a new policy document or even a new department. Rather, it is a shift in approach towards supporting more risk reducing forms of environment management and development and vice versa, an approach, which will need to pervade all operations, programs and departments. Therefore, the sustainable disaster risk reduction and environment management should enlarge and focus on the convergence areas of three sectors:

- Development management;
- Environment management; and
- Disaster risk management

What are the goals of mainstreaming disaster risk reduction?

Mainstreaming risk reduction has three goals:³⁸

- To reduce existing risks where possible to mitigate the impacts of future disasters;
- To ensure that development does not drive risk, (that is, that projects do not inadvertently increase risk of the beneficiary population); and
- To ensure the sustainability of the individual project, thus protecting the project's investment.

In general, hazard risk reduction mainstreaming involves understanding local risks and hazards and weighing the trade-offs, costs, and benefits of incorporating a risk reduction strategy or component in to the project scope. In practical terms, mainstreaming risk reduction will vary from project to project.

BOX 5 Risk concepts and definitions³⁹

Risk estimation: the process used to produce a measure of the level of health, property, or environmental risks being analysed. Risk estimation contains the followings steps: frequency analysis, consequence analysis and their integration.

Risk analysis: the use of available information to estimate the risk to individuals or populations, property, or the environment, from hazards. Risk analysis generally contains the following steps: scope definition, hazard identification, and risk estimation.

Risk evaluation: the stage at which values and judgements enter the decision process, explicitly or implicitly, by including consideration of the importance of the estimated risks and the associated social, environmental, and economic consequences, in order to identify a range of alternatives for managing the risks.

Risk assessment: the process of risk analysis and risks evaluation.

Risk control or risk treatment: the process of decision making for managing risks, and the implementation, or enforcement of risk mitigation measures and the re-evaluation of its effectiveness from time to time, using the results of risk assessment as one input.

Risk management: the complete process of risk assessment and risk control (or risk treatment).

38- WB report on DRR in rural projects

39- Proposed by: International Union of Geological Science (IUGS), Working Group on Landslides, Committee on Risk Assessment, 1997



What are the disaster risk reduction measures?

Disaster risk reduction measures can primarily be three dimensional which would cover:

- Hazard mitigation
- Vulnerability reduction and
- Increasing the capacity to cope with or to withstand the negative effects of hazards.

Table 4 Example of Measures in Each Disaster Risk Management Phase

Disaster Phase	Earthquake	Flood	Storm (cyclone, typhoon, hurricane)	Landslide
Prevention / Mitigation	<ul style="list-style-type: none"> - Seismic design - Retrofitting of vulnerable buildings - Installation of seismic isolation / seismic response control systems 	<ul style="list-style-type: none"> - Construction of dike - Building of dam - Forestation - Construction of flood control basins / reservoirs 	<ul style="list-style-type: none"> - Construction of tide wall - Establishment of forests to protect against storms 	<ul style="list-style-type: none"> - Construction of erosion control dams - Construction of retaining walls
Preparedness	<ul style="list-style-type: none"> - Construction and operation of earthquake observation systems 	<ul style="list-style-type: none"> - Construction and operation of meteorological observation systems 	<ul style="list-style-type: none"> - Construction of shelter - Construction and operation of meteorological observation systems 	<ul style="list-style-type: none"> - Construction and operation of meteorological observation systems
	<ul style="list-style-type: none"> - Preparation of hazard maps - Food & material stockpiling - Emergency drills - Construction of early warning systems - Preparation of emergency kits 			
Response	<ul style="list-style-type: none"> - Rescue efforts - First aid treatment - Fire fighting - Monitoring of secondary disaster - Construction of temporary housing - Establishment of tent villages 			
Rehabilitation/ Reconstruction	<ul style="list-style-type: none"> - Disaster resistant reconstruction - Appropriate land use planning - Livelihood support - Industrial rehabilitation planning 			



What should be the policy principles for disaster risk reduction?

Duryog Nivaran has suggested to the governments and non-government organizations five fundamental policy principles for disaster risk reduction which include:

- Disasters should be looked at as a part of ecology and they should be *managed* rather than *controlled*.
- Disasters should be treated as issues of development and governance; and states should be made responsive, sensitive and accountable to the demands, needs and rights of disaster-prone communities and areas.
- Disaster management policies should be redirected towards poverty and vulnerability reduction instead of mere compensation and relief responses.
- Disaster management strategies should integrate structural measures (construction of embankments, dykes, resistant buildings, etc.) with non-structural measures such as enhancing the entitlements and negotiating power of the most vulnerable communities and subordinate social groups.
- Disaster-prone communities should be engaged equitably into the process of disaster-related decision-making and development planning, implementation and monitoring.

Source: ITDG, RDPI, Duryog Nivaran: 2005



SECTION TWO

Disaster Management Systems and Structures in Pakistan: A Contextual Analysis



Pakistan: Hazard Profile

Pakistan is divided into three major geographic areas: the northern highlands; the Indus River plain, with two major subdivisions corresponding roughly to the provinces of Punjab and Sindh; and the Balochistan Plateau.⁴⁰ More than two-thirds of Pakistan is arid or semiarid.⁴¹ The west is dominated by the Balochistan plateau, consisting of arid plains and ridges. Rivers, streams, and lakes exist only seasonally.⁴² The arid south ends at the rugged Makran coast and rises to the east into a series of rock-strewn ranges, the Kirthar, and to the north, the Sulaiman, which extends to the Indus plains.⁴³ A semi-watered Pothohar plateau surrounds Rawalpindi, bounded to the south by the salt range. Southward, the extensive Punjab plains support about 60% of the country's population. In the northern areas of Pakistan, the forest-clad hills give way to lofty ranges, including 60 peaks over 6,700 m (22,000 ft) high. K-2 (Godwin Austen), at 8,611 m (28,250 ft), is the second-highest mountain in the world.⁴⁴ The principal ranges, trending NW – SE, include several Himalayan ranges—notably the Pir Panjal and Zaskar—leading into the Karakoram Mountains. The Indus is the principal river of Pakistan. Its major tributaries are the Jhelum, Chenab, Ravi, and Sutlej.⁴⁵

Pakistan has been at risk to various types of natural disasters of which cyclones, flooding, landslides, earthquakes and drought are more common. The country is one of the most flood prone countries in South Asia (GFDRR, n.a). According to Global Facility of Disaster Reduction and Recovery, the Pakistan floods of 1950, 1992 and 1998 resulted in a large number of deaths and severe loss of property valued at an estimated \$1.3 billion. Pakistan is also located in a seismically active zone on account of its proximity to the Indo-Australian and Eurasian plates (GFDRR, n.a). This vulnerability was proven in October of 2005 when a major earthquake measuring 7.6 on the Richter scale hit 9 Districts in Khyber Pakhtunkhwa and Azad and Jammu Kashmir (AJK), killing over 73,000 people and damaging / destroying about 450,000 houses (NDMA, 2008).

Droughts are also a serious hazard in the country as 60 percent of the country is classified as semi-arid to arid (GFDRR, n.a). The droughts of 2000-2002 are estimated to have cost economic losses of about \$ 2.5 billion. The country does not have a very high risk to cyclones; however fourteen cyclones have been recorded between 1971 and 2001 which have caused a certain amount of damage (GFDRR, n.a).⁴⁶

40- See Pakistan Topography and Drainage. URL: http://www.mongabay.com/history/pakistan/pakistan-topography_and_drainage.html and also See Pakistan – Topography, Encyclopedia of the Nations. URL: <http://www.nationsencyclopedia.com/Asia-and-Oceania/Pakistan- TOPOGRAPHY.html>

41- Ibid.

42- Ibid.

43- Ibid.

44- Ibid.

45- See Pakistan – Topography, Encyclopedia of the Nations. URL: <http://www.nationsencyclopedia.com/Asia-and-Oceania/Pakistan- TOPOGRAPHY.html>

46- See Global Facility for Disaster Reduction and Recovery. URL: <http://gfdrr.org/ctrydrmnnotes/Pakistan.pdf>

Context of Disaster Management in Pakistan (1952 – 2005):

Disasters in Pakistan have predominantly been treated with post-hoc relief-driven perspective. Disaster management systems and structures were heavily dictated by the flood as a recurring phenomenon undermining other hazards like earthquake, drought, landslides, GLOF, tsunami etc. Legal framework on disaster management included: West Pakistan National Calamities (Prevention and Relief) Act 1958 (as amended upto 1959)⁴⁷; Civil Defense Act 1952 (as amended upto 1953) and Local Government Ordinance, 2001.⁴⁸

Local Government Ordinance 2001 (LGO 2001) was promulgated as a prototype of decentralization for all four provinces. LGO 2001 demarcated local areas into four categories: (i) Union; (ii) Tehsil (Taluqa); (iii) Town; and (iv) District and City District. For each local area a local government was installed which included: (a) District Government and Zila Council in a district or a City District; (b) Tehsil (Taluqa) Municipal Administration and Tehsil (Taluqa) Council in a tehsil; (c) Town Municipal Administration and Town Council in a town; and (d) Union Administration and Union Council in a Union.

According to the LGO 2001 disaster includes⁴⁹ famine, flood, cyclone, fire, earthquake, drought, and damage caused by force majeure. It empowered the District Nazim⁵⁰ (elected head of the district government) to take charge, organize and prepare for relief activities in disasters or natural calamities. The District Council was empowered to review measures for flood relief and storm water drainage.⁵¹

Though there was no direct mention of disaster risk reduction measures in the LGO 2001, some indirect linkages between local governance and disaster risk reduction could have been developed. For instance, Tehsil Administration is empowered to approve master plans, zoning, land use plans, including classification and reclassification of land, environment control, urban design, urban renewal and ecological balances.⁵²

These interventions could incorporate the objectives of DRR in the planning process at tehsil level. Local level governance is also mandated to review implementation of rules and bye-laws governing land use, housing, markets, zoning, environment, roads, traffic, tax, infrastructure and public utilities.⁵³

A review of development of integrated system of water reservoirs, water sources, treatment plants, drainage, liquid and solid waste disposal, sanitation and other municipal services⁵⁴ were also given to the local government. Tehsil Officer (Infrastructure and Services) is responsible for water, sewerage, drainage, sanitation, roads, streets and street lighting; fire fighting, park services.⁵⁵ Tehsil Officer (Planning) is responsible for spatial

47- The Act covers only post-disaster relief measures; there are no provisions for early warning systems, capacity building of the communities and related departments towards disaster prevention. The Act is also silent on rehabilitation of the disaster hit areas.

48- Section ix Local Government Ordinance 2001

49- Section 18 K, Local Government Ordinance 2001

50- Section 39 (t) Local Government Ordinance 2001

51- Section 40 (a) Local Government Ordinance 2001

52- Section 40 (b), Local Government Ordinance 2001

53- Section 40 (e) Local Government Ordinance 2001

54- Section 53 (3) (ii) Local Government Ordinance 2001

55- Section 53 (3) (iii) Local Government Ordinance 2001



planning and land use control; building control; and coordination of development plans and projects with Union Administration, Village Councils and other local governments.⁵⁶

Summarily, the LGO 2001 provided space for DRR integration into development planning at the Local Government level, indirectly though. However, these potential entry points for disaster risk reduction at local level have not been appropriated and neither later disaster management reforms introduced in the country have been able to create any institutional synergy with these existing opportunities at Union Council, tehsil and district levels. With the promulgation of LGO 2001, some administrative conflicts between the nazim and the DCO have been observed on the question of making decision on relief distribution.

Context of Disaster Management Reforms in Pakistan (2005 – 2012):

October Earthquake unleashed the institutional inadequacies of Pakistan's disaster management system. Reforms in disaster management were initiated after the Earthquake in 2005. Two days after the earthquake, the Federal Relief Commission (FRC) was established on October 10, 2005 with a mandate to coordinate relief activities.⁵⁷ Sixteen days after the disaster, Earthquake Rehabilitation and Reconstruction Authority (ERRA)⁵⁸ was established on October 24, 2005. With the end of relief phase on March 31st, 2006 the Federal Relief Commission was merged with ERRA.

ERRA was mandated to take up rebuilding in the earthquake affected regions (nine districts of Khyber Pakhtunkhwa and AJ&K). At the Province and State level Provincial Earthquake Reconstruction and Rehabilitation Agency (PERRA) in KPK and State Earthquake Reconstruction and Rehabilitation Agency (SERRA) in AJ&K. District Reconstruction Unit were also established at the District levels in earthquake- hit areas.

In a bid to provide for a legal and institutional arrangements for disaster management at Federal, Provincial and district levels, the National Disaster Management Ordinance (NDMO) was promulgated in December 2006. Subsequently, National Disaster Management Commission (NDMC) and National Disaster Management Authority (NDMA) were notified in February 2007. In Punjab province, the Punjab Emergency Service Act, 2006 was enacted with an aim to provide time-sensitive emergency response in Search and Rescue (SAR) and emergency medical evacuation.

National Disaster Risk Management Framework (2007), a conceptual derivative of HFA (2005-2015) developed a National Action Plan (2007-2012). The NAP identified nine priority areas which include (NDMA, 2007):

56- FRC's mandate included: coordination and monitoring of relief efforts in collaboration with Cabinet Division, Ministry of Health, Ministry of Interior, Ministry of Foreign Affairs; Communication Division and Ministry of Information and Armed Forces.

57- Role of ERRA includes: macro planning, developing sectoral strategies, financing, project approval and monitoring and evaluation.

Additionally, it ensures the required coordination and provides facilitation to implementing partners, whereas physical implementation of the projects is the responsibility of respective provincial/state governments.

58- NDMA, "Risk Governance – Pakistan case Study – inputs of NDMA" email interview dated 3 September 2012.

1. Institutional and legal arrangements for DRM
2. Hazard and vulnerability assessment,
3. Training, education and awareness,
4. Disaster risk management planning,
5. Community and local level programming,
6. Multi-hazard early warning system,
7. Mainstreaming disaster risk reduction into development,
8. Emergency response system, and
9. Capacity Development for Post-Disaster Recovery

The NDMO 2006 lapsed in March, 2010 and after about six months of legal vacuum (NDMA, 2012),⁵⁵ this Ordinance was presented to and approved by both the upper and lower houses of the parliament in November 2010 and it was notified in Gazette of Pakistan in December 2010.

In accordance with the decision of Implementation Commission (established in the aftermath of the 18th Constitutional Amendment), 17 Ministries were abolished at the federal level. Ministry of Environment was one of them. Initially the functions of the abolished ministries were either devolved to the provinces or relocated at the federal level and assigned to some relevant ministries. However, by aggregating the reassigned subjects of the erstwhile Environment Ministry, the Federal Government decided to establish a Ministry of National Disaster Management. The Ministry of National Disaster Management was notified on October 26, 2011, and renamed as Ministry of Climate Change in June 2012 (GoP, 2012).⁵⁹ The functions and institutions of newly created Ministry include:

- a. National Disaster Management Authority (NDMA)
- b. Pakistan Environment Protection Council (PEPC)
- c. Pakistan Environmental Agency (PEA)
- d. Pakistan Environmental Planning and Architectural Consultant (PEAAC)
- e. Global Environment impact Study Center, Islamabad
- f. Policy, Legislation, Plan, Strategies and programs with regard to environmental Protection and Preservation.
- g. Coordination, Monitoring and Implementation of Environmental agreements with other countries, International Agencies and Forums.

The newly established Ministry is in its formative phase and it needs to develop a strategic plan and draw out rules of business for effective coordination of the functions assigned to it (See Strategic Framework).

⁵⁹- Government of Pakistan, Ministry of Climate Change. URL: <http://www.mocc.gov.pk/>



Decentralized Risk Governance in Pakistan – Institutional Review:

Post-earthquake reforms in disaster management in Pakistan recognize the importance of disaster risk reduction at the decentralized level in following two ways:

- (a) The National Framework of Disaster Risk Management (2007) underlines the need of DRR at policy, planning and development implementation level by identifying the need of undertaking national hazard and vulnerability assessment; promoting disaster risk management planning;
- (b) National Disaster Management Act 2010 also outlines some mitigation measures at the district and local level through District Disaster Management Authorities and it also assigns Local Authorities to address disaster management issues at the local level.

However, the disaster management reforms (2005-2012) have some structural inconsistencies in terms of policy, planning, coordination and implementation. This study identifies five core problem areas with special reference to disaster management reforms in Pakistan:

- (a) Disaster risk governance is treated in isolation of the overall governance (See Box 5);
- (b) Disaster risk reduction is treated in isolation of the overall disaster risk governance;
- (c) Disaster Risk Management Framework (DRMF, 2007-2012) fails to create cross linkages with already existing regulatory frameworks and institutional mechanisms related to disaster management;
- (d) Rampant institutional overlaps without clearly demarcated jurisdictions of policy and enforcement of disaster risk reduction at national, provincial and local levels.
- (e) The lowest tiers of the governance is de-prioritized as it lacks legislative mandate, fiscal resources, required knowledge base and technical capacity to integrate DRR with development planning at the local level.

a. Restrictive and conflicting definitions:

Term 'disaster' varies in four different laws. The National Calamities (Prevention and Relief Act (1958) used 'calamity' and there is no mention of 'disaster' in this premier Act. This Act enlists flood, famine, locust or any other pest, hailstorm, fire, epidemic or any other calamity which, in the opinion of Government warrants action under this Act.⁶⁰ The 'opinion of Government' in this Act leads to arbitrariness without giving a solid basis and reasons for the holding such an opinion. It also opens room for controversies and inconsistency as it lacks a conclusive definition of a disaster or a calamity.

60- Section 3, The National Calamities (Prevention and Relief Act (1958)

Local Government Ordinance 2001 defines disaster “including⁶¹ famine, flood, cyclone, fire, earthquake, drought, and damage caused by force majeure”. The definition equates hazard with disaster without qualifying the effects of hazard (famine, flood, fire etc).

According to National Disaster Management Ordinance 2006 (adopted as Act in 2010) disaster means, “a catastrophe or a calamity in an affected area arising from natural or man-made causes or by accident which results in substantial loss of life or human suffering or damage to, and destruction of, property.”⁶² The term “substantial” remain unsubstantiated in the Act.

The NDM Act 2010 enlists preparedness, response, recovery and rehabilitation, and reconstruction but there is no mention of 'disaster risk reduction' while defining disaster management in legal lingo. Also the Act remains vague on declaration and definition of “affected area”. While Earthquake Rehabilitation and Reconstruction Act 2011 defined “affected areas” as areas affected by the earthquake and its aftershocks and notified as such by the Federal Government.⁶³

b. Disconnects between framework and functionality:

These reforms initiated in 2005 were enunciated by the National Disaster Risk Management Framework (NDRMF), which failed to develop institutional linkages of these reforms with existing governance institutions at the local level. NDRMF 2005 and NDMO 2006 have proposed to create a parallel system and structure of disaster risk management at national, provincial and district levels without creating institutional synergies with existing entry points at respective tiers of governance. Therefore these reforms could not trickle down to the institutional memories and operational levels and neither these reforms were integrated with real-time governance in the country.

BOX 6: How the agenda of disaster risk management operates in isolation of overall governance?

The National Disaster Risk Management Framework (NDMF) and the National Disaster Management Ordinance 2006 (as adopted in 2010) missed to recognize Tehsil administration as a crucial link in disaster risk reduction at the local level. These both reference documents opted to confine the role of local authorities only to “ensure that all construction projects under it or within its jurisdiction conform to the standards and specifications laid down for prevention of disasters and mitigation by the National Authority, Provincial Authority and the District Authority”.

While according to the LGO 2001 (defunct now but was operative at the time of NDRMF and NDMO 2006), Tehsil Municipal Administration (TMA) has a direct link with the disaster risk reduction. TMA being the middle tier of the local government has greater roles in mainstreaming disaster risk reduction into ongoing development planning within its administrative jurisdiction for the two following reasons:

61- Section IX, Local Government Ordinance 2001.

62- Section 2 (a), (b) and (c), National Disaster Management Act 2010.

63- Section 2 (a), Earthquake Rehabilitation and Reconstruction Act 2011



First, TMA is mandated to enforce municipal regulations. This makes the tehsil administration responsible through a designated tehsil officer (TO) to undertake the licensing, management of municipal lands, estates, properties, facilities and enterprises and enforcement of relevant municipal laws, rules and bye-laws etc. The dividends of disaster risk reduction and management are directly dependent on the enforcement of municipal regulations at the local level. Therefore, tehsil administration can integrate the elements of disaster risk reduction into the process of municipal regulation in the area.

Second, TMA is responsible for infrastructure and services. This involves water, sewerage, drainage, sanitation, roads (other than provincial and district roads) streets and street lighting; fire fighting, park services. A Tehsil Officer is delegated separately to coordinate these facilities. The areas of operation enlisted above are the issues related to town planning and these have a direct bearing on the objectives of disaster risk reduction and management. For instance, it has been observed in many areas poor management of drainage create local flooding hampering the mobility of the local residents following heavy rains in monsoon season.

Third, TMA is responsible for spatial planning and a Teshil Officer is designated for spatial planning and land use control; building control; and coordination of development plans and projects with Union Administration, and Village Councils. Spatial and land-use planning is considered as critical factors in disaster risk reduction and management because it involves the physical layout of an area, locality and settlement. However, disaster management reforms since 2005 have not taken into account these already existing entry points where disaster risk reduction could have been institutionally integrated at the local level. This implies that reforms on disaster risk management continue operating in isolation of overall governance at the local levels.

c. Institutional Overlaps and Inconsistencies:

Evident disconnects between horizontal and vertical policy coordination and absence of any convergence point on disaster risk reduction are some of the core issues emerging from current systems and structures of disaster management in Pakistan.⁶⁴

64- Federal Emergency Relief Cell was the lead organization for disaster management, yet it is still operational with no distinct role to perform. There exists a long list of responding agencies in case of a disaster including Civil Defense, Fire Fighting, Army, Police Emergency, Pakistan Red Crescent Society (PRCS) etc. Same gap exists in relation to institutionalizing early warning and information management by addressing to the linkages of NDMA with organizations like Pakistan Meteorological Department and SUPARCO. Other important institutions which are not formally linked with the National Disaster Management System include: Federal Flood Commission, Dams Safety Council, and Geographical Survey of Pakistan etc.

Currently there are four federal laws and five (subordinate) provincial laws dealing with various dimensions of disaster management in Pakistan.⁶⁵ There are one national commission and four provincial commissions as governing bodies of the national and provincial disaster management authorities. The district disaster management authorities are supposed to be established by each district – some districts have notified these Authorities on paper without giving any substantial authority to regulate disaster risk reduction at the local levels.

At the federal level, both NDMA and ERRA are attached with the Prime Minister's Secretariat; however, they have different governing bodies. NDMA is governed by the 16-member National Disaster Management Commission (NDMC) headed by the Prime Minister, while ERRA is governed by its 7- member Council also headed by the Prime Minister. There is another federal body, Emergency Relief Cell attached with the Cabinet Division, which was sidestepped in the reforms introduced after the 2005 October Earthquake when a temporary Federal Relief Commission was established which was merged with ERRA later on. Following are few examples indicating the institutional overlaps and inconsistencies in practice.

In the case of Floods 2010, NDMC was circumvented by the Council of Common Interests (CCI) on major decisions related to compensation and developing reconstruction strategy.⁶⁶ Additionally, another body National Oversight Disaster Management Council (NODMC) was established on August 19, 2010 'to ensure transparency in aid distribution' in the wake of massive floods of 2010.⁶⁷ Damage assessment of Flood 2010 was steered by the Provincial Governments. NDMA was circumvented by the Planning Commission in flood reconstruction planning and NDMA was also denied any role in the post-flood rehabilitation and reconstruction.

PDMA has not been established in Balochistan at the time of earthquake in 2008 and in the absence of any dedicated institutional arrangement, the Provincial Social Welfare Department had taken the lead in relief coordination. During the IDP crisis in Khyber Pakhtunkhwa in 2010, the role of PDMA was replaced with the temporary Provincial Emergency Response Unit (PERU). Even the NDMA was bypassed by the federal level Special Support Group (SSG), which was led by the law enforcement agencies (Ali, 2010).

In its Annual Report 2010, the NDMA recognized that “the bypassing of NDMA/PDMAs in formulation and execution of policies with respect to the reconstruction

65- West Pakistan National Calamities (Prevention and Relief) Act 1858; Civil Defense Act 1952 (as amended upto 1953) ; National Disaster Management Act 2010, Earthquake Rehabilitation and Reconstruction Act 2011; Punjab Emergency Service Act 2006.

66- After the flood disaster of 2010, the responsibility of providing strategic guidance to reconstruction and rehabilitation efforts was assigned to the CCI, while NDMA argues that it was the responsibility of NDMC. See NDMA Annual Report 2010. However, in an email Interview with ISDR (on 3 September 2012) NDMA contradicted its previous stance on this issue by stating: “The CCI did not play any role in disaster management in 2011 floods. The CCI did pass certain decisions regarding on issues of immediate disaster management concerns in its 17th September 2001 meeting as the NDMO 2006 had lapsed and the NDM act 2010 had not yet passed from the Parliament. This was done to fill constitutional and procedural vacuum.”

67- Daily Times, “NODMC established to ensure transparency in aid distribution” (August 20, 2010). URL:<http://dailytimes.com.pk/default.asp?page=2010%5C08%5C20%5Cstory_20-8-2010_pg1_3>



and rehabilitation of the affected areas in the aftermath of Floods 2007, Balochistan Earthquake 2008, Swat IDP crisis and Floods of 2010 [reflected] adhocism in dealing with disasters.’’⁶⁸

NDMA-ERRA (Ghumman, 2011) controversy has caused wastage of resources, duplication of work and communication problems with international community. ERRA was initially a project covering 9 districts of KPK and AJ&K, but through ERR Act 2011 it has become a permanent body extending its scope to the whole of Pakistan.

d. Centralized Disaster Management Laws and Provincial Autonomy:

According to the legislative assignments demarcated by the Constitution of Pakistan, disaster management is a residual subject thus it falls within provincial jurisdictions – which means Federal tier cannot legislate on disaster management. However, Article 144 (f) of the Constitution of Pakistan provides for a federal legislation on a residual subject if one or more Provincial Assemblies pass a resolution empowering Parliament to regulate certain subject. This article was invoked in 2006 to promulgate NDMO 2006.

In 2010, the 18th Constitutional Amendment has brought about massive changes in the governance structure, domain of policy formulation and jurisdiction of implementation on issues falling within the provincial competence. Key ministries and institutions responsible for social sector policy, planning and implementation have been devolved to the Provinces. Disaster management was the provincial subject even before the 18th Constitutional Amendment, however, NDMA 2010 did not incorporate these changes in the new legislation – NDMA 2010 stands to be the replica of NDMO 2006. The same Ordinance, without any review and amendment in the light of changed/devolved governance structure ushered by the 18 the Amendment was proposed and approved by the Parliament and have become National Disaster Management Act 2010. There are conflicting views (even within NDMA) on the implications of the 18th Amendment on disaster governance in Pakistan. According to some NDMA's top officials, “the existing (DRM) framework needs to be revisited at the earliest”⁶⁹ In another example, NDMA has maintained that the “introduction of 18th constitutional amendment 2010 does not specifically entreat upon disaster management paraphernalia in Pakistan...Although 18th amendment ensures enhanced provincial autonomy, yet it does not usher new legislative and institutional spaces to revisit and reform the centralized model of disaster governance and establish decentralized model of risk governance in Pakistan.”⁷⁰ This statement reflected that NDMA seems to be convinced that (a) there is no impact of the 18th Amendment on disaster management regime and (b) “enhanced provincial autonomy” does not provide basis for reforming existing centralized model of disaster governance.

Contrary to this version, a recent study has recommended, “it is important to provide greater clarity about the specific roles of NDMA and PDMA to avoid friction among them and to properly align the NDMA Act with the (18th) constitutional devolution amendment (DEC, 2012).

68- NDMA. (2010). Annual Report 2010.

69- Ahmad Kamal, Member NDMA, quoted in “Floods 2010: Governance Issues in Disaster Risk Management”, Policy Dialogue Report (2011) by Action Aid and ISAP-S.

70- NDMA, “Risk Governance – Pakistan case Study – inputs of NDMA” email interview dated 3 September 2012.

It has been noted that the institutional conflicts between NDMA and PDMA have been increased in the aftermath of implementation of the 18th Constitutional Amendment. According to NDMA, “District/Municipal Governments are also hesitant to accept advice from NDMA because they function under the overall policy direction of the Provincial Governments and cannot interact with NDMA directly.”⁷¹ Provinces view that NDMA was established through a Presidential Ordinance in highly centralized governance structures with an overbearing effect on provincial domains in 2007.

The provincial authorities are of the view⁷² that NDMA 2010 is a violation of the spirit of the devolution ushered in by the 18th Constitutional Amendment. Constitutional experts also view that NDMA 2010 needs to be amended to correct legal distortions carried forward through this piece of legislation.

For example, the Section 9(g) of the NDMA 2006 empowered National Disaster Management Authority to lay down 'guidelines' and give 'directions' to the concerned ministries and authorities of the Provincial Governments regarding measures to be taken by them in the case of any disaster. Provinces have contested this assertion. “This is reflective of directing provincial disaster response from the 'centre' instead of allowing provinces to develop and operating their own disaster response at the appropriate tiers.”⁷³ Particularly, Punjab has constituted a review committee to look into this 'transgression' and take up this issue with the Federal Government to repeal, revoke or amend the Sections of NDMA 2010, which encroach upon the provincial domains against the backdrop of the 18th Constitutional Amendment (Sherdil, 2012).⁷⁴

Similarly, ERRA faces another constitutional contest: Punjab province has raised its concerns that ERRA Act 2011 was passed without having provincial consent under Article 144 of the Constitution.⁷⁵

The issues highlighted above resurfaced prominently during 2010 Floods. According to some reports (Raza, 2011)⁷⁶ Rs. 5 billion collected after the 2010 Floods were not released for relief and rescue operation. Some officials indicated that funds were not released because disaster management had become a provincial subject after the 18th Amendment.

Civil society representatives⁷⁷ have also expressed their concerns that after devolution under the 18th Amendment, acting partners were unclear about the roles and responsibilities of disaster management authorities (Musaddaq, 2012).

71- NDMA. (2010). Annual Report 2010. Islamabad.

72- Interview with Syed Abdul Kahliq, Focal Person, Local Governance, Rural Development Policy Institute. 16 April 2012.

73- Interview with Dr. Kahdim Hussain, Executive Director, Bacha Kahn Education Foundation, Peshawar. 17 April 2012.

74- Interview with Mr. Khalid Sherdil, Director General, Provincial Disaster Management Authority, Punjab. 20 April 2012.

76- Ibid.

76- Raza, Syed Irfan. “Rs 5 billion raised last year still unused”, Daily Dawn (September 19, 2011).

URL:<<http://www.dawn.com/2011/09/19/rs5bn-raised-last-year-still-lying-unused.html>>

77- Interviews with Abdul Shakoor Sindhu (Rural Development Policy Institute), Iqbal Mallah (Hyderabad Press Club), 12-15 April, 2012.



e. **Decentralized Disaster Risk Governance: Missing Links**

The quantitative distribution of disaster management related functions include: National Disaster Management Commission (7), National Disaster Management Authority (10), Provincial Disaster Management Commissions (7), Provincial Disaster Management Authority (13), District Disaster Management Authority (33), and Local Authorities (4).

Looking at these functions, local governments related tiers are assigned with the highest number of (aggregated) functions, 37 in numbers but, the role of local authorities is confined to relief, rehabilitation and reconstruction⁷⁸ leaving a gap for operationalising decentralized disaster risk reduction at the lowest tiers of the governance.

For example, in terms of risk reduction in construction sector the existing law makes a vague reference by saying: “ensure that all construction projects under it or within its jurisdiction conform to the standards and specifications laid down for prevention of disasters and mitigation by the National Authority, Provincial Authority and District Authority.”⁷⁹ The cited section enlists three agencies as a reference point for standards without specifying already assigned roles of municipal regulation and infrastructure development to the Tehsil Municipal Administration.

Down to districts, it is pertinent to note that DDMA are assigned with 33 functions regarding disaster management. However, DDMA remain ad-hoc bodies without any dedicated office, staff, resources or executive authority and technical competence to undertake disaster risk reduction measures at the local levels.

Besides, in the absence of elected local government system⁸⁰ DDMA are headed by the administrative heads (DCOs) which creates a conflict between already existing district development committees (DDCs) headed by the elected representatives of Provincial or National Assembly.⁸¹

District Development Committee makes decisions about the approval of annual development plans, schemes and projects at the district level, while DDMA are assigned to review the development projects with disaster risk perspective. DDMA cannot effectively influence the decision of DDCs because of overlapping membership and weak composition of DDMA.

Pakistan HFA Review Report (2011) has also indicated to the institutional incapacity

78- Section 25, NDMA 2010.

79- Section 25 ©, NDMA 2010.

80- The LGO 2001 has not been extended by the Provincial Governments. Some administrative amendments have been made and the powers of elected district head (Zila Nazim) have been assigned to the administrative head of the districts (District Coordination Officers) in all four provinces of Pakistan. Currently, there elected local governments do not exist in any of the four provinces of Pakistan. Balochistan has enacted Local Government Act 2010, Sindh has also enacted Sindh Peoples Local Government Act 2012; while Khyber Pkhtunkhwa and Punjab are in the process of discussing the framework of new law on the local government without reaching to any consensus as yet.

81- This is more relevant to the Province of Punjab as the Provincial Government of Punjab has notified District Development Committees on the basis of rotating chairpersonship given to the elected representatives of treasury benches.

of the local government in undertaking disaster risk reduction. The HFA Report (2011) noted that “the deficiency of institutional capacities and expertise at the local level to implement the policies and plans in letter and spirit is the major challenge”⁸² in achieving the objectives of decentralized disaster risk reduction. “The local departments personnel lack requisite professional know how, skills, equipment or resources to plan or respond to the impending challenges of disaster risks with a scientific approach,” the HFA Report added.

Some analysts argued that the current disaster management system in Pakistan provides for a top-down model in which 'centre' controls the definition, policy, resources and decisions while provinces and lower tiers of the government are expected to 'implement' and 'report.'⁸³ The NDMA 2010 directly instructs districts to follow the template of disaster management envisaged at the central level. The roles, functions and composition of District Disaster Management Authorities (DDMAs) were also determined by the 'centre'.

f. Regulations, Planning and Coordination for Disaster Risk Management:

Departmental Regulations and SoPs are yet to be drafted and approved to streamline internal governance and create coordination vectors within and between NDMA, PDMAs and DDMAs. Although committed in the National Action Plan (2007-2012), an authentic technical baseline on multi-hazard has not been developed so far. Instead, guidelines on DRR for three sectors have been developed which are only limited to the qualitative data. Experts view that these guidelines need to be amended by incorporating quantitative data as well.⁸⁴

Existing Law does not provide for any enforcement power to the PDMA and neither has it suggested any punitive action in the case of non-compliance of standards in infrastructure construction.

NDMA in collaboration with UNDP has developed Provincial Disaster Risk Management Plans for three Provinces and 10 Districts. These Plans face criticism from PDMAs for the process and methodology. Existing Provincial Plans do not take into account DRR; these are predominantly 'response' plans but branded as disaster risk management plans.

Khyber Pakhtunkhwa has not approved the draft Provincial Plan developed by NDMA/UNDP.⁸⁵ Punjab does not own the Plan though it is uploaded at its official website.⁸⁶ In the Balochistan Provincial Plan, some of very important disasters are missing from the list of the hazards.⁸⁷ Apparently, disaster risk management plans are also developed in some select districts (under One-UN Program) but these Plans do not suggest any specific

82- NDMA (2011). HFA Report 2011

83- Interview with Amir Mohayuddin, former Director NDMA, 12 April 2012.

84- Ibid.

85- Provincial Plan for Khyber Pakhtunkhwa was developed by NDMA and UNDP, however, the PDMA has neither commented on the draft and neither has approved it.

86- Interview with DG PDMA, Punjab revealed that Provincial Disaster Risk Management Plan for Punjab was developed by UNDP and NDMA and published it under PDMA in 2008, two years before the PDMA was established in Punjab.

87- Comments on the Draft Provincial Disaster Risk Management Plan Balochistan by Participatory Development Initiative, Quetta, Balochistan URL:

<<http://www.pdi.org.pk/reports/PDI%20Comments%20on%20Provincial%20Disaster%20Management%20Plan%20Balochis.pdf>>



measures on DRR in local risk geographies, instead in flood prone-districts, these plans are just renamed from annual flood plans to disaster risk management plans. Multi-hazard identification and risk reduction planning to this effect is missing in district plans. In certain cases data gaps and serious inconsistencies were also observed in UNDP-sponsored provincial and district plans.⁸⁸ Trainings in select districts were organized by NGOs, however, the questions of integrating this training with governance intuitions remains a major issue.

g. Ignoring Development-Induced Disasters:

Literature on disaster risk reduction recognizes that hazards are being reshaped and new hazards introduced by contemporary development trends (UNDP, 2004). Recent studies have indicated that a new trend of development-induced disasters is emerging in developing countries.⁸⁹ Left Bank Outfall Drain (LBOD), Right Bank Outfall Drain (RBOD), Chashma Right Bank Canal Irrigation Project (CRBCIP), Taunsa Barrage Remodeling and Rehabilitation Project (TBRRP) are some oft-cited examples of disasters caused by mega development in drainage and irrigation sectors in Pakistan. Some analysts have termed 2010 Flood at Taunsa (South Punjab) as a result of 'engineering failures' (Gadi, 2011) because the very structures meant to control flooding have caused and exacerbated the flood problem itself (Ibid).

Existing disaster management systems do not seem to have taken development-induced disasters into account. The NDMO 2006, NDRMF 2007 and NDMA 2011 does not provide for any preventive or punitive clauses to address the whole spectrum of disasters induced by ill-designed development projects.

Box 7: Draft National Disaster Risk Reduction Policy (2012) and the 18th Constitutional Amendment: An Institutional Analysis

A draft National Disaster Risk Reduction Policy (2012) has been developed which awaits the approval of Federal Cabinet since last couple of months. One of the stated purposes of the policy is “to advocate an approach to disaster management that focuses on reducing risks.”⁹⁰ The policy claims to serve as “a guiding framework both for DRR and relevant development plans and programs to focus attention upon priority issues.”

While discussing the “policy challenges” the Draft Policy does not delineate upon the “institutional vulnerability” - basic institutional overlaps, jurisdictional conflicts, definitional confusions, policy disconnections and resource gap - hampering effective disaster risk governance in Pakistan. There seems to be a

88- Provincial Disaster Risk Management Plan 2008 was developed for the Punjab Province, which failed to provide authentic data on flood zoning as some high-flood zone districts were shown in no-flood zone (e.g. District Hafizabad). When this discrepancy was indicated to the DG PDMA, he refused to own the document by saying that it was produced by UNDP two years before the PDMA was established in Punjab. “Therefore, the onus of responsibility to clarify the discrepancy lies with UNDP and NDMA instead of PDMA,” he asserted.

89- See Manila-based NGO Forum on ADB (Asian Development Bank), reflects some of this thinking. URL: <<http://www.forum-adb.org/>>

90- Draft National Disaster Risk reduction Policy (2012).



disconnect between institutional memory and the proposed Policy as this Draft does not make any cross reference to the lessons learnt with special reference to institutional disarray reflected in Flood 2009 and 2010 - and that continues even today.

The Draft Policy also fails to create institutional synergies to achieve the proposed policy objectives, instead it concludes with a prescription to “harmonizing DRR initiatives” without fixing the responsibility to respective tiers of governance and relevant institutions. The Draft restricts itself to underlining a need for “a clear definition of roles and responsibilities between different layers of governance and actors.”⁹¹ Being generic in nature, the Policy seems to be silent on assignment of responsibilities as who will do what to achieve disaster risk reduction in Pakistan.

There is another concern as if the Federal Cabinet is the appropriate forum for approval to a policy on a matter which cuts across provincial jurisdictions? This study argues that disaster management being the provincial and inter-provincial subject needs a more representative forum like Council of Common Interests (CCI) to formulate such a policy. The competence of Federal Cabinet is more related to the policies on international coordination and minimum standards on disaster risk management instead of indulging into the subjects and functions devolved to the Provinces and Districts.


Without addressing the fundamental questions of disaster risk governance, the draft policy in fact compounds the confusion caused by overlapping institutional roles. It intends to erect a building on wrong foundations. The draft policy seems to have encroached upon the provincial domain by giving a national policy on essentially a provincial subject. Draft Policy on DRR appears to be the extension of National Disaster Risk Management Framework (2007-2012), failing to incorporate in it the changes brought about by the 18th Constitutional Amendment 2010.

Draft Policy assumes to undertake the “strengthening Local Level Risk Reduction capacity focusing upon communities, and supportive linkages with Union Councils, tehsils and districts.”⁹² In the light of democratic devolution ushered in by the 18th Constitutional Amendment, the Federal outreach in policy, planning, project implementation and monitoring has been restricted leaving the lowest tiers of the governance (Union Council, tehsil and district) to be managed by the Provincial Governments. It is apprehended that such a policy prescriptions would lead to recentralizing the decentralized subjects and functions like disaster management in Pakistan.

However, one of the objectives of the Draft Policy to “create Multi-Hazard Early Warning capacity while building upon existing systems and emphasizing the information and warning needs of vulnerable end- users” seems to be a concern of the Federal Government as it involves cross border and inter-provincial mechanisms of information sharing and dissemination – subjects included in Federal Legislative List Part I.

91- Ibid.

92- Ibid.



It has been established that disaster risk management can effectively be achieved through a perspective of “polycentric governance”, however, the sectoral roles and responsibilities need to be clearly demarcated to ensure the intersection of institutional directions. This entails an interplay between policy and institutions for an effective and efficient delivery. The element of this interplay is missing in the Draft Policy making it structurally incompatible with the existing governance systems and structures existing in Pakistan. The Draft National Policy on Disaster Risk Reduction (2012) appears to have operated in isolation with a vertical (top-down) approach in a horizontally devolved environment of governance in Pakistan.

Conclusion- Lessons Learnt

Disaster risk management in Pakistan has predominantly been led by a politically centralist and administratively reactive perspective of governance, while changed governance scenario requires an 'alternative perspective'⁹³ -- doing away with highly centralized, hegemonic and techno-centric concepts of disaster management.

At the time of democratic transition in 2008, the democratic government inherited a dysfunctional and unaccountable military-dominated disaster response apparatus in Pakistan (ICG, 2012). Former military regime had set up the Federal Relief Commission and the Earthquake Reconstruction and Rehabilitation Authority (ERRA) in the aftermath of the 2005 earthquake, with a mandate limited to earthquake-affected parts of KPK and Azad Jammu and Kashmir (AJK). National Disaster Management Authority (NDMA) was established in 2006. Operating outside parliamentary purview and headed by serving generals, these three institutions were exempted from external oversight and accountability (ICG, 2006).

The eighteenth constitutional amendment (April 2010) devolved disaster management to the provinces, potentially providing an opportunity to design a locally adapted disaster response apparatus (NDMA, 2011).

There is a need to create constitutionally guaranteed synergies of disaster risk governance between Federal, Provincial, District, Tehsil, Union Council, Village/Neighborhood levels. The experience of policy and legislative interventions followed by the HFA has shown that there are two key drivers of change towards decentralized disaster risk governance in developing countries. First, the internalization of disaster risk reduction paradigm at policy and planning level; second institutionalization of disaster risk reduction paradigm at all tiers of political, economic and development governance. Failure of disaster risk governance can be attributed to the malfunctioning or misdirection of these two critical drivers of change.

93- The alternative perspective on disaster risk management advocates that hazards is natural but disaster is not. It urges to explore the social dimensions of disasters including institutional capacities, societal vulnerabilities and indigenous knowledge. The alternative perspective also advocates to create a better interface between structural and non-structural dimensions of disaster. (www.duryognivaran.org)



In the case of Pakistan, analysis indicates that stand-alone, episodic and isolated reforms in disaster risk governance (2005-2012) compounded the problem instead of resolving it. Political and institutional ownership and commitment of disaster management reforms remain a major missing link in Pakistan leading to uncoordinated legislative experimentation in disaster management.

It is also important to note that the process of conceiving, achieving and integrating reforms in disaster risk governance is a major determinant which creates relevance and ownership of the intended reforms as a product. Some strategic gaps in the process applied for the disaster risk management reforms in Pakistan have contributed to the ineffectiveness and incoherence of the disaster management system in Pakistan

The process of decentralization in last decade has undergone some political turmoil. The Devolution of Power Plan (2001) introduced by the military government was dismissed by the successive democratic dispensation in 2009. The democratic dispensation instead introduced a federalist model of devolution in 2010, giving more autonomy to the Provinces and leaving the fate of devolution at districts level to be decided by the Provinces.

The DRM reform process in Pakistan in the last decade has been carried out under tremulous political and catastrophic disaster scenarios. The Devolution of Power Plan (2001) introduced by the military government which gave powers of devolution to the District level disregarding the Provinces has been dismissed by the elected government in 2009, and a model of devolution giving more autonomy to the Provinces has been introduced in 2010.

In this scenario, the framework for decentralized disaster risk governance has become the exclusive competence of Provinces, with provinces becoming the strategic entry point for required internalization and institutionalization of decentralized disaster risk governance in Pakistan. The process of disaster risk governance reforms in this case should be guided by the changed governance milieu in the country.

Box 8 : The absence of local government(s) increases disaster risk: Lessons from 2010 Floods

Floods in 2010 and 2011 (White, 2010) have strikingly exposed the vacuum of governance at the local level leading to a huge loss of life, infrastructure and livelihoods. The first responders in these floods remained obscure letting the Provincial and Federal authorities to micro-manage relief and rescue operations at the lowest tier of the governance. Some reports have observed that the collapse of local governance has increased the risk of disasters in Pakistan (Rumi, 2010). The provincial irrigation departments were also criticized for negligence in maintaining the canals and embankments. Most importantly, the lack of building regulation around rivers, canals and widespread encroachments demonstrate the inefficient governance systems responsible to respond to disasters and emergencies. The firmness of river banks has been damaged and human settlements have emerged without planning, regulation and the safety measures.



Post-flood studies have recommended strengthening the local capacities. There is urgent requirement for the provincial governments to set up local government systems. It has been argued that the governance vacuum at the local level is contributing in enhancing the vulnerability of local communities.

There is a need to put in place sound building regulations, which have been part of the Union Council and district governments' mandates under local government laws. Similarly, there is a vital need to strengthen the capacity of deconcentrated structures of irrigation departments in districts and divisions.

Currently, with the new wave of provincial autonomy in the country and the renewed architecture of governance provides a promising space in legislative and institutional domains to rethink and restructure the disaster risk governance model in Pakistan. It is important to create clearly defined roles and operational links while designing the institutional and policy frameworks on disaster risk governance. The definitional inconsistencies and institutional overlaps need to be addressed for cohesive disaster risk governance.

Above all, a paradigm shift – from relief and response to risk management and risk reduction is imperative for meaningful reforms in disaster risk governance in the country. It is also to be noted that frameworks can only function effectively if they have explicit connections with the existing structures of decision making. Reforms in isolation are destined to fail in their objectives and dividends.





Recommendations:

How to decentralize disaster risk governance in Pakistan – A Strategic Framework

Against this backdrop this paper proposes a four-pronged strategic framework for effective decentralized disaster risk governance in Pakistan:

(a) Policy Level:

A review and evaluation of National Disaster Risk Management Framework (2007-2012) should be undertaken and a consultative process at Federal, Provincial and District levels should be initiated to develop: (a) multi-layered, (b) multi-sectoral and (c) multi-hazard “Decentralized Disaster Risk Governance Framework (DDRGF)” for next five years (2012-2017). To link the DRR agenda with political processes, the Council of Common Interests (CCI) can be the appropriate forum for the review, advice and vetting of DDRGF. CCI as the highest decision making body with high-profile provincial representation in the Council which, if approves, would strengthen the political ownership of DRR agenda in Pakistan. It is also important to note that decisions of CCI entail cross- provincial ownership and support, and CCI is accountable to the Parliament. If the decision on decentralized disaster risk governance is solicited at the CCI level, the agenda is likely to get Parliamentary support and oversight making it part of the overall governance.

(b) Fiscal Front:

It is important to note that 7th NFC Award has introduced multiple formula for resource distribution between provinces.⁹⁴ New (8th) Finance Commission⁹⁵ has already been constituted and in the forthcoming Award, Disaster Risk Indicator (DRI) can be integrated as basis of future resource distribution at the Federal, Provincial and District levels. In this regard, a comprehensive framework of DRR-sensitive NFC, PFC (Provincial Finance Commissions) and DFCs (District Finance Commissions) can be developed and introduced to the members of NFC and Provincial Governments for approval. NFC provides an important strategic forum to secure fiscal support for decentralized disaster risk governance in Pakistan.

(c) Legislative Level:

NDM Act 2010, ERR Act 2011 and related Provincial Laws on disaster management need to be revised and amended in the light of devolution ushered in by the 18th Constitutional Amendment. In the revision of existing Laws following points to be kept in mind:

94 - he 7th NFC Award signed by the President of Pakistan on March 16, 2010 introduced a 'multiple criteria' for distribution of revenues amongst the Provincial Governments. The criteria includes: population, poverty or backwardness, revenue collection, or generation and inverse population density with the ratio of 82%, 10.3%, 5.0% and 2.7% respectively.

95- Under Article 160(1) of the 1973 Constitution, the NFC is appointed at intervals not exceeding five years.



- The inconsistencies in the definition of 'disaster and 'disaster management' need to be corrected. An explicit mention of disaster risk reduction is to be made part of amended law, by explaining its sectoral linkages with development at federal, provincial, district, tehsil, union council, village and neighborhood levels.
- Enforcement and accountability clauses to be inserted in the amended law. It is essential that the amended law provides for punitive actions on disasters and damages caused by ill-planned development, institutional negligence and lack of responsiveness.
- Cross reference of existing laws and institutions related to disaster management need to be made in the amended law; and institutional responsibilities, authorities and resources to be clearly explained in the law.
- Sector-specific responsibilities towards disaster risk reduction are to be explained in the law instead of leaving this to the arbitrary administrative decisions.
- Village/neighborhood should be the basic unit of disaster risk analysis and planning for disaster risk reduction; and the role of local municipal authorities and public works departments should be realigned in accordance with the objectives of disaster risk reduction.
- The demarcations of responsibility, authority, fiscal space and accountability on disaster risk reduction should be clarified at the lowest tiers of governance based on the principles of 'allocative efficiency'.⁹⁶

(d) Institutional Level:

- With the establishment of new Ministry of National Disaster Management (MNDM), a 'convergence plan' should be devised and all federal institutions related to disaster management (NDMA, ERRA, ERC etc) should be declared as attached departments or wings of the Ministry.
- The roles and functions of erstwhile Ministry of Environment currently reallocated to the newly established MNDM need to be integrated with objectives of disaster risk reduction. This would provide an opportunity to link the objectives of sustainable environment with disaster risk reduction.
- Institutional restructuring of Federal and Provincial authorities responsible for disaster risk management is required to clarify the legislative, fiscal, administrative and policy boundaries between three tiers of governance.
- Federal agencies need to assume the role of policy formulation and coordination with effective input from the Provinces; giving the authority and responsibility of context- specific policy, planning, implementation and monitoring to the Provincial agencies.
- Vectors of communication and coordination between Federal, Provincial and District levels should be developed along with reporting mechanisms, formats, routes and timelines.
- Disaster-related data should be made available for public, media and other stakeholders for the purposes of planning and performance audit.
- The role and relevance of DDMA's need to be reviewed and a system of localized disaster risk reduction to be introduced within existing development investments at

96- Allocative efficiency is a type of economic efficiency in which producers produce only that type of goods and services which are more desirable in the society and also in high demand.

public and private levels. To this effect some specific planning instruments and 'DRR filters' should be developed to make development initiatives compliant with DRR objectives at the lowest tiers of the governance. This entails that district, tehsil and union council level development planning need to be integrated with disaster risk reduction.

Box 9 : How to integrate disaster risk reduction with existing planning forums?

Development planning and disaster risk reduction has to go hand in hand instead of treating them in separation. Below are some strategic entry points where the objectives of disaster risk reduction can be integrated with a continuous development planning process in Pakistan.

(i) Union Council level

Union Council is the basic unit of governance. Union Council Works Committee has the authority of approval of projects costing up to Rs. 0.100 million of the UC concerned.

(ii) Tehsil Level

The forum of Tehsil Development Committee (TDC) is mandated to extend approval to the projects costing Rs. 5 million sponsored by the concerned Tehsil Municipal Administration (TMA).

(iii) District level

District Development Committee (DDC) can approve development projects costing up to Rs. 20 million (except foreign aided projects) pertaining to the concerned district government and development projects costing between Rs. 5 million and Rs. 20 million pertaining to the TMA of the district. The DDC can also recommend the District Government and TMAs projects costing more than Rs. 20 million for approval of competent forum.

(iv) Provincial Level

Provincial Development Working Party (PDWP) is the provincial forum mandated to approve development projects costing above Rs. 100 million up to Rs. 1000 million for provincial government and above Rs. 50 million to Rs. 1000 million for local governments. It is also authorized to scrutinize and recommend projects costing more than 1000 million for approval of Executive Committee of the National Economic Council (ECNEC) through the Central Development Working Party (CDWP). It also can scrutinize and recommend all projects having Foreign Assistance for approval of ECNEC through CDWP.

Departmental Development Sub-Committee

The DDSC has the mandate of approval of development projects costing up to



Rs. 100 million sponsored by the concerned Provincial Department, between Rs. 20 million and Rs. 50 million projects sponsored by the local governments and scrutinize / recommend such projects costing above Rs. 50 million, for approval of competent forum, through the Planning and Development (P&D) Department.

(v) Federal Level

Central Development Working Party (CDWP) is the approval body at Federal level which can approve the schemes submitted by central ministries costing up to Rs. 200 million and review all development schemes submitted by Provincial Governments and Central Ministries costing more than Rs. 1000 million and Rs. 200 million respectively and submit them for approval of ECNEC.

Executive Committee of the National Economic Council (ECNEC) is another high level Federal body responsible to: Sanction development schemes in public and private sector; Allow moderate changes in the plan and in the plan allocations; and supervise the implementation of economic policies laid down by the National Economic Council (NEC) and the Government

National Economic Council (NEC) is in overall control of planning machinery and it approves plans and policies relating to development in the country.





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