

NEELUM

District Disaster Risk Management Plan



NEELUM

District Disaster Risk Management Plan



**Building Enabling Governance and Institutions
for Earthquake Response (BEGIN-ER)**



Copyright © 2007 United Nations System in Pakistan

Material in this publication may be freely quoted or reprinted, but acknowledgement is requested.

Printed by Instant Print System (Pvt.) Ltd., Islamabad - Pakistan.

This Publication is available from:

1. Country Director - UNDP
UN House
House No. 12, Street No. 17, F 7/2
Islamabad, Pakistan.
Tel: +92-51-8255600
Fax: +92-51-2655014 -2655015

Website: <http://www.undp.org.pk>
2. Earthquake Reconstruction & Rehabilitation Authority (ERRA)
Prime Minister's Secretariat
Constitution Avenue
Islamabad - Pakistan
Tel: +92-51-9222373
Fax: +92-51-9204197

Website: <http://www.erra.gov.pk>

Table of Contents

Acronyms	v
Acknowledgements	vii
Foreword	ix
Message from Deputy Chairman ERRA	xi
Introduction	1
Purpose and Scope of the Plan	2
Planning Process	2
Section 1: Profile of District Neelum	3
1.1. Location	3
1.2. Area and Divisions	3
1.3. Salient Physical Features	3
1.4. Socio-Economic Features	3
Section 2: Risk Assessment and Current Responses	5
2.1. The Landslide Situation	6
2.1.1. Settlements and Structures	6
2.1.2. Lifelines	6
2.1.3. Population and other at-Risk Elements	7
2.2. The Avalanche Situation	7
2.2.1. Settlements and Structures	8
2.2.2. Lifelines	8
2.2.3. Population and other at-Risk Elements	9
2.3. The Cross Border Firing Situation	9
2.3.1. Settlements and Structures	9
2.3.2. Lifelines	10
2.3.3. People and other at-Risk Elements	10
Section 3: Disaster Risk Reduction Strategy	11
3.1. Institutional Mechanism for District Disaster Management Authority Neelum	12
3.1.1. The Office of the District Disaster Management Authority Neelum	13
3.1.2. Functions of the DDMA	13
3.1.3. The Secretariat of the DDMA	15
3.2. Implementation Activities of DDMA in District Neelum	15
3.2.1. Pre-Disaster Activities	15

a. Suggested Mitigation Activities	16
b. Preparedness Activities to be Accomplished within Six Months	17
c. Preparedness Activities to be Accomplished within the First Year	18
3.2.2. Activities During Disaster Events	18
a. Establishment of the District Emergency Operations Centre (DEOC)	18
b. Emergency Response Equipment	20
c. Activities of Line Departments Before and During Disasters	21
3.2.3. Post-Disaster Activities	24
a. Recovery and Rehabilitation Activities	24
b. Minimum Intervention	24
3.3. Community Based Activities	24
3.3.1 Community Preparedness	25
a. During Emergency Situations	25
b. During Relief and Rehabilitation	25
c. Areas of Community Participation	26
3.4. Directions for Community Based Response Plan	26
3.5. Non-Governmental Organisations (NGOs) and Voluntary Agencies	27
3.6. Reporting Formats	28
3.7. Plan Dissemination through Community Education	28
Bibliography	29
ANNEX I	35
Landslide Study by Durham University	
ANNEX II	39
Summary of Earthquake Damages in AJ&K, Oct 2005	
ANNEX III	40
Detail of Losses (Due to Indian Firing / Flood/Natural Calamities/Earthquake) in District Neelum, up to March 2007	
ANNEX IV	41
References on Avalanche	
ANNEX V	47
Matrix for Prioritization of Hazards	

ANNEX VI	49
Bi-lateral Meetings for the Development of Neelum District Disaster Risk Management Plan	
ANNEX VII	50
List of Participants: Consultative Workshop on Draft of the Neelum District Disaster Risk Management Plan	
ANNEX VIII	51
a. District Level Damage, Needs & Capacity Assessment Form	
b. Union Council Level Damage, Needs & Capacity Assessment Form	
c. Village Level Damage, Needs & Capacity Assessment Form	
ANNEX IX	62
Menu of Disaster Risk Reduction Options for Disaster Reduction Plans	
ANNEX X	69
Disaster Risk Management Terms	

Acronyms

AC	Assistant Commissioner
AD	Assistant Director
ADB	Asian Development Bank
AJ&K	Azad Jammu & Kashmir
CBDM	Community Based Disaster Management
CBO	Community Based Organization
CD	Civil Defence
DC	Deputy Commissioner
DDMA	District Disaster Management Authority
DEOC	District Emergency Operations Centre
DFO	District Forest Officer
DM	Disaster Management
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DRU	District Reconstruction Unit
EOC	Emergency Operations Centre
ERC	Emergency Relief Cell
ERRA	Earthquake Reconstruction and Rehabilitation Authority
EWS	Early Warning System
GoP	Government of Pakistan
GSP	Geological Survey of Pakistan
HVCA	Hazard Vulnerability and Capacity Assessment
IDB	Islamic Development Bank
IHK	Indian-held Kashmir
INGO	International Non-Governmental Organization
LG&RD	Local Government & Rural Development
MC	Municipal Committee
NDMA	National Disaster Management Authority
NDMC	National Disaster Management Commission
NDMO	National Disaster Management Ordinance, 2006
NESPAK	National Engineering Services Pakistan
NGO	Non-Governmental Organization
NVDA	Neelum Valley Development Authority
OCHA	Organization for Coordination of Humanitarian Affairs

PAK	Pakistan Administered Kashmir
PC-1	Planning Commission (Form)-1
PKR	Pakistani Rupees
PMD	Pakistan Meteorological Department
PRCS	Pakistan Red Crescent Society
SERRA	State Earthquake Reconstruction and Rehabilitation Authority
SOPs	Standard Operating Procedures
SSP	Senior Superintendent of Police
SW&WD	Social Welfare & Women Development
SUPARCO	Pakistan Space and Upper Atmosphere Research Commission
UC	Union Council
UNDP	United Nations Development Program
WAPDA	Water and Power Development Authority
WB	World Bank

Acknowledgements

This document has been developed through an extensive process of consultations and builds on the ongoing Disaster Risk Reduction Strategy of the PAK Administration. Acknowledgement is due to following District Administration officials, departments and stakeholders who participated in the consultation process for the development of this plan.

- Asif Assadullah, SDO- Public Works Department
- Dr. Abdul Hamid, Director - Health Dept.
- Dr Arifa Alvi, Programme Officer Health - Islamic Relief
- Dr. John Egbuta, Head - UNICEF Muzaffarabad Office
- Dr. Manzoor Ahmd, DHO- Health Dept.
- Dr. Riaz Nasrullah - UNICEF Muzaffarabad Office
- Feroze Awan, DFO - Forest Dept.
- Gohar Zaman- Islamic Relief Pakistan Office
- Habib ur Rehman Pirzada, In charge Hospital - Livestock Dept.
- Imran, Engineer PWD
- Khurshid Ahmed Rana, President - Neelum Valley Cluster Coordination Forum
- Kh. Ghulam Rasool - Municipal Committee
- Kh. Shahjahan, AD Extension - Agriculture Dept.
- Mian Abdul Wahid, Member Legislative Assembly - AJ&K Parliament
- Muhammad Aslam, Head Clerk, DO Secondary Schools - Education Dept.
- Muhammad Irshad Khan, Project Manager- LGRD
- Muhammad Ismail - Islamic Relief
- Nabeel Qureshi, Deputy Commissioner
- Raja Amir Khan, Inspector - Agriculture Dept.
- Rehan Ul Hassan, In charge, Sustainable Livelihood Project - Islamic Relief
- Sadaqat Hussain Mir, Assistant Director- Civil Defence
- Sultan Mehmood, Deputy Head of Programmes- Islamic Relief
- Syed Mohabbat Shah- Livestock Dept.
- Tariq Qureshi, Officiate Principal- Education Dept.
- Zulifqar Ali, APO Education, UNICEF - Muzaffarabad Office

Foreword

The devastating earthquake of October 2005 brought about an acute awareness among government institutions and communities of the critical need for disaster risk management. As part of the joint UN response to earthquake relief and recovery, the United Nations Development Programme (UNDP) supported the Government in restoring the operations of local government institutions for the planning and implementation of recovery activities through the “Building Enabling Governance and Institutions for Earthquake Response (BEGIN-ER)” project in the affected districts of North West Frontier Province (NWFP) and Pakistan Administered Kashmir (PAK). It was during the implementation of the capacity building component of this project that government officials, elected local representatives, community based organizations, and national and international NGOs identified the need for developing District Disaster Risk Management Plans.

Meanwhile, the Government of Pakistan promulgated the National Disaster Management Ordinance in December 2006. The Ordinance provides for a coherent disaster risk management system through the establishment of National Disaster Management Commission (NDMC) and National Disaster Management Authority (NDMA). It also calls for instituting similar bodies at the provincial and district levels. The NDMA has been established to ensure that appropriate policies, strategies and programmes for risk management are developed and implemented to reduce disaster risks in a proactive, organized and effective manner.

Considering these national level developments and the needs expressed by local authorities, UNDP engaged national and international planning experts to develop disaster risk management plans for the districts of Muzaffarabad, Neelum, Rawalakot, and Bagh in Pakistan Administered Kashmir (PAK). During the process, they conducted a series of bilateral meetings and had consultations with the district administration officials and civil society representatives. Based on review of the secondary data and consultations, draft plans were prepared, which were presented in district level stakeholder workshops for final comments. The plans were also shared with Earthquake Reconstruction and Rehabilitation Authority (ERRA) and we are grateful especially to Lieutenant General Nadeem Ahmed for his valuable inputs to finalize and endorse the district plans.

I am glad to present the District Disaster Risk Management Plan (DDRMP) of district Neelum, which has been developed with a primary objective of saving lives, properties and infrastructure of the district from existing and future natural and human-induced hazards. The Plan consists of three sections: a) profile of district Neelum; b) risk assessment and current response; and c) disaster risk reduction strategy, structures and roles of stakeholders in disaster risk management; and recommended readings on the subject.

I am grateful to our experts Mr. Zorobabel Zuniga and Mr. Iqbal Haider Butt for putting together their efforts in producing the Plan. For guiding the planning process we are thankful to Mr. Mohammad Zafar Iqbal, Mr. Zubair Murshed and Mr. Irfan Maqbool. Thanks are also due to Ms. Shaista Hussain, Mr. Tariq Rafique and Mr. Usman Qazi for review and editing of the plan, and Ms. Asma Rashid and Ms. Jamila Sikander Khan for the copy editing. The preparation of this document and publishing has been made possible with support from United Nations secretariat of the International Strategy for Disaster Reduction (UN-ISDR).

The production of District Disaster Risk Management Plan is only a first step towards achieving the broader objective of reducing disaster risks. We hope that the government of PAK would extend all possible support to the District Administration through the establishment of the District Disaster Management Authority and provision of resources for the implementation of this plan.



Mikiko Tanaka
Acting Country Director
UNDP Islamabad

Message from Deputy Chairman ERRA

In the post-earthquake phases of emergency relief, early recovery, rehabilitation of the affected populace, and the on-going process of reconstruction in NWFP and Azad Jammu & Kashmir, the United Nations Development Programme Pakistan has so far played a commendable role through its continuous support to the Earthquake Reconstruction and Rehabilitation Authority (ERRA).

Most significantly, the BEGIN-ER (Building Enabling Governance and Institutions for Earthquake Response) project has been a great success in terms of providing critically needed prefabricated offices to the local government institutions in the most affected districts and enhancing capacities of elected representatives, government officials, and community based organizations for an effective and integrated response to the earthquake disaster.

I am glad that under the training component of the BEGIN-ER project, UNDP has been able to produce District Disaster Risk Management Plans for Muzaffarabad, Rawalakot, Bagh and Neelum districts in AJ&K and Abbottabad, Battagram, Shangla and Manshura districts in NWFP.

I congratulate Mr. Mohammad Zafar Iqbal, Assistant Resident Representative, UNDP and his team for such a tangible and timely output. It is expected that these plans can be used as guidelines for development of plans by National Disaster Management Authority for other districts of Pakistan.

The ERRA, on its part, would extend all possible assistance to the district governments for successful implementation of the disaster risk management plans in due course of time. Additionally, the planning guidelines and framework would also be shared with other district governments in Pakistan to be followed during the future development discourse.

I am confident this initiative would lead towards achieving the overall objective of making communities more resilient against future hazards and putting the country on the path of integrating disaster risk reduction into development plans, ensuring sustainable development.



Lieutenant General Nadeem Ahmed
Deputy Chairman, ERRA

Message from the Prime Minister - AJ&K

It gives me great satisfaction to know that the Pakistan-based United Nations Development Programme (UNDP) has tasked itself with a more serious mission to educate the general masses of the people, public/private institutions, organizations and civic bodies in the earthquake zones of Azad Jammu and Kashmir and in the Northwest Frontier Province of Pakistan on how to offset the disastrous consequences of seismic convulsions. Honestly speaking this vital link in the chain of public information was missing. Its introduction will certainly help improve the techniques and methods to grapple with the disaster-produced consequences for human beings.

In the recent earthquake related seminar organized by JICA in Margallah Hotel, I had suggested formation of a national disaster management body with its subsidiaries at the provincial and then at the district levels throughout the country. This suggestion was based on my personal observation and future needs keeping in view the 2005 devastating calamity. I am happy that its infrastructural foundations have come on the ground. And it has the sisterly technical and advisory cooperation of the UNDP in Pakistan.

I generously commend the initiatives of the UNDP in setting the basic preventive guidelines in booklet forms and making them available from the general public to the organized institutions not only to the community of affectees in Azad Jammu and Kashmir and in Northwest Frontier province of Pakistan but also disseminating the preventive expertise and advice all over the country and beyond even. It is a question of safety of human beings. It acquires top priority.

On this occasion I would like to inform the institutions and the individuals that I have already persuaded several humanitarian international bodies to set up a Seismological Research Institute in our quake affected region. It is the need of the time. Some experts are of the view that the already quake-convulsed terrain and slopes are still quake-prone because of faultlines and extreme destabilization of sub-soil layers of earth. I would like to suggest that the UNDP should take the lead in setting up the Seismological Research Institute under the joint academic management of the Muzaffarabad and Peshawar Universities. Can we sit any longer cross hands? Herein lies the necessity of the continuity of the international aid agencies role. I commend them all. But they will have to come to save the humanity in institutionalizing the preventive theories and knowledge.

I would also like the local and the international humanitarian bodies engaged in post earthquake re-building processes in AJ&K and NWFP to spread their reach of transmitting preventive and

curing information down to the sub-villages. Easy-to-understand language, avoiding the bombardment of technical terminologies, should be the media of transmission. Any cooperation needed in this drive from the Government of Azad Jammu and Kashmir would be instantly available.



Sardar Attique Ahmed Khan
Prime Minister Azad Jammu and Kashmir

Introduction

The destruction and devastation caused by the October 2005 earthquake has diverted global attention to Pakistan in general and Pakistan Administered Kashmir (PAK) in particular¹. The level of direct damage is higher in PAK than in NWFP. For PAK, it amounts to PKR 76.4 billion (US\$1.3 billion) and for NWFP, PKR 58.7 billion (US\$ 989 million). In most sectors, the monetary value of destruction of physical assets in PAK exceeds comparatively in NWFP².

Assistance to PAK started from emergency response and has entered into the rehabilitation and construction phase today. The Pakistani government, with the help of the UN system and other countries, has also established the policies and procedures to guide the reconstruction process.

Among the government agencies in the forefront are the Earthquake Rehabilitation and Reconstruction Authority (ERRA) and the recently formed National Disaster Management Authority (NDMA).

The development of the Neelum District Disaster Risk Management Plan, hereafter called the Plan, is part of this undertaking and has been developed with support from the BEGIN-ER project, which is being implemented by UNDP. This plan is the result of an extensive literature review, series of meetings with various officials in Neelum, consultative workshop with stakeholders and technical review by Disaster Management experts.

The Plan will guide initial operationalization of the District Disaster Management Authority (DDMA) until such time that it is able to function on its own. The Plan will also guide in identifying risks and hazards in district Neelum and as to what activities are most urgent and need immediate implementation.

The Disaster Risk Management Plan for district Neelum is composed of three (3) chapters:

- 1. Profile of District Neelum** is a brief introduction to the area. It provides basic information about location, administrative area and divisions, salient physical features and socio-economic features.
- 2. Risk Assessment and Current Responses in the District** prioritizes risks and hazards being faced by the district. While using a qualitative matrix, this section is developed by scientific research and participatory approaches to map out which hazards affect the district most

¹Azad Jammu and Kashmir (AJ&K) is the national designation, while the official designation of the UN for Kashmir is Pakistan Administered Kashmir (PAK)

²ADB /WB, *Preliminary Damage and Needs Assessment*, November 2005.

in order of both likelihood and consequences. The planning consultants have traced patterns of occurrences of disasters i.e. landslides, earthquake, avalanches, etc. This section highlights and prioritizes localized problems and risks in district Neelum; so that appropriate strategies are adopted to minimize these risks.

3. Strategy for Implementation of the District Disaster Risk Management Plan delineates principles of social vulnerability. This section is further divided into two sub-sections (i) the institutional mechanism for District Disaster Risk Management, specifically the structure of DDMA, and (ii) implementation activities/targets to be achieved by the DDMA for immediate and mid-term periods. This section proposes DDMA's structure, functions and implementation agenda.

Purpose and Scope of the Plan

The Neelum District Disaster Risk Management Plan is conditioned by the following objective:

- The Plan aims to guide the establishment and operationalization of the District Disaster Management Authority Neelum in terms of structure, strategy and activities and will provide implementation agenda for the medium term (3 years).

Planning Process

The following steps were undertaken in the crafting of the District Disaster Risk Management Plan:

1. Review of existing documents on the disaster situation, present activities in rehabilitation and reconstruction, and the pertinent documents relevant to the National Disaster Risk Management Framework at the UNDP office in Islamabad. (*See Bibliography given at the end of the Plan*)
2. Information gathering at field level through bilateral meetings with district officials, some NGOs and local residents. (*For details see Annex VIII Bi-lateral meetings for the development of Neelum District Disaster Risk Management Plan*)
3. Impressions were taken through site visits, visual inspection, observations, photography, and discussions with affected people, officials and field staff of aid agencies
4. Review of information gathered and Plan drafting
5. Sharing of draft Plan with stakeholders through a consultative workshop in Neelum
6. Revision of the Plan and internal review
7. Consultation with ERRA and endorsement of draft plans
8. Finalization of the Plan

SECTION 1:

Profile of District Neelum

1.1. Location

District Neelum is situated at the north & north-east of Muzaffarabad, running parallel to Kaghan Valley (NWFP) and borders with Indian-held Kashmir.

1.2. Area and Divisions

Total area of the district Neelum is 3,621 sq km, which makes it the biggest district of PAK. It was part of district Muzaffarabad until 2005 when its administrative status was upgraded from tehsil Athmuqam to district Neelum. Its total population was 125,712 according to 1998 census and density was 210 per sq km, with a growth rate of 3.1 per annum. The district is divided into two (2) sub-divisions (Athmuqam and Sharda) and nine (9) union councils consisting of eighty-eight (88) villages.

1.3. Salient Physical Features

The district features exceptional scenic beauty, panoramic views, and lush green forests, running streams, enchanting waterfalls and towering mountains. The noisy River Neelum cuts through most of the district and merges into the river Jhelum at Domail.

District Neelum is abounded with 677,258 acres of forest land, which cover 73% of the whole district. The whole space is heavily filed by Chir pine, Blue pine or Kail, Deodar, Spruce, Fir, Barmi, Juniper, Wild Walnut, Almonds, and Strawberry trees, and many other types of wild growth and herbs.

Neelum valley, starting from Muzaffarabad, is about 150 miles long, and is the main attraction of district Neelum. Its elevation, starting from 2,000 feet, gradually rises till it goes as high as 8,000 feet up north, most of which is snow-covered area.

1.4. Socio-Economic Features

Majority of the population in district Neelum depends on daily wages, forestry, livestock and agriculture for its subsistence. Average per capita income is estimated to be the lowest in PAK. This is also the case with the literacy rate, which is attributed to the cross-border firing between India and Pakistan during 13 years of tension (1990 - 2003). The economic profile of the area makes its people the most vulnerable among 4 districts affected by the earthquake 2005.

Power supply is unpredictable and expensive. Wooden fire, wax candles and gas burners are used by most houses for cooking purposes and warmth during the winter season.

There are no other means of communication accessible to the public but the road/transport system. Landline telephone services are available only within the Athmuqam area. There is no mobile phone service in the area at present. Use of satellite phone is very expensive and is usually carried by employees of I/NGOs and expatriates.

Only the Islamic Relief, an International NGO with their extensive activities in Neelum Valley, is equipped with internet facilities. The only other entity that has continuous communication facility and connection outside the district is Pakistan Army.

SECTION 2:

Risk Assessment and Current Responses

As a recently organized district Neelum needs the assistance of the State and National governments to be able to function fully in a short period. Presently, some line departments have not yet completed their separation from district Muzaffarabad administration. Such situation can delay services from these line agencies. In this scenario, the implementation of the District Disaster Risk Management Plan and its execution can also move on a slower pace compared to other districts of the PAK.

In district Neelum, the October 8, 2005 earthquake killed 470 people of which 305 were school children. 660 residents were injured and 15,845 structures were damaged. As compensation, the Revenue Department has paid the amount of PKR 349.38 million³.

The consultation in Neelum undertaken by the BEGIN - ER project on the draft District Disaster Risk Management Plan resulted in prioritization of risks faced by the area. The hazard of earthquake was not selected among the top three hazards requiring immediate attention. In this deliberation, the stakeholders ranked Landslide first; Avalanche second; and Cross Border Firing third on the priority list of hazards. These hazards call for immediate attention of District Disaster Management Authority.

The main considerations for the prioritized list of hazards were the likelihood of occurrence, the consequences of the hazard and the current responses against the impacts of these hazards. (For details of this criteria to determine the severity of a hazard, please see *Annex V: Matrix for Prioritization of Hazards*)

In district Neelum, landslide is a frequently occurring hazard intensified by the effects of the earthquake. Rains trigger landslide events which result in deaths and destruction of properties. We have recently witnessed this combination and its fatal effects during first quarter of 2007. During the summer season when snow melts and during the monsoon season landslide becomes a routine occurrence. There is a pressing need to control/mitigate this hazard that is causing deaths and destruction on regular basis.

Avalanche is put second on the priority list of hazards because many parts of the district receive snowfall for almost half of the year. During the winter season, the incidences of avalanches occur frequently and, after the 2005 earthquake, there is a perceived increase in the frequency of occurrences of this hazard.

³All figures from the Deputy Commissioner Neelum Mr. Nabeel Qureshi, March, 2007.

The Indo-Pak border has been silent for about five (5) years now. But before that, for almost fifteen (15) years, cross border firing had been the daily routine. It badly affected the people of Neelum valley especially for those from more than twenty (20) villages on the Indian border. The selection of this man-made hazard, as the third priority hazard to be prepared for, reflects the impact caused by cross border firing in their lives.

According to the perception of the Neelum stakeholders, the earthquake hazard is well-covered by the activities of the National Government's line agencies, the ERRA, the UN agencies and international and national NGOs.

2.1. The Landslide Situation

During the rainy season, the main and the only road link of district Neelum to other districts of the PAK State is blocked by land/rock slides that sometimes take up to three months to be cleared.

A study of roadside landslides undertaken by the Earthquake Reconstruction and Rehabilitation Authority (ERRA) show that there are ten (10) sites of which two (2) are considered priority targets for immediate attention.

2.1.1. Settlements and Structures

The only source of information regarding the impact of the landslides on settlements and structures in district Neelum is from the office of the Deputy Commissioner. The figures below are from this office.

According to the government records, there were 648 structures completely or partially damaged by landslides triggered by earthquake 2005 in the district. The Revenue Department has paid out PKR 6.48 million as compensation money to help those affected by landslides. School buildings, health facilities and some government structures were destroyed or damaged by landslide spawned by earthquakes are under reconstruction with financial and technical assistance from ERRA.

Many affected families have migrated to other places but most of the people are still residing in the partially damaged structures/vulnerable locations. The exact number of these structures and the families residing therein are to be determined by the DDMA as soon as it is able to function to avoid any future disaster caused by landslide..

2.1.2. Lifelines

The only highway linking the district to other parts of PAK is threatened by landslides at many points. In the third week of March 2007, the road blockade caused by the landslides took 12 days

to be cleared and during this whole period, the district remained isolated from the rest of the state. Still, another landslide continued to block the northern highway that links Athmuquam, the center of district Neelum, to the four (4) union councils in the northeast mountains.

The Public Works Department and the Pakistan Army have to be constantly engaged in both clearing of landslide debris and repair of road cuts/slips in district Neelum. Some international NGOs are working on projects of tree replanting on slopes.

The earthquake 2005 caused months of isolation of the district because of the landslides it had spawned. The inability to move injured or very sick people to hospitals in other districts has resulted in deaths according to the Health Department Officer. Furthermore, the area also suffered from the loss of supplies in essential commodities.

2.1.3. Population and other At-risk Elements

Landslides spawned by earthquake 2005, killed 60 people and injured 30. The Revenue Department has provided compensation of PKR 1.5 million to victims. The families whose livestock were killed by the landslides have not yet been assisted in terms of replacement of lost animals. These families are now more vulnerable than they were prior to the earthquake 2005.

The government departments are not well equipped to respond to the road emergencies caused by landslides that claim numerous lives and damage several vehicles on the road. There is no system of prior notification or early warning for the landslides. Knowledge of a landslide in an area is therefore based on witnessing an occurrence. Increased traffic on the road is enhancing the danger of deaths and injuries. The non-availability of emergency rescue during such incidents also contributes to the increase of casualties.

2.2. The Avalanche Situation

Avalanches are a significant mountain hazard – responsible for more deaths each year [in the United States] than earthquakes. Once in motion, snow slides are a powerful force of nature, capable of snapping off mature trees like match sticks, and easily destroying buildings. And when an avalanche finally stops, the snow sets up like concrete, making rescue efforts extremely difficult, and chances for survival slim⁴.

In district Neelum, there are about four (4) union councils (Guraze, Kel, Sharda and Dhudnial) out of nine (9) which are directly affected by the winter snow conditions. During the consultative meeting, the Deputy Commissioner told that avalanches happen mostly in the north-eastern portion of the district. Most of the fatal incidents are found to have occurred in the Surgan Valley area. Specifically the affected villages are: Surgan Buganawan, Lassian Surgan, Miantan Wali Seri, Shon Nallah Kel, Phulaway Kel (Upper Valley, Sharda Sub-division) and Dabba Jagran Kuttan

⁴<http://www.pbs.org/wgbh/nova/avalanche/elements/html>

(Athmuqam).

Two years ago in 2005, a ten-year old avalanche recurred and killed 47 people, injured 38, completely destroyed 152 houses and damaged 265. Power supply was also badly disrupted and damage was caused to poles and grid stations. There was also an increase in the incidence of Acute Respiratory Infection (ARI), Gastro-Intestinal Tract Infections (GATI) and Scabies. The area lacked 94% of the required medicine stock. In total about 75,339 people were affected in 44 villages⁵.

In terms of documentation and official record, all incidences on avalanches for Neelum are reported as part of Muzaffarabad district, since Neelum was pronounced to be a district only in 2005. Even now some line departments are still in the process of their separation from district Muzaffarabad administration.

It is necessary that a trend analysis of avalanche be done to come up with a more precise description of the avalanche hazard in district Neelum; so that an effective risk reduction plan can be developed for mitigation and preparedness.

2.2.1. Settlements and Structures

The Revenue Department reported that 27 houses were damaged in the winter season of 2005-6 the compensation of PKR 270,000 was extended to the owners. As a matter of fact a survey of structures in the avalanche threatened areas need to be undertaken; so that correct statistics be obtained and a hazard map can be developed. Furthermore, the hazard map can determine which are the risk-free zones where the structures may be relocated, and which also can be a basis for coming up with an avalanche free road-map.

2.2.2. Lifelines

Roads from the four affected union councils (Guraze, Kel, Sharda and Dhudnial) are blocked due to heavy snow fall during winter season and the areas remain isolated for about three (3) months. Power services also break down. The residents usually face shortages of food and fuel stocks during the winter season in the affected union councils.

Sometimes, rain and snow also affect Athmuqam, the capital of the district, and it becomes inaccessible for about two weeks or even more crippling everyday life. The hospital from Athmuqam has been relocated to Kel due to cross border firing which poses severe problems of access during winter season. According to the Islamic Relief sources, shortage of medicines occurs and the residents face huge difficulties transporting patients to the hospital resulting in loss of lives in some cases.

⁵Report by a joint team of Pakistan Red Crescent Society, WHO, WFP and Islamic Relief, February 2005.

2.2.3. Population and other At-risk Elements

The families and their livestock living in threatened areas are at-risk. Livestock are usually killed due to roof-collapse of the animal sheds because of heavy snow gathered on the roofs. Lack of early warning system and knowledge regarding behaviour patterns of the avalanche enhances the risk even more. An avalanche in 2005 claimed 47 lives and injured 38, according to the Deputy Commissioner. For these, the Revenue Department has provided total compensation of PKR 3.8 million and PKR 380,000 respectively.

2.3. The Cross Border Firing Situation

The cross border firing problem is dated back to 1989 when an insurgency broke out in Indian-held Kashmir. However, the problem has two earlier dates: 1947 Indian take over and the 1965 war. In the Pakistani Administrated Kashmir, the problem occurred from 1989 and existed for about fifteen (15) years.

A study on refugees elucidates the impact of this man-made hazard. The refugees were divided into two different groups; those who opted to come to Pakistan after 1947 and after the 1965 war; and the others who were forced to evacuate their families after the insurgency broke out in Indian-held Kashmir in 1989. The study from the Abbas Institute of Medical Sciences-Muzaffarabad revealed that out of 534 patients in the psychiatric clinic, 167 refugees of 1989 incident had post-traumatic stress disorder (PTSD). The study states, "Factors included stress of migration (32.9%), death of family members by atrocities of law enforcement agencies (26.9%), emotional and psychological torture (22.8%) and destruction of native home, property or livelihood (19.2%)." Dr. Khwaja Hamid Rashid, a psychiatrist said, "I have observed that the second group is suffering from the worst mental traumas, while the first group is not as prone to mental disorders."

After five (5) years of relative peace in the area, refugees have started to trickle back to their homes and started rebuilding their lives, hoping that the dreaded situation will not recur yet ever-looking behind their backs to be sure there is no firing going on. Although this hazard has ceased to exist now, but the looming shadow forced the stakeholders to rank it third priority hazard and prepare a disaster risk management plan.

2.3.1. Settlements and Structures

The reports from office of the DC show that 1,224 houses and 363 shops were damaged in the cross-border firing incidents. For these damages, the Revenue Department extended the amount of PKR 9.88 million and PKR 21.349 million, respectively. According to the president of Neelum Valley Cluster Coordination Forum, there were other houses which were also hit by bombs and bullets but were not reported. These houses were visible from Indian positions in the mountains overlooking these places or from across the river separating the two areas.

Since the firing incidents have a proven record to strike through any structure, therefore, all structures within the range of weapons being used are in the hazard zone. The types of bombs used also indicate that these are effective in damaging and even demolishing any structure within range. Although there are clear indications to the limits of the effective range of Indian weapons, there has been no actual count of structures within the effective range.

Only the underground firing shelters constructed by Islamic Relief and some by the local government have given safety to the residents.

2.3.2. Lifelines

The hospitals and schools were not spared by the bombings and firings. Hence, the only hospital present at Athmuqam had to be shifted to safer areas and thus was relocated to Kel. However, during the winter season, access to the hospital gets impossible, rendering a smaller area of effective service.

Transport service comes to a standstill during actual firing, as has been reported in the past. Not only this, it had been a very risky venture during lull as sniper fire was resorted to by the Indian border guards. About 61 vehicles were reported damaged for which the Revenue commission paid PKR 1.22 million.

Power service gets interrupted as the distribution lines were hit by the bombs. It was shared by those interviewed that using light bulbs in the night attracted sniper fire or shelling of the lighted building.

The hospital is going to be relocated to Athmuqam where it was originally located. In case of resurgence of hostilities between the two countries, the hospital will again be destroyed by firing. Also most of the government buildings and residential structures will be in the range of firing.

2.3.3. People and other At-risk Elements

People who live in houses within the effective range of fire or who travel into or across these areas are under risk of losing their lives. The Deputy Commissioner's report reveals that 322 were killed and 1,043 injured in the cross border firing in PAK. The use of "trick bombs" documented by the Islamic Relief have maimed and, in some instances, killed children.

Since there has been no firing in the recent past, there is no immediate threat. However, some unexploded explosive and trick bombs may still be among the ruins or thickets and could accidentally be discovered by adults or children and their wrong handling can result in injury, maiming or death.

SECTION 3:

Disaster Risk Reduction Strategy

The Hazard, Vulnerability and Capacity Analysis shows that the rural areas and town centre of the district are vulnerable to landslides while a big part is further threatened by snow avalanche and the potential out break of cross-border firing.

Although earthquake has been recognized as hazard but the recurring destruction and disruption caused by landslides and snow avalanches is deemed to contribute to a bigger disaster if not mitigated immediately. In addition, the specific plans for mitigation and preparedness will have to be evolved with the participation of union councils, active community based organizations and NGOs working in the area. This process will ensure active participation of affected populace in the implementation and maintenance of the strategy. Monitoring done at the community level will safeguard integrity of the participatory process. A community level monitoring system needs to be established in relation to development of capacities of the unions.

Furthermore, experience has shown that mitigation and preparedness plan should be area specific. This plan will be specific to the nature and type of vulnerabilities which will determine, to a great extent, the risk reduction strategies. Given the principles of disaster risk management, the strategy is oriented primarily to impoverished communities and families but does not exclude the safety of the over-all society.

In view of the risks and vulnerabilities identified, the disaster risk reduction measures proposed are presented using the hazards as the point of reference. These are landslide, avalanche, and cross-border firing. According to the stakeholders' opinion, gathered through a consultative workshop, earthquake is not a primary concern in district Neelum because its likelihood of recurrence is not certain and various agencies are implementing multiple activities to reduce the impact of this hazard. Likewise, the events of traffic accidents, domestic fires and annual health epidemics were discussed and the views of concerned officials were that these are localized and controllable emergencies and not disasters. Prevention measures to ensure that these do not develop into disasters will be the responsibility of the District Disaster Management Authority.

Based on these, the requirements for line departments will have to be identified keeping in view their future growth requirements as well as specific demands put on them for implementation of the disaster risk management plan. It is expected that special procurements and inputs will enhance capabilities and quality of service and will rationalize efficient contributions of the limited manpower resources available with these agencies. The risk reduction strategy also envisages the possibilities of upgrading the quality of human resources through training, in the long run.

3.1 Institutional Mechanism for District Disaster Management Authority (DDMA) Neelum

District Neelum is a special area for being the newest and largest district of PAK, and would require close assistance to make the DDMA functional in a short time. The establishment of the District Disaster Management Authority (DDMA) Neelum is the keystone of the proposed disaster risk reduction strategy. All activities aimed at hazard impact reduction and decreasing the vulnerability of at-risk population, private and public assets and the environment, require the presence and participation of the DDMA.

The coordination of efforts of all district departments, the non-government organizations and civil society is a major concern of the DDMA Neelum. The present sectoral coordination arrangements will be strengthened by the multi-sectoral coordination that will be handled by the DDMA. These meetings will afford all the stakeholders the opportunity to have a bird's eye view of all the efforts being undertaken to make district Neelum a safer place.

The systems to be set-up by the DDMA will be backed up by appropriate equipments and trained staff. The DDMA is a coordinating mechanism for all government agencies and non-government organizations operating in the district and which have important functions related to disaster risk reduction as well as disaster response.

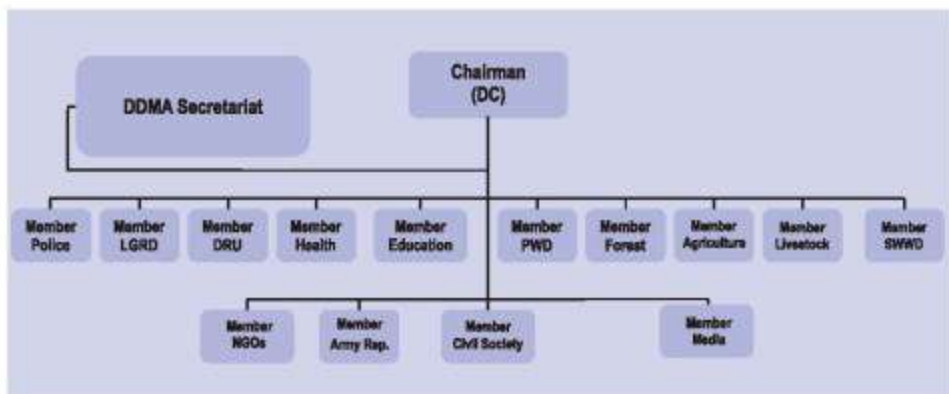
The DDMA is composed of the following:

Deputy Commissioner	Chairman, District Disaster Management Authority
Civil Defence Head	District Disaster Officer
Agriculture	Member
Civil Society Representatives in the District	Member/s
Designated Local Representative of the Pakistan Army	Member/s
Education	Member
Fire Services	Member
Forestry	Member
Health	Member
Islamic Relief	Member/s
Livestock	Member
Local Government	Member
Neelum Valley Development Authority	Member
NGO Representatives in the District	Member/s
Police	Member/s
PWD	Member
Others	Member

3.1.1. The Office of District Disaster Management Authority Neelum

The Deputy Commissioner is the head of District Disaster Management Authority. In running the day-to-day operations of DDMA, a Secretariat would assist the DC. The make-up of the office of the DDMA will depend on the set-up of the State Disaster Management Authority because of the integrated and interdependent nature of these organizational units and also in consideration of economies of scale.

DDMA members will include designated representatives of all line departments in the district.



3.1.2. Functions of the DDMA

Based on the Ordinance No. XI of 2006, titled National Disaster Management Ordinance, 2006, the District Disaster Management Authority has the following functions to perform:

- Formulate district disaster risk management plan, based upon a hazard and vulnerability analysis of the district
- Coordinate and monitor the implementation of district plan in accordance with the State Disaster Risk Management plan
- Continuously monitor the hazards, risks, and disaster threats and the conditions of vulnerable population within the district
- Prepare guidelines for mitigation, preparedness, and response as well as for vulnerability reduction
- Identify training needs and conduct education, training and public awareness programs

- Conduct training in disaster risk reduction and relief administration for local government officials, public and civil society representatives and at-risk communities
- Set up, maintain, review and upgrade district level early warning and communication systems for effective dissemination of warning messages
- Coordinate with local authorities to ensure that post disaster activities are carried out promptly and effectively
- Mobilize and coordinate all interventions from other agencies at the time of emergencies
- Mobilize needed financial and material resources for disaster risk management
- Implement disaster risk reduction and response activities as decided in the district disaster risk management plans
- Review development plans of government departments at the district/municipal level and provide guidance on mainstreaming disaster risk reduction measures in these plans
- Identify buildings and places in the district/ municipality that could be used as evacuation sites or relief centres in case of a disaster and make arrangements for water supply and sanitation in such buildings or places
- Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice
- Encourage the involvement of non-government and community groups in disaster risk reduction and preparedness
- Identify alternative means for emergency communications should the regular channels be disrupted
- In the event of a disaster, the DDMA will take operational control, by activating the Emergency Operation Centre, of the situation to ensure that support is delivered promptly to the affected communities
- Keep linkages with the State Disaster Management Authority and the Relief Department
- Perform such other functions as the State government of the PAK may assign to it or as it seems necessary for disaster risk management in the district

3.1.3. The Secretariat of the DDMA



In running the day-to-day operations of the DDMA, a Secretariat would assist the DC. It will be led by a District Disaster Officer, who should be responsible, committed and experienced in disaster risk management. During the consultative workshop on draft DDRMP by the UNDP consultants, the stakeholders approved the idea of the Civil Defence Official to be the District Disaster Officer. He should have a dedicated team of technical, operational and support staff, so that the DDMA works efficiently through out the year.

It is suggested that the minimum staff of the DDMA will be one Head, with district level personality and authority, one secretary (ex. officio) and two technical staff assistants, one liaison officer and one driver within the secretariat.

3.2 Implementation Activities of DDMA in Neelum District

3.2.1. Pre-Disaster Activities

The DDMA is the focal organization and authority in the conduct and implementation of activities and actions on disaster management in district Neelum. In the event of a disaster the DDMA will be complemented by the union council and community based disaster management groups in carrying out emergency response and relief activities in the affected areas.

During the pre-disaster stage, the DDMA is expected to undertake selected mitigation activities to make it ready for the onset of any disaster. In this instance, the activities are suggested to be accomplished in six months and one year time frame.

a. Suggested Mitigation Activities

- Design and implement education/public awareness program on the landslide and avalanche hazards for residents of threatened areas with emphasis on children and women. The public awareness program should instruct the target audience on the nature of hazards (landslide and/or avalanche), set the safety requirements to avoid being caught by the hazards, provide recall materials to assist in remembrance of the critical info on safety measures, etc.
- Develop warning system for communities in identified landslide or avalanche prone areas and the transport system passing through landslide prone highways and roads. For areas already known as hazardous, the warning signs should instil in the reader a healthy respect and understanding of the force of the hazard and motivate him/her to undertake the necessary precautions
- Organize communities and train in emergency response for landslide and avalanche hazards. Communities nearest the site of a landslide or avalanche emergency, if capable, can be a source of immediate help and rescue and can save more lives
- Come up with a district map identifying actual and potential landslide and/or avalanche prone areas in coordination with the AJ&K University, appropriate line departments, UN organizations, and NGOs
- Design Action Plan for Landslide and/or Avalanche Risk Response that will include among others, population details of threatened areas; evacuation routes; camp sites for temporary use; selected areas for permanent shifting of families; livelihood assistance, and the like
- Establish institutional linkages with national and international agencies undertaking studies on earthquake hazard with topics such as warning systems, emergency response activities, and mitigation interventions. The organizations may include Pakistan Metrological Department, Federal Flood Commission, Geological Survey of Pakistan (GSP), National Engineering Services Pakistan (NESPAK) and Pakistan Space and upper Atmosphere Research Commission (SUPARCO) etc.
- With assistance from Pakistan Army, draft a district level map indicating areas out of range of "cross border firing" for sites of supply depots/warehouses and also possible sites for hospital and health centres. Discuss the options with concerned agencies
- Design prototype of house with underground shelter with costs within the reach of the most vulnerable population to avoid cross-border firing risk
- Acquire improved skills and knowledge regarding forest fire prevention and control with the Forest Department
- Document and monitor transport situation with the police and transport offices, to include vehicular accidents, number of dead and injured, location of accident, cause of accident, etc. and develop a trend analysis for use in development of a transport hazard reduction plan
- Implement safer construction techniques in rural areas

b. Preparedness Activities to be Accomplished within Six Months

The officers and members of the DDMA shall without delay:

- Set up the office, secure equipment and design and install office systems (e.g. Disaster Management Information System)
 - Conduct the first inter-agency coordination meeting for familiarization with the DDMA set up and its operating system. Agenda may include organization of an adhoc team for Damage and Needs Assessment (until such time that the more permanent inter-agency arrangement is formed), the building-up of District Emergency Response team, stockpiling of essential commodities, and the like
 - Undertake an executive level disaster management training seminar for officials of district departments, selected as focal persons on disaster management to provide comprehensive understanding of the policy requirements and operational aspects of the Disaster Risk Management from the state, district, tehsil, union council and village levels
 - Establish warning systems for floods and landslides with the help of concerned government departments and the State Disaster Management Authority, and institutionalize cooperation with agencies and institutions that are involved in studies and monitoring of earthquake and other hazards. This will also include devising warning signs and signals that can immediately alert and update people about the recurring risks of their respective areas
 - Call the first Multi-Sectoral Meeting with NGOs and voluntary agencies, introduce the DDMA and discuss coordination points and SOPs
 - Initiate the training and formation of a skeletal emergency operations group for the district in Collapsed Structures Search and Rescue and Medical First Responders Skills. Ensure that this group is also equipped after the training (*refer to No.3.2.2. (b), Equipment for Immediate Procurement*)
- Note: The training for Neelum Rescue Team should already involve selected personnel from Bagh, Rawalakot and Muzaffarabad districts from the Police, Fire Brigade and Civil Defence Departments. Selected NGOs and voluntary agencies may be included in these training*
- Conduct Training Needs Assessment and conduct the needed training in disaster risk management for selected tehsil and union level officials and NGOs operating in the areas
 - Conduct Community Based Disaster Management Training Seminars for selected persons in the most hazard-prone villages
 - Assist in completion of the Neelum Municipal Master Plan
 - Test run communications system with State DMA, Municipal Committee, Tehsils and NGOs and CBOs in the District
 - Arrange initial training of two K-9 units

c. Preparedness Activities to be Accomplished within the First Year

The DDMA is to undertake the following activities within the first year of this draft plan:

- Finalize Standard Operating Procedures for the district level coordination and action covering all aspects and phases of disaster risk management based on State DMA Policies and Procedures. Among the concerns here will be an inventory of department assets (manpower, skill, equipment, etc.) and assessment of these resources for disaster risk management purposes
- Finalize communications system with State DMA, Tehsils, Union Councils and Village Disaster Management organizations
- Finalize coordination mechanisms and SOPs with NGOs at the multi-sectoral level and establish coordination in rescue, relief and rehabilitation activities as well as information sharing
- In coordination with the appropriate departments, conduct union council level meetings to increase awareness of target population regarding the major hazards in the district
- Undertake at least, one training on Mass Casualty Management for personnel of selected hospitals and health organizations
- In coordination with ERRA and DRU, conduct evaluation of randomly selected residential structures, educational buildings and related structures to determine adherence to earthquake safety measures
- Identify evacuation areas and develop evacuation plans with and for residents of the threatened areas
- Assist line departments to conduct disaster management capacity assessments and formulate capacity development plan for each department considering the approved PC-1s
- Establish stockpile warehouse in the district and maintain the quality level of the supplies
- Discuss with Public Works Department (PWD) the provision of safer alternative routes linking the district to the outside world
- Ensure budgetary and financial support for district level activities

3.2.2. Activities during Disaster Events

a. Establishment of the District Emergency Operations Centre (DEOC)

In the event a disaster emergency occurs, the District Disaster Management Authority shall activate the District Emergency Operations Centre (DEOC) and take the operational lead for all district administration departments. The DDMA Head will manage the EOC and is responsible

for ensuring that following activities are always undertaken:

- Set up the EOC
- Advise State DMA on the disaster situation
- Send out Damage and Needs Assessment Teams
- Set up Relief Centres (following the SOP for relief by Revenue Department) for residents residing outside the municipal or town centre
- Supervision and monitoring of disaster management and relief activities
- Coordinate the activities of
 - Police
 - Municipal Committee Control Room
 - Fire Brigade
 - Civil Defence
 - PWD
 - Health Department
 - Army District Command
 - Other members of the DDMA with emergency response functions
- Enlist services of laboratories and expert institutions for specialised services through the Health Department, as and when required
- Issue advisories on the disaster situation immediately and in appropriate time phases thereafter to the State DMA and the general public
- Operate a public information display area for immediate access to information by the public and media regarding the disaster and the current situation
- Requisition of accommodation, structure, vehicles and equipments for relief
- Set up transit camps and arrange food distribution
- Arrange dry rations and family kits for cooking
- Provide gratuitous relief
- Organise and coordinate clearance of debris
- Carry out temporary repairs to damaged infrastructure
 - water
 - telecommunication
 - public buildings
- Set-up an information centre to organize sharing of information with the media and the public
- Generate and provide all information contained in the Risk and Vulnerability Assessment document to other control rooms and in special circumstances communicate about the disaster prone sites to all control rooms
- Coordinate with other control rooms
- Manage international relief coming into the district
- Monitor disaster warning or disaster occurrence and communicate the same to tehsils,

union councils , and wards/villages for better preparedness and effective response in coordination with and on the advice of the following agencies :

- State DMA
- Meteorological Department (Heavy Rains, Cyclones),
- SUPARCO (Earthquakes),
- Fire Brigade, Police (Road accidents, Riots, Bomb threats/blast, Fires, House crashes)
- PWD and LG&RD (Landslides)
- Health Department (Epidemics and Gastroenteritis)

b. Emergency Response Equipment

Materials/equipments needed for emergencies for immediate procurement (within 6 months)

Cutters	Hammers and Chisels
Helmets with Lights	Stretchers
Shovels and Picks	Megaphones
Ropes	Ladders

Materials/equipment to equip a fully capable District Emergency Operations Centre (DEOC)

· Ambulances	· Mobile X-Ray units
· Boats/rescue boats	· Public address systems
· Buses	· Pumps diesel and electric
· Cranes	· Self breathing apparatus
· Demolition equipments	· Sniffer dogs
· Drilling rigs	· Tankers/ dozers
· Earth moving equipments	· Tents
· Foam tenders	· Toxic gas masks
· Generators	· Tractor
· Ham sets	· Trucks
· Helicopter service	· VHF sets with batteries
· Mobile trauma care vans	· Wireless sets

c. *Activities of Line Departments Before and During Disasters*

The various line departments will be responsible for co-ordinating and facilitating the performance of certain emergency services and functions within their departments. These activities would ensure availability and movement of staff and resources of their respective departments for response to the emergency at hand. Additional assistance of the District Emergency Operations Centre (DEOC) may be sought in emergency situations.

Army

- Maintain liaison with the DEOC for vital inputs during warning period
- Collate information and warn appropriate Army units
- Coordinate movement of men and material as required
- Establish communication system reaching till the sites of disaster and supplement the civil communication set up if required
- Coordinate all military activity required by the civil administration
- Set up command centre for relief. This would include provision of communications (radio, telephone) and specialised manpower

The armed forces can be requested to also perform the following activities in the event of a disaster:

- Provide medical aid
- Provide medical care with the help of medical teams, including treatment at the nearest armed forces hospital
- Organize transportation of relief material
- Provide logistic back-up (aircrafts, helicopters, boats, etc.) and vehicles for transportation of relief material to the affected area
- Establish relief camps
- Set up relief camps and oversee their running, if needed
- Construct and repair roads and bridges to enable relief teams/material to reach affected areas. This will include provision of technical and plant equipment such as cranes, bulldozers and boats etc.
- Organize maintenance of essential services
- Repair, maintenance and running of essential services in the initial stages of relief
- Evacuate people to safer areas
- Assist in evacuation of people to safe places before and after the disaster
- Local management of international relief can be undertaken by the defence services

Civil Defence

- Rescue and evacuation
- Communicate to DEOC details of all the above activities
- Communicate to DEOC any additional resources required for performing the above tasks

Fire Brigade

- Rescue and evacuation
- Salvage Operations
- Communicate to DEOC details of all the above activities
- Communicate to DEOC any additional resources required for performing the above tasks

Health

- Provide emergency treatment for the seriously injured
- Ensure emergency supplies of medicines and first-aid
- Corpse disposal
- Preventive medicine and anti-epidemic actions
- Supervise food, water supplies, sanitation and disposal of waste
- Assess and co-ordinate provision of ambulances and hospitals where they could be sent (public and private)
- Provide special information required regarding precautions for epidemics
- Set-up an information centre to organise sharing of information with public
- Communicate to DEOC details of all the above activities
- Communicate to DEOC any additional resources required for performing the above tasks

Local Government & Rural Development

- Provide information on the situation of rural areas and submit the same to the DEOC
- Monitor progress of relief operations in the rural areas
- Send advisories to the DEOC on the progress of disaster situation
- Assist and facilitate Damage and Needs Assessment teams from NGOs

Police

- Co-ordinate with District EOC
- Cordon the area to restrict movement of vehicular and pedestrian traffic
- Shift the rescued/affected people to hospitals
- Provide easy access to rescue and relief personnel/vehicles
- Corpse disposal
- Law and order
- Divert traffic on alternate routes as and when necessary in co-ordination with PWD
- Request PWD for providing access through roads during emergencies for specific time duration and monitor the requirement of such an access

Public Works Department

- Send advisories to the DEOC on road conditions especially regarding blocked or impassable roads
- Organize draining of flood waters from roads
- Set-up an information centre to organise information for public
- Communicate to DEOC details of all the above activities
- Communicate to DEOC any additional resources required for performing the above tasks
- Rescue and Salvage Operations for road accidents
- Monitor flood situations and landslides on roads and co-ordinate with DEOC for mass transport requirements and advisory on rerouting of traffic, as needed

Revenue Department

In coordination with the DEOC, the Revenue Department shall:

- Establish relief distribution centres
- Accept relief donations and relief support
- Put up camps, if warranted by the situation, and manage the same
- Request assistance from the DEOC, as needed
- Submit reports to the DEOC of operations and expenses

Women and Social Welfare

- Provide the DEOC with reports on the impact of disaster on women, children and poor in the affected areas
- Extend advisories to the DEOC regarding observance or violation of gender principles
- Send report to the DEOC regarding needs assessment of vulnerable segments of the population

3.2.3. Post-Disaster Activities

The DDMA is also responsible for pursuing the efforts of recovery of communities affected by the disaster.

a. Recovery and Rehabilitation Activities

- Post disaster damage and need assessment: Inter-disciplinary team with community involvement
- Recovery planning based on need assessment: Multi-disciplinary team with community involvement
- Linking with State development plan
- Implementation of recovery and rehabilitation plan with community participation
- Coordination integrated with monitoring and evaluation participated in by the affected communities

b. Minimum Intervention

The recovery management approach should be one of minimum intervention. However, recovery services and information should always be readily available within disaster affected communities and be responsive to the range of needs.

External recovery services and resources are provided as a support to an affected community, to be used if the needs following the event are beyond the capacity of existing services and resources. Wherever possible additional resources should be under local management through the network of existing service providers.

3.2. Community Based Activities

In partnership with NGOs already involved in risk reduction activities at the community level, the union councils and ward/village leaders should develop the Union and Ward/Village Disaster

Management Plans based on the DEOC's Plans regarding actions during emergencies and disasters. It must be kept in mind that disaster, such as the 2005 earthquake, resulted in cutting off essential services. Furthermore, experiences in other countries have also shown that despite administrative preparedness, the government may not be able to bring relief to particular communities immediately. In district Neelum there are union councils located in the mountains and are not immediately accessible even by four-wheeled vehicles and remain isolated for weeks during the winter season.

3.3.1. Community Preparedness

Mitigation efforts and preparation of the disaster risk management plan for local areas are essential elements and pre-requisites. Preparedness to a large extent would reduce the impact and damage. Training and simulation exercises for enhancing the community's preparedness and response capability to identify risks, will simultaneously strengthen and enhance capacity of the administration to undertake necessary preparedness or evacuation.

As a part of general preparedness at community level, the NGOs will make the communities conscious about the type of hazard that the community faces. Thus local disaster risk management plans for hot-spot areas in the context of specific vulnerability would be developed.

a. During Emergency Situations

For appropriate security and to maintain law and order, precautionary evacuation would be undertaken with assistance from community leaders and community based organisations (CBOs). The entire family would evacuate together as a unit. However, to avoid stampede and confusion and in cases of inadequate transport or limited time, emergency evacuation would be undertaken in an orderly manner.

The community evacuation plan should train the community residents how to leave the area in an organized manner and move to the safe place or evacuation site without losing any family member. The proper steps to orderly evacuation must be learned by the community members.

Also, there should be training in the management of evacuation centres so that the developmental nature of this activity can be safeguarded through the participatory arrangements involving the affectees. This will include participatory method in distribution of relief assistance and running of the evacuation camp affairs.

b. During Relief and Rehabilitation

After the impact of a hazard in a disastrous situation, members of the community may be depressed or still panicky. The learning from the 2005 earthquake showed that many families sold their animals at very low prices for fear of being unable to tend these because of helplessness.

The community could have come together to extend help for the more injured members and give succour regarding care of the animals. An organized community will be able to promote help for each other. This will also assist in the early recovery and promote confidence in the rebuilding stage after the disaster.

Organizing a community managed and owned disaster management organization is going to ensure the achievement of the goal of resilient community.

c. Areas of Community Participation

The DEOC Neelum and NGOs at the disaster site should ensure maximum community participation in all stages of operation in order to maintain community morale and confidence; and maximize the use of local resources and promote a faster recovery. Disaster management situations offer a wide range of choices and demands that require immediate decision making. Participation of communities and their representatives would duly inform the field agencies about communities' perceptions and would thus create public ownership of the official decisions. Based on local dynamics, ethos and the experience of other countries, an appropriate strategy to ensure community support needs to be evolved. Such efforts to enlist community support and participation have gone a long way in reassuring the community about administration's intent and seriousness about managing the disaster.

3.4. Directions for Community Based Response Plan

The involvement of communities in the District Disaster Risk Management Plan necessitates action at the micro-level and at the ward level. The Plan will have to be evolved with the participation of village residents, their leaders and the officials of the union councils. When disaster is localised at union council level and can be managed locally, community based disaster management plan will come into operation.

However, a disaster situation may cover a major part of the city which would call for co-ordination of activities at the city level. Under such conditions, the community based plan in the affected wards would be in operation along with the DDRMP.

The response structure given in the ward plan essentially limits itself to micro-level intervention. When more than one ward are affected, DEOC which is the co-ordinating authority, would expect the ward officers to co-ordinate the activities at ward level with the line agencies such as Fire Brigade, Police etc., while the inter-ward co-ordination will be the responsibility of DEOC.

The Community Based Disaster Management Plan will include the following

- Responsibilities of CBOs on receipt of warning or occurrence of disaster

- Responsibilities of ward officer on receipt of warning or occurrence of disaster
- Responsibilities of the tehsils and union councils on receipt of warning or occurrence of disaster

3.4 Non-Governmental Organisations (NGOs) and Voluntary Agencies

The non-governmental organisations and voluntary agencies play an important role in disaster management and provide a strong band of committed volunteers with experience in managing the disasters. Their strength lies in the choice of their manpower, the informality in operations and flexibility in procedures. These organisations enjoy a fair degree of autonomy and hence can respond to changing needs immediately.

However, in order to maintain uniformity in operations and effective co-ordination, it is desirable that they follow the standards of services (as given in the Guidelines), information exchange and reporting so as to enable the DEOC to have a total picture of resource availability, disbursements and requirements. NGOs therefore have been assigned specific tasks by the Municipal Commissioner to undertake relief work within the overall institutional framework. As and where possible, NGOs may also be able to improve the quality of delivery of services. In addition, CBO Committees have been operating at the community level, especially in times of emergencies like house collapses, fires, and floods. Such committees have been identified at the ward level.

Specific activities in which NGOs/private sector can be involved during disaster management operations are:

- Search and rescue operations
- Information dissemination
- First aid
- Burial of dead
- Damage assessment
- Management of information centres at temporary shelters
- Mobilisation and distribution of relief supplies including finances
- Community mobilisation, crowd control, rumour control, traffic management
- Specialised services (psychiatric and mental health assistance)
- Management of transit camps
- Rehabilitation activities

The following agencies will be associated with relief and rehabilitation activities. Most of these

agencies have capacity to mobilise required resources and have assisted the administration in the past in managing relief and rehabilitation activities. These agencies include:

- Islamic Relief
- MERLIN
- Red Crescent Society
- UN Agencies
- Others

3.5 Reporting Formats

The need for common reporting formats to be used by both government and non-government agencies during disasters will facilitate understanding of messages, data and information. This will avoid both embarrassments and mistakes in the emergency work to save lives and properties. Examples of reporting formats are in *Annex VIII*

The DEOC will send the Status and Action taken Report on a continuous basis to the State DMA. The DEOC will provide updates of the situation and include advisories for the State DMA to guide it in its decision-making responsibilities.

3.6 Plan Dissemination through Community Education

The DDMA will disseminate the DDRMP at four levels;

- District administration departments, and to the state level officials
- To the tehsil, union council and ward/village leadership
- Through mass media to the general public in the district
- Through existing CBOs and collaborating NGOs

In addition to dissemination of literature related to the DDRMP, the DDMA will ensure that disaster response drills are conducted by the ward officers and other agencies on a regular basis, especially in the disaster prone areas to maintain the readiness of communities and departments, with attention to operational procedures, personnel, equipment and orderly response.

Bibliography

A Review of Disaster Management Policies and Systems in Pakistan, for WCDR 2005. January, 2005, Islamabad.

Action Aid Pakistan. 2006. *Conference Report: Disaster Preparedness and Mitigation in Developing Countries.*
February 2006.

Asian Development Bank and World Bank. 2005. *Pakistan - 2005 Earthquake: Preliminary Damage and Needs Assessment.* Islamabad, November 12, 2005

Cabinet Division, Govt. of Pakistan. 2006. *National Plan: Strengthening National Capacities for Multi Hazard Early Warning and Response System, Phase: I.* May 2006.

Centre for Research on Poverty Reduction and Income Distribution (CRPRID). *Pakistan 2005 Earthquake: An Assessment of Impoverishment Risks.*

Civil Defence Department-AJ&K . *PC-I: Strengthening the Civil Defence Organization and Establishment of Emergency Services (1122) in Azad Kashmir (Phase -1).*

Church World Service Pakistan/Afghanistan. Reports Related to Earthquake October 8th 2005.

ERRA and IASC Country Team. 2006. *ERRA-UN Early Recovery Plan.* Islamabad, May 2006.
www.erra.gov.pk

ERRA. 2006. *Rebuild, Revive with Dignity & Hope: Annual Review 2005 - 2006.* Islamabad, October 2006.

ERRA. Reconstruction and Rehabilitation Strategy Documents on (1) Education (2) Environment (3) Governance (4) Health (5) Housing (6) Livelihood (7) Power Generation (8) Telecom (9) Transport (10) Vulnerable Groups, and (11) Water and Sanitation.

Falak Nawaz & Mohammad Shafique. *Data integration for flood risk analysis by using GIS/RS as tools.*
http://www.gisdevelopment.net/application/natural_hazards/floods/ma03032.htm

Food and Agriculture Organization (FAO). 2006. *Pakistan: Post-Earthquake Early Recovery, Rehabilitation and Reconstruction Programme for the Agriculture and Livestock Sectors.* Rome, 15 November 2005.

Govt. of AJ&K. 2006. *Emergency Response Plan for Winter/Monsoon (August 2006 - April 2007), First Draft.* August 2006.

Board of Revenue and Relief Department - Govt. of AJ&K. 2005. *PC-1: Azad Jammu and Kashmir Disaster Management Project (2005 - 10).* July 2005.

Home and Tribal Affairs Department. *NWFP: Provincial Disaster Management Strategy.*

International Landslide Centre. 2006. *Brief Report on Landslide issues requiring attention 8th October 2005 earthquake affected areas, northern Pakistan,* February 2006.

Inventory of Glaciers, Glacial Lakes and Glacial Lake Outburst Floods (GLOFs) in HKH Region Pakistan.

IUCN. 2006. *Earthquake in Pakistan: An Assessment of Environmental Risks and Needs.* 16 January 2006.

LG & RD - AJ&K. *Baseline data of Earthquake Damages.*

Report on the Baseline Study of LG&RD Facilities in Azad Jammu & Kashmir, 2005.

NDMA - Govt. of Pakistan. 2006. *National Disaster Management Framework, Pakistan.* (Draft) October 2006.

OCHA 2006. *Evaluation of Disaster Response Agencies of Pakistan.* Islamabad, December 2006.

OXFAM. *Keeping Recovery on Course: Challenges Facing the Pakistan Earthquake Response One Year On.*

International Crisis Group. 2006. *Pakistan: Political Impact of the Earthquake, Asia.* Briefing No. 46, (ICG) Islamabad/Brussels, 15 March 2006.

Paul Currión. *Assessment Report: Pakistan Earthquake Response November-December 2005.* Interagency Working Group (IWG).

Raja Muhammad Rafique Kiani. *Assessment of Damage in Earthquake Affected Areas of AJ&K,* A PPT Presentation, Central Forest Office Neelum AJ&K.

Roger Bilham. *Earthquakes and Tectonic Plate Motions*
<http://cires.colorado.edu/~bilham/Kashmir%202005.htm>

Sardar Arshad Abbasi, MC Administrator. A power point presentation before the Prime Minister of AJ&K.

Shafeeq-ur-Rehman (Islamic Relief), Umair Hassan (Save the Children). et al. *Assessment Report: Azad Jammu and Kashmir.*

Report on *Structures for Recovery Reconstruction in Earthquake Affected Districts.*

The Government of Pakistan. 2006. The Gazette of Pakistan, Ordinance No. XI of 2006. *National Disaster Management Ordinance, 2006.* Dec 2006.

UNDP–BEGIN-ER. *District Action Plan, Workshop on Disaster Risk Reduction.*

United Nations Pakistan. 2006. *UNDP & The 2005 Pakistan Earthquake: One Year On.*

WHO. *District Health Plan Neelum (2006 2007).*

