

PRESENTATION

ON

**DISASTER MANAGEMENT IN PAKISTAN
WITH SPECIAL REFERENCE TO THE FEDERALLY ADMINISTERED
NORTHERN AREAS**

By:

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Islamic Republic of Pakistan

Area: 796,096 Sq. Kms

Topography: Coastal Beaches, sandy deserts, plateaus, plains, mountains, snow covered peaks
Northern Highlands, Indus River Plains, Baluchistan Plateau

Demography: 167 million (34% Urban – 66% Rural)

Languages: Multi cultural, Multi ethnical, Multi lingual
(Urdu, English, Punjabi, Pushto, Baluchi, Sindhi, Hindko, Gojri, Kashmiri, Brahwi, Shina, Brushahski, Wakhi, Khwar)

Climate: Extreme



CHINA

AFGHANISTAN

NORTHERN AREAS

Lahore

PAKISTAN

New Delhi

Rashtrapati

INDIA

IRAN

ARABIAN SEA

HAZARDS

- Floods
- Droughts
- Earthquakes
- Cyclone
- Flash Floods
- Land Slides
- Avalanches
- Infectious Diseases/Epidemics
- Human Induced Hazards

Overview of Major Disasters:

➤ Floods:

Highest annual average number of people physically exposed to floods which occur normally due to storm system from bay of Bengal during the monsoon season from July to September.

➤ Drought:

Drought has become an intermittent problem in Baluchistan, Sindh and Southern Punjab where average rainfall is as low as 200 – 250 mm. The drought in 2000 and 2002 lead to 120 deaths and affected 2,200,000 people.

Overview of Major Disasters:

➤ Earthquake:

Pakistan lies in the seismic belt and therefore suffers from frequent earthquakes of small magnitude. The devastation can be immense because of poor quality buildings.

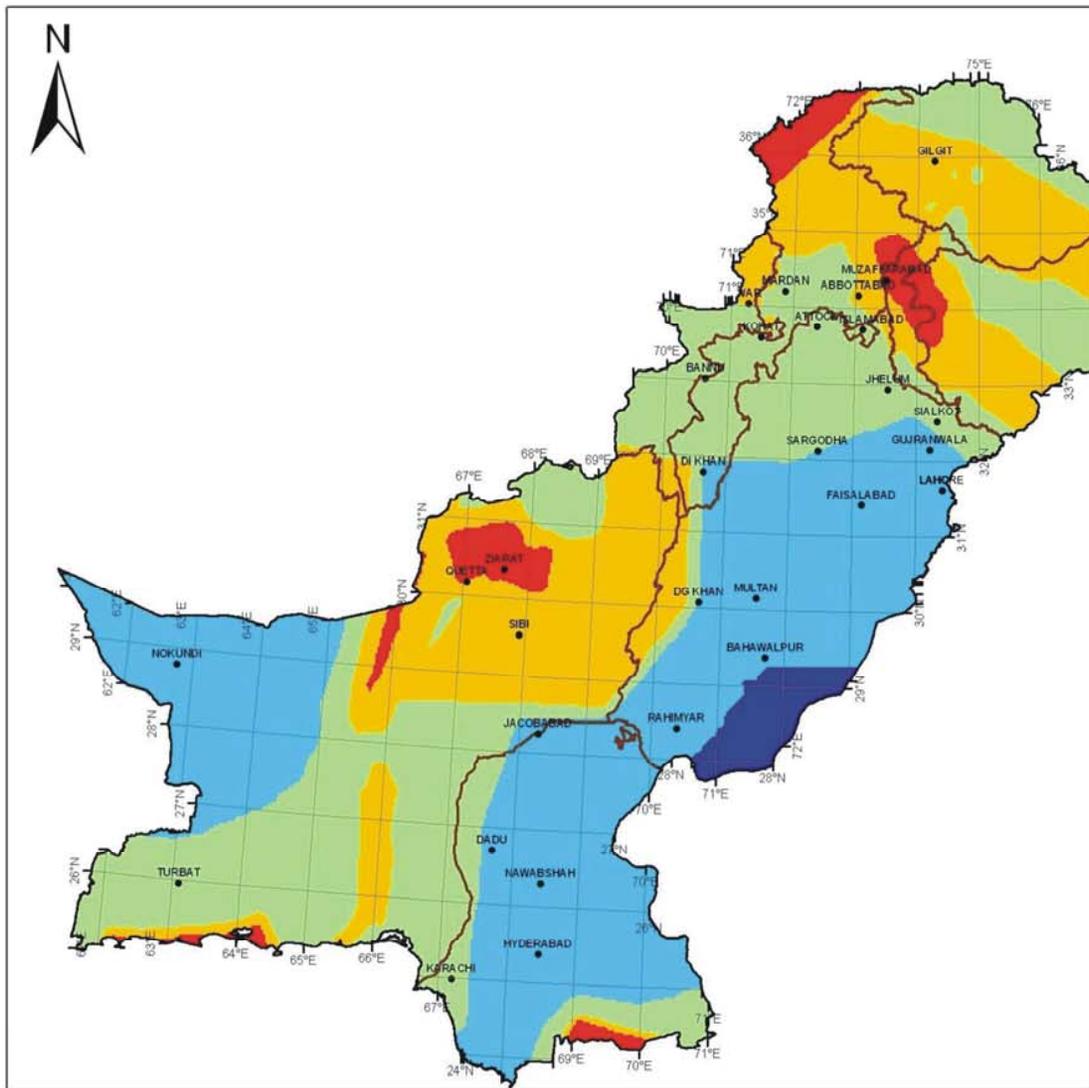
1935 - Entire Quetta city was destroyed
2005 - 73000 Deaths, 130,000 injured

➤ Cyclones:

Although not a frequent phenomenon cyclones can cause large scale destruction to the coastal areas of Sindh and Baluchistan. The cyclone of 1999 in Thattha and Badin Districts wiped out 73 settlements and resulted in 168 deaths. The period 1971 to 2001 records 14 cyclones of various magnitudes.

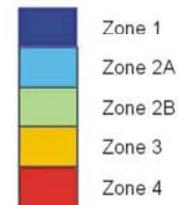
FIG 2.1

SEISMIC ZONING MAP
OF PAKISTAN



Legend

Seismic Zones



PERIODIC LEGISLATIONS:

The National Calamities (Prevention & relief) Act 1958.

Local Government Ordinance 2001.

Emergency Services Ordinance 2002.

SUPPLYMENTARY LAWS:

Pakistan Environmental Act 1997.

Karachi Port Trust (Amendment) Ordinance 1994.

National Fund for Cultural Heritage Act 1994.

Agricultural Pesticides (2nd Amendment) Ordinance 1995.

AJK Environmental Protection Act 1995.

Federal Environmental Rules and Regulations.

Organizations with Disaster related Responsibilities:

Emergency Relief Cell (ERC)

Meteorological Department

Federal Flood Commission

National Crisis Management Cell (NCCMC)

Civil Defense

Provincial relief Departments

Provincial Health Departments

Provincial Agriculture & Live Stock Departments

Provincial Flood Departments

Provincial Communication & Works Departments

Provincial Planning & Development Departments

Army

Police

Dams Safety Council

Space & Upper Atmosphere research Council (SUPARCO)

Approach:

Conventional

Isolated from mainstream development

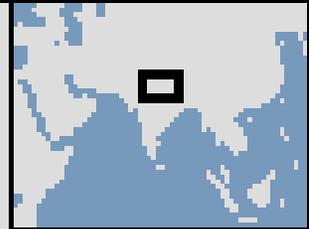
Relief & Recovery Based

Lack of coordination

TURNING POINT: (Mega Earthquake of 2005)

AFGHANISTAN

CHINA



PAKISTAN-CONTROLLED KASHMIR

Date: Kabul □

8th October 2005

□ Jaisalmer

Muzaffarabad

Magnitude:

7.6 Moment Magnitude Scale

Epicenter:

□ Islamabad

□ Uri

□ Srinagar

Muzaffarabad

INDIAN-CONTROLLED KASHMIR

Depth:

10 Kms

Areas Affected:

30,000 sq Km

(NORTH-WEST FRONTIER, Azad Kashmir, Islamabad)

Deaths:

PAKISTAN

73,338 (Including about 18000 Children)

Injured:

128,304

INDIA

□ Delhi

NEPAL

CHALLENGES:

- Absence of Disaster Management Organization
- Vast Affected Areas & Scattered Settlements
- Inaccurate Damage Assessment
- Inadequate Resources
- Destroyed Means of Communication
- Dysfunctional Civil administration
- Lack of Inter Agency Coordination

Earthquake Relief & Rehabilitation Authority (ERRA):

Formed in April 2006

Sectors:

■ Hardware

- ✓ Housing
- ✓ Education
- ✓ Health
- ✓ Water & Sanitation
- ✓ Governance
- ✓ Power & Telecommunication
- ✓ Transportation

■ Software

- ✓ Livelihood
- ✓ Social Protection
- ✓ Environment
- ✓ Industry & Tourism



PARADIGM SHIFTS:

In view of vulnerability of the region need for an appropriate policy, legal and institutional arrangements was felt seriously. The National Disaster Risk Management Frame Work is adopted.

THE FRAMEWORK:

“To achieve social, economic and environmental development in Pakistan through reducing risks and vulnerabilities, particularly those of the poor and marginalized groups, and by effectively responding to and recovering from disaster impact.”

NDMA

National disaster Management Ordinance promulgated in 2006. Implementation of the ordinance would be ensured by NDMC. In terms of section 9 of the national Disaster Management Ordinance 2006, the National Disaster Management Authority (NDMA) shall serve as the focal point and coordinating body for the execution of the whole spectrum of disaster management activities. All stakeholders including government bodies, agencies at the federal as well as provincial level, armed forces, UN agencies, international organizations and NGOs shall work through the NDMA in all stages of disaster management.

HYOGO FRAMEWORK FOR ACTION:

- * Make disaster risk reduction a PRIORITY
- * Know the risk and take action
- * Build understanding and awareness
- * Reduce risk
- * Preparedness for active action

Line of Action adopted by NDMA Pakistan:

1. Make Disaster Risk reduction a Priority:

- Gravity of the disaster and future risks compelled the policy makers for adoption of a comprehensive policy based on disaster risk assessment for reduction & mitigation of disasters instead of relief oriented activities.
- Realizing the importance of disaster risk management for sustainable social, economic and environmental development, the Govt of Pakistan has embarked upon establishing appropriate policy, legal and institutional arrangements at federal as well as provincial levels, to minimize risks and vulnerabilities.

Line of Action adopted by NDMA Pakistan:

2. Know the Risks and take Action:

◆ High Priority:

◆ Floods

earthquakes

Landslides

Flash Floods

Infectious Diseases and Epidemics

◆ Medium Priority:

◆ Transport and industrial accidents

◆ Low Priority:

◆ Drought

Forest Fire

Urban Fires

Line of Action adopted by NDMA Pakistan:

3. Build Understanding and Awareness:

- Medium term public awareness strategy for multiple sectors; e.g. civil servants, staff of technical agencies, NGOs, media, politically effective people and communities themselves.
- Orientation about disaster risks and vulnerabilities, skill development on risk management, risk assessment, vulnerability reduction, hazard mitigation and emergency response management.
- Specialized training in the areas of response also being envisaged; e.g. search & rescue, first aid, fire fighting, evacuation, camp management and relief distribution.
- NDMA is establishing partnership with electronic and print media and develop awareness of media personnel.
- The programme implemented at community and local level is at the heart of disaster risk reduction strategies.

Line of Action adopted by NDMA Pakistan:

4. Reduce Risk:

- Risk reduction envisages strategies and plans to check occurrence and likely damage by both natural and man made disasters.
- In the case of natural disasters the option is limited to taking precautionary measures like adoption of earthquake resistant designs for buildings, ensuring stability of slopes to reduce landslides and avalanches, plantation to prevent soil erosion.
- Man made disasters like fires and blow outs, collapse of buildings and bridges, road accidents etc, require a well designed and implemented legal framework to ensure that the risk to life, property and infrastructure is minimized.

Line of Action adopted by NDMA Pakistan:

5. Preparedness for Active Action:

- Keeping in view inability of the existing emergency response system in case of a catastrophe, NDMA is formed and assigned with the task to develop an organized effective disaster response system at national, provincial and district levels.
- This would imply development of institutional mechanism and technical and operational capacity of involved agencies.
- Revamping of Civil Defense Departments at federal as well provincial levels would be critical.
- In addition other departments that need strengthening include the ERC, PRCs, Police, Fire Sighting Services, municipalities, ministries for interior & health alongwith the NVM and other line departments.
- Forums need to be strengthened for collaboration between armed forces and above mentioned agencies.

Efforts Underway:

- Emergency Operation Centers (EOC) are being established at national, Provincial and District Levels under the overall supervision of NDMA, PDMAAs respectively.
- The EOC would lead coordination and management of relief operations in affected areas. Civil Defense, armed forces, NCMC, fire services, police, ambulance services, Red crescent Society, Edhi Foundation and other concerned agencies will be coordinated by the EOC at respective levels.
- Standing Operating Procedures (SOPs) are being drafted, which would define roles of federal, provincial and local agencies for their involvement in emergency response.

Efforts Underway:

- A database is being developed to record disaster response resources available with different departments at district, provincial and national level. The PDMAs DDMA's and MDMA's will manage the database at their respective levels which would be interconnected with the main database.
- A national Disaster Management Fund has also been established by the NDMA in order to enable the federal government to organize emergency response effectively.



FEDERALLY ADMINISTERED NORTHERN AREAS

NORTHERN AREAS

JAMU&KASHMIR

PUNJAB

General Information:

- Area: 72496 Sq Kms
- Population: About one Million
- Density: 20.7 /Sq Km
- Districts: 6+1
- Languages: Multilingual
- Topography: Glaciers, Lakes, High mountains, Snow Peaks, Narrow valleys, High Plateaus
- Geography: Wakhan-Afghanistan to Northwest, Xinjian-China to Northeast, Indian administered Kashmir & Pakistan administered Kashmir to Southeast and NWFP-Pakistan to West.
- Climate: Varies from valley to valley extreme -10 C to 35 C



DISTRICT WISE POPULATION OF NAs

DISTRICT WISE POPULATION (in Million)

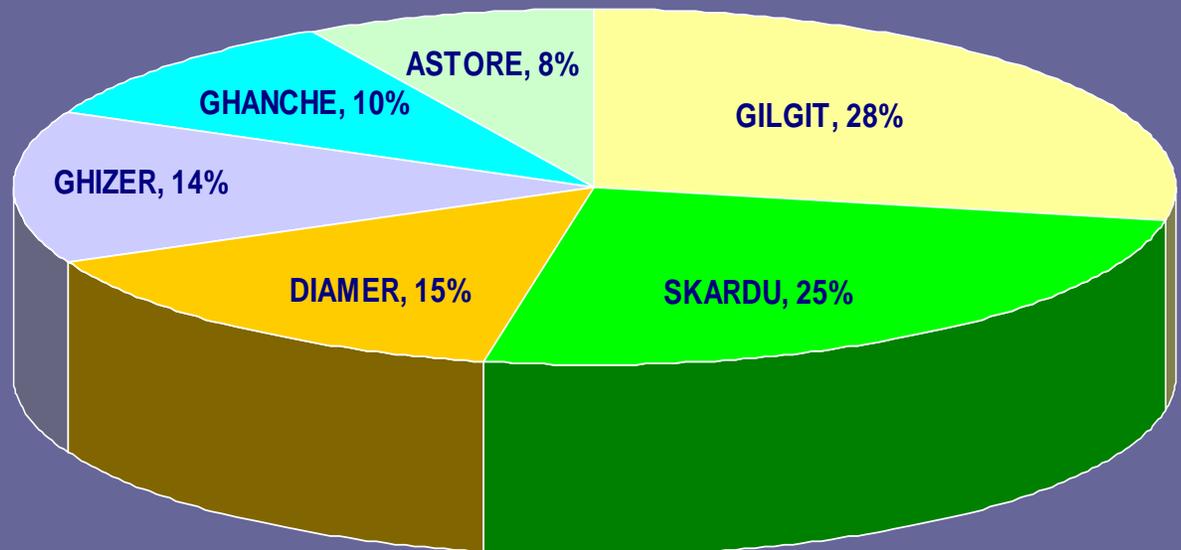
Gilgit	0.247
Skardu	0.219
Diamer	0.133
Ghizer	0.121
Ghanche	0.089
Astore	0.074

SECT WISE POPULATION

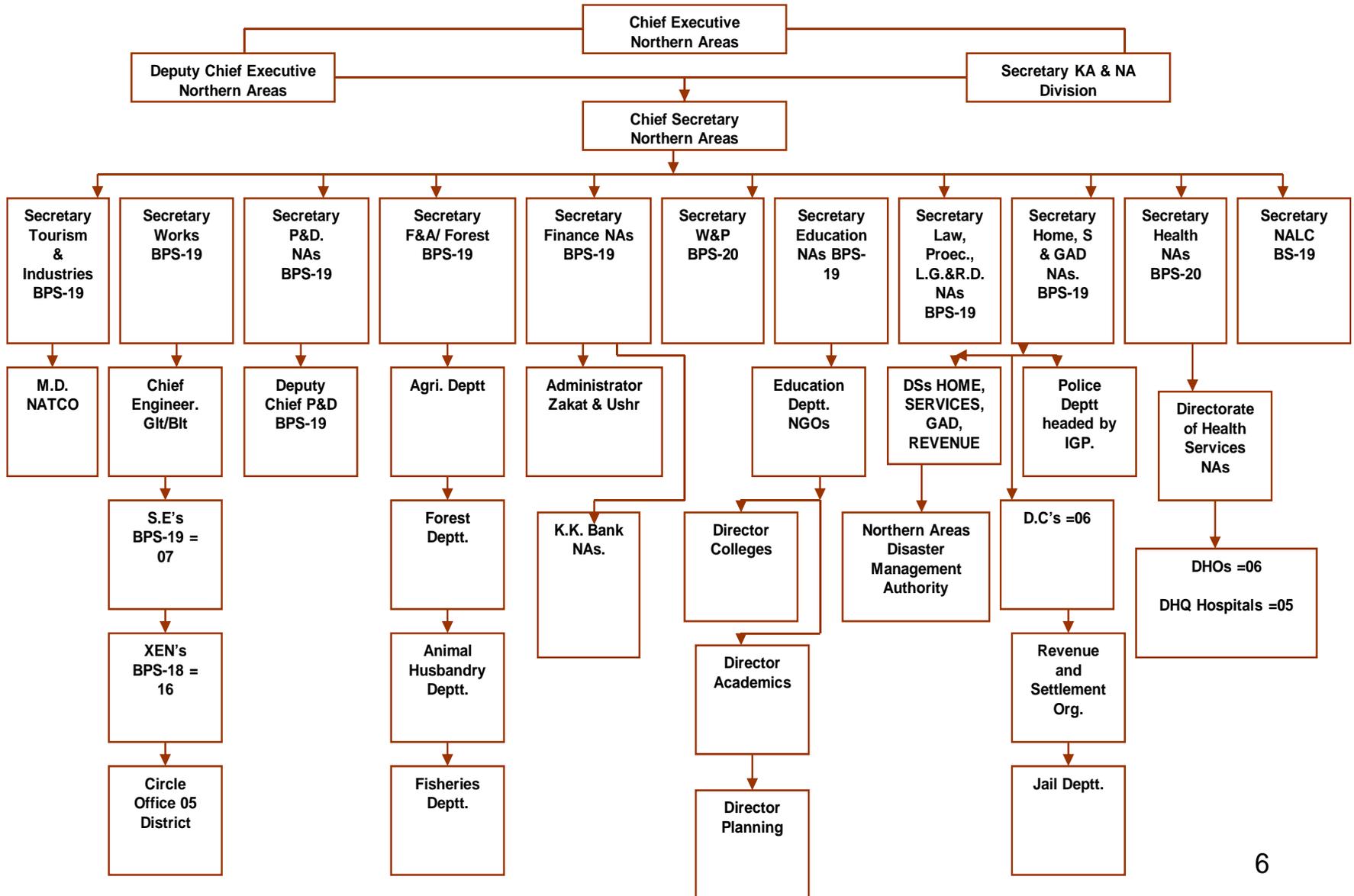
Ahle Sunnat	35%
Ahle Tashee	40%
Ismaili	18%
Noor Buksh	06%
Others	01%

MAJOR ETHNIC GROUPS

Sheen
Yashkun
Balti
Kashmiri
Dhom



Northern Areas Administration is headed by the Chief Secretary supported by 11 Administrative Secretaries, one IGP. and six Deputy Commissioners



NORTHERN AREAS DISASTER ANALYSIS

Hazards:

- Floods
- Droughts
- Earthquakes
- Flash Floods
- Land slides
- Avalanches



Vulnerabilities:

- Scattered Settlements
- Inaccessibility
- Poor Quality Design & Construction
- Fragility of Natural Environment
- Deforestation
- Harsh Climate

Image © 2006 TerraMetrics
Image © 2006 DigitalGlobe

© 2006 Google™

Pointer 35°54'49.44" N 74°20'05.22" E elev 4850 ft

Streaming ||||| 100%

Eye alt 12613 ft

DISASTER RISKS IN NAs

Earthquakes:

- Entire NAs including its capital Gilgit lies in the seismic zone. As such occurrence of earthquake tremors is common in the region. The earthquakes of 1972, 2002 and 2004 caused wide spread damages to life and property.

Drought:

- The drought during 2000-03 in NAs had affected about half of its population, mainly those dependant on livestock production as pastures at higher altitudes were dried due to shortage/lack of snowfall. As many as two thousand yaks perished on the account of insufficient vegetation on higher altitudes.

Floods:

- Delayed winters and sudden rise in average temperature (10 degree above normal) resulted in excessive snowmelt lead to abnormally high water flows. On the whole from December 2004 to August 2006 rain/snowfall and resultant floods affected as many as 91,304 persons in the NAs.

Land Slides:

- The NAs is vulnerable to landslides. Aside from the young geology and fragile soil type of mountain ranges, accelerated deforestation is a major cause behind increased incident. Frequency of landslides may increase in future since the forest cover is shrinking by 3 % annually. Moreover extensive explosive blasting along the KKH (Karakorum Highway) during and after its construction and frequent earthquakes have caused cracks in the mountains.

Avalanches:

- The NAs being host to the largest glacier concentration outside the polar zones and regular seasonal snowfall is prone to avalanches. A study conducted by the WAPDA in the year 1988-89 under the snow and ice hydrology project identified the potential avalanches paths.

Establishment of NADMA

- Following the catastrophe of 8th October 2005 the Federal Government of Pakistan established NDMA and all provinces were asked to do the same at provincial, district as well as municipal levels.
- In compliance with the policy of the federal government NADMC & NDMA were established in January 2007.
- At present a proposal for creation of posts, infrastructures and provision of related requirements is submitted to the federal government. The Home and General Administration Department NAs is looking after the affairs of the NDMA under the direct supervision of the Secretary Home and GAD NAs who is working as the DG NADMA.

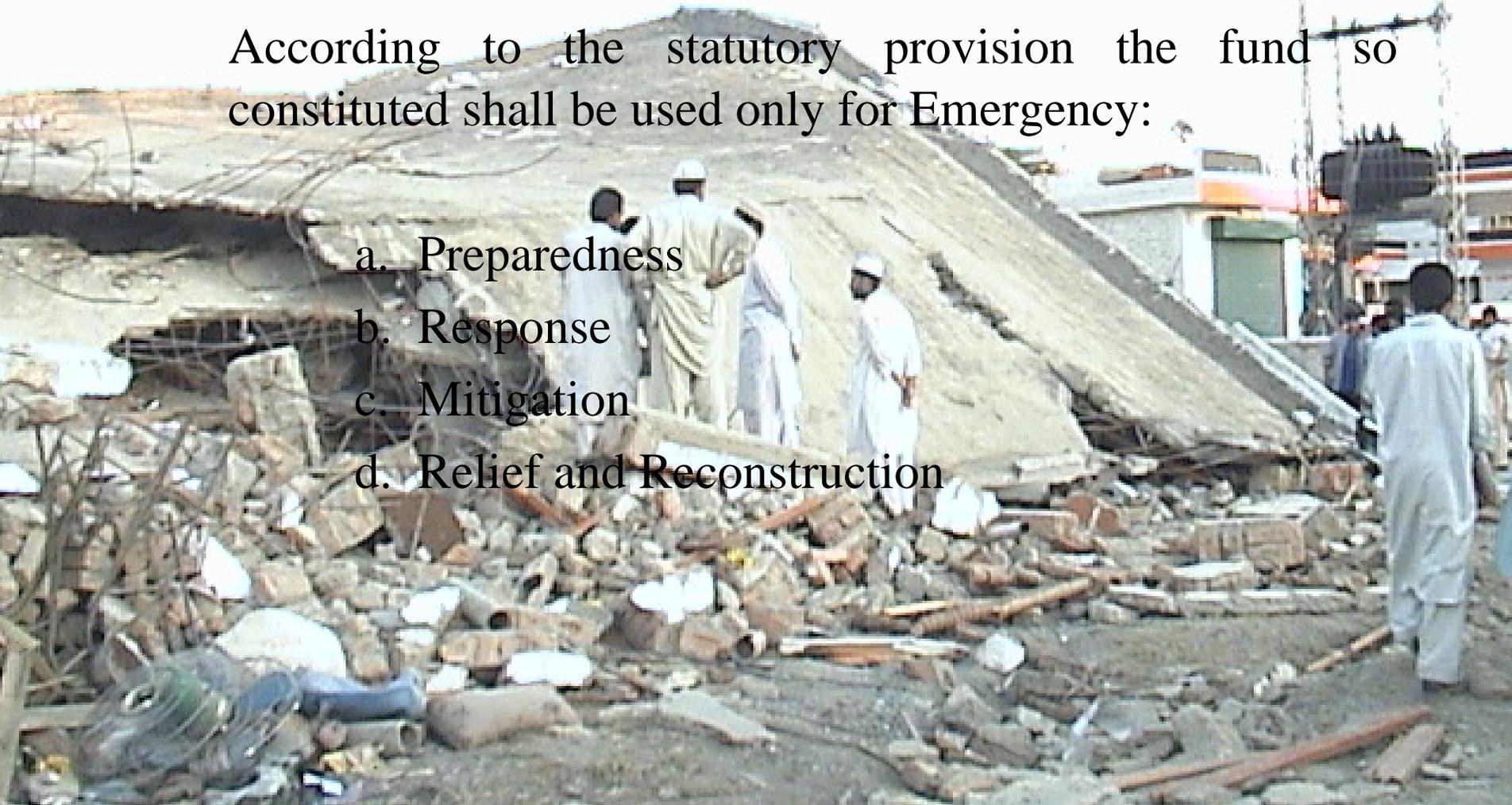
Establishment of NADMA Fund

The federal government of Pakistan constituted NADMA Fund on 15th November 2007 in pursuance of Section 30 of National Disaster Management Ordinance, 2006. The Fund shall consists of assets, liabilities, fund equity, revenues and expenditures or expenses.

Utilization of Fund

According to the statutory provision the fund so constituted shall be used only for Emergency:

- a. Preparedness
- b. Response
- c. Mitigation
- d. Relief and Reconstruction



NORTHERN AREAS DISASTER MANAGEMENT COMMISSION
(CHIEF EXECUTIVE NORTHERN AREAS EX-OFFICIO CHAIRMAN)
(Chief Secretary NAs as Chief Executive Officer)

NORTHERN AREAS DISASTER MANAGEMENT AUTHORITY
(SECRETARY HOME NAs EX-OFFICIO DIRECTOR GENERAL)

LINE DEPARTMENTS

DISASTER MANAGEMENT SECRETARIAT, GILGIT

PROVINCIAL EMERGENCY OPERATIONS CELL

DISTRICT DISASTER MANAGEMENT AUTHORITY
(HEADED BY THE DEPUTY COMMISSIONERS)

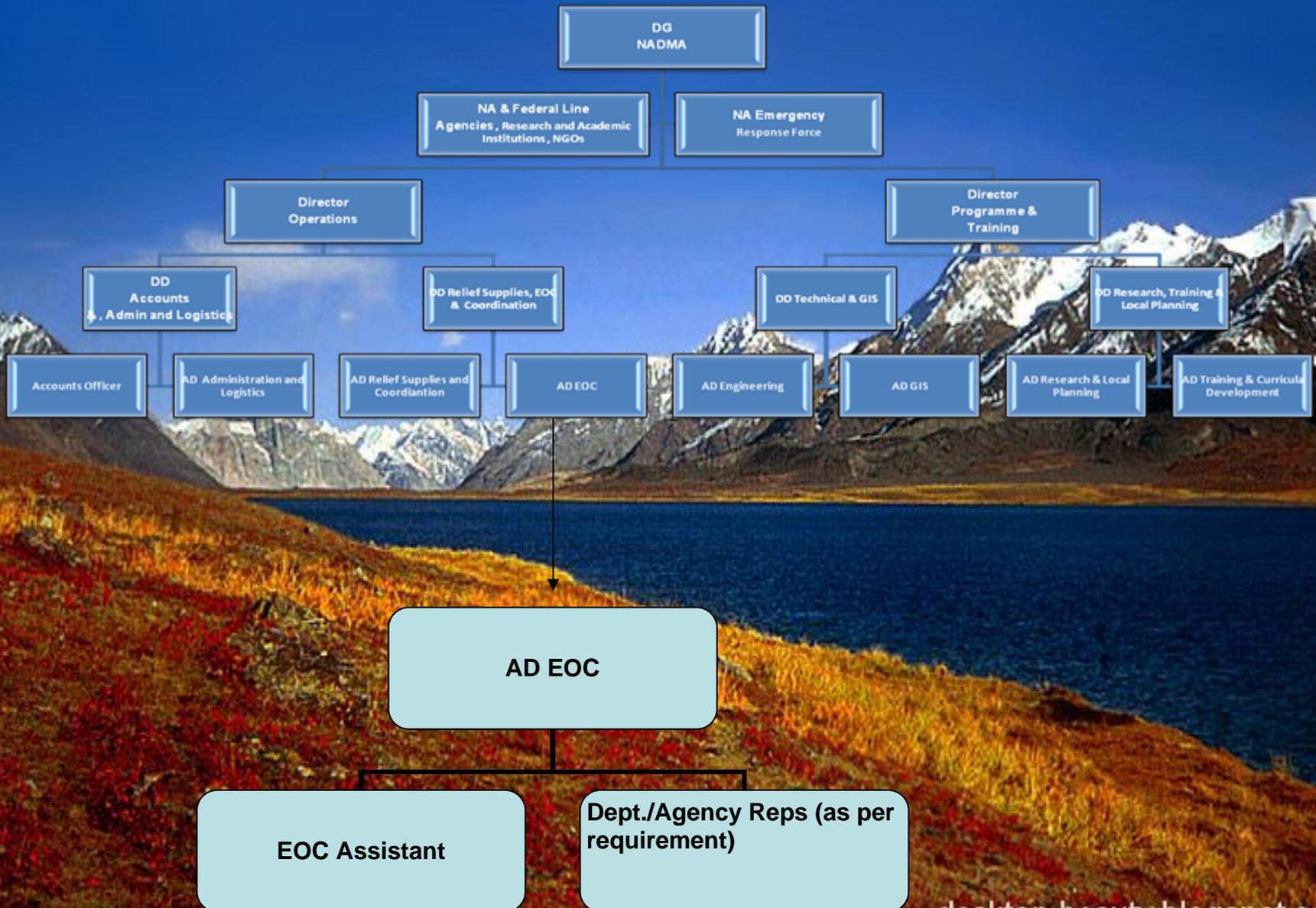
DISTRICT EMERGENCY OPERATIONS CELLS

COMMUNITY BASED ORGANIZATIONS

DISTRICT LINE OFFICES

TEHSIL UNION AND MUNICIPAL/TOWN DISASTER MANAGEMENT SETUPS

Proposed Structure of NADMA – Emergency Operations Cell



Structure of DDMA & Respective EOC



Priorities for Disaster Reduction –NADMA

Phase-I

Institutional and Legal Arrangements:

- ✓ NDMA/DMA established and functioning effectively.
- ✓ Districts & Municipal Authorities established and made functional.
- ✓ Introduction of a proper mechanism for implementation of National Building Code.

➤ Hazard and Vulnerability Assessment:

- ✓ Information in digitalized form is available.
- ✓ An atlas is published and disseminated to stakeholders at all levels.
- ✓ An online open source database will made available for use of decision makers and practitioners at local and national levels.
- ✓ A study on the impact of climate change on the glaciers and ice cover is underway.

➤ Disaster Risk Management Planning:

- ✓ To conduct courses for district and municipal DMAs.
- ✓ Develop public awareness (Posters, brushers, videos, booklets, seminars, workshops etc)
- ✓ Integrate disaster risk management education in the syllabus of regimental centers, police recruitment training centers, schools and colleges.

PRESENT Position of NDMA in NAs

- Home & GAD NAs is presently looking after the affairs of NDMA in the NAs.
- PC-1 for provision of posts and infrastructures is taken up with the Federal Government.
- Central Emergency Relief Center Gilgit with its branches in Skardu and Ghizer is established.
- Merger of Civil Defense in NADMA is proposed.
- District and Sub-divisional heads of the GAD have been asked for collection of information which can be useful for disaster response.
- Responsibility to identify hazard & risk and disaster prone areas is already assigned to the field staff.
- Workshops and seminars are being conducted for promotion of awareness amongst the general public.
- Campaign is launched for awareness and adoption of National Building Code.
- **Disaster Risk Management Plan is drafted in consultation with the UNDP.**

SALIENT FEATURES OF DRM PLAN

◆ VISION:

Safer Northern Areas

◆ Mission:

To manage complete spectrum of all types of disasters through gradually moving away from response and relief oriented approaches and by a Disaster Risk Reduction perspective from local government upwards.

◆ Scope:

The plan intends to provide direction and guidelines to all stakeholders. It provides strategies and programmes for all three phases of disaster risk management i.e. pre-disaster (Risk & Preparedness), during disaster (response & relief) and post disaster (rehabilitation, recovery and reconstruction).



Areas of DRM Plan:

- ❑ General Information About the Area
- ❑ Overview of Major Disasters
- ❑ Hazard and Risk Information
- ❑ Information about NADMA and subordinate DDMAAs
- ❑ Framework of Action
- ❑ SOPs

Impediments:

- **Intense Vulnerability**
- **Gender Sensitivity**
- **Lack of awareness**
- **Improper implementation of laws**
- **Extreme weather**
- **Communication/conveyance Problems**
- **Hard terrain**
- **Scattered Valleys**
- **Multi-lingual, multi-ethnic & Quasi Tribal**
- **Population Expansion** (1.8/woman/decade)
- **Unplanned Urbanization**
- **Socio-economic Conditions**
- **Machinery & Equipment**
- **Early Warning System**
- **Insufficient Resources**

Recommendations:

- Government may not be left alone for DRM.
- Collective & Well coordinated efforts needed instead of isolated ones.
- A multi-dimensional approach incorporating DRM into mainstream development is needed.
- Encouragement of NGO & Volunteer Culture would be helpful.
- Information collection and proper/systematic record keeping
- Establishment of Early Warning System.
- Provision of proper Machinery & Equipment.
- Need for resources exploration.
- DRM awareness & Education
- Research Facilities.

16 7 2004

A young girl with dark hair is the central focus, wearing a white long-sleeved shirt and a vibrant green sash. On her head, she wears a traditional, cylindrical hat with a colorful, patterned band and two prominent circular ornaments. Her expression is neutral as she looks slightly to the right. The background is a blurred outdoor setting with stone walls and a wooden structure. The word "THANKS" is superimposed in a large, red, serif font across the lower middle of the image.

THANKS