



# State Disaster Management Authority

**Azad Government of State of Jammu & Kashmir**

**Presentation by**

**Shahid Hussain Malik**

**Director Administration**

**State Disaster Management Authority,**

**Muzaffarabad, AJ&K,**

**Pakistan**

**[shahidmalikcmo1@gmail.com](mailto:shahidmalikcmo1@gmail.com)**

# Demography of Pakistan

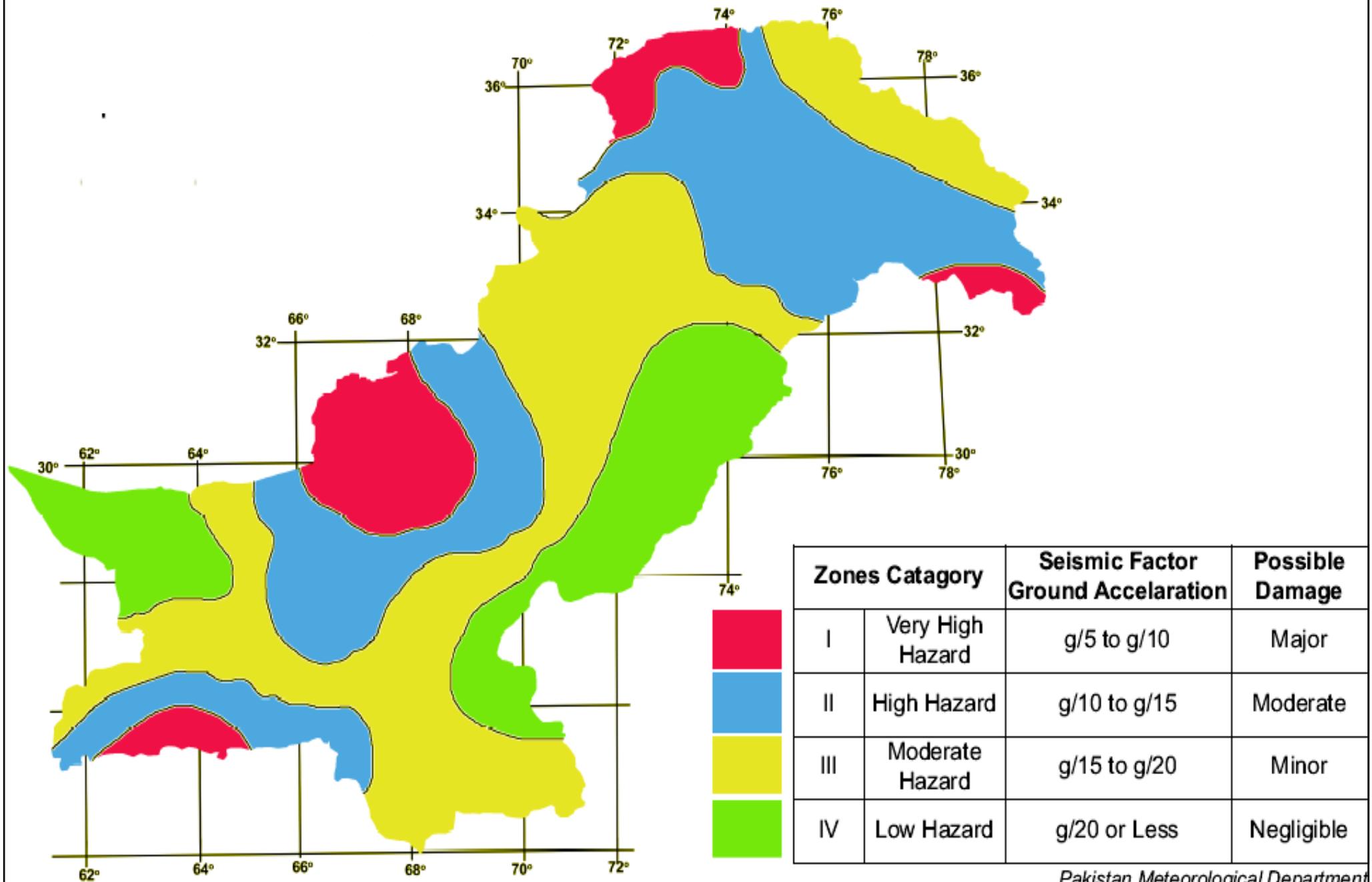
Official Name:	Islamic Republic of Pakistan
Independence Day:	14 <sup>th</sup> August, 1947
National Language:	Urdu
Official Language:	English
Provinces:	Baluchistan, NWFP, Sindh, Punjab
Territories:	FATA, Northern Areas & AJ&K
Political System	Parliamentary
Administration:	Federation
Population:	172.8 million (2007)
Literacy Rate:	54%
Growth Rate:	2.2 %

# Map of Pakistan



# SEISMIC ZONES OF PAKISTAN

## EARTHQUAKE/ SEISMIC



# Demography of AJ&K

Office Name: State of Azad Jammu & Kashmir

Area: 13297 KM square

Districts: Bagh, Bhimber, Forward Kahota, Kolti,  
Mirpur, Muzaffarabad, Neelum, Poonch,  
Rawalakot

National Language: Urdu

Political System: Parliamentary

Population: 2.973 million (1998) almost 4 m at present

Literacy Rate: 60% +

Growth Rate: 2.17 %

Topography: Mainly hilly and mountainous with valleys and  
plains at some places.

# Map of AJ&K



## □ Azad Jammu & Kashmir

- **Longitude:** 730 - 750 and
- **Latitude:** 33o - 36o and
- **Area:** 5134 Square Miles (13297 square kilometres).
- **Altitudes:** 360 meters above sea level and north having the highest altitude of 6325 meters.
- **Terrain:** AJ&K is mostly hilly and mountainous with some stretches of plains. The land is blessed with snow covered mountains, thick green forests, fast flowing rivers and streams.
- **Rivers:**  
The main rivers are Jehlum, Neelum and Poonch. AJ&K
- **Climate:** Characterized by sub-tropical highland
- **Rain fall:** Average 1300 mm.
- **Snow line:** Fluctuates between 1200 metres in winter to 3300 meters in summer.

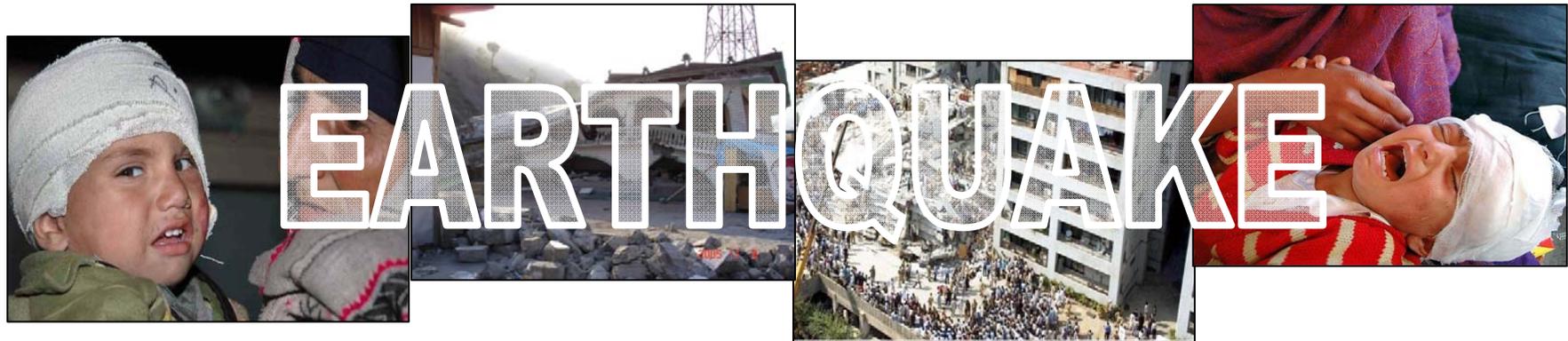
## □ Administrative Structure of AJ&K

Division	District
Muzaffarabad	1.Muzaffarabad 2.Neelum 3.Bagh
Poonch	1.Poonch 2.Sudhnuti
Mirpur	1.Mirpur 2.Kotli 3.Bhimber

## Demography of AJ&K

DISTRICT	AREA (Sq. Kms)	POPULATION (Millions)		DENSITY In (2006) (Persons/ Sq. Km )	GROWTH RATE	HOUSE-HOLD SIZE
		1998	2006			
MUZAFFARABAD	2496	0.620	0.770	307	2.80 %	7.1
NEELUM	3621	0.126	0.159	42	2.80 %	7.1
MIRPUR	1010	0.334	0.395	391	2.09 %	6.8
BHIMBER	1516	0.302	0.370	244	2.60 %	6.7
KOTLI	1862	0.563	0.690	370	2.59 %	7.3
POONCH	855	0.411	0.490	573	2.24 %	7.6
BAGH	1368	0.393	0.460	336	2.00 %	7.4
SUDHNUTI	569	0.224	0.262	460	1.99 %	7.3
<b>TOTAL</b>				<b>270</b>	<b>2.41 %</b>	<b>7.2</b>

## “ The Devastation ”



TOTAL POPULATION : 3.5 M

FAULT LINE  
100 KM LONG

• HUMAN LOSS

• INJURED

• FAMILIES AFFECTED-

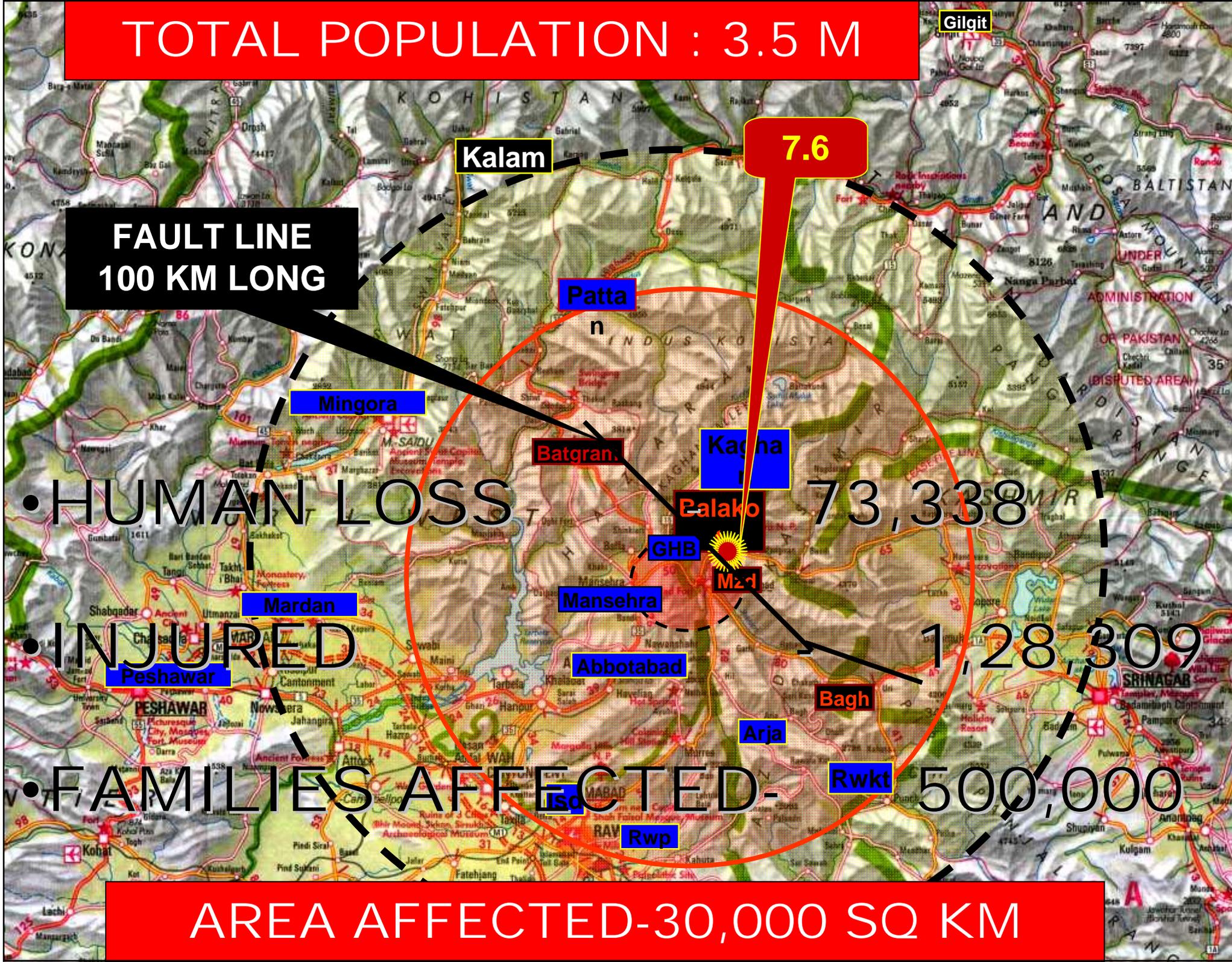
7.6

73,338

1,28,309

500,000

AREA AFFECTED-30,000 SQ KM



## □ Earthquake Damages

- Affected area (Sq Km) 7000
- Population affected (Million) 1.8
- Villages affected 977
- Houses Damaged 3,29,579
- Deaths 46,528
- Injured 33,489
- Estimated Losses in Private Sector: Rs. 60.875 Billion
- Estimated Damages in Public Sector: Rs. 64.328 Billion
  
- Total Losses **Rs. 125.203 Billion**

### A. Losses to Private Sector (Rs. Billion)

Sector	Damages (Rs. In Billion)
■ Private Housing	50.000
■ Economic Assets	10.875
<b>Total:</b>	<b>60.875</b>

## □ Earthquake Damages

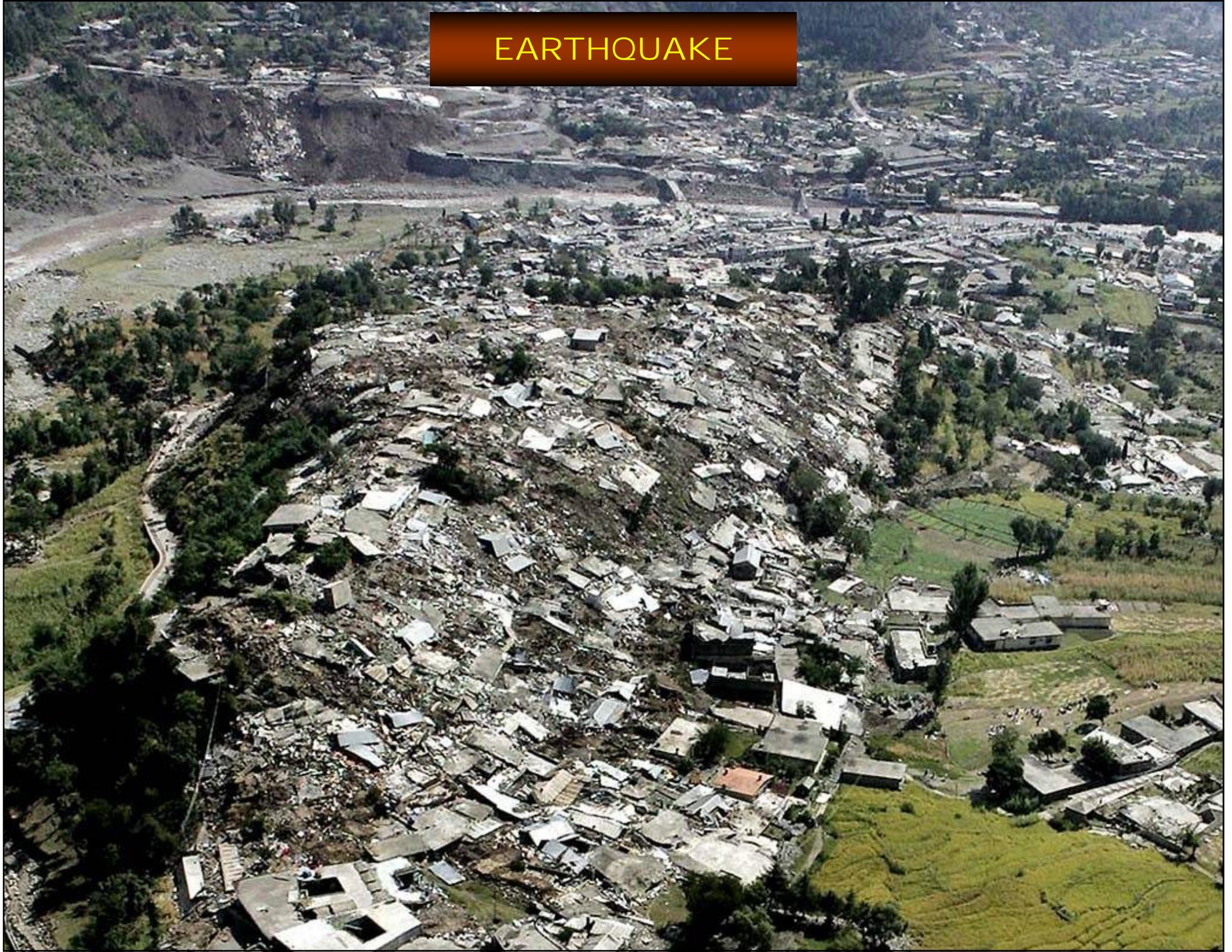
### B. Losses to Public Sector (Rs. Billion)

Sector	Damages	Est. Cost
■ Transport & Communication	810 km roads & 2725 meter bridges	6.140
■ PP&H	806 Nos official accommodation with 2050385 sft	5.153
■ LG&RD	Rural access roads (1809 km), jeep able bridges (18), foot bridges (56) & rural water supply & solid waste (1630)	4.988
■ Education	Reconstruction of 2706 education institutions including 1852 primary, 498 middle, 298 high/ higher secondary schools, 20 inter, 12 degree colleges, 6 post graduate colleges & 1 university	28.239
■ Health	Recont. of 176 health institutions including 47 civil Dissp., 96 BHUs, 15 RHCs, 4 THQs, 2 CMHs, 2 DHQs, Jinnah Dental Hospital, 1 Chest Disease Hospital & AIMS	5.926
■ Electricity	Repair of hydel stations & rehabilitation of electrical damaged infrastructure	0.839
■ HEB		0.105
■ Environment	Natural Resource Management, Socio Economic Dev.	1.394
■ Livelihood	Infra. Reconst. Capacity building, Impl. of Village Plans	1.577
■ Others	(Industries, Tourism, Agriculture)	9.967
<b>Total</b>		<b>64.328</b>

# Devastated Rural Housing Sector



# EARTHQUAKE









# LAND SLIDES

NEELUM RIVER



# Rescue Operation



45

2005 10 14

# APP



**PESHAWAR: Army personnel embarking a helicopter to reach to earthquake affected areas in NWFP after a severe earthquake at a magnitude 7.6 that jolted the country.**

**APP photo by Riaz Anjum**

**APP**



**Reaching out to the remote villages**



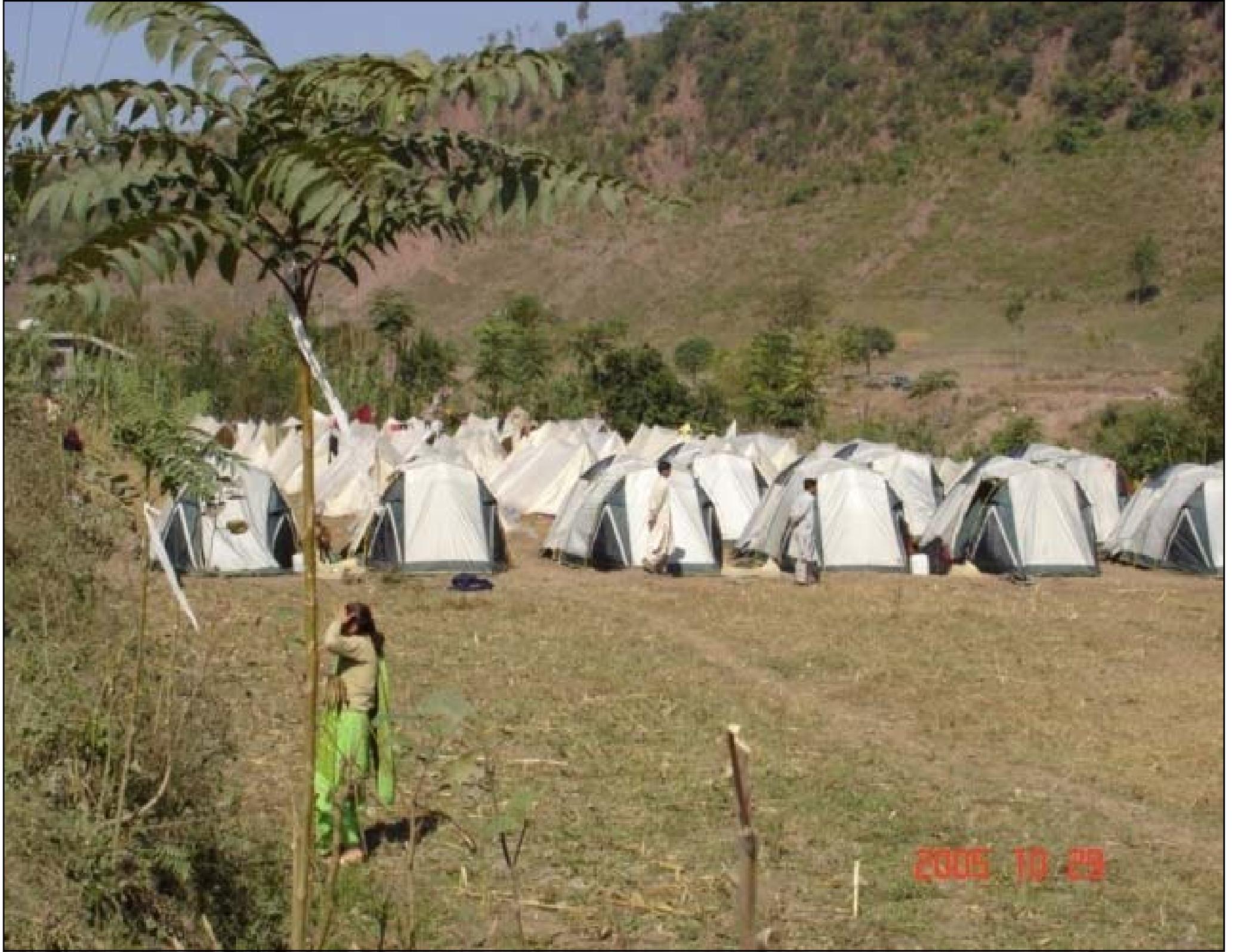
# Camp Management Organization

- **Established Immediately After the Earthquake to look after affairs of 1,16,512+ Internally Displaced Peoples in 225 camps.**
- **Efforts of CMO are acknowledged by both international and UN forums.**
- **The team of CMO is now an integrated part of new disaster management system established after the earthquake.**

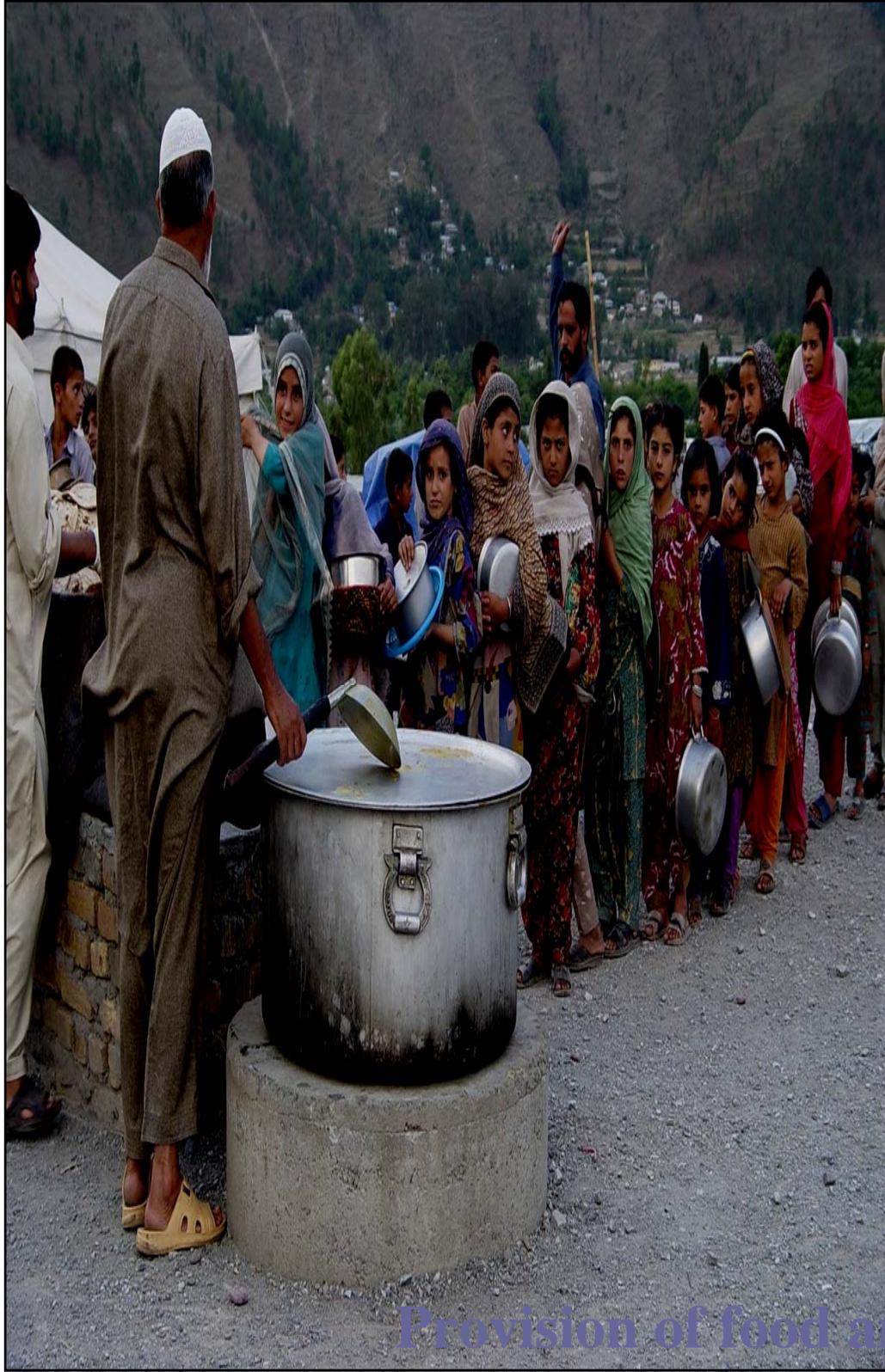
# CREATION OF STABILITY



Establishment of tent villages



2005 10 29



Provision of food and medical support

CUBA   
MEDICAL TEAM





**THERAPUTIC FEEDING CENTRE**  
Abbas Institute of Medical Sciences Muzaffarabad  
In Collaboration With **TFC**  
**UNICEF**





# How we mitigated the aftermath?

# Rescue & Relief Operations

World's biggest rescue and relief operations employing 50 helicopters which generated about 19,000 sorties, started within hours of the occurrence of the earthquake

- People initially migrated to Camps (Oct 8<sup>th</sup> 2005-Ending March 2006): 116,512
- No. of Camps established: 225

The following commodities and relief items were distributed:

- 855.2 tons of medicines
  - 1.91 million blankets and 75,962 tons of ration
  - G.I sheets: 6.000 million Nos.
  - About 0.400 million Tents were provided to the affectees.
  - All primary and secondary roads were opened and communication was restored.
- Averted additional deaths from exposure to severe climatic condition, hunger and disease
  - The relief goods provided by the NGOs/ Civil Society are uncountable.
  - Repatriated to their original locations: 30 June 2008 almost all the IDPs
  - Monsoon Relocation-Survey of 23 villages was conducted and the area was declared as high hazardous zone and about 6,785 people shifted to camps
  - People were provided free transportation facility to return to their original places
  - No epidemic or infectious disease reported

# **Mitigation Measures**

## **Post Earthquake Scenario**

## □ **Identifications of Challenges**

### **Technical Incapacities:**

- **Non Availability or absence response planning**
- **Non Availability or absence of hazard context**
- **Non availability if cohesive communication infrastructure.**

### **Institutional Incapacities:**

- **Job fragmentation**
- **Non availability Institutional arrangements**
- **Non existence of contingent platform in case of black out disaster scenario**

### **Sustainability:**

- **Till the earthquake of 2005 latent attitude on the subject had prevailed.**

# Technical Measures

## □ Hazard Scoping & Conceptualization

- **Conducting Seismic studies for all Infrastructure Projects.**
- **Geo physical assessments.**
- **Comprehensive Hazard Zone Mapping**
- **Enforcement of building codes**
- **Implantation of safety culture through clean water supply system, Hygiene promotion, environmental protection, plantation, slope stabilization, water harvesting, land use planning etc.**
- **Revival of tradition construction Methodologies i.e Dhaji, Doosloo (through Stone) etc.**

# Institutional Measures

## □ **Housing Compensation Grant/Subsidy Program**

### **Program Objective:**

**To provide financial and technical assistance to affected home-owners in reconstructing or retrofitting their damaged houses, using home-owner-driven, assisted and inspected construction regime.**

### **Determination of Eligibility:**

**192 AI-Teams were constituted & involved to conduct comprehensive threshold assessment of the housing stock in quake affected areas to categorize houses into Fully ,partially or negligibly damaged categories. AITs, also, identify the houses needed to be relocated on the basis of hazard maps and to provide them guidelines for seismic resistance reconstruction.**

## □ Housing Compensation Grant/Subsidy Program

Fully Damaged/ Destroyed House @ Rs. 175,000	Cash Grant	Payment Triggers	Operational Procedures
<b>First Installment</b>	Rs. 25000	Preliminary Housing Damage Determination to cover immediate shelter needs	Preliminary Housing Damage Determination by Revenue Department of AJK Through Initial Surveys to Prepare Temporary Shelter Support List
<b>Second Installment</b>	Rs. 75000	House Damage Categorization & Beneficiary's Eligibility Confirmation by AITs	Assessment and Eligibility Confirmation by AITs and Signing of MOU With Home Owners
<b>Third Installment</b>	Rs. 25000	Completion of Construction at Plinth Level by Home-owner	Inspection & Certification of Plinth bands by AIT
<b>Fourth Installment</b>	Rs. 50000	Completion of Construction at Lintel Level by Home-owner	Inspection of, RCC frames, Windows band, Lintel band by AIT
<b>Partially Damage Houses @ Rs. 75,000</b>			
<b>First Installment</b>	Rs. 25000	Preliminary House Damage Determination to cover Immediate Shelter Needs	Preliminary House Damage Determination by Revenue Department of AJK Through Initial Surveys to Prepare Temporary Shelter Support List
<b>Second Installment</b>	Rs. 50000	House Damage Categorization & Beneficiary Eligibility Confirmation From AITs	Assessment & Eligibility Confirmation by AIT & Signing of MOU With Home Owners

# □ Housing Compensation Grant/Subsidy Program

## Current Status

Plinth Level	No. of Houses	Lintel Level	No. of Houses
Houses to Reconstructed	208305	Houses to Reconstructed	195145
Compliant Houses	195145	Compliant Houses	129739
Non-Compliant Houses	150	Non-Compliant Houses	14144
No Work Started	8895	No Work Started	19618
In Progress Houses	4115	In Progress Houses	32352

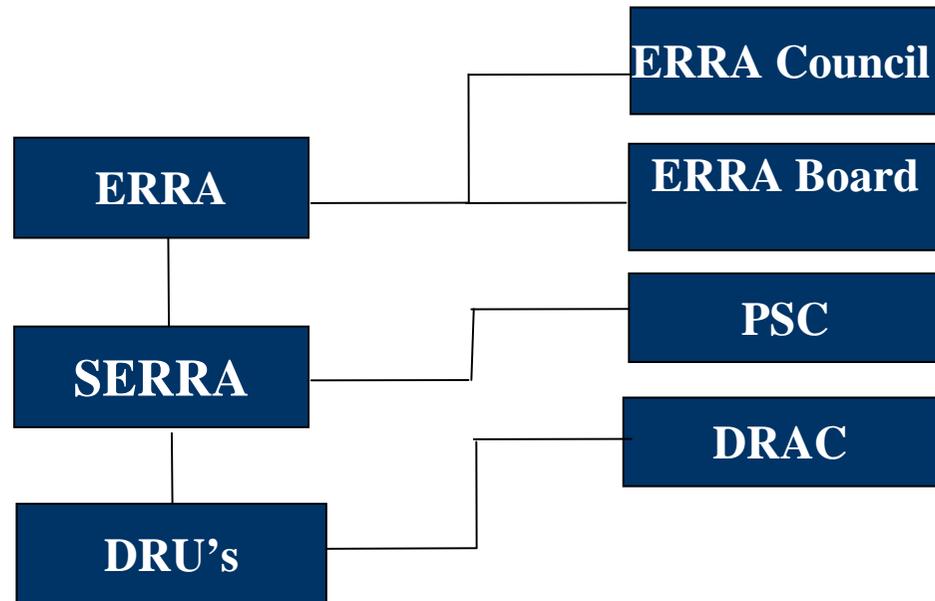
## □ Institutional Measures

### Donor Organizations

World Bank  
 Asian Dev. Bank  
 Islamic Dev. Bank  
 UNESCO  
 UNDP  
 UNICEF  
 WHO  
 WFP  
 CIDA  
 DFID  
 USAID  
 European Union  
 UN Population Fund  
 UN Women Fund  
 UNHABITAT etc.

### Donor Countries

UK	USA
Germany	Azerbaijan
France	China
Emirates	Malaysia
Turkey	KSA
Japan	Canada
Norway	Bosinia
Kuwait	Belgium
Qatar	Poland



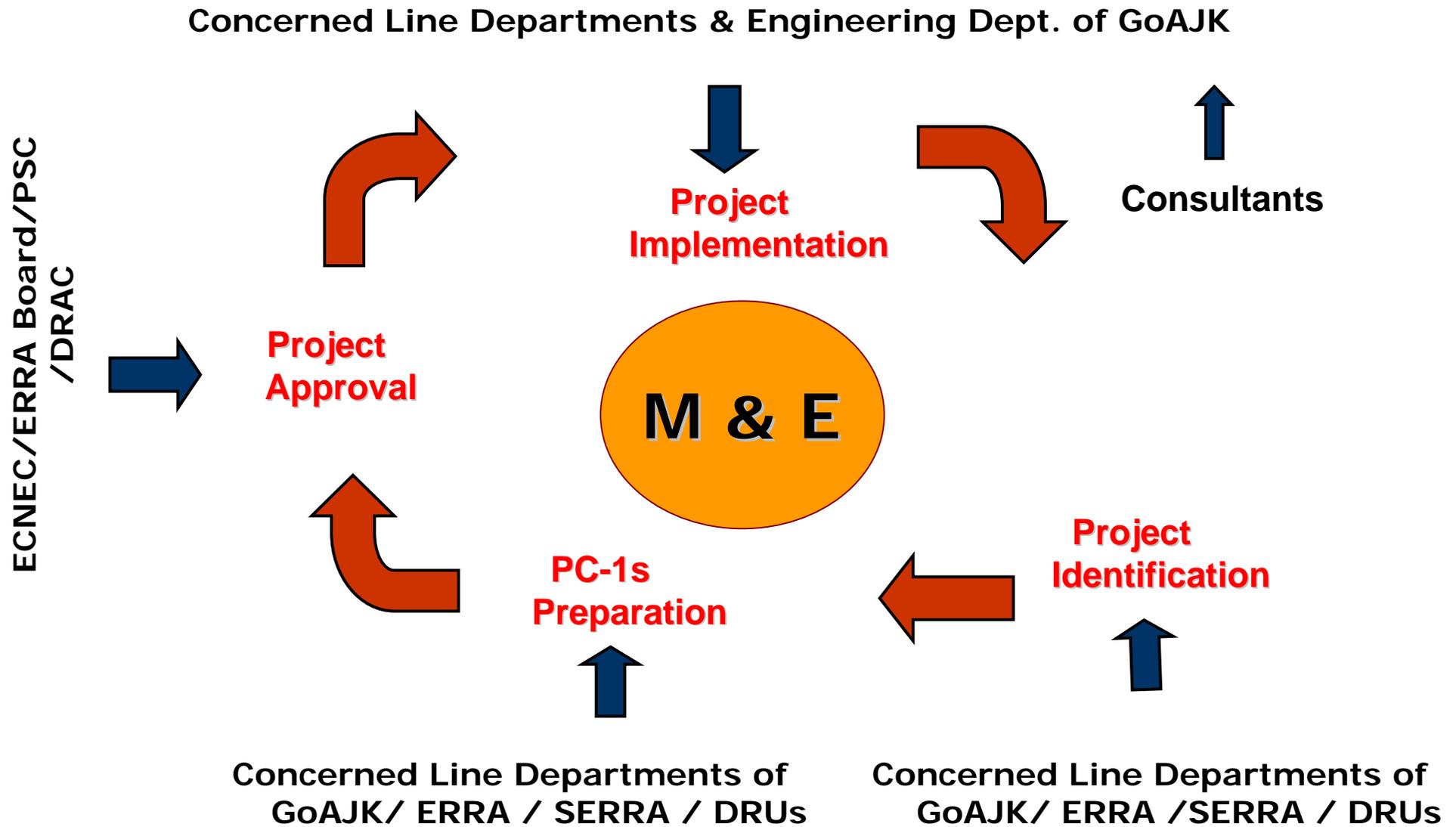
### Line Departments

Health  
 Education  
 Forest  
 Agriculture  
 Animal Husbandry  
 LG&RD  
 PWD  
 Power  
 Industry  
 Social Welfare etc.

### NGOs

International :	42
National :	17
Total :	59

## □ Institutional Measures



## □ **Capacity Building**

- **Capacity Building of line agencies**
- **Psychological & social uplift tough sensitisation**
- **Community Capacity building through technical skill trainings**
- **Incorporation of new technologies e.g. geo physical and spatial science etc**
- **Alternative technologies for rapid reconstruction**
- **Human Resource development for long run sustainability**
- **Community Participation**
- **Maintaining close liaison with humanitarian community**
- **Round the clock robust Integration and coordination framework**

# Broader Social Interventions

## ❑ **Insuring Sustainability Through**

- **Resilient Infrastructure development.**
- **Private & Public level social awareness.**
- **Stakeholders sensitisation.**
- **Community Participation.**
- **Incorporation of lessons learnt into future development initiatives through data kipping and multi channel accessibility platform.**
- **Establishments of State Disaster Management Authority as specialised institution to deal with emergent emergency situations.**

# “ Building Back Better ”



## □ Pictorial Tour



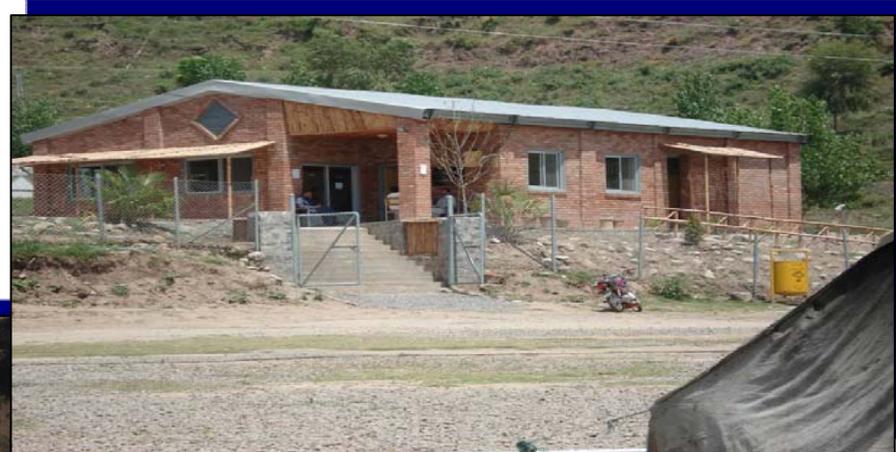
## □ Pictorial Tour



**Early and swift disbursement of compensation.**

## □ Pictorial Tour

**Safer and better building codes were adopted.**

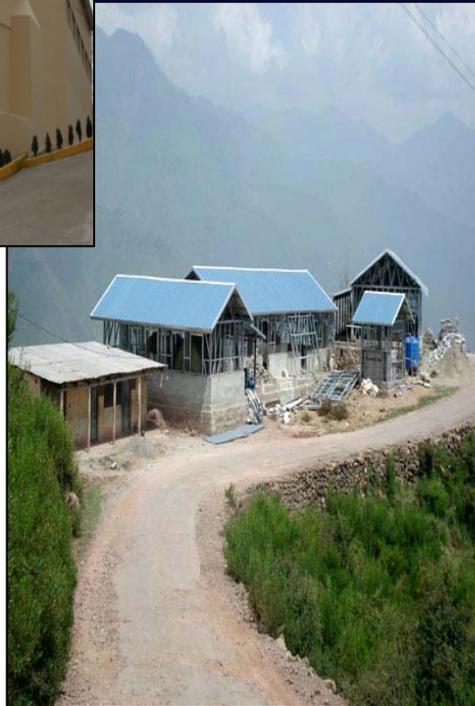


**Provision of trainings & technical assistants.**

## □ Pictorial Tour



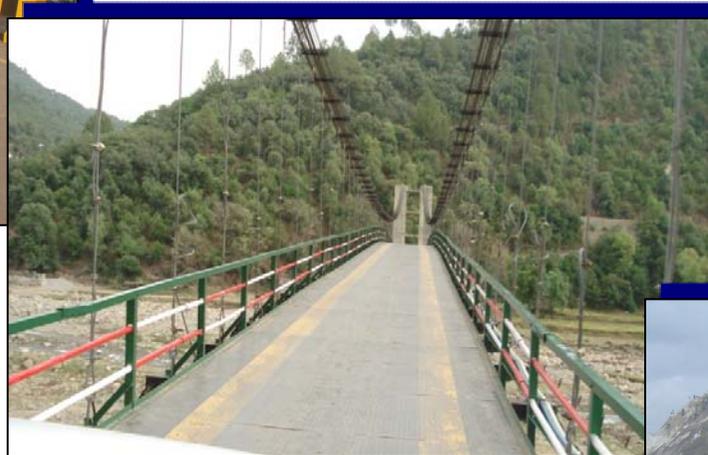
**Converting adversity  
into opportunity for  
better & safer future.**



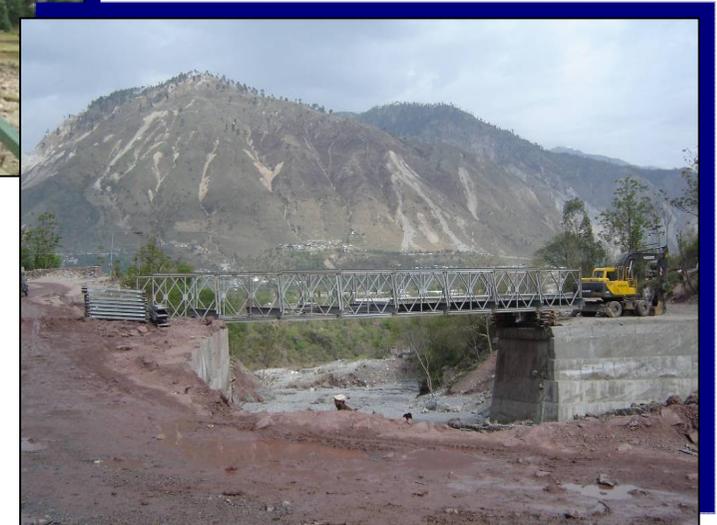
## □ Pictorial Tour



**Disaster resilient  
infrastructure installed.**



**State of the art technology and expertise  
brought to use.**



# □ Pictorial Tour



**Better**



**Safer**







# Dhaji Technique













Cost: Rs 17.1 Million

Govt Girls High School  
Chinari



Covered Area: 6225 SqFt  
Cost: Rs 10.2 Million





MEDIAMARKET

CESVI



PRIMARY SCHOOL  
FOR GIRLS & BOYS  
NAGNI

DONOR - MEDIAMARKET

PROJECT CODE - PAK 553

SPONSOR - COOPERAZIONE E SVILUPPO ONLUS (CESVI)

AND

MOUNTAIN & GLACIER PROTECTION ORGANIZATION (MGPO)









## □ **Alternative Reconstruction Technology**





# Setting up of Disaster Management System























# LESSONS LEARNT FROM EQ 2005

- MOVE BEYOND ORGANIZATIONAL BEHAVIORS AND EGOS
- CREATE INTER AGENCIES & MULTI-ORGANIZATIONAL LIAISON MECHANISM
- DE-CONFLICTING CONSTITUTIONAL AND INSTITUTIONAL DOMAINS AND SPHERES
- HARMONIZE POLICIES AND RULES OF OFFICIAL BUSINESS
- ONE ROOF/ONE WINDOW OPERATION AT STRAT / OPERATIONAL LEVELS

# LESSONS LEARNT FROM EQ 2005



NEED FOR A PERMANENT

**LEAN  
STRUCTURE**

**FOCUSED  
APPROACH**

**NATIONAL  
DISASTER  
MANAGEMENT  
AUTHORITY**

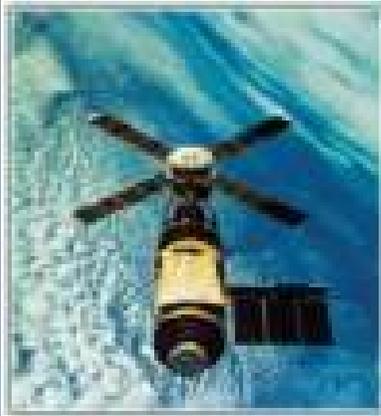
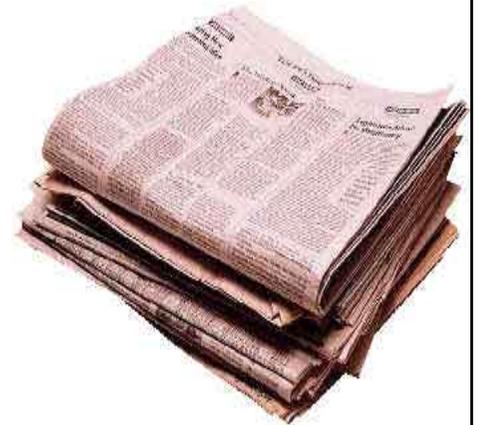
**FLEXIBLE**

**CAPACITIES**

# LESSONS LEARNT FROM EQ 2005

## ➤ DISSEMINATION OF INFORMATION

- CREATE STRONG LINK BETWEEN MEDIA, AFFECTEES AND THE WORLD COMMUNITY
- THEIR JOB BE FACILITATED BY SHARING DATA AND INGRAINING THEM INTO THE RELIEF ORGANIZATION





# LESSONS LEARNT FROM EQ 2005

## ➤ QUICK & SMOOTH RESPONSE

- HAVE SOPs
- ESTABLISH COORDINATION CENTERS
- SHARE INFORMATION
- USE COMMON DATABASE
- TRAIN SEARCH AND RESCUE TEAMS

*(REDUCING TIME OF EXECUTION CAN REDUCE THE COST OF MANAGING A CATASTROPHE)*

# LESSONS LEARNT FROM EQ 2005

## ➤ CAPACITY BUILDING IN S&R.

CAPACITY BUILDING THROUGH EXPERTISE, EQUIPMENT & TRAINING FOR SEARCH, RESCUE AND DEBRIS REMOVAL TASKS

## ➤ PROMPT DECISION MAKING.

SMOOTH FIELD OPERATIONS NEED CONTINUOUS ANALYSIS OF IMPEDIMENTS AND PROMPT DECISION MAKING TO ADJUST MICRO STRATEGIES



## ➤ DEPENDENCY SYNDROME

- UPLIFT COMMUNITIES FROM CYCLE OF DEPENDENCY INTO SELF-RELIANCE
- REGENERATION OF SOCIAL AND CULTURAL COHESION



# LESSONS LEARNT FROM EQ 2005

## ➤ WIDE RANGING DISASTER MANAGEMENT

### STRATEGY

- ❖ LIKELY SCENARIOS
- ❖ DELINEATION OF RESPONSIBILITIES
- ❖ CAPACITY BUILDING GUIDELINES

➤ COMMUNITY INVOLVEMENT. TO MAKE RELIEF PROCESS SELF-SUSTAINING LOCAL COMMUNITIES, NOTABLES, POLITICAL LEADERS AND LOCAL GOVT REPRESENTATIVES BE DOVETAILED



# POST EQ 2005 LEGAL AND INSTITUTIONAL ARRANGEMENTS

## INTRODUCTION

- The high Magnitude of 8<sup>th</sup> October, 2005 disastrous earthquake had brought almost all of the public & private infrastructure to rubble.
- Earthquake highlighted the exposure and vulnerability of AJ&K towards such catastrophic risks carrying vast socio economic implications.
- Devising and integrating Disaster Risk Reduction Measures (DRRM) into public policy guidelines was of immediate need.
- “State Disaster Management Commission” with “State Disaster Management Authority” as functional body has been established with legitimate cover under the chairmanship of Honorable Prime Minister of AJ&K for this purpose.
- Commission shall lay down policies, plans and strategies in line with the National Disaster Management Authority framework.

## **MISSION STATEMENT**

**“ Safer and prosperous communities in AJ&K ”**

### **Our Goal**

**“ Main streaming disaster risk reduction (DRR) into development planning and enhancing institutional and community capacities for disaster mitigation, preparedness, response and recovery ”**

## **ROLES & RESPONSILBILTIES**

Cont.

### **State Disaster Management Commission (SDMC)**

**Headed by the Honourable Prime Minister, GoAJK**

#### **Members**

- **Leader of the Opposition**
- **Senior Ministr in the Legislative Assembly**
- **Minister of Works, Communication, Reconstruction & Rehabilitation**
- **Minister of Health**
- **Minister of Social Welfare**
- **Minister of Civil Defence**
- **Chief Secretary AJ&K**
- **Senior Member Board of Revenue, AJ&K**
- **Inspector General Police, AJ&K**
- **Secretary Finance, AJ&K**
- **Representative of Civil Society or any other person appointed by the Prime Minister AJ&K.**

## ROLES & RESPONSILBILTIES

Cont.

### State Disaster Management Commission (SDMC)

#### Functions

- Lay down Policies and guidelines for smooth streamlining of Disaster Risk Reduction into AJ&K.
- Allocate resources for the envisioned infrastructure framework.

# ROLES & RESPONSILBILTIES

## State Disaster Management Authority (SDMA)

Cont.

Headed by the Director General, SDMA

### Members

- Secretary Electricity
- Sectary Finance
- Secretary Agriculture & Animal Husbandry
- Secretary Health
- Secretary Social Welfare
- Secretary Local Government & Rural Department
- Secretary Law, Justice, & Preliminary Affairs, & Human Rights
- Commissioner Relief & Rehabilitation
- Director General, Civil Defence
- Additional Secretary (Home)
- Divisional Commissioners, Muzaffarabad, Mirpur & Poonch

# ROLES & RESPONSILBILITIES

## State Disaster Management Authority (SDMA)

### Functions

- **Monitor/integrate/enforce Disaster Risk Reduction Measures (DRRM)**
- **Prepare strategies,**
- **Streamline institutions, pool resources, build capacity,**
- **Integrate monitoring standards**
- **Enable/establish rapid response schemes/force to reduce AJ&K's exposure/vulnerability**
- **Advocate integration of DRRM into future socio-economic development policies**

# **ROLES & RESPONSILBILTIES**

## **District Disaster Management Authority (DDMA)**

**Headed by the Deputy Commissioner**

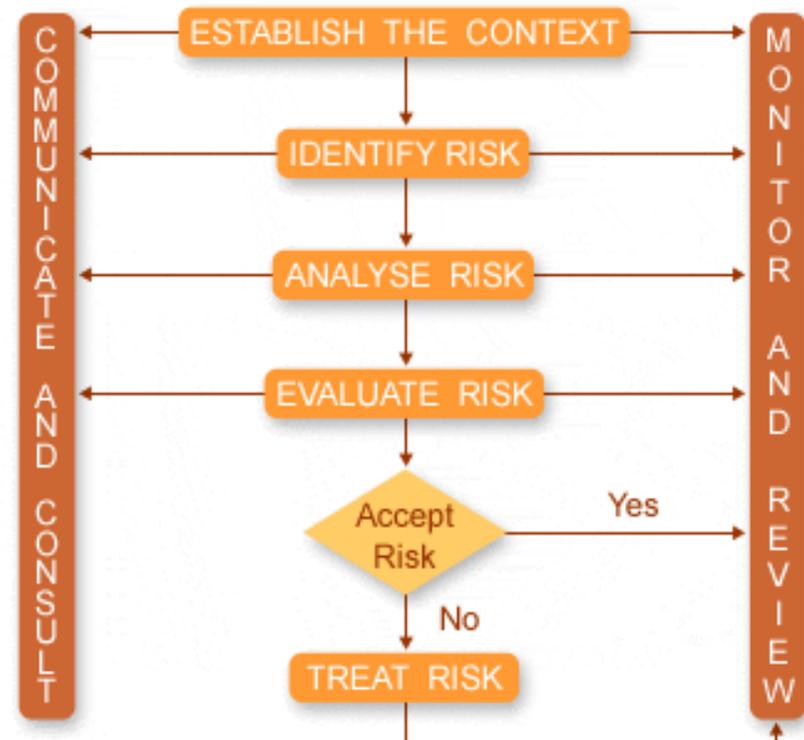
### **Members**

- **SSP/SP of the District**
- **District Health Officer**
- **Assistant Director Civil Defence**
- **Member of Legislative Assembly from the respective areas**

### **Functions**

- **Serve as front line flag post for combating emergency situations and resource activator/mobilizer.**

# Disaster Risk Reduction PROCESS



## THREATS POSED

### ◇ Primary Hazards

- Hydro Climatic Hazards
- Land Slides/Toppling/Avalanches
- Flash Floods etc

### ◇ Secondary/Consequential Hazards

- Rainfall Catchments Bursts/Re-Routing
- Communication & Energy Link Disruption
- Epidemics & potential pandemic outbreak etc

### ◇ Tertiary Hazards

- Distortion of habitat
- Socio-economic vulnerabilities etc

## THREATS POSED

### ◇ High Altitudes

- Land Slides/Toppling/Avalanches
- Flash Floods
- Land Erosion
- Climatic Hazards
- Communication & Energy Link Disruption
- Seismic activities
- Epidemics & Pandemics etc



### ◇ Low Altitudes

- Floods
- Land Slides
- Land Erosion
- Forest Fires
- Communication & Energy Link Disruption
- Seismic Activities
- Epidemics & Pandemics etc.



# DISASTER RISK ASSESMENT MATRIX

District Wise Manmade Risk Assessment Matrix									
Location (Districts)		Neelum	Muzaffarabad	Bagh	Poonch	Sudhnoti	Kotli	Mirpur	Bhimber
Manmade Disasters	Cross Border Firing	Moderate	Moderate	Moderate	Moderate	Nil	Low	Nil	Low
	Road Accidents	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low
	Wild Fire	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low
	Terrorism	Low	Moderate	Low	Low	Low	Low	Moderate	Moderate

**\*Note:**

The matrix is based on consultations with Geological Survey of Pakistan, NESPAK AJ&K, Relief & Rehabilitation Commissioner AJ&K, Dy. Commissioner Muzaffarabad, SERRA AJ&K, Department of Local Government and Rural Development, Department of Social Welfare & Women Development, Department of Health, NGOs, INGOs and others.

Indicators	
Extreme	Red
High	Orange
Moderate	Yellow
Low	Light Yellow
Nil	Green

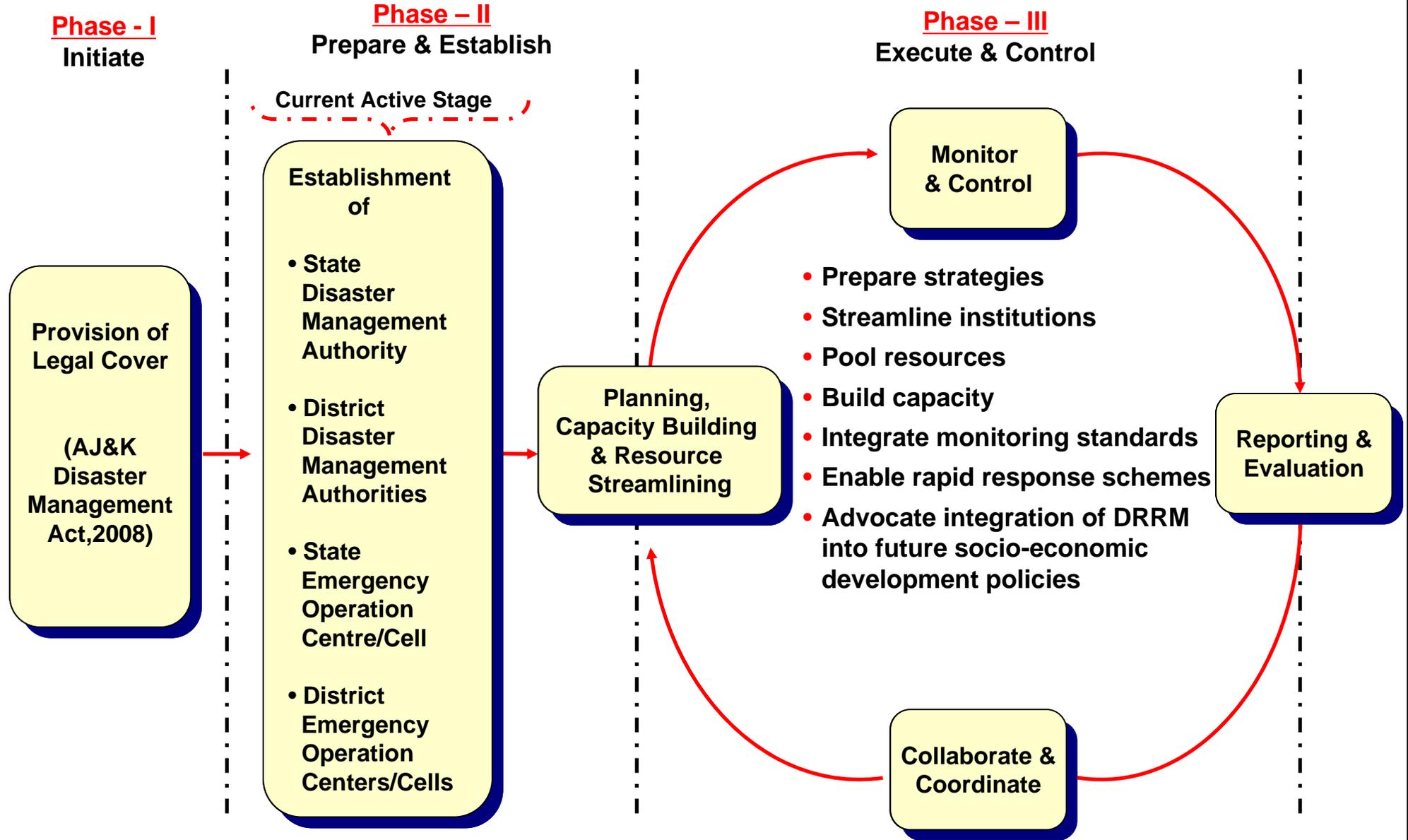
# DISASTER RISK ASSESMENT MATRIX

District Wise Natural Risk Assessment Matrix										
Location (Districts)			Neelum	Muzaffarabad	Bagh	Poonch	Sudhnoti	Kotli	Mirpur	Bhimber
Natural Disasters	Geo Metrological Hazards	Earthquake	Extreme	Extreme	Extreme	Extreme	High	Extreme	Extreme	Moderate
		Landslides	Extreme	Extreme	Extreme	High	Moderate	Moderate	Low	Low
		Geo Metrological/ Avalanches	High	Low	Low	Low	Nil	Nil	Nil	Nil
	Hydro Meteorological Hazards	Flash Floods	High	High	High	Moderate	Low	Low	Low	Low
		Seasonal Floods	Low	Moderate	Moderate	Moderate	Low	Low	Moderate	Moderate
		Cloud Burst	Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Low
		Wind Storms	Low	Moderate	Moderate	Low	Low	Moderate	Moderate	Moderate
		Lightening	Moderate	Low	Low	Low	Low	Low	Low	Low
	Drought	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Low
	Others	Epidemics	Low	Low	Low	Low	Low	Low	Low	Low

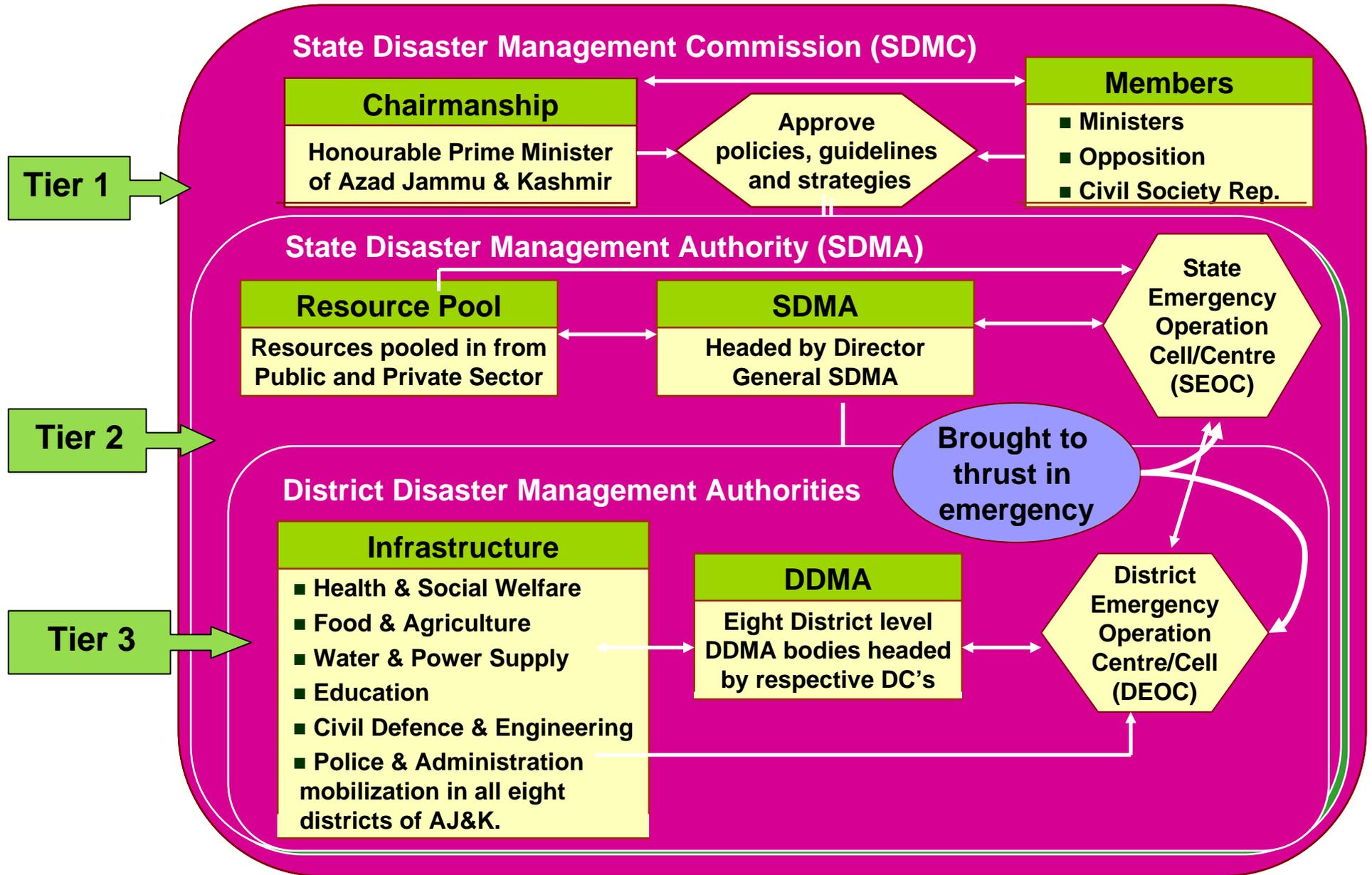
Indicators	
Extreme	Extreme
High	High
Moderate	Moderate
Low	Low
Nil	Nil



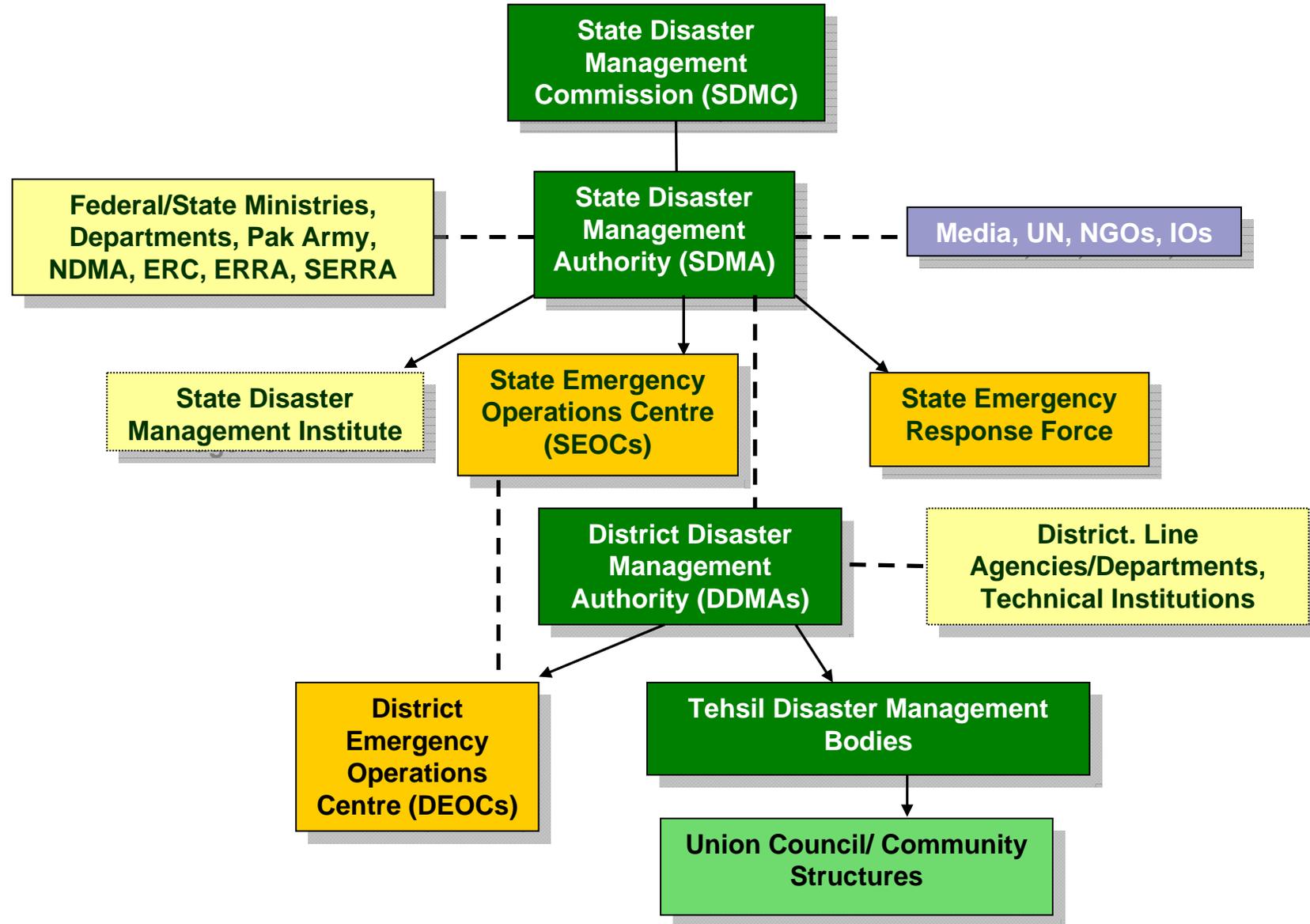
# SCOPE FRAMEWORK



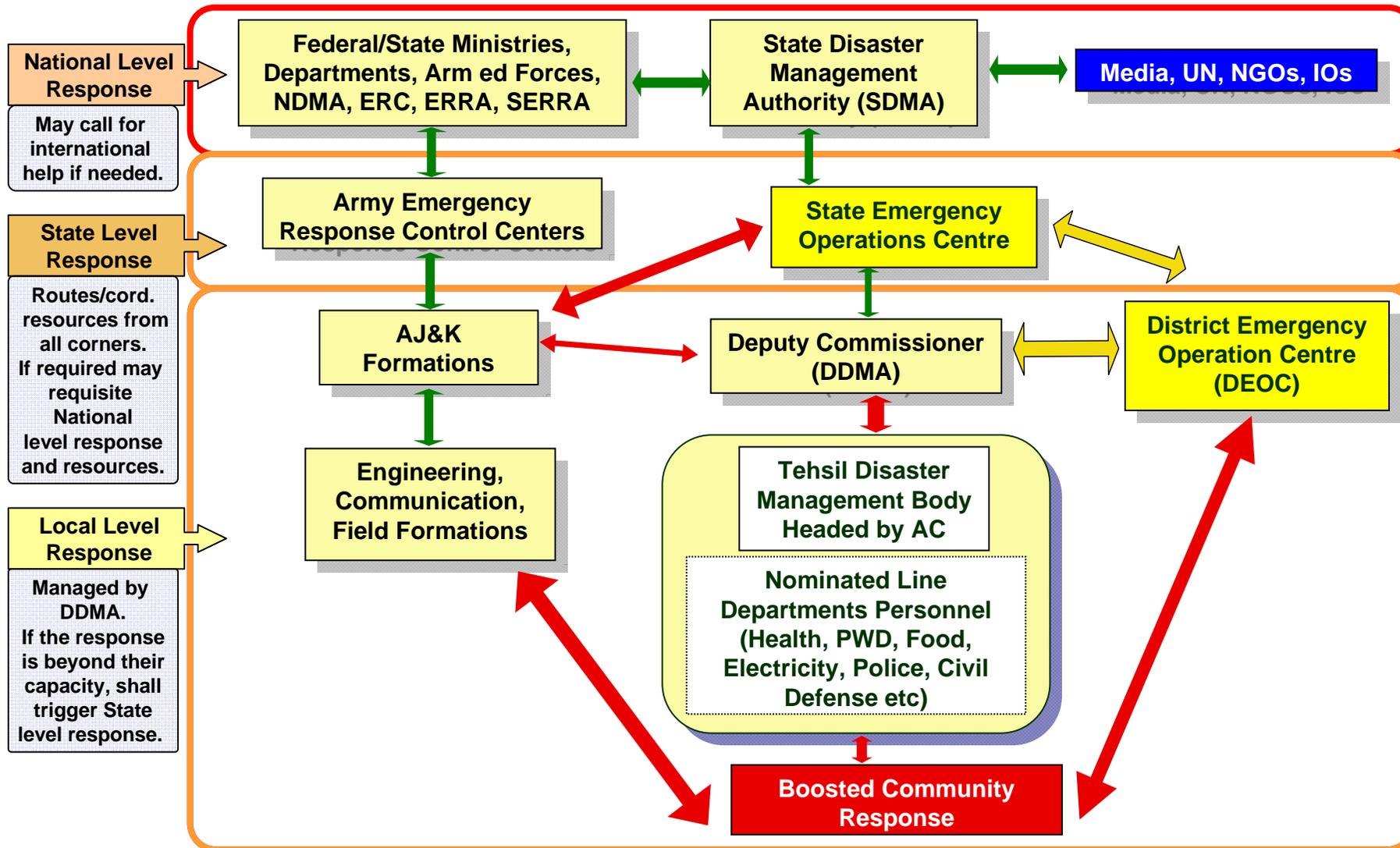
# OPERATIVE FRAMEWORK



# COORDINATION FRAMEWORK

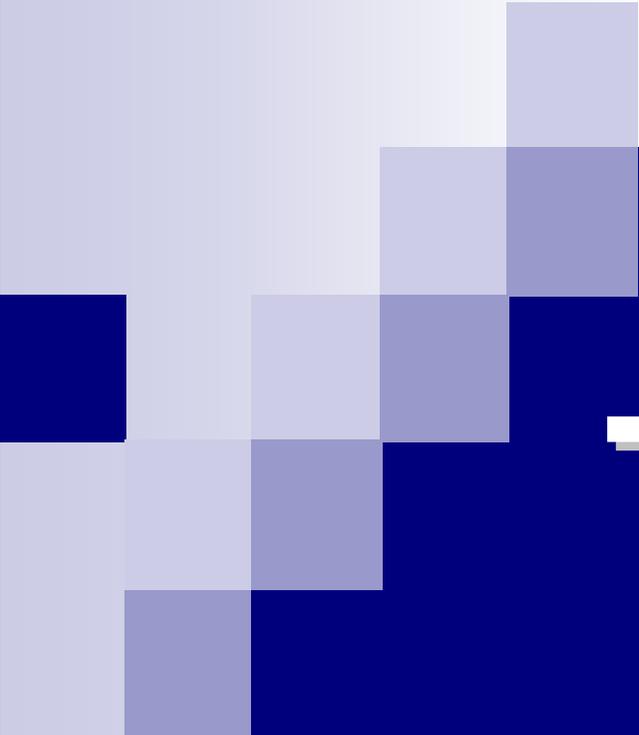


# RESPONSE FRAMEWORK



## WHAT WE HAVE

- **A vision with clear mission in sight.**
- **The will power to achieve the goals.**
- **Dedication to overcome the hurdles.**
- **Commitment to serve the nation.**



# THANK YOU