

Disaster Risks & their Impact on Communities in Afghanistan



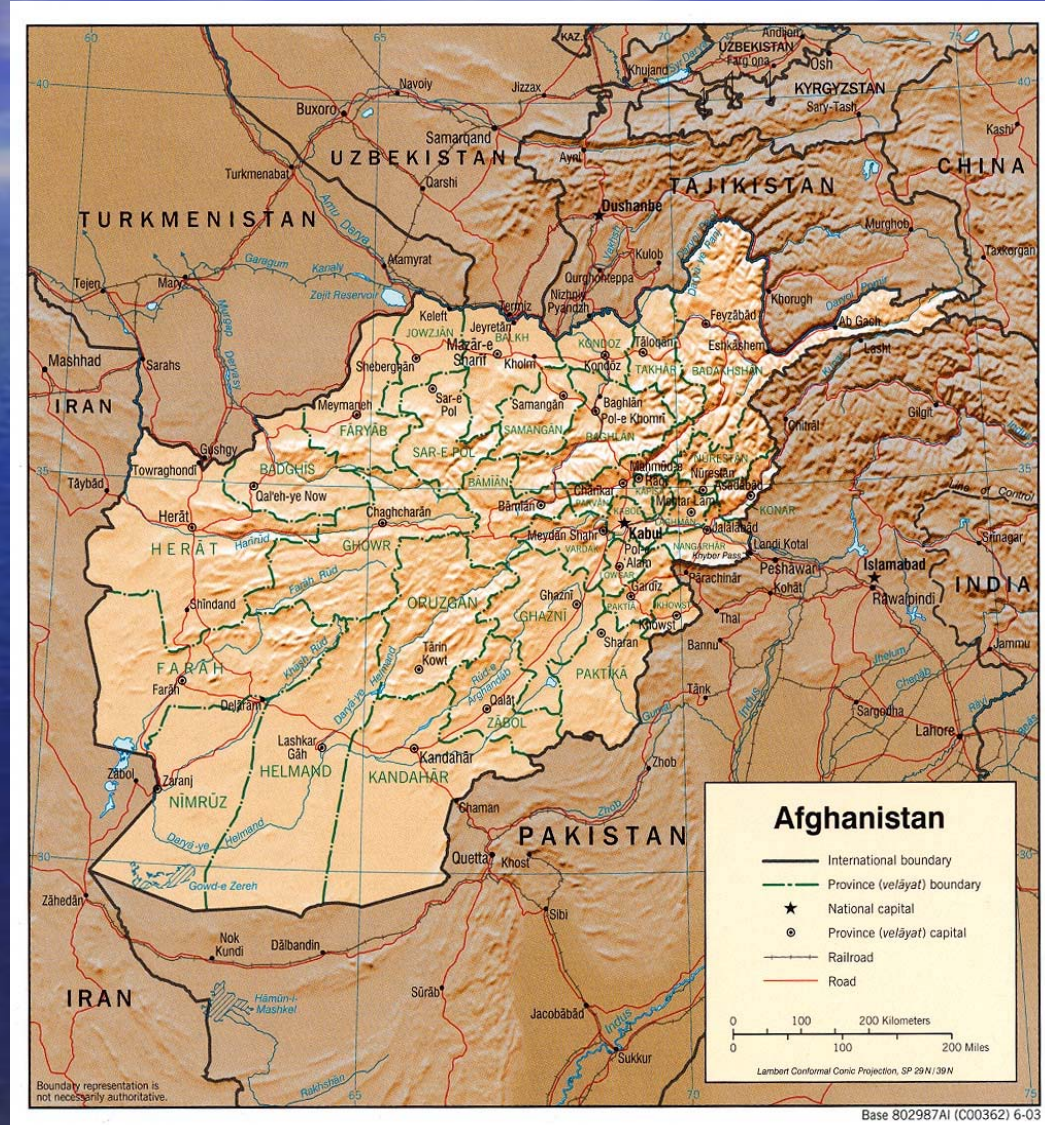
Country Profile

- Afghanistan is a landlocked country of 647,500 sq. km.

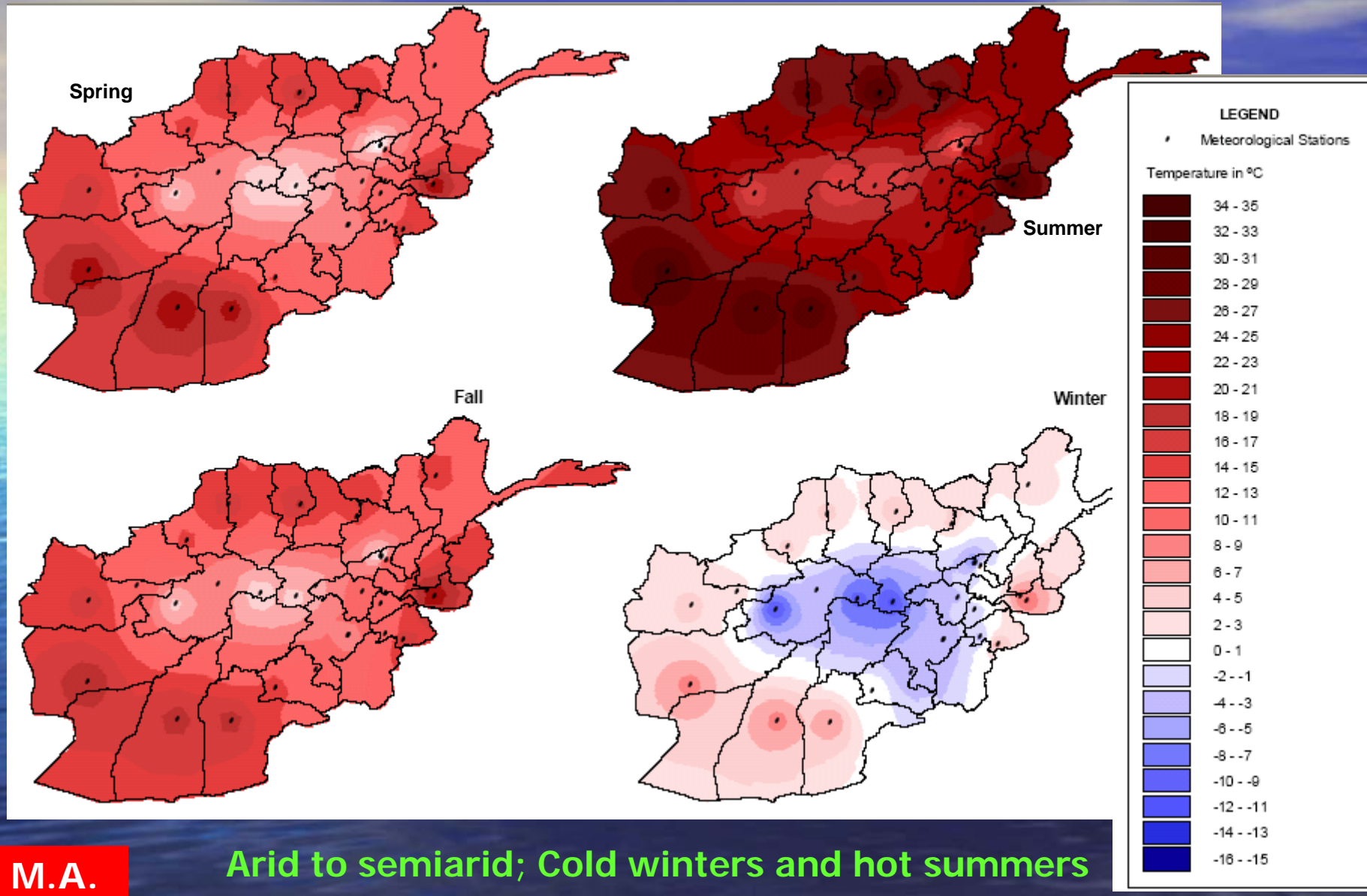


Country Profile

- The geography of Afghanistan is **dominated by mountains**. The Hindu Kush sweeps down from the north east through the central regions of the country and flattens out into the deserts of the southwest plateau. On either side of these majestic mountains, **to the north, and to the east, the land is more fertile, and it is in these areas that most agricultural activity takes place.**



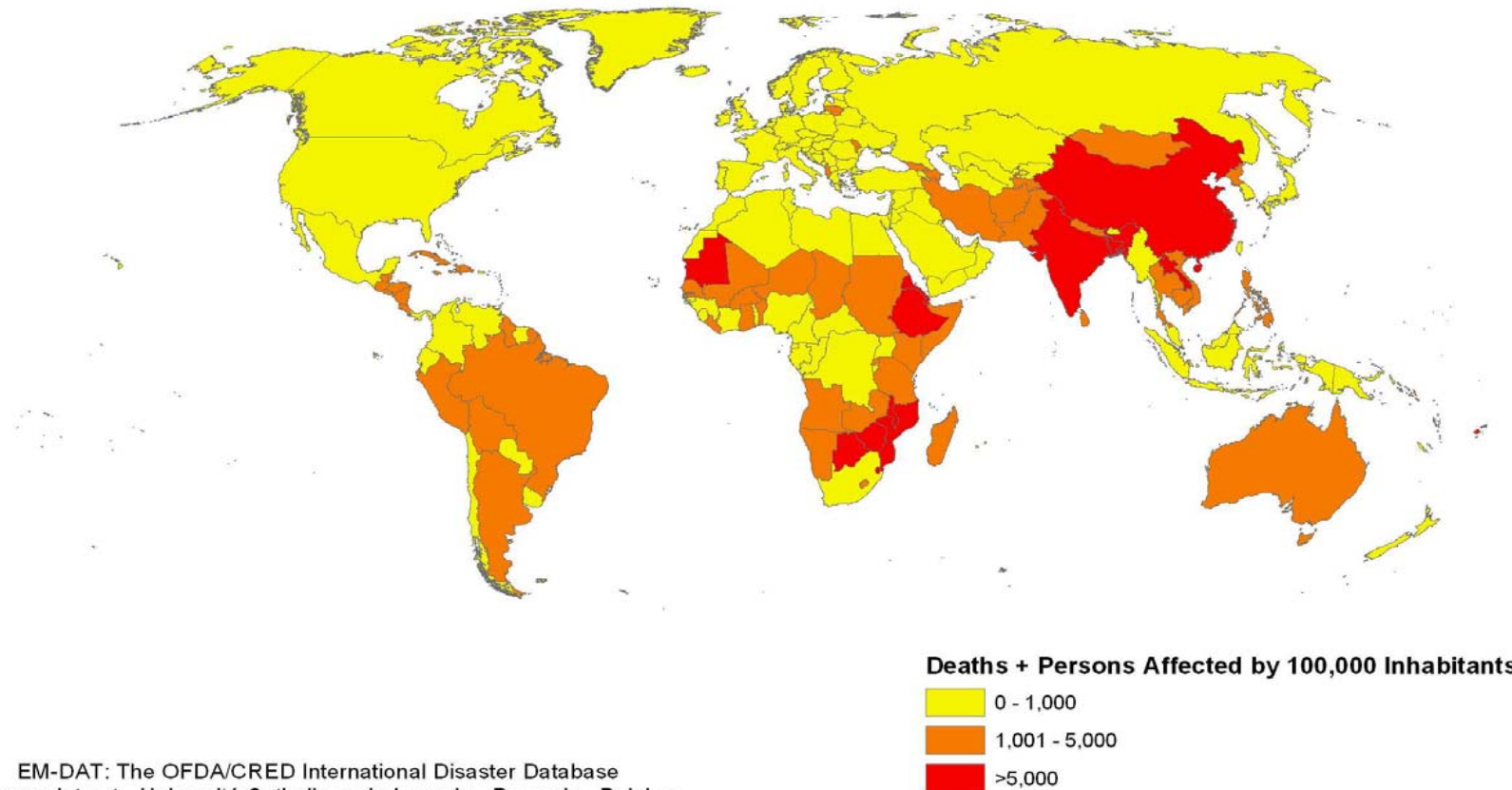
Average Seasonal Temperature



M.A.

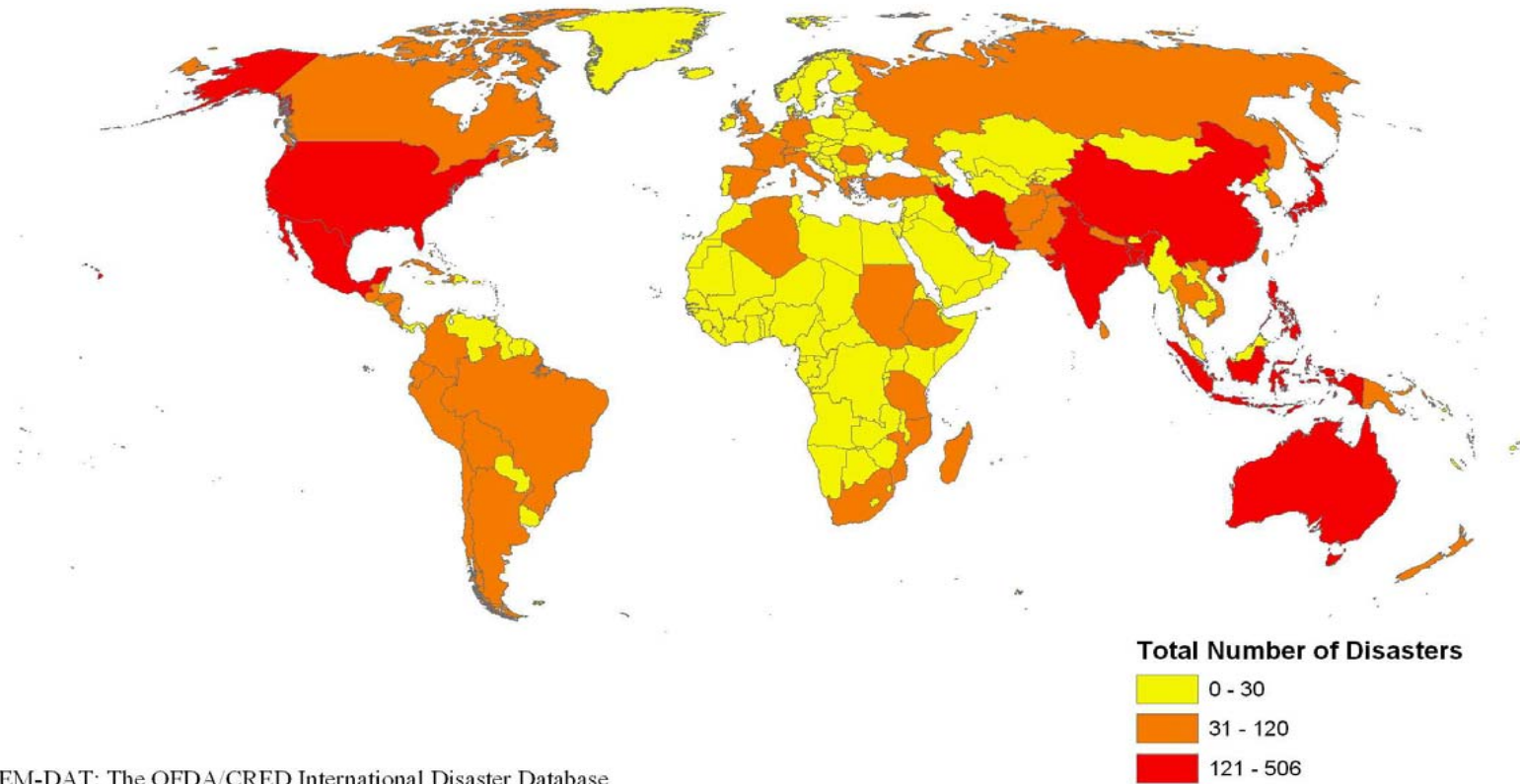
Arid to semiarid; Cold winters and hot summers

Total Number of Deaths and of People Affected by Natural Disasters by 100,000 Inhabitants: 1974-2003



EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium

Total Number of Natural Disaster Events by Country: 1974-2003



EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium

Types of Hazards in Afghanistan

Natural

Human Induced

-
-
-
-
-
-

Types of Hazards in Afghanistan

Natural

- Earthquakes
- Flooding
- Drought
- Landslides
- Avalanches
- Extreme winters

Human Induced

- Landmines
- Explosions
- Fires
- Air/Road accidents

#	Province	Population	Earthquake	Drought	Flood	Landslide	Avalanche
1	Kabul	2,974,808	M	L	L	L	M
2	Kapisa	360,292	M	M	L	L	H
3	Parwan	762,839	M	M	L	L	H
4	Logar	291,880	M	M	L	M	M
5	Wardak	413,596	L	M	M	L	H
6	Bamian	340,005	M	H	M	L	H
7	Ghazni	1,865,762	L	M	H	L	H
8	Ghor	486,108	L	H	H	L	L
9	Paktika	352,629	L	M	M	L	L
10	Khost	70,246	L	H	M	L	L
11	Nuristan	111,898	L	L	L	L	M
12	Laghman	308,260	M	M	M	L	M
13	Ningarhar	1,086,593	M	M	M	L	L
14	Kunar	321,662	M	M	M	L	M
15	Badakhshan	593,148	H	M	H	H	H
16	Baghlan	758,242	H	M	M	H	H
17	Kunduz	815,107	M	M	H	M	M
18	Takhar	697,601	H	M	M	H	M
19	Balkh	935,742	M	H	H	M	M
20	Faryab	699,897	M	H	H	L	M
21	Jawzjan	508,660	M	H	H	L	M
22	Samangan	304,073	H	M	H	H	M
23	Sar-I-Pul	467,763	M	H	M	L	L
24	Helmand	745,616	M	H	M	L	M
25	Kandahar	826,870	L	H	M	L	L
26	Nimroz	149,339	L	H	M	L	L
27	Uruzgan	639,115	L	H	H	L	H
28	Zabul	282,170	L	H	M	L	H
29	Badghis	758,242	L	H	M	L	M
30	Farah	338,276	M	H	M	L	M

Natural Hazards Occurrences by Provinces (estimated)

Out of 34 provinces, 30 are prone to different hazards

Legend:

H: High

M: Medium

L: Low

Source: UNAMA

UN Assistance Mission for Afghanistan

Disasters & their impacts 1983-2002

Type of event	No of events	Killed	Affected
Earthquakes	19	9,312	370,984
Floods	19	9,151	982,165
Droughts	5		2,003,174
Cold waves	3	224	200
Avalanches/Landslides	7	894	174
Epidemic	2	23	4,481

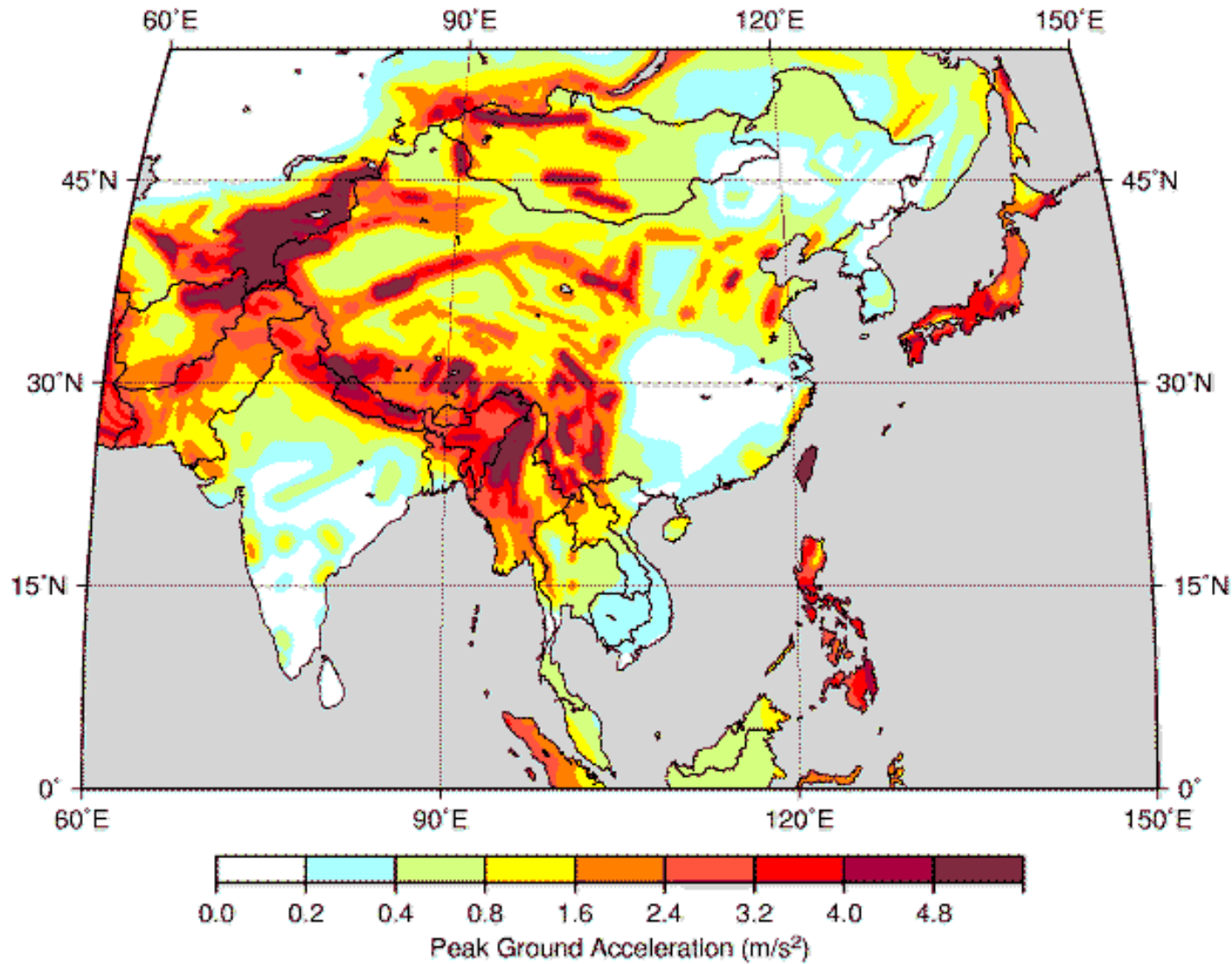
Source: USAID-Cred database- 2003

1. Earthquakes

- Earthquakes are relatively frequent, being more frequent in the north and northeast part. EQ of magnitude 4 occur nearly every week or two. Mostly deep seated having focal depth of more than 33 km.

Asia Seismic Map

Geo science Faculty)
Kabul Uni.Afghanistan

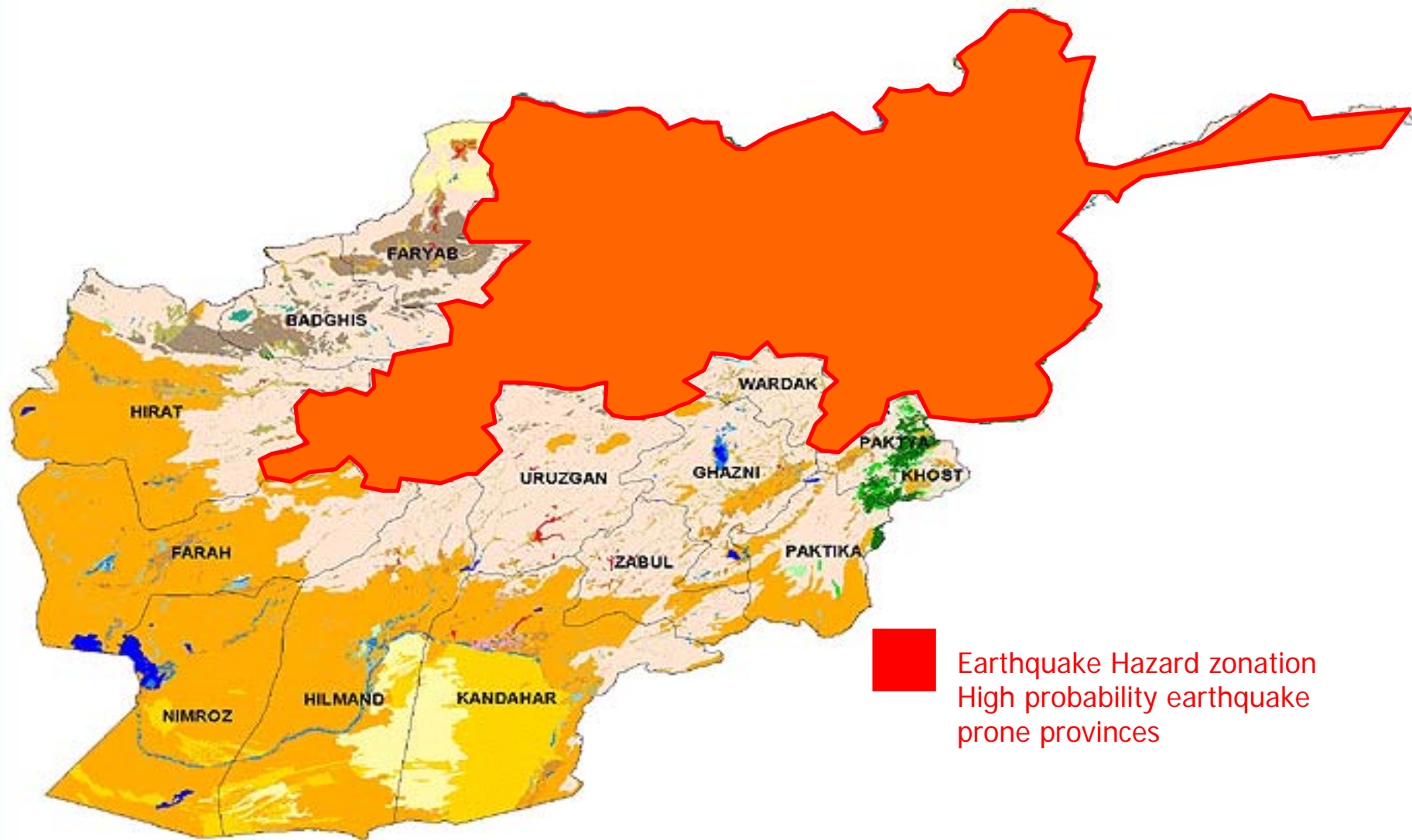


M.A.

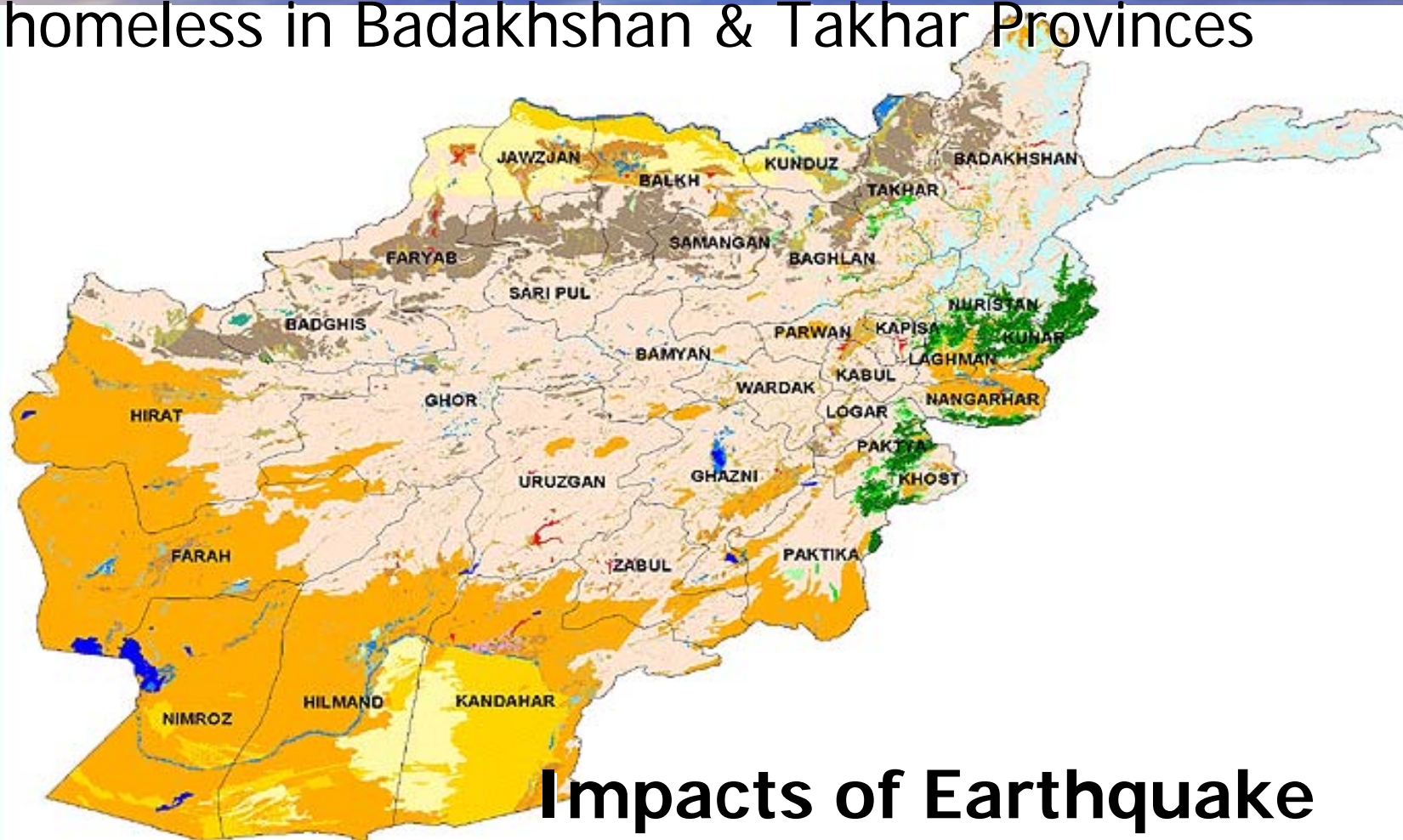
Earthquakes

- According to Global Seismic Hazard Assessment Programme (GSHAP):

North eastern part is in high probability of damage zones which comprises of 16 provinces including Badakhshan, Takhar, Kunduz, Balkh, Jowzjan, Samangan, Sar-e-pol, Bamian, Baghlan, Parvan, Kabul, Kapisa, Konar, Laghman, Nangarhar and lowgar provinces



30th May 98: Afghanistan-Tajikistan Border Region:
At least 4,000 people killed, many injured and
homeless in Badakhshan & Takhar Provinces



Impacts of Earthquake

- **25th March 2002 Hindu Kush Region:**
14,000 injured, 1,500 houses destroyed in the Nahrin area. Approximately 20,000 people homeless.
- **March 2002 Baghlan Province:**
1,200 people died, damages thousands of houses, caused severe landsliding in the area.
- **February 1998 Rostaq, Baghlan Province:**
2,323 people died, 818 injured & 8,094 houses destroyed

Disaster Risk for Earthquake

Average no of events per year	No of people killed per year	Average physical exposure per year	Relative vulnearbility
event/ year	killed/year	people/ year	killed/million exposed
0.81	399.95	1,749,097	228.1

2. Landslides and Avalanches

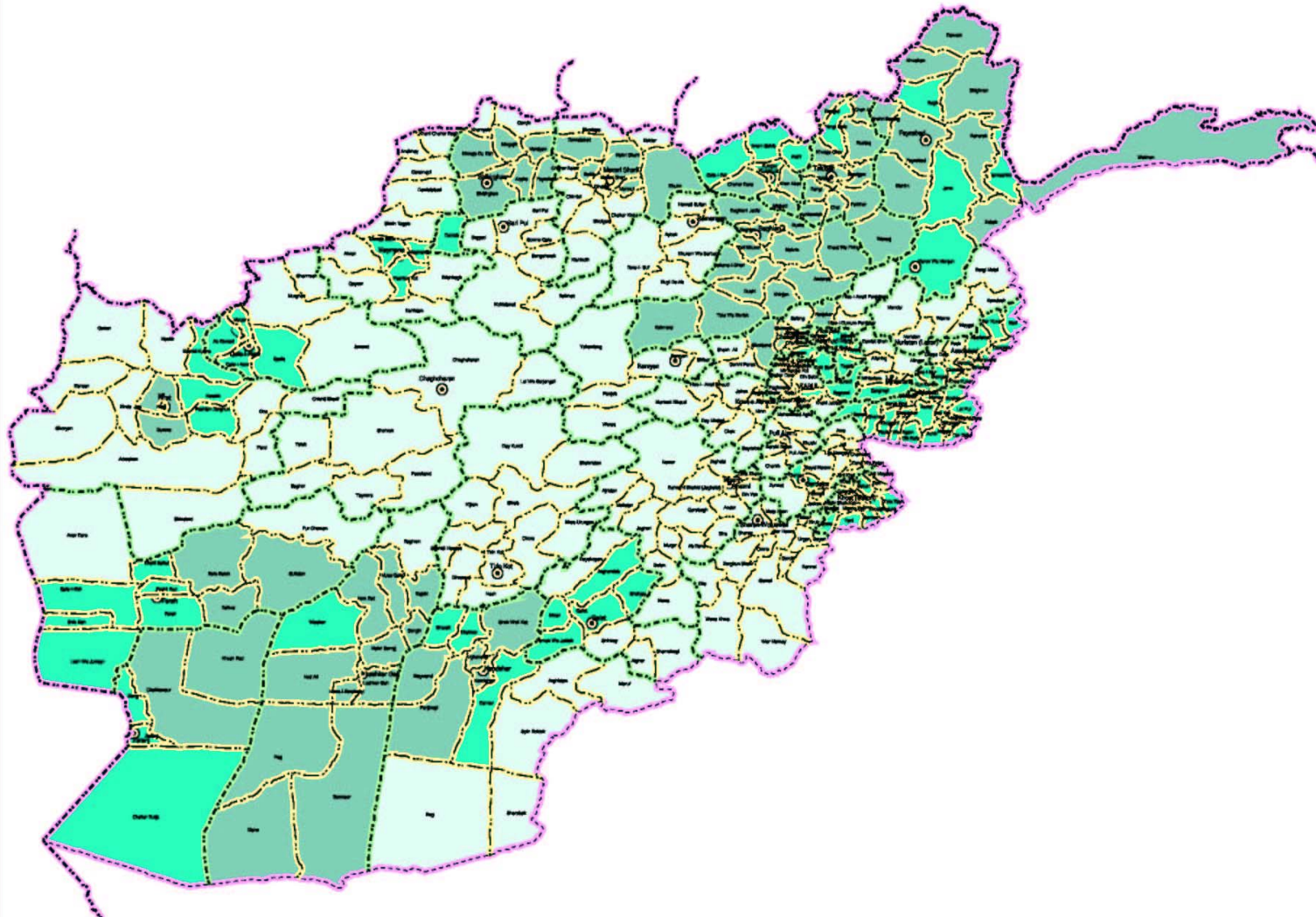
- Landslides often triggered by Earthquakes and flash flooding in Afghanistan.

Since 1954, a total of 799 people have been killed, 64 injured, 110 made homeless, & 400 affected, in which only 354 people died due to severe landsliding on 27-Mar 95.

3. Floods

- Amu Darya is the principal river responsible for flooding in the flood plains on both sides of the river.
- Originate from high mountains where snow melt during spring and early summer causing flooding.
- Floods are common in the spring when snow begins to melt and rainfall is heavy

Flood Zoning at National Level



BOUNDARY

- International
- Provincial
- District

RIVER

- Main
- Stream
- Lake

SETTLEMENTS

- Province Center
- Capital.shp

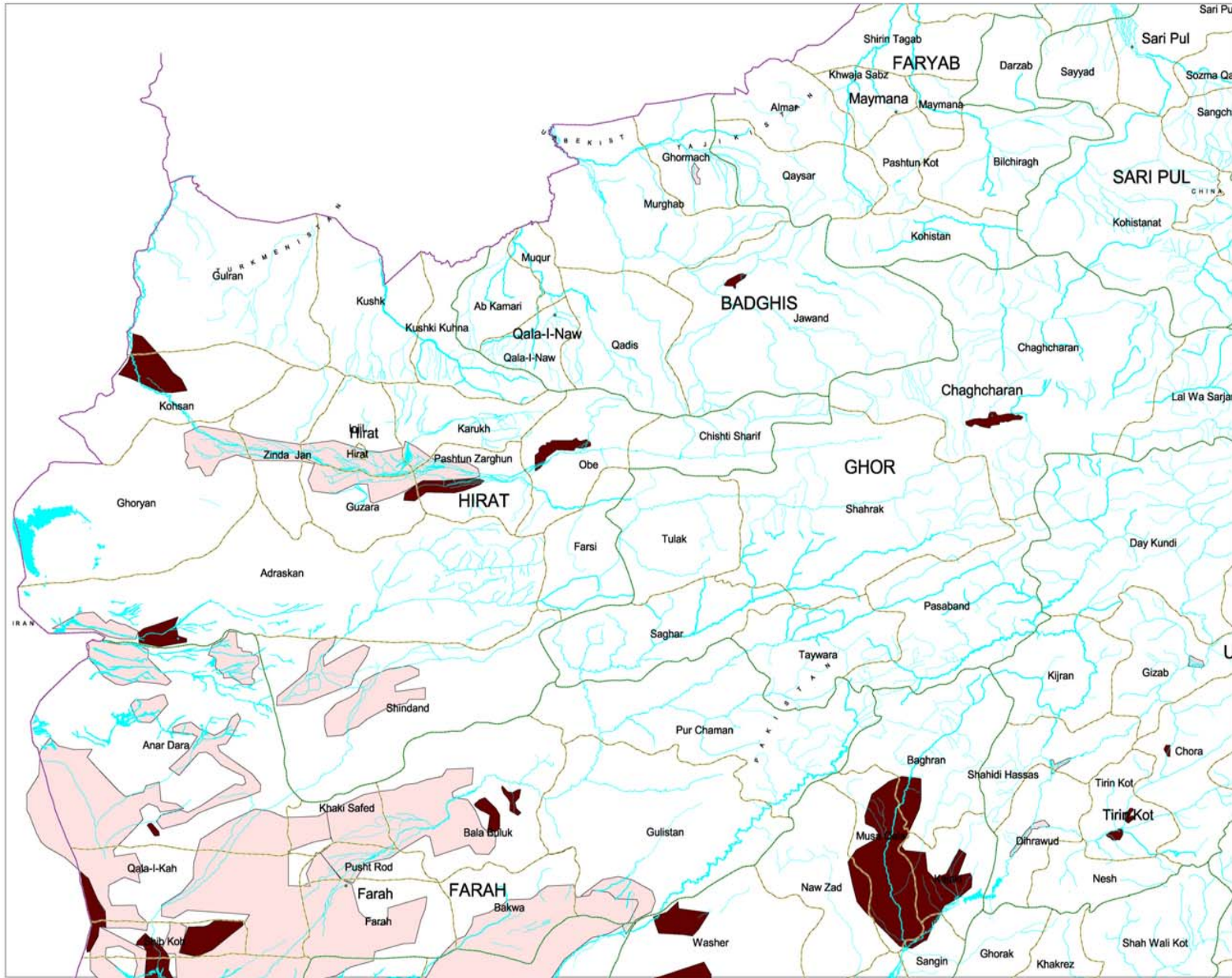
FLOOD RISK

- No Risk
- Medium Risk
- High Risk

SOURCE:
Data compiled from
Historic Flood Data,
& Local Knowledge.
Date: March 11, 2005



Flood Zoning Analysis - Western Area



- BOUNDARY**
- International
 - Provincial
 - District
- RIVER**
- Main
 - Stream
 - Lake
- SETTLEMENTS**
- Province Center
 - Capital.shp
- FLOOD RISK**
- Low Flood Risk
 - Medium Flood Risk
 - High Flood Risk

Source:
Flood Analysis done by CFC



Print Date: March, 2008

4. Drought

According to ADB study;

- Localized droughts in parts of the country have a return period of 3-5 years.
- Droughts covering large areas having 9-11 years return periods.
- At National level, Afghanistan has 20-30 years return period.
- The recent drought, however, is unusual and perhaps the worst in the country's history.

Drought

- **Most Affected:** Balkh, Jawzjan, Badghis, Logar, Wardak
- **Affected:** Faryab, Saripul, Nangarhar, Parwan
- **Least Affected:** Kabul, Samangan, Baghlan, Laghman, Bamyan (food only)

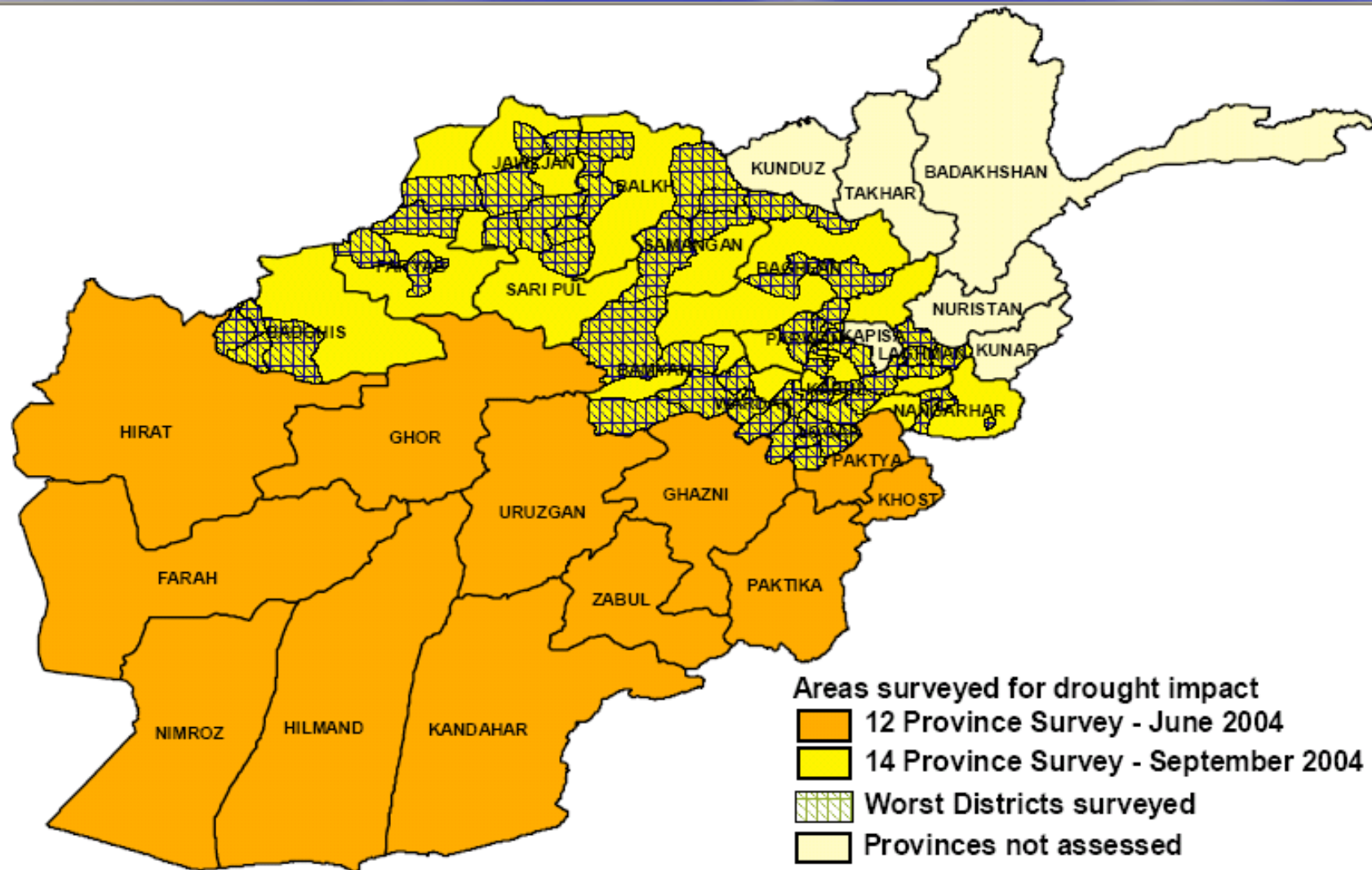


Figure 1 – Provinces surveyed in the two Inter-ministerial drought assessments

Impacts on the communities

Reasons for Displacement of the communities

Table 1: Displacement as reported by district level key informants

Province	Total reported No. of HH displaced	HH displaced due to lack of drinking water	HH displaced due to lack irrigation water	HH displaced due to food shortages
Badghis	840	840	0	0
Baghlan	0	0	0	0
Balkh	2,600	2,600	0	0
Bamyan	1,036	0	0	1,036
Faryab	610	610	0	0
Jawzjan	1,187	1,187	0	0
Kabul	685	685	0	0
Laghman	250	0	250	0
Logar	2,380	280	1,600	500
Nangarhar	2,910	1,500	910	500
Parwan	3,778	100	3,620	50
Samangan	160	160	0	0
Saripul	500	500	0	0
Wardak	357	209	33	115
Total	17,293	8,671	6,413	2,201

Impacts on the communities

Reasons for Displacement of the communities

Province	Communities buying drinking water (%)	Drop in shallow well depths (m)
Badghis	38	5.5
Baghlan	19	2.0
Balkh	0	2.6
Bamyan	0	2.4
Faryab	19	5.6
Jawzjan	11	5.0
Kabul	4	2.4
Laghman	6	2.7
Logar	29	9.0
Nangarhar	28	5.1
Parwan	14	2.5
Samangan	47	2.8
Saripul	0	1.7
Wardak	4	4.3
Average	15	4.3

Community water source information by Province

Table 3: Livelihood shocks due to water shortages (* = no data)

Province	Communities with high loss to grazing land productivity (%)	Communities with greater than 50% crop loss	Average reduction in all irrigated water sources by community (%)	Communities with inactive main source of irrigation water (%)
Badghis	100	85	*	*
Baghlan	100	100	89	87
Balkh	100	92	21	16
Bamyan	100	70	41	27
Faryab	96	79	30	28
Jawzjan	94	94	12	25
Kabul	93	100	50	0
Laghman	90	75	25	16
Logar	89	100	28	14
Nangarhar	86	33	16	30
Parwan	73	94	33	33
Samangan	45	75	27	33
Saripul	25	31	19	2
Wardak	6	11	25	25
Average (%)	79	75	33	30

Source

Survey designed, implemented and analysed (with support from FEWS-NET, WFP VAM and FAO) by
 Ministry of Irrigation, Water Resources & Environment
 Ministry of Rural Rehabilitation & Development
 Ministry of Agriculture & Animal Husbandry
 Ministry of Mines

OCTOBER 2004, KABUL

Findings of the study carried out from the 281 communities adversely affected by the drought

● Displacement

- An estimated 17,293 households were displaced in the last three months across the 70 districts surveyed.
- Lack of drinking water caused 50% of the displacement, 37% was due to lack of irrigation water and 13% was due to food shortages.
- Highest numbers of displaced households come from downstream irrigated areas.

Displacement due to Drought

Livelihood Shocks Due to Water Reduction

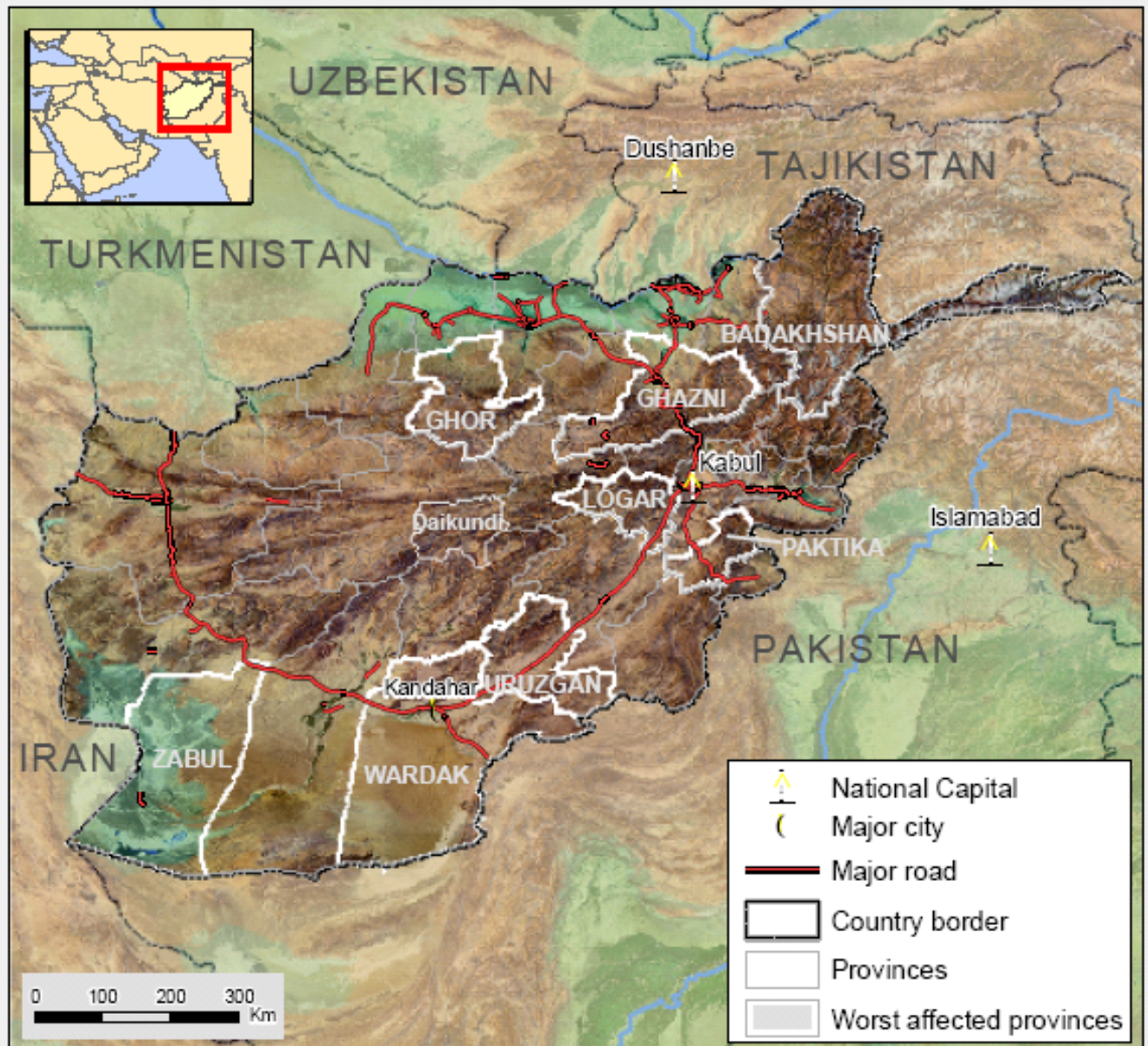
- 75% of communities reported crop losses
- Nearly 64% of communities reliant on irrigation for crop production reported a 75% decrease in the area cultivated compared to last year.
- 80% of communities reported high loss of grazing land productivity since the previous year

Displacement due to Drought

Household Shocks

- Lack of drinking water caused increased diarrhoeal diseases in 50% of communities surveyed.
- On average 40% of households in communities surveyed sold one or more productive assets to buy food and/or water.

5. Severe winter conditions



5. Severe winter conditions

- Severe winter weather affected much of the country. At least 100 deaths reported due to extreme cold temperature and cold related illness. Heavy snow blocked district roads and prevented movement of food provoking shortages and steep price rises.
- **Measles epidemic** confirmed in Ghor provinces. 100 cases reported amongst children, with 8 deaths

Main vulnerable Communities

- **Critically poor & livelihood insecure households:**

An estimated 6 million people (25% of the national population) are critically poor.

- **Critically poor urban households:**

An estimated 3.35 million people live in the major cities. Three categories of urban poor families were defined:

Those living in open spaces;

Those living in abandoned or derelict houses; and

Those living in houses with no heating arrangement.

Main vulnerable Communities

- **Disabled People:**

There are an estimated 0.8m-1.0m disabled people. The high number is due to malnutrition, poor maternal health, inadequate access to health care, and mine accidents.

Main vulnerable Communities

- **The Kuchis:**

The Kuchi (Nomad) population estimated to be 1.3million, is very vulnerable because their assets have been depleted by the drought. Their vulnerability is highest in the South and Southwest, where 75% & 100% of households respectively are affected.

Main vulnerable Communities

- **Cold Season (Winter) vulnerable households:**
2 million or more people are considered as especially vulnerable during the winter due to isolation (accessibility problems for rural areas). The winter season creates a potential disaster situation for vulnerable groups.

Main vulnerable Communities

- **Returnees:**

It is estimated that 1.7 million Afghan refugees returned to their homes during 2002. At least 3 million people remain uprooted and over 1 million are expected to return during 2003. Livelihood opportunities for rural returnees may be limited.

Main vulnerable Communities

- **Internally displaced people:**

There are 1.3 million IDPs, and an estimated 400,000 internally displaced people were expected to return to their homes. With few income earning opportunities available, the number of highly vulnerable people is very high.

**THANK YOU VERY
MUCH**