

OUTLINE

- What we do in Afghanistan
- What are Natural Disasters?
- Natural Disasters in Afghanistan
- DMIS – Prototype
- External Collaboration
- Challenges

Afghanistan Information Management Service (AIMS)

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Mandate:

- Build “Information Management Capacity”, → Govt.
- Provide “Information Management Services” → Govt. & HC

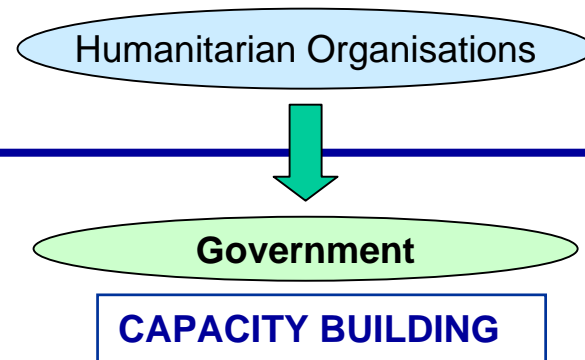
Strategies:

- Promotes common data and technology standards
- Promote free flow of information.
- Through focused Customer services, Advisory Services, product provision, capacity building & supports information policy devt.
- Currently AIMS is serving over 10 government departments.

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What is AIMS focus



AIMS Expertise

- GIS & RS Expertise
- D-base Expertise
- Information Mgmt
- Customer Service
- Capacity Building
- Cost recovery*

Special Projects

- Disaster Management
- WDWW
- Inst. Model for collection (activity data)
- 8 GIS teams
- 4 Training courses (Dari)

Customer Services

- Maps & imagery
- Walk in Advisory
- Project Services
 - GIS projects
 - D-base projects
- Project Advice
 - Standards
 - D-base design
 - D-base mgmt
 - Collection

CAPACITY BUILDING

GIS capacity in line ministries

- Training
 - Training Trainers
 - Counterpart training
 - Project tuition
 - Trouble shooting support
- GIS section establishment
 - GIS equipment provision

Advanced Digital Mapping Capability

- Focused Training
- Joint Projects
- Dovetailed work-plans
- Support in donor relations
- Seconded staff
- Develop Technical skill base
- Develop Customer Services culture

Natural Disasters



Nahrin March 2002 Earthquake

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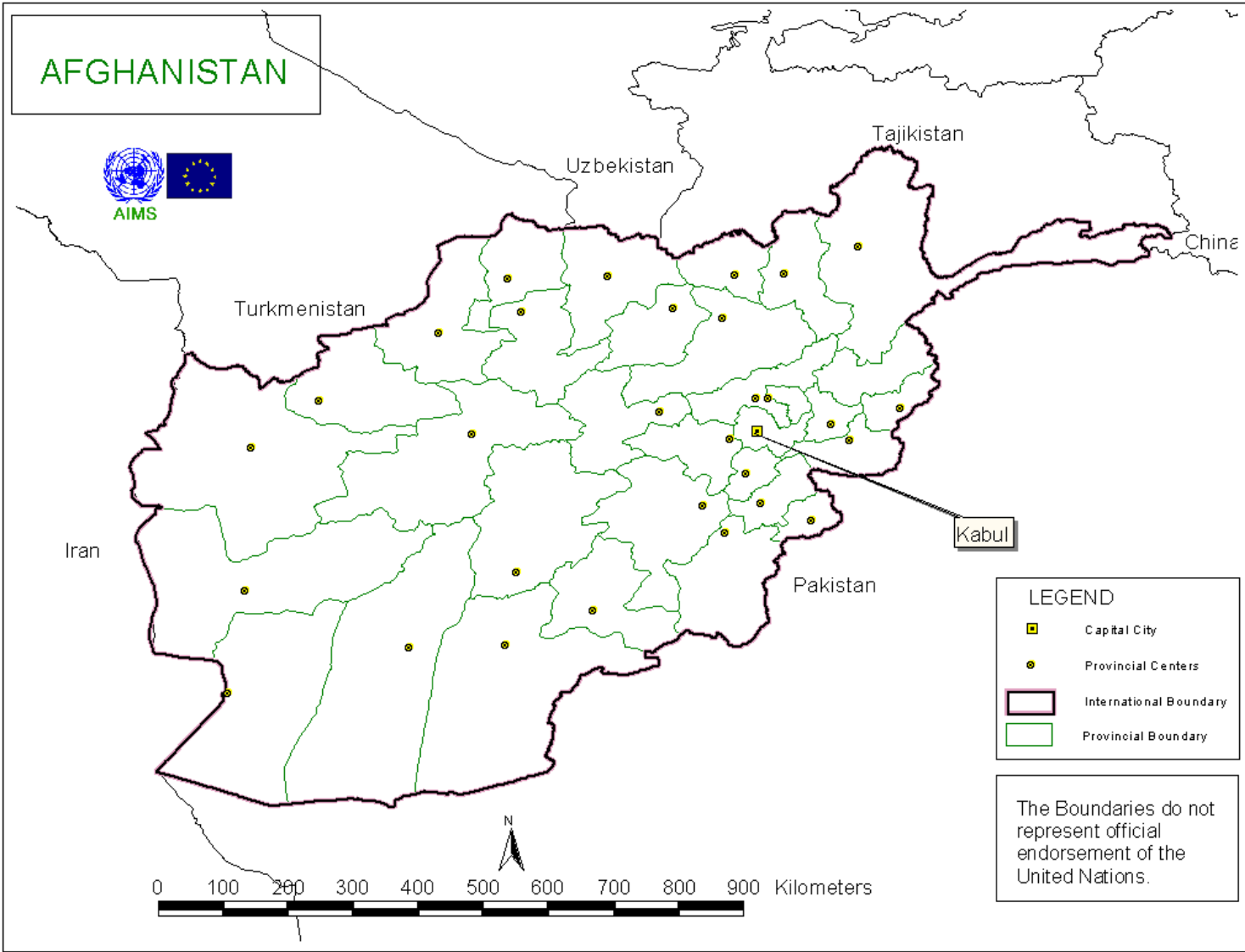
Natural Disasters

- Natural Disasters strikes countries (both developed & developing),
- Consequences includes;
 - death or injury to humans,
 - damage or loss of 'goods', e.g. buildings, communications, agricultural land, forest, and natural environment
- Due to diverse geo-climatic conditions prevalent in different parts of the world,
- different types of natural disasters strikes according to the vulnerability of the area.

Afghanistan

- Afghanistan is categorized as one of the LDCs in the world.
- Country is landlocked
- Borders China, Tajikistan, Turkmenistan, Uzbekistan, Iran & Pakistan.
- Climate mostly dry with extremes of cold winters & hot summers.
- The terrain consists mostly of rugged mountains in the central & east, & plains in the north and southwest.
- Desert covers the south and west of the country.

AFGHANISTAN



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Problem

- War, civil conflict & environmental degradation, have contributed to the vulnerability of Afghans to natural disasters.
- IFRC/RC, (2002) estimates 19,000 people killed and 7.5 million people displaced since the early 1980s
- Between 1991 and 2002, Afghanistan has experienced nine significantly large natural disasters.

- The high level & extent of poverty,
- Lack of livelihood & income generating opportunities,
- Chronic health problems,
- Poor state of the infrastructure,
- Poor water & sanitation systems,

Add to the burden of natural disasters on the people of Afghanistan.

Natural Disasters in Afghanistan

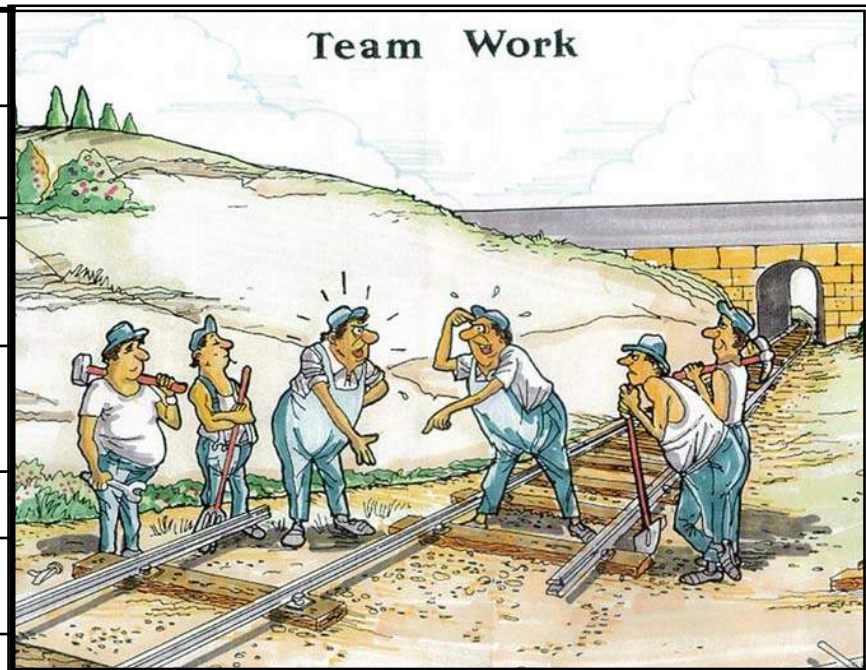
Main hazards that have for centuries adversely affected the lives, property and livelihoods of Afghan people are:

Earthquakes,	Sand storms,
Flooding,	Avalanches,
Droughts,	Pests (e.g. Locusts),
Landslides,	Fire,
Extreme winter conditions,	etc

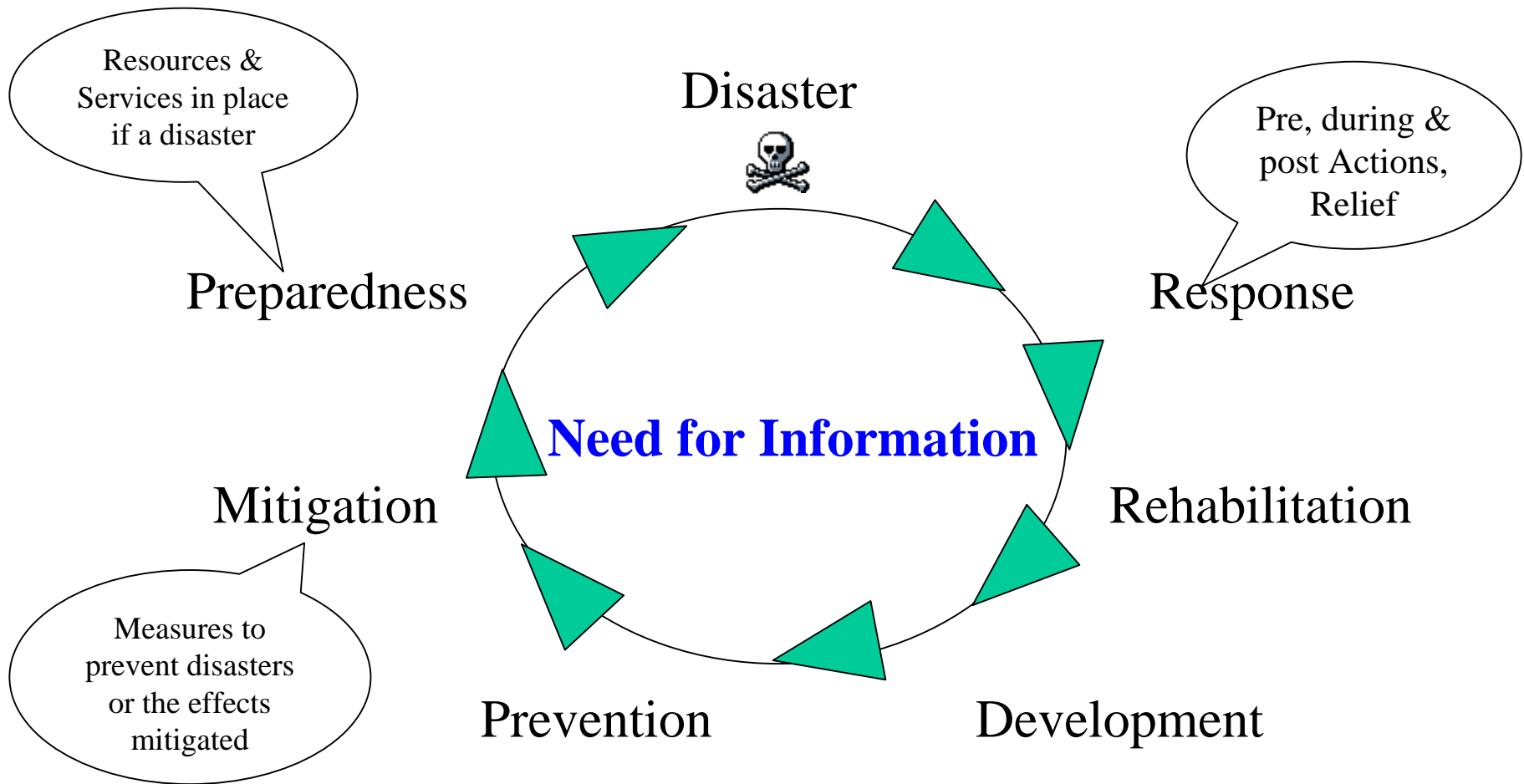
Managing Natural Disasters

- Multidisciplinary endeavour
- Different stakeholders with different interests

Stakeholder	Mandates
DDP	Command, Coordination & Control
MRRD	Vulnerability & Livelihood Surveillance activities
Irrigation & Environment	Involved in disaster mitigation Projects – Drought & Flooding
Health	Emergency health task force
Agriculture	Emergency health task force
NGOs	Very close Communities
INGO	Design & Implement disaster management projects
UN/Donors	Provide Resources, M & E



Disaster Management Cycle



Disaster Management Information System for Afghanistan (DMIS)

A Pilot Project

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Abstract

- Afghanistan is a country prone to natural disasters
- Thousands of people have been killed & millions displaced as a result of natural disasters since 1980's
- Disaster management is a typically multi-disciplinary endeavour, requiring many types of data
- GIS and Remote Sensed satellite imagery plays an important role in disaster management and crisis prevention.
- This Pilot project aims at developing a Disaster Management Information System (DMIS), building regional capacity to maintain, update and disseminate information to stakeholders and users for decision-making.

Project Goal

- Develop a Disaster Management Information System (DMIS).
- Build regional capacity to maintain, update and disseminate information to stakeholders and users for decision-making.
- The DMIS will be a GIS based system and will integrate Remote Sensed data with ground survey and other ancillary data.

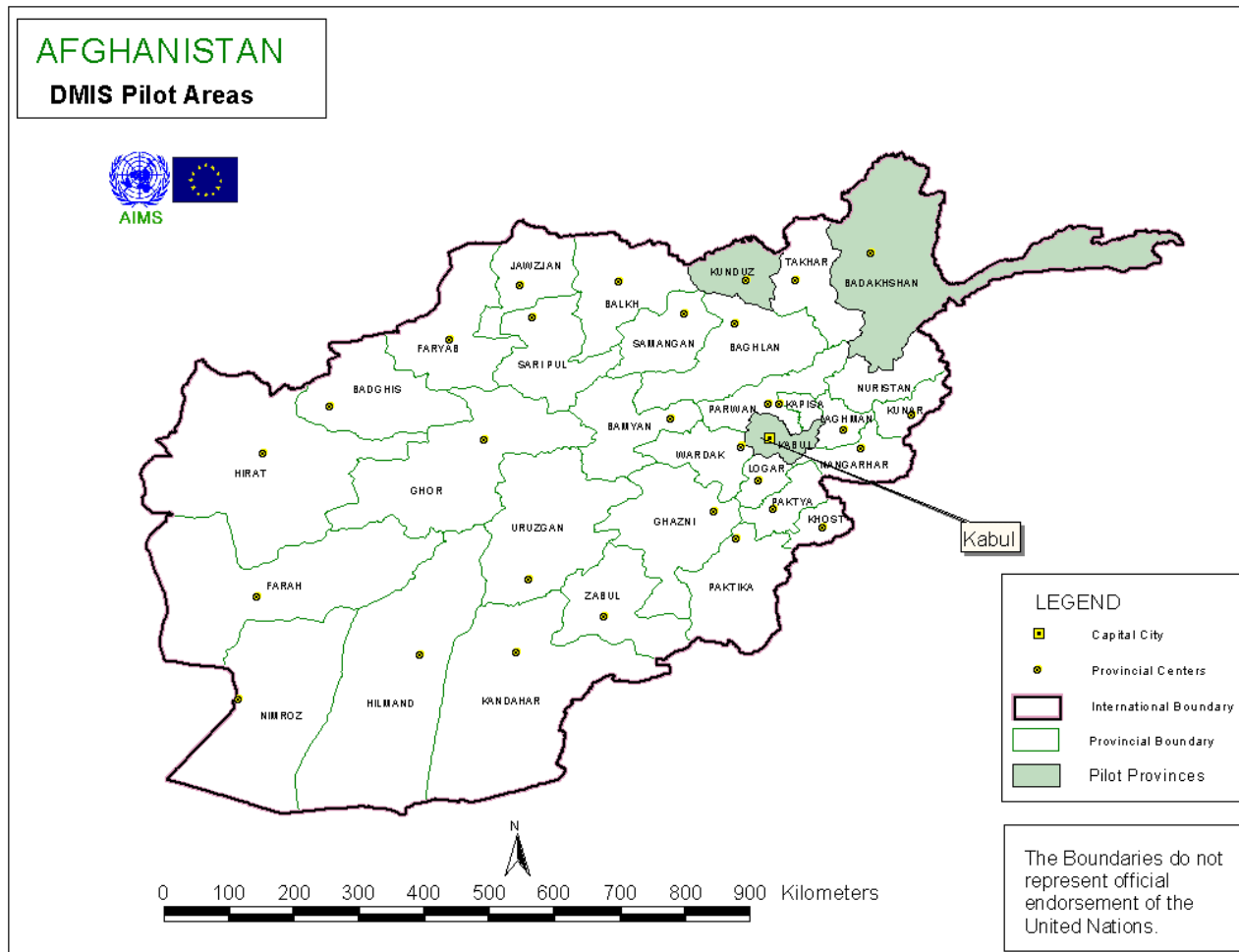
Approach

- DMIS supports Govt. Disaster Mgt. Plan
- Consultations/collaborations with key Ministries (central & regional), UN, NGOs, Local Authorities,
- DMIS – Piloted in Kabul, Kunduz & Badakhshan Province
- Expecting funding from AETF & UNDP
- Implementation to commence in June 2004
- Together with the Dept. Disaster Preparedness, DMIS will be developed (skills transfer)
- Build DMIS with the full participation of the users
- Duration expected to be 7 months

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DMIS Pilot Provinces



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Staffing

Project Manager	<i>Joseph Kandeh</i>
Systems Analyst & Designer	<i>Joseph Kandeh</i>
RS Consultant	<i>International hired for 3 Months</i>
Training Consultant	<i>Hired for 2 Months</i>
National GIS Expert	<i>Hired for entire duration</i>
National Database Expert	<i>Hired for entire duration</i>

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Activities

- ***Functional Survey Teams established in 3 Provinces.***
 - a) trained in survey and enumeration work to gather baseline data & information on most vulnerable communities,

- ***Functional Data Processing Unit established in 3 Provinces.***
 - a). Train staff in data entry, running & managing DMIS

Activities

- ***Conduct workshops for Govt. Depts. in information management.***
 - a) trained to collecting their own data for inclusion into DMIS

- ***Develop a model of institutional collaboration amongst Govt. institutions***
 - a) Standardization
 - Standard reporting & data collection forms for DMIS
 - Define data standards for collection & data entry

Activities

■ *Capacity Building*

a) Survey Teams & DPU of DDP trained in:

field surveys techniques	Interpreting physical, Aerial photographs, topographic maps, & satellite imagery
data collection using standard forms	
GPS technology	Database development & Mgt
Image processing	

b) Survey Teams trained in Natural Disaster assessments methods

- Natural hazards assessments
- Vulnerability assessments

c) Standard training modules developed and translated into Dari.

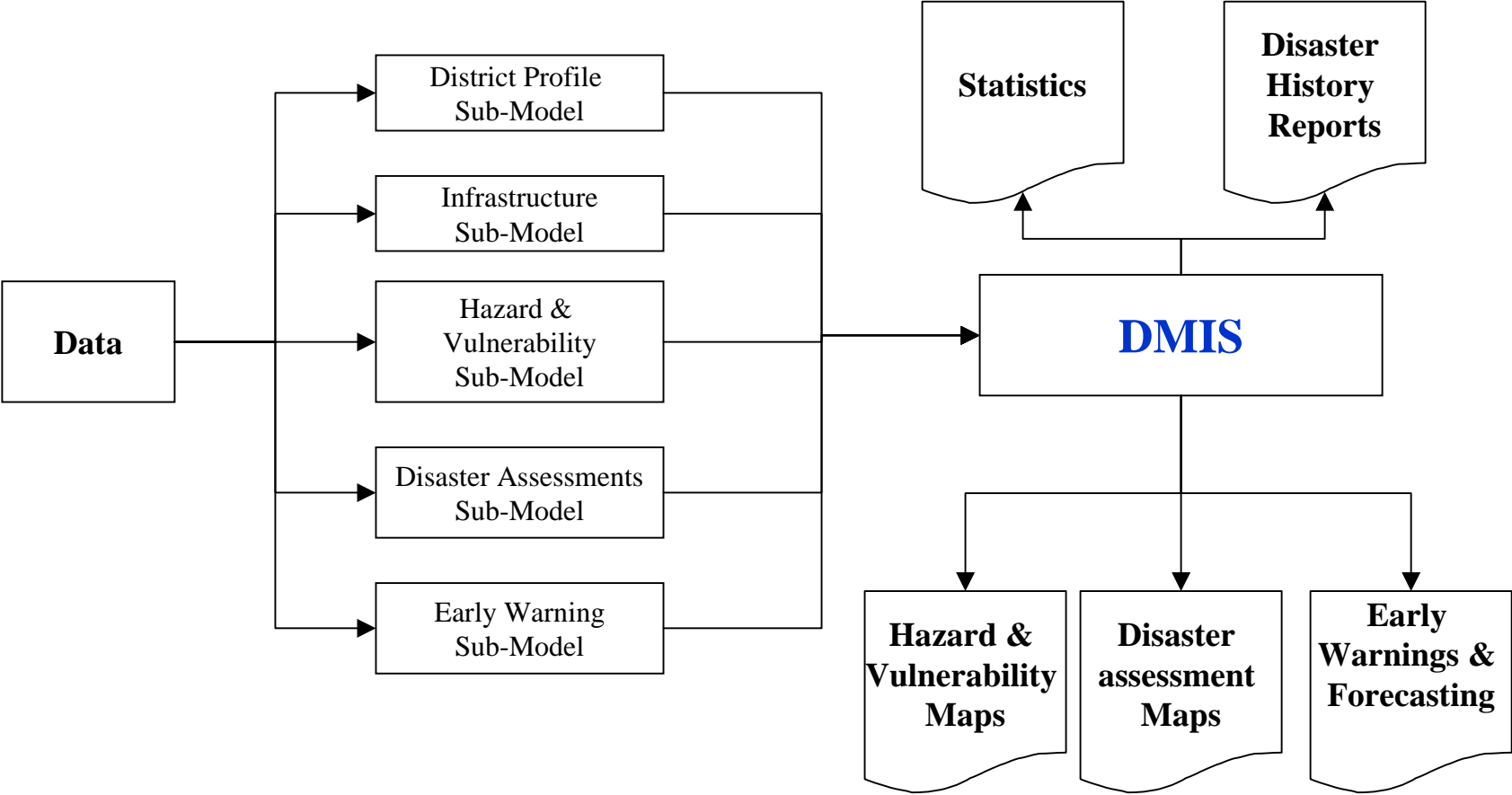
Activities

- ***Detailed User Requirements Analysis***
 - a) Streamlining data acquisition, storage, management, & data and information exchange,

- ***Develop, test and install DMIS in Kabul, Kunduz & Faizabad***
 - a) Define system boundaries
 - b) Spatial and non-spatial data modeling, system devt., testing, & implementation,

- ***Baseline Data collection and data validation and entry***
 - a) District profile, and on vulnerable communities

Conceptual Diagram of DMIS



Data Needs

	Data	Expected Provider
1	Satellite Image: Quickbird	Donors
2	Aerial photos of Kabul, Kunduz , Badakhshan Provinces	Donors
3	NOAA AVHRR, Landsat or SPOT (depending on use and availability).	Donors
4	Disaster history maps	Donors
5	Flood history maps (locations, flooding levels, etc)	Donors
6	Earthquake data (strength, frequency, epicentre location, etc)	Donors
7	Rainfall data (historical)	Donors
8	DEM	Donors
9	Elevation Data	Donors
10	Drainage System (rivers, streams, irrigation channels, etc	AIMS
11	Watershed maps	AIMS
12	Landcover & Land-use maps (existing)	AIMS
13	Administrative Boundaries	AIMS
14	Roads	AIMS
15	Infrastructure data (Health Centres, Schools, Mosques, Police	AIMS/Governor
16	Population density map	AIMS/CSO
17	Population distribution	CSO
18	Agricultural production (crop types, consumption, history etc)	Min. of Agric/FAO/WFP

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Data Needs

19	Population and distribution of Livestock (camels, sheep, cattle, Goats etc)	Min. of Agric/FAO/WFP
20	Water Wells and other artificial water sources	DACAAR
21	Soil types map	AGCHO
22	Geology Map	AGCHO
23	Vegetation cover maps	AGCHO
24	Land-use potential maps if available	AGCHO
25	Risk factors (tribal conflicts, access permissions) - History of it	Governor
26	Resource and supply centres (in an emergency)	DDP/MRRD
27	Risk & Vulnerability data	MRRD
28	Land mines distribution and risk areas	UNMACA
29	Market and market capacity, requirements, distances, etc	Interior Ministry
30	Agro-Ecological Zone Map (AEZ)	Donors/FAO/WFP
31	Socio-economic statistics	CSO
32	Epidemiological & Nutritional Data	MOH/WHO
33	Agricultural input to farmers	Min. of Agric/FAO/WFP
34	Relief Data	WFP/MRRD
35	Food requirements data	Min. of Agric/FAO/WFP
36	MeteoSat data	Donors
37	Landforms	Donors

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External Collaboration

1. *'Charter On Cooperation To Achieve The Coordinated Use Of Space Facilities In The Event Of Natural Or Technological Disasters'* → UNOOSA
2. US State Department's HIU, OFDA
3. Vietnam Veterans of America Foundation (VVAF)
4. Regional Networks?

Key Lessons & Challenges

- DDP not present in most of the provinces in Afghanistan
- Collaboration between Govt. Institutions could prove challenging
- Recruitment of National GIS & Database Specialist could prove challenging
- Need for Collaboration at all sectors in standards adoption
- Sourcing for project funding could be a long process
- Need for networking within the sub-region

End of Presentation

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