Presentation By

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- Disaster Relief Section Kathmandu
- NEPAL
- Now as a visiting Researcher at ADRC.

My duties and responsibilities in my country

- Collection and compilation of disaster related data from different Parts of the kingdom.
- To provide disaster information data to disaster concerned agencies.
- To implement disaster related Govt.decisions.
- Allocate the money from Central Disaster Fund to District Disaster Fund.
- Follow up and monitor relief assistance.

Brief introduction of Nepal

- Southern Asia,between India and China.
- Latitudes of 26 to 30 degree North.
- Longitude of 80 to 88 degree East.
- 147,181 Sq.KMs areas covered.
- Lowest elevation 70 meters and highest 8,848 meters from the Sea level.

Population,Growth rate,and literacy rate

- Near about 22 Million population.
- 2.8% growth rate.
- 39.6% literacy rate.

Religions

- 90% Hindus.
- 5% Buddhists.
- 3%Muslims.
- 2% Other.

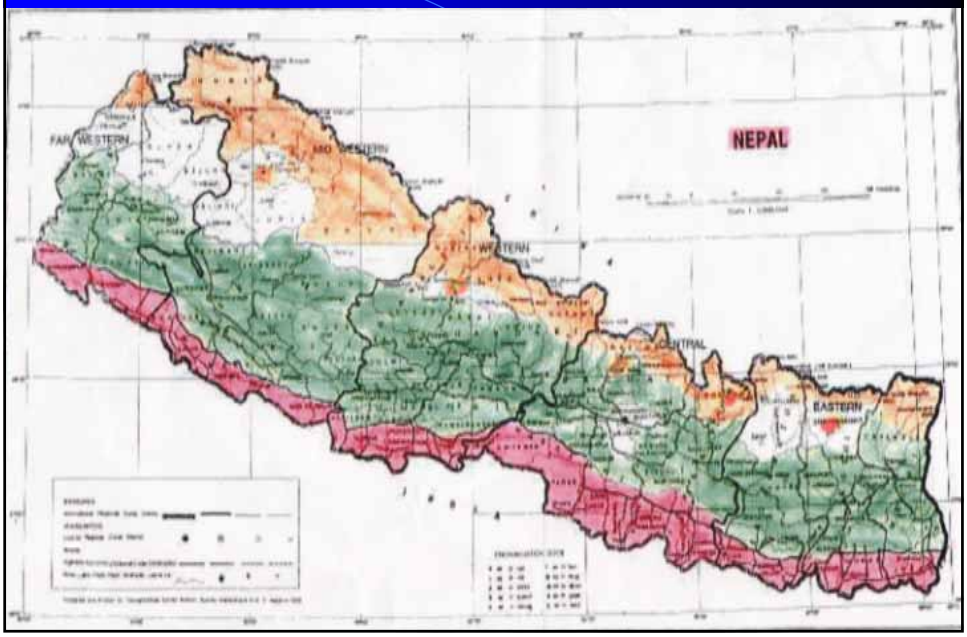
Nepal is famous for

- World highest peak Mount Everest.
  (8,848 Meters)
- Nepalese Gorkha.
  (Gorkha Soldiers)
- Lord Buddha birth place.
  (Lumbini)
- Tourist Center.
  (Pokhara and other many natural beauty places)

Natural Resources

- Water,
- Timber,
- Natural beauty,
- Iron.

Map of Nepal



Administratively Divided into

- Five development regions.
- 14 Zones.
- 75 Districts.
- 57 Municipalities and 3,913 VDC.

Physigraphycally Divided into

Three Regions.

- 15% Himalayan regions.
- 68% Mid-hill.
- And 17% Tarai areas.

Disaster situation in Nepal

- Climate and rainfall.
- Major types of disasters .
- Data of last year disasters.

Climate and Rainfall

- Sub-tropical climate
- Temperate climate
- And Alpine climate.
- 80% of total rainfall takes in monsoon seasons.
- Usually monsoons seasons starts from June 1st week.
- And monsoons end mid of the September.

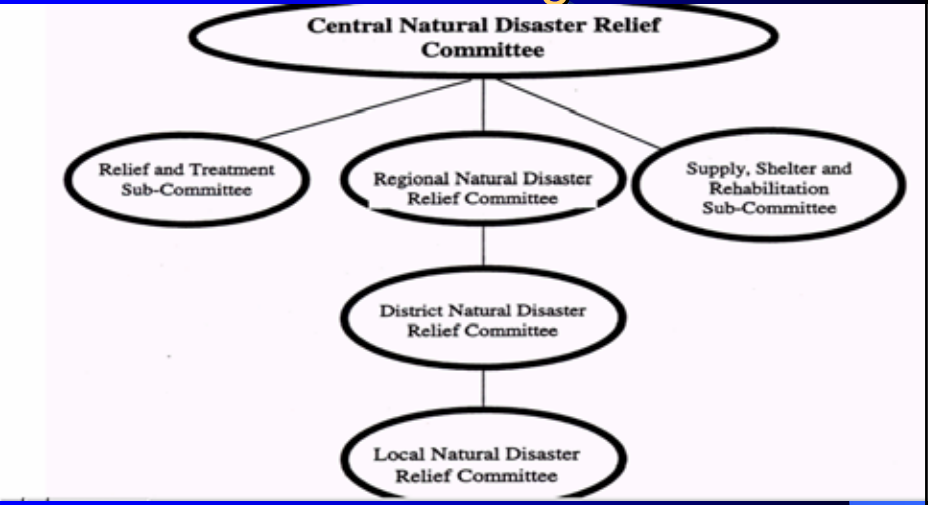
Major types of Disasters in Nepal

- Landslides,
- Glacier lake outbursts,
- Floods,
- Fires,
- Earthquakes,
- Epidemics,Avalanches,windstorms etc

Last year 1999

- 1,190 people died by different types of disasters.
- 117 Injured.
- 36,987 Families affected.
- 15,082 Houses destroyed.
- 326.89 Hectors land losses.

Organizational Structures of Disaster Management



Budget and resources Management

- There is one Central Disaster Relief Fund.
- Prime Minister Disaster Relief Fund.
- 25 Million has been allocated by HMG/N in this fiscal year(1999/2000).
- Home Ministry is a focal point of disaster management in Nepal.

Ministry of Home Affairs is Central Focal Point of Disaster Management in Nepal

Before joining Asian Disaster Reduction Center I had no idea about

*Why ADRC was established and what are the activities,and objectives of ADRC?

*How to use computer?

*What is Database system?

*What is VENTEN GIS system?

*And other disaster related activities?

Following are my Achievements during my stay at ADRC.

- Basic knowledge of ADRC Activities and Objectives.
- Computer Knowledge.
- Database System.
- VENTEN Geographical Information Sharing System.
- And other Activities.

Where did I visited during my stay at ADRC?

- Ministry of Construction(MOC).
- National Land Agency(NLA).
- Japan Metrological Agency(JMA).
- Foundation of River and Basin Integrate Communications(FRICS).

Where did I Visited during my stay II

- National Research Institution of Earth Science and Disaster Prevention (NIED).
- Institute for Hydrosphere-Atmospheric Science (IHASI) Nagoya University.
- Disaster Prevention Research Institution(DPRI) Kyoto University.
- Nojima Awaji Island (Nojima Fault).
- Yodo River Dam Hirakata city,and Daiogogi

From my field visit I learned;

Basic Knowledge of;

- Disaster prevention,
- Disaster Countermeasures,
- Flood and Glacier Lake monitoring system,
- Weather forecasting system in Japan,
- And fire fighting , fire prevention measures.

What did I learn about ADRC activities?

- Gathering of information during time of disasters.
- Accumulation and dissemination of information.
- Raise public awareness of disaster reduction in Asian region.
- Develop Database system.
- VENTEN GIS system and
- Promotion of disaster reduction cooperation.

What did I learn about Computer?

- Microsoft Word Excel and Microsoft Power point.
- World wide web system.
- Mail system with Attached file and
- Processing of Graphics.

Database System

*Lesson learned from past disasters such as; Kobe Earthquake,Chinaflood,Urisha Cyclone etc

*Disaster management legal systems

*Disaster prevention such as;

Early warning system-Recent Hokkaido Usu volcano.

Database System II

*Prepared for future disaster;
by learning past disasters.

*Information sharing such as;
inputting, disseminating and accumulating disaster data.

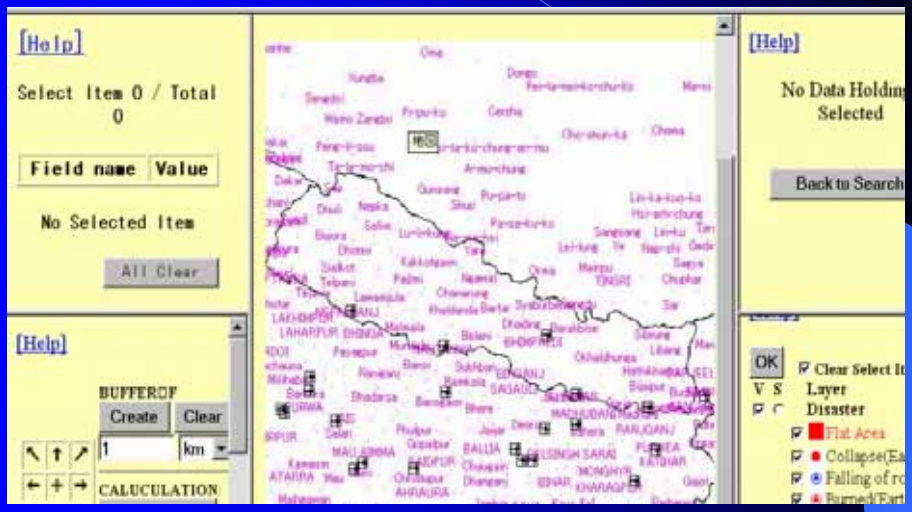
*Systematic collection of disasters information raw data.

What did I Understand about VENTEN GIS System?

Objectives of VENTEN;

- Main objective of VENTEN GIS is Information Sharing within 22 ADRC member Countries.
- This is a platform of information Sharing.

VENTEN GIS system



What did I understand about VENTEN GIS System II?

Methods of VENTEN;

- Internet GIS,
- Analysis geographical information data such as;population,Airport, Road ,Name of city etc.
- Database system such as;Latest disaster Information,Past disasters,training,ADRC E-Net work etc.

My focusing will be for VENTEN system,when I will back to Nepal.

- To providing disaster related data and Information .
- To providing hazard map.
- To providing basic geographical data.

About VENTEN system

- Without any financial contribution Very very useful for member countries as well as any users.
- Using this system easily we can analysis geographical data :areas,bridge,road,airport,and other disaster related data from VENTEN GIS system.

But;

At one time only five users can use over the world.

- Never ending process.
- Expensive for ADRC.
- Difficult to maintain continuously.

Knowledge maintain above will be useful for myself, as well as His Majesty's Government of Nepal.
&
I will be able to play significant role in the field of Disaster Management.

I will play following role in my Country as a Disaster Manager

-To Promotion Disaster Management.

-Reduction of Disasters.

- Prevention and

-Countermeasures of Disaster

- Especially Database System and

-Information Sharing System.

During my stay at ADRC; I prepared

-Nepalese Legal system and Assistances Norms in Disaster Management.

-Challenges of Disaster Management in Nepal and Its solutions.

-Revised CRED Disaster Data.

-A Report on Tsho Rolpa Glacier Lake.

-Great Earthquake in Nepal 1934

&

Hanshin-Awaji Earthquake 1995.

A Report of Tsho Rolpa Glacier Lake Outburst

-Glacier Lake found in Himalayan region.

-Continuously pillaging of snow layer.

-Result will be formation of Glacier Lake.

-causes of global changing environment When a huge amount of ices melt .

-And overflow from the lake, Glacier Lake outburst Disaster occurred.

Nepal is a Himalayan Region

We can found 2 types of Glacier Lakes.

1. Clean type of Glacier Lake.

2. Debris Covered type of Glacier Lake.

Clean type of Glacier Lake

Debris type of Glacier Lake

Situation of Glacier Lake in Nepal

-Small and large 159 Glacier lakes.

-Among them 24 are dangerous.

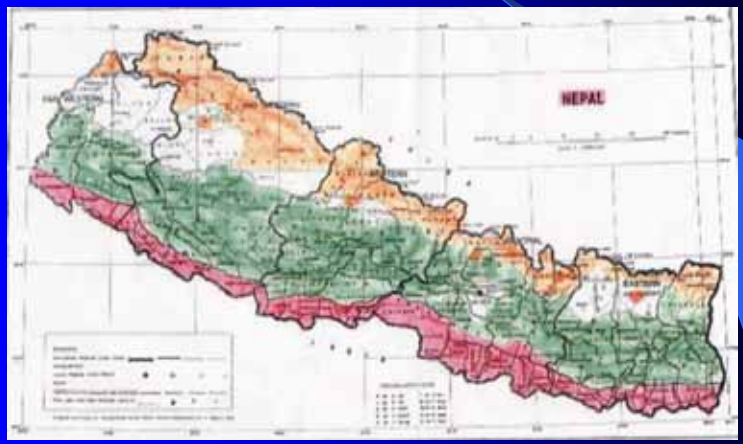
-Tsho Rolpa is one of among 24 dangerous Lakes.

Tsho Rolpa

-Located eastern part of Nepal.

-4,580 meters from the Sea level.

Location of Tsho Rolpa



Tsho Rolpa Glacier Lake

Water Volume and Areas

-Water Volume estimated 80 million cubic meters.

-Pilling of ices started from 1953.

-In 1953 it was only 15 Sq meters wide.

-And .3 million cubic meter water volume.

Warned

-In 1997 Dr.J.Noredes warned any time Tsho Rolpa will be burst.

-CNDRC decided to adopt countermeasures.

-Immediately HMG/N formed a Water Induce Disaster Prevention Committee

Scope and adopted countermeasures by Water Reduce Prevention Committee

-Reduce the water Volume from the Glacier Lake

-Evacuated the people.

-Adopt early warning system.

-Monitoring system established.

Trial Siphon System

Establishment of surveillance post

Early warning system by sirens.

Components of the first early warning system of Nepal at Tso Rolpa

Master station 1.

- Glacier lake sensing 2.
- Lake warning monitoring 2.
- Glacier lake warning Sirens 19.
- Early warning relay stations 3.

Provision of Budget

- In 1997, 5 Million allocated from Prime Minister Disaster Fund
- 1,218 Million allocated 1997 to 200 fiscal years from HMG/Nepal.

Next fiscal year Netherlands Govt.will provide 200 million.

Conclusion

1.Nepal is a land locked country.

2.It is Himalayan Region.

3.Glacier lake outburst is one of the major Disaster.

4.Clean water and Debris water two types of Glacier lakes found in Nepal.

5 Small and large Glacier Lakes are located in Nepal.

5.24 are dangerous them.

Conclusion II

6.Tsho Rolpa is a danger Glacier Lake.

7.4,580 meters from sea level.

8.Water volume 80 million cubic meters.

9.1.65 square KMs areas covered.

Conclusion III

10.Countermeasures adopted by HMG/N

-Reduce water volume.

-Evacuated the people.

-First early warning systems introduced.

-Monitoring system established.

Budget.

-From 1997 to till now 1,718 Million NR

Finally

Database system ,Information Sharing,

Hazard mapping,

Risk analysis,

Effective early warning system,

And Public awareness

Are more needed in Nepal.

The End of this Chapter

His Majesty's Government of Nepal
MINISTRY OF HOME AFFAIRS