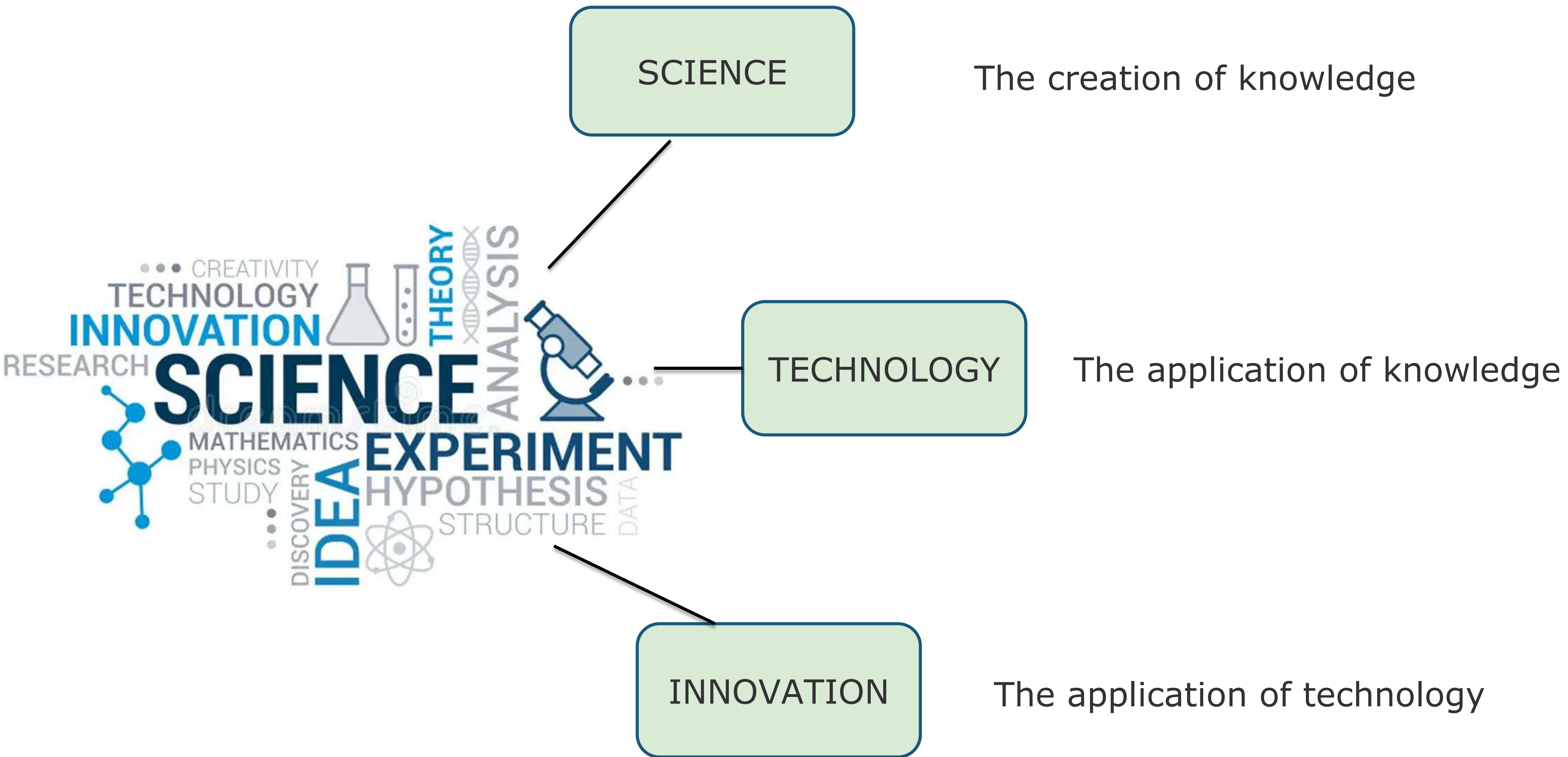




Technology, Innovation And Science in DRR

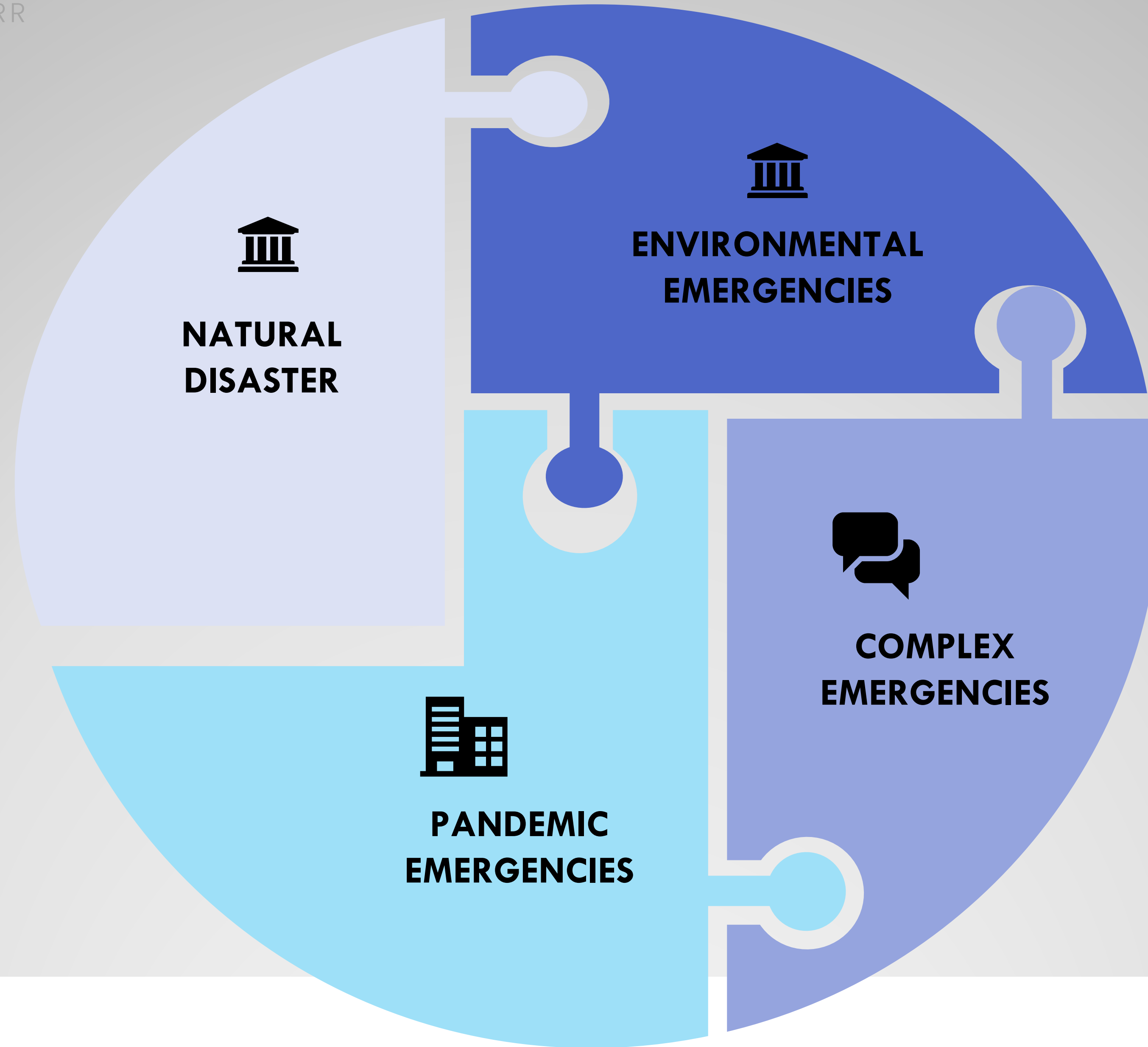
Ar. Kabita Pandey
Nepal Academy of Science and Technology



DISASTER MANAGEMENT BY UNDERSTANDING THEIR RISK



RISK INSIGHTS



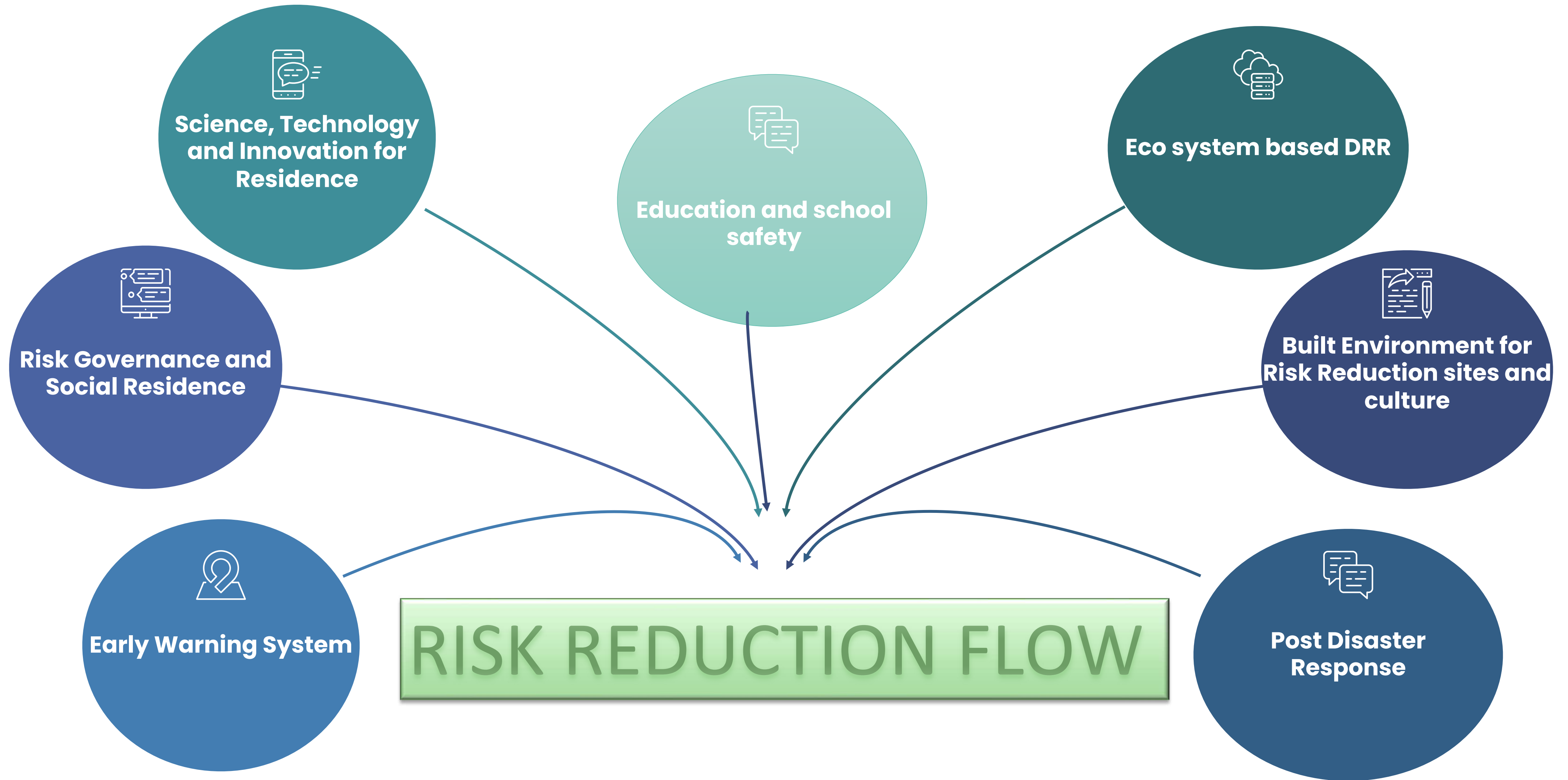
DISASTER MANAGEMENT CYCLE



SCIENCE, TECHNOLOGY AND INNOVATION

Science, Technology & Innovation has a role in all phases of DM:

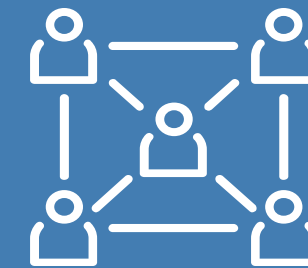
- To evaluate disaster risks for preparedness, response and mitigation (When, What, Duration and Impact)
- To communicate disaster risks and their management options to all stakeholders including the people (more actionable approach)
- To develop plans to mitigate contributors to the risks (knowledge-based action)
- To use technologies for risk-reduction, mitigation and response
- To develop decision support systems for planning and response (Use drones, social media, mobile data traffic information, etc. for rapid situational assessment and emergency response)
- To develop early warning systems
- To develop emergency communication systems
- and so on.



DISASTER RISK MANAGEMENT



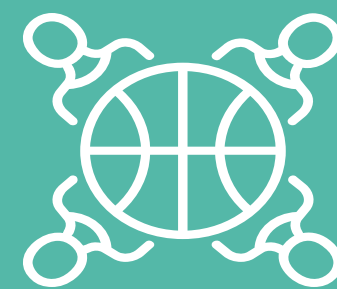
**Improving
Disaster Risk
information**



**Strengthening
Disaster
Preparedness**



**Enhancing Disaster
Risk Reduction**

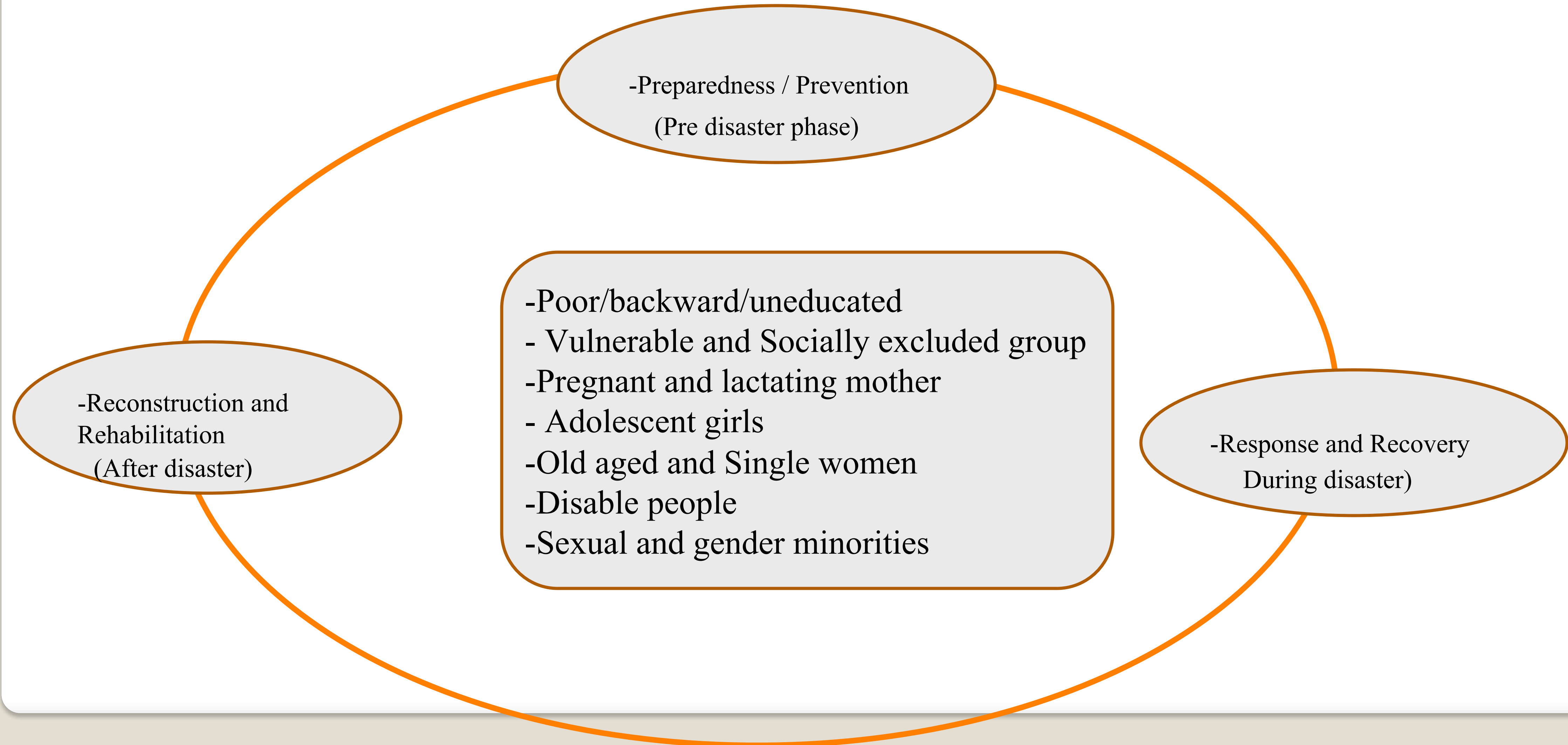


**Understanding
of Fiscal
Disaster Risk**

GENDER EQUALITY DISABILITY AND SOCIAL INCLUSION IN DRR

According UNDP, BCPR, 2004,

- Nepal falls in the top 20th list of the most multi-hazard prone countries in the world.
- Ranked 4th, 11th and 30th in term of climate change, earthquake and flood risk respectively.
- Other major disasters in Nepal are landslide, fire, drought, epidemic, storm, hailstorm, avalanches and GLOF.



GEDSI IN DRRM (governance and policies)

- Constitution of Nepal
- Disaster risk reduction and Management act, 2074
- National Policy for Disaster Risk Reduction, 2018
- Disaster risk reduction and Management Regulation, 2076
- National Disaster Response Framework (first amendment 2075)
- Disaster Risk Reduction National Strategic Action Plan 2018 -2030
- Local Government Operation Act, 2074
- Disaster Risk Reduction and Management Act for Local Government, 2075
- Local Level Disaster Management fund Operation Guideline, 2075

CHALLENGES IN MAINSTREAMING GEDSI IN DRRM

- The management system and process along with policies and activities are gender neutral which may not address the diverse need of diverse group.
- Lack of enabling office environment like presence of open and participatory processes, mandatory GESI policy, policies on work life balance, sexual harassment and abuse of authority policy notified and implemented (mandatory courses on gender).
- Weak knowledge management as knowledge products on GEDSI developed and disseminated, communication work/materials/ website reflect commitment to GEDSI concerns.
- Weak partnerships with different stakeholders
- Minimal engagement of women, men, LGBTQI, disabled and socially excluded people in policy making, decision making and in access to resource together with disaster governance decision making.

ACTIVITIES CONDUCTED BY NAST IN DRRM

Earthquake

- 62 sensors for Earthquake Early Warning system has been installed all over Nepal
- With the coordination of Care Life (ICL), China, China had successfully activated 43 sensors which would record the seismic events.



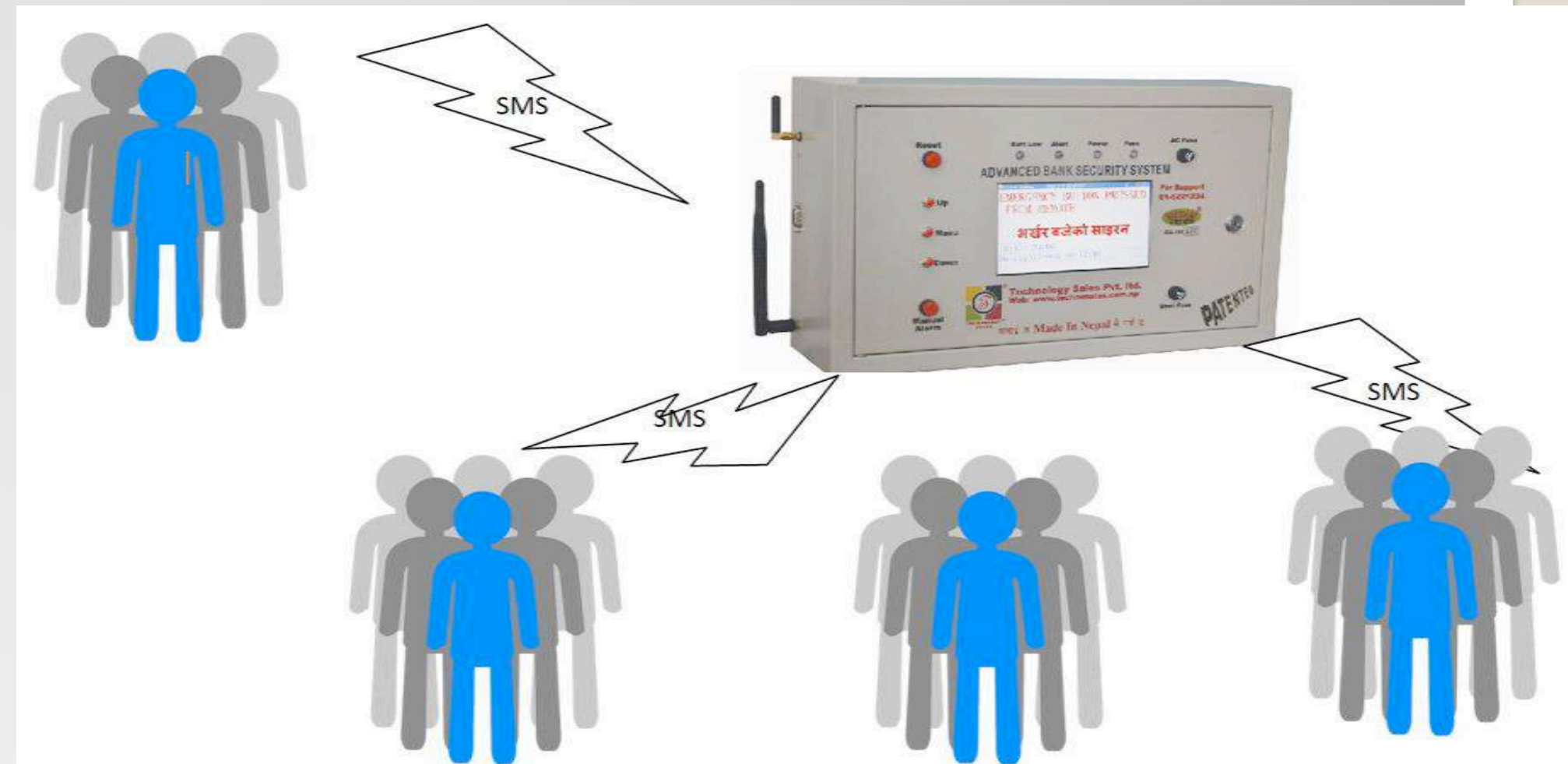
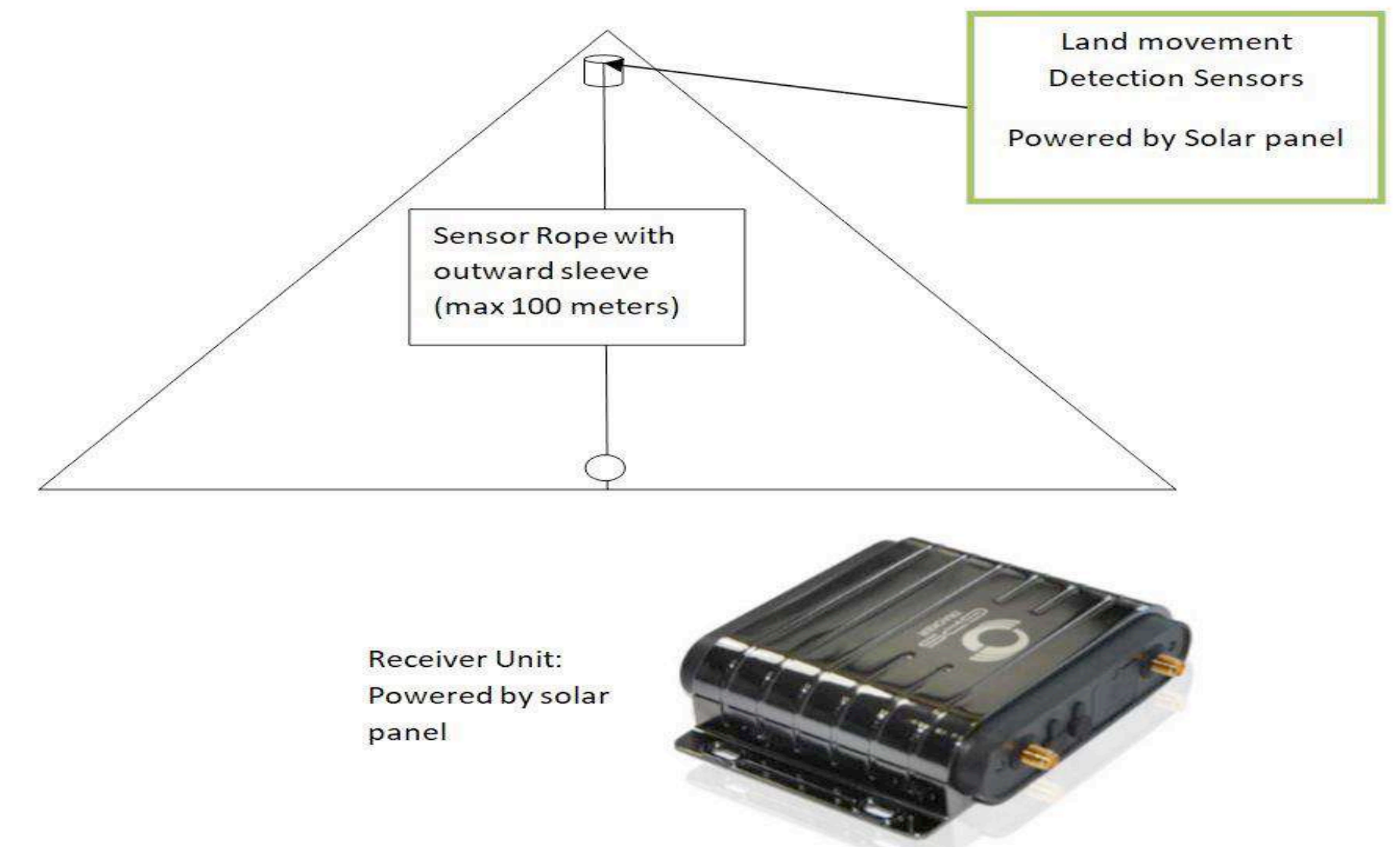
GPS

- 11 GPS installed in the central part of Nepal



Landslide

- Early warning system has been installed in Khanigaun, Gorkha
- Alerts the community whenever there is slight movement of land



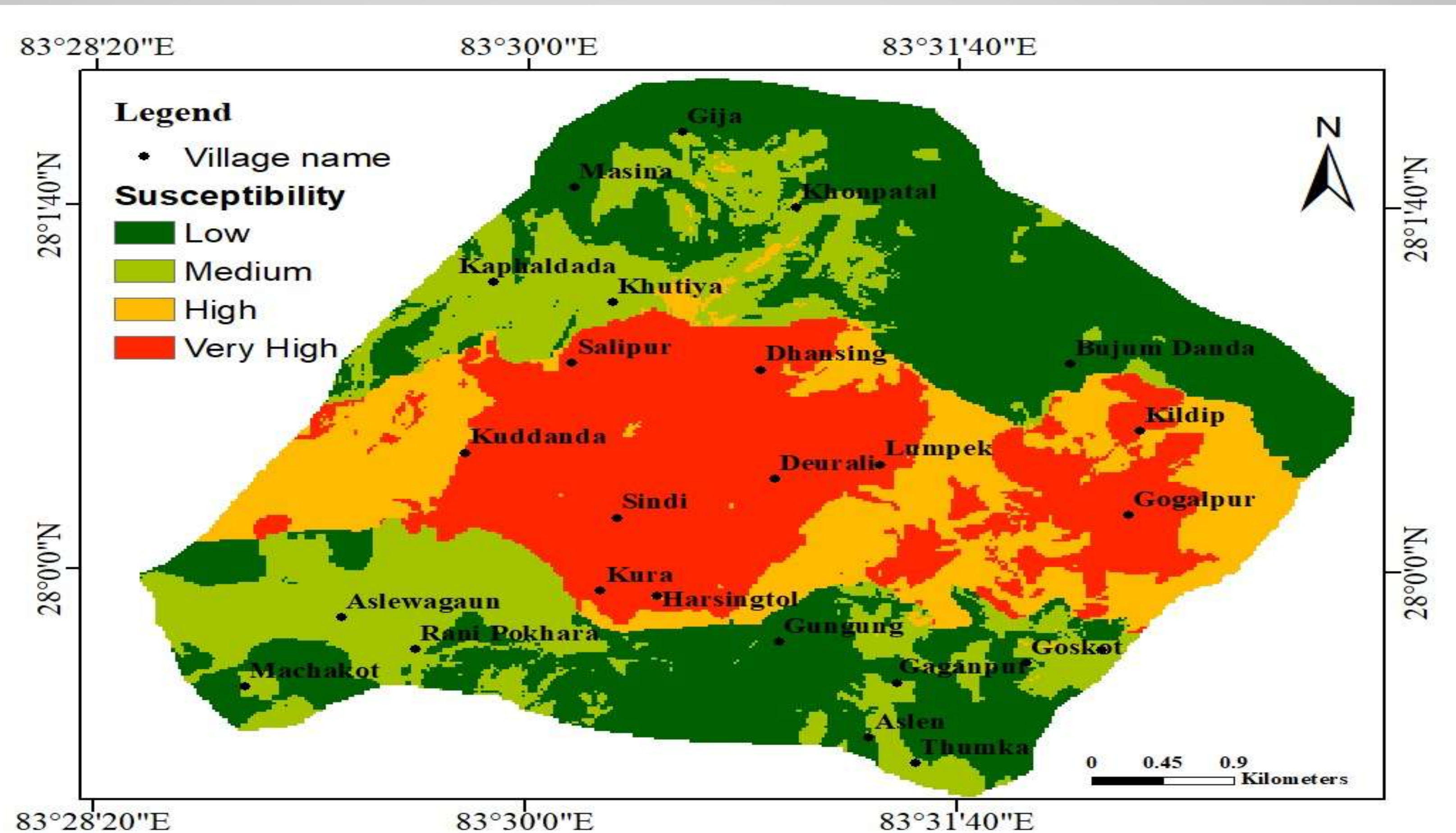


Landslide at Khanigaun, Gorkha

Landslide

- Landslide Inventory mapping of Gandaki Province of Nepal:
 - The result of the study were the compiled database of landslides events from(1971-2021) and their impacts
 - Landslide inventory map were prepared from image interpretation and field verification

- Landslide Inventory mapping of Gulmi was prepared from image interpretation and field verification



Fire

- Fire resistant houses were made and tested and the locals were trained to make their own houses using simple techniques.
- Awareness campaigns were done in fire affected zones of Nepal such as : Surkhet, Mahottari, Dhanusha, Sunsari, Sarlahi, Bara, Parsa, etc.



Lightning

- Awareness and Interaction programs on Lightning protection done in various lightning prone regions of Nepal



Thank You

