

Wednesday, 30 September 2020, (10:30 AM- 12:30 PM {IST})



Chief Guest Prof. Vinod Sharma. Vice-Chairman, SSDMA



Guest Of Honour Mr P N Sherpa, Relief Commissioner & Secretary, L R & D M Dept. Govt. of Sikkim



Prof. Ajit Tyagi, Senior Advisor, IRADe



Prof. Jyoti Parikh Executive Director, IRADe



Dr PLN Raju Director, NESAC

Registration Link:

https://zoom.us/webinar/register/WN foISZkAjQbiRZI18ncKGtg

Webinar Agenda







in





G.B. Pant National Institute of Himalayan Environment'(NIHE)

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Draft Agenda

Stakeholders' Workshop on Developing Disaster Resilience Action Plan for Gangtok

Date: 30th September, 2020

Time	Session Details	
10:30 – 11:00 am	Inaugural Session	
	Welcome Remarks	Prof. Jyoti Parikh, Executive Director, Integrated Research and Action
		for Development (IRADe)
	Opening Remarks	Prof. Ajit Tyagi, Senior Advisor, IRADe
	Special Remarks	Dr P L N Raju, Director, North Eastern Space Applications Centre
		(NESAC)
	Address by the Chief	Prof. Vinod Sharma, Vice-Chairman, Sikkim State Disaster Management
	Guest	Authority (SSDMA)
		Mr P N Sherpa, Relief Commissioner –Cum-Secretary
	Address by the Guest of	Land revenue and Disaster Management Department
	Honour	GOVI. OF SIKKIII
	Address by Special	Dr Shard Sapra, Scientist 'E' and Director, Mountain Division, Ministry
	Guest	of Environment, Forest and Climate Change (MoEFCC), Government of India (TBC)
	Vote of Thanks	Mr Rohit Magotra, Deputy Director, IRADe
11:00am – 12:00	Session on Disaster Resilience Action Plan: Methodology & Project Outputs	
pm		
	Disaster Resilience	Mr Rohit Magotra, Deputy Director, IRADe
	Action Plan: Key	
	Features	
	Hazard and Risk	Dr Diganta Barman, Scientist/Engineer 'SF', NESAC
	Mapping of Gangtok	
	Impact of Urbanization	Dr Rajesh Joshi, Centre Head, G B Pant National Institute of Himalayan
		Environment and Sustainable Development - Sikkim Regional Centre
	on Gangiok City	(GBPNIHESD-SRC)
12:00 - 12:30	Panel Discussion	
pm		
	1	

Time		Session Details
		Moderated by: Prof. Ajit Tyagi, Senior Advisor, IRADe
		Mr Hem Kumar Chettri, Municipal Commissioner, Gangtok Municipal
		Corporation (GMC)
		Mr. Shailendra Pradhan, Chief Executive Office, Gangtok Smart CP
		(TBC)
		Mr. Dhiren Shrestha, Director, Department of Science, Technology and
		CC(TBC)
		Mr Phigu Bhutia, Additional. Director, Sikkim State Disaster
		Management Authority (SSDMA) (TBC)
		Mr. Keshar Luitel, Deputy Director, Department of Mines &
		Geology(TBC)
		Dr. Swain, Director, Geological Survey of India(TBC)
	Panel Discussion	Mr. Dinesh Dhakal, Urban Planner, SSDMA(TBC)
		Ms Sarla Rai, IAS, Secretary, Urban Development and Housing
		Department (UDHD), (TBC)
		Dr Pankaj Saini, Superintending Geologist, GSI-Gangtok (TBC)
		Dr A K Raha, Director, IMD, Gangtok
		Dr Surajit Baruah, Former State Project Manager, UNDP
		Dr Saurabh Baruah, Chief Scientist, CSIR Northeast Institute of Science
		and Technology, Jorhat, Assam
		Mr. Nimish Pandya, All India President, Sri Sathya Sai Seva
		Organisations India (SAI), (TBC)
		Ms Punam Pradhan, President Sikkim, Sri Sathya Sai Seva Organisations
		India (SAI), (TBC)
		Mr Mustafa Ali Khan, Team Leader, SDC (TBC)
	Conclusion & Way	
	Forward	Prof. Ajit Tyagi, Senior Advisor, IRADe

Developing Disaster Resilience Action Plan through GIS and Prioritizing Actions for Natural Disaster Risk Reduction in Urban Agglomerations of Shillong & Gangtok

(A collaborative project of IRADe, NESAC & GBPNIHESD – Sikkim Unit, funded by MoEFCC, Govt. of India under National Mission on Himalayan Studies Programme)

Introduction

This project aims to provide decision-supporting tools for disaster risk reduction for North East regional cities, which includes development of maps for micro zonation of hazard risks, and develop action plan for developing disaster resilience of the identified cities. The specific objectives and the expected outputs of the project are:

Geographical coverage: Gangtok & Shillong

Project Objectives

1. To develop maps at the scale of 1:4000 and map the hazard/disaster wise vulnerable zones of the Gangtok urban agglomerations.

To identify and map critical infrastructure at risk through ground surveys – telecommunication, emergency operation centres, shelter, slums, hospitals, schools etc. on cadastral maps of 1:4000.
To develop a disaster resilience action plan for the identified cities and prioritise actions for disaster risk reduction through multi-stakeholder consultations involving citizens, government, public and private sector.

4. To spread awareness and capacity building of citizens, city, district and state authorities on disaster resilience of Gangtok

Expected outputs

- Land use/land cover maps of Gangtok at scale 1:4000.
- Disaster wise vulnerable zone maps of Gangtok.
- Vulnerability assessment of Gangtok to natural disasters.
- Critical infrastructure risk mapping of Gangtok.
- Disaster resilience plans for Gangtok.
- Capacity building of city, district and state authorities on disaster resilience.

Project Proponent:





Consortium Partners:

NESAC



Project Approach:



Fig.1 Project Approach







Consortium Partners:



Project Methodology

One of the key objectives of the study is vulnerability profiling of Gangtok by highlighting various risk exposure and vulnerability factors on the scale of 1:4000 for assessing disaster resilience and adaptive capacity. In order to achieve this, we have prepared Geo-database at 1:4000 scale which has two components:

- 1. Land Use and Land Cover Mapping
- 2. Hazard Risk Mapping & Vulnerable Zone Identification

Preliminary results:



Map 1 a: Flash Flood Map



Map 1 c: Earthquake Map

Maps prepared on a scale of 1:4000			
Flash Flood	High concentration of flash flood in the area of Ranipool (ward no.16), Daragaon		
(Map 1 a)	(ward no.14), Tadong (ward no. 15) and some part of Lower Sichey II (Ward no.		
	4).		
Landslides	The areas of Upper Burtuk (ward no.1), Chandmari (ward no.6) and parts of		
(Map 1 b)	Syari (ward no.17) are highly prone to Landslides. Meanwhile beyond the		
	municipal area some parts of the agglomeration are also showing vulnerability to		
	landslides.		
Earthquakes	Majority of central part of Gangtok municipal area, comprising of Arithang (Ward		
(Map 1 c)	Number 9), Deorali (Ward Number 13), and Upper Sichey (Ward number 5) are		
	showing high vulnerability to earthquakes. (Figure 3-c)		

Project Proponent:











Stakeholder workshop on 6 February 2018, "Developing Disaster Resilience Action Plan through GIS and Prioritizing Actions for Natural Disaster Risk Reduction" at the Sikkim Regional Centre, Summit Denzong, Gangtok; organized by IRADe in collaboration with NESAC Meghalaya and GBPNIHESD

Contact Details

Principal Investigator: Prof. Ajit Tyagi, Senior Advisor, IRADe Co- Principal Investigator: Mr. Rohit Magotra, Deputy Director, IRADe

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Project Proponent:



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GBPNIHESD



Developing Disaster Resilience Action Plan through GIS & Prioritising Actions for Natural Disaster Risk Reduction Shillong & Gangtok

Project Proponent:







Supported by:







Consortium Partners:





BACKGROUND

Himalayan cities are particularly vulnerable to disasters and extreme events like earthquakes, landslides, flash floods, thunderstorms and cold waves. The magnitude of hazards and extreme events in the region may vary depending on the risk exposure of the city.

Physical risks and vulnerabilities in the Himalayan cities are often accompanied by difficult terrain, lack of necessary resources – financial, human and institutional – as well as lack of access to relevant scientific information on the coping mechanism. This necessitates a thrust on improving the knowledge base and adaptive capacity of the cities by integrating disaster risk reduction measures in the urban planning.

In addition, rapid urbanization and climate change could exacerbate environmental stress in the region. Thus, there is a need to collect and review evidence to assess the vulnerability and likely impact of disasters in the region. IRADe with support from Ministry of Environment, Forests & Climate Change (MoEFCC) under National Mission on Himalayan Studies (NMHS) aims to develop Disaster Resilience Action Plans for Shillong and Gangtok cities.

AIM

To provide decision-supporting tools for disaster risk reduction in the urban areas of the North East Region. It includes development of cadastral maps for micro zonation of hazard and action plan for disaster resilience for Shillong & Gangtok.

OBJECTIVES

- Develop cadastral maps at the scale of 1:4000 and map hazard/ risk wise vulnerable zones of Shillong and Gangtok urban agglomerations.
- Conduct ground survey to Identify and map critical infrastructure – telecommunication installations, emergency operation centers, shelter homes, slums, hospitals & schools,
- Develop disaster resilience action plan for the identified cities and prioritize actions for disaster risk reduction through multistakeholder consultations involving citizens, government, public and private sector.
- Spread awareness and raise capacity of the citizens as well as city, district and state authorities.

PARTNERS

The research is led by Integrated Research and Action for Development (IRADe), a leading research institute and think tank with consortium members including North-Eastern Space Applications Centre (NESAC), Meghalaya and Institute G.B. Pant National Institute of Himalayan Environment & Sustainable Development, (GBPNIHESD), Almora.



EXPECTED OUTPUTS

- Land use/land cover maps for Shillong & Gangtok cities at cadastral scale 1:4000.
- Hazard wise vulnerable zone maps of the cities.
- Vulnerability assessment of Shillong & Gangtok cities to natural disasters.
- Critical infrastructure risk mapping for the cities.
- Disaster resilience plans for the Shillong & Gangtok.
- Capacity building of city, district and state authorities on disaster resilience.

OUTCOMES

The outcomes of the project will help in developing policies for reducing the risk of losses in the events of natural disasters in the two cities.

- Generate awareness amongst stakeholders such as policy makers, state government, local governing bodies, government departments,NGOs, communities/citizens about the disaster risk reduction to reduce losses.
- Address lack of coordination and bring all stakeholders to one platform, leveraging IRADe's experience, expertise and strong local network.
- Craft and prioritize city-specific actions for disaster risk reduction.
- The project will lead to capacity building of the local mountain communities in disaster risk reduction by imparting them the necessary knowledge and information through social networking and public participation in workshops.

For more details please check the web-link: irade.org/cce-drap.htm

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