Concept Note

For

Webinar

On

Geospatial Techniques for Flood Risk Management

Dated: 07th September, 2021

15:00-17:00 Hours

Gujarat Institute of Disaster Management
B/H, PDPU, Koba-Gandhinagar Highway,
Village-Raisan, District Gandhinagar
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1. INTRODUCTION

Flood risk management is one of the biggest challenges facing risk and asset managers today. Due to the limited understanding of the factors that determine the likelihood of these events, disaster risk is inherently challenging to model. It requires better understanding across forecast, prevention, mitigation, and recovery planning phases.

Existing hydrological models and complex GIS are traditional methods of identifying any meteorological hazard using geospatial data. Though considered powerful tools for flood risk assessment, these models are difficult to implement, understand and maintain. Additionally, these solutions require many tools, have an exorbitant cost of acquiring or building a multipurpose geospatial structure, and are difficult to deploy on a broader scale.

As an alternative, open and lightweight tools have emerged with the development of remote sensing and the availability of high-quality geospatial data. Computing power has become cheaper as well. Newer processors and graphics units come equipped with higher horsepower and algorithms that are more efficient.

Leveraging these improvements, this webinar aims to develop a capacity on analysis framework built on open-source technologies to assess the flood risk in an area using geographic analysis and freely available remote sensing and precipitation data.

2. AIMS & OBJECTIVES

The webinar is designed with the following objectives in the field of Geospatial Risk Identification, Mitigation and Management of Floods: -

- To build capacities of govt. sector for identification of flood risk management using geospatial technology.
- Geospatial Flood Early Warning system using Multispectral Satellite Imagery.
- Geospatial Decision Support System for flood Early Warning of Flood Hazard.
- Leveraging Geospatial Technology in Response and Recovery.

The main aim of this webinar is to build capacities to use Geospatial Techniques to manage Risks associated with Flood Hazard.

3. NEED OF THE WEBINAR

Flood – one of the most destructive disasters affecting nearly everyone across the globe. Climate change has increased the frequency of floods, even in areas that may have never seen

one before. An efficient early warning mechanism will enable better measures to prevent large-scale loss of lives and property.

To predict flood risk in India, one must first identify the most flood-prone areas. Looking at the natural features that affect flooding, such as rivers, mountains, and swamps, is the best way to start. Then, using satellite images taken before the disaster, one can assess which areas are most likely to be affected by flooding. This method will help gather more information about disaster risks in specific areas of India, which can be used to plan appropriate flood prevention and management measures to save lives.

4. METHODOLOGY

- Power point presentation on Google Meet platform
- Language to be used: Hindi/ Gujarati
- Question/ Answer
- Interaction and Experience Sharing
- Reading material (Soft Copy only)
- Presentations (Soft copy only)
- Flip Charts

5. TARGET AUDIENCE

First webinar in this series is proposed on 07th September, 2021 for following target audience

Sr. No.	Name of Departments/ Authorities/ Boards/ Corporations	Officials/ Engineers	Level of officials
1.	Municipal Corporations	Deputy Engineer, Assistant Engineer, Executive Engineer	L1 and L2
2.	Town Planning and valuation Department	Town Planner, Junior Town Planner, Deputy Engineer, Assistant Engineer, Executive Engineer	L1 and L2
3.	Gujarat Urban Development Authority	Deputy Engineer, Assistant Engineer, Executive Engineer	L1 and L2
4.	Roads and Building Department	Deputy Engineer, Assistant Engineer, Executive Engineer	L1 and L2
5.	Narmada Water Resources, Water Supply and Kalpsar Department	Deputy Engineer, Assistant Engineer, Executive Engineer	L1 and L2
6.	District Administration	District Mamlatdars	