

WEBINAR
On
FLOOD RISK MANAGEMENT
&
EARLY WARNING SYSTEMS

Dated: 25th March, 2021

03:00- 05:00 PM



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

Human beings have been at the mercy of natural disasters since the beginning of time. Floods, fires, earthquakes and tremors, mudslides, volcanic eruptions, hurricanes, tornadoes, tsunami, tropical storms, ice storms, landslides, droughts and famine consistently remind us of how vulnerable we are.

Disasters occurring at present are much more in magnitude and frequent as compared to earlier times. Also, the specific characteristics of every event prohibit us to take one size fit all approach.

Although disasters cannot be prevented completely and there will remain some residual risks, however, their impact can be reduced with better DRR strategies and capacity building activities aided by latest technological development. Failure of levees and dams and inadequate drainage in urban areas can also result in flooding. Although loss of life to floods during the past half-century has declined, mostly because of improved warning systems, economic losses have continued to rise due to increased urbanization and development.

This capacity building activity has been designed in accordance with Sendai Framework for Disaster Risk Reduction (SFDRR) priority action no. 2 and PM's 10-point agenda and the need of the major stake holders involved in various phases of DRM cycle namely Mitigation, Preparedness, Response, Recovery and Rehabilitation.

2. AIM & OBJECTIVES

The webinar is designed with the following objectives in the field of Flood Risk Early Warning are as follows:-

1. Discuss various Geospatial Technologies in Flood Early Warning Systems in the state,
2. Discuss ways to strengthen the existing system and effective dissemination of early warnings
3. Strengthen efforts to mainstream DRR into water management/ developmental projects and reduce the likely impacts of floods in the state.
4. Discussion on lessons learnt from the best practices that have been implemented in the state: Vadodara Floods in 2019

The main aim of this webinar is to enhance synergy between the engineers, scientists and administrative officials in order to inculcate the culture of imbibing technologies for better preparedness and reduce potential risks.

3. FLOOD PROFILE OF THE STATE

The climatology of Gujarat is influenced by the Arabian Sea in the West and three hill ranges along its Eastern border. A long coastline makes parts of arid Saurashtra and Kutch occasionally experience very high rainfall. These occasional heavy rainstorms are responsible for most of the floods in the State. While the Northern part of the State is mostly arid and semi-arid, the Southern part is humid to sub-humid. Extremes of climate, be it rainfall or temperatures are quite common in this region. All major rivers in the State pass through a wide stretch of the very flat terrain before reaching the sea. These flat lowlands of lower river basins are prone to flooding. Cities like Ahmedabad, Surat and Bharuch are located on the flat alluvial plains of large rivers.

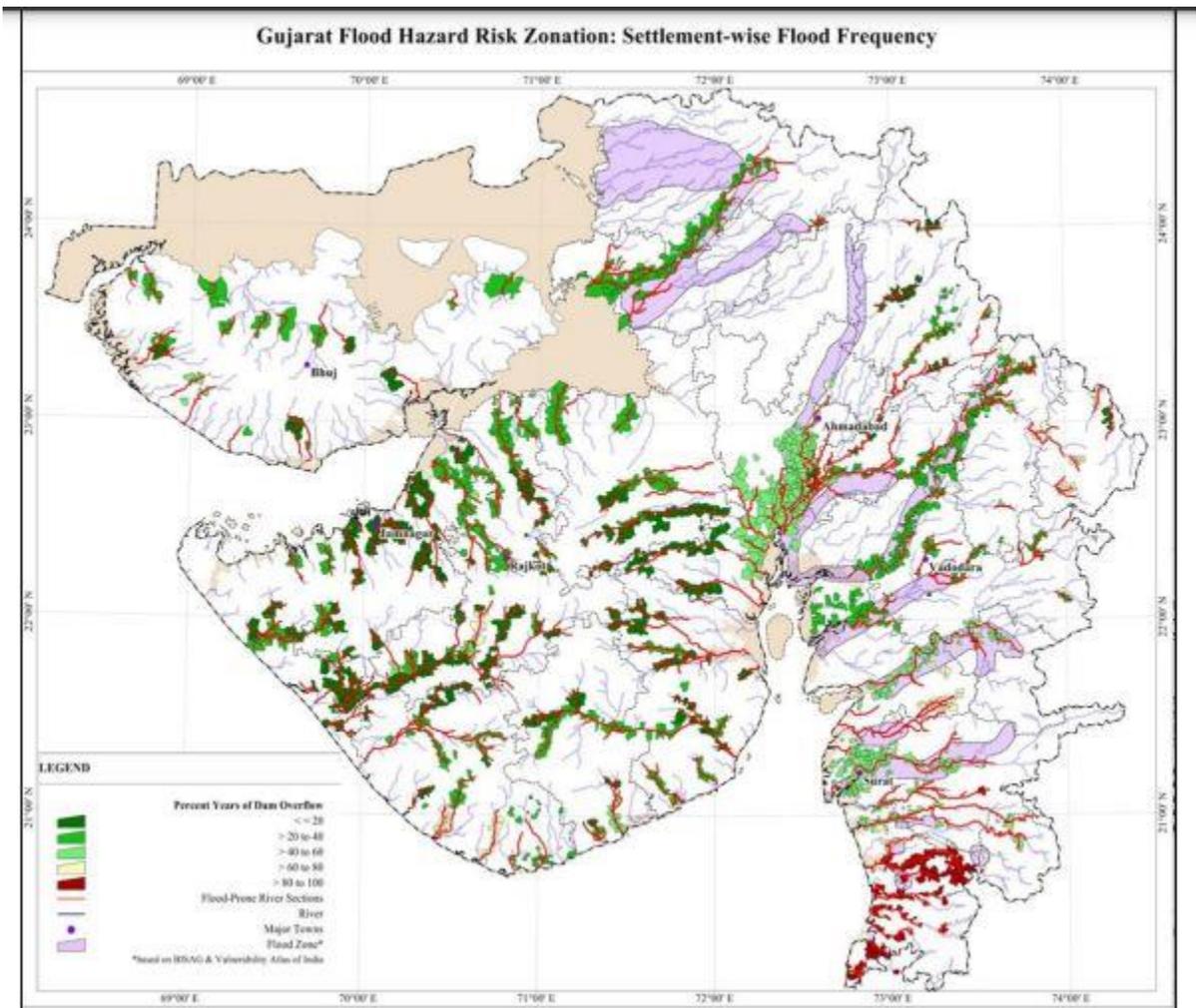


Figure 1: Flood Profile of Gujarat State

Concentrated runoff resulted by heavy rainfall cause flash floods in the small river basin of Saurashtra and Kutch because of their fairly impervious catchments (rocky or black cotton soils) and steep sloping upper catchments. The flood prone river sections were identified from settlement level analysis. Flood prone river sections in Saurashtra extend to the upper basins due to the presence of dams which have to resort to emergency discharge during heavy rainstorms. Even small valleys in Saurashtra are used for agriculture. Hence flooding in these zones impacts both residents and settlements. Figure 2.5 shows the majority of the area of Gujarat is flood prone, irrespective of the size of the catchment. The flood risk in Saurashtra is lower than that of the South Gujarat plains. The relatively flat plains in the lower basic areas with hilly catchments in upper parts of South Gujarat accentuate flood risks. Few villages in the North Gujarat are flood prone too.

4. METHODOLOGY

- Power point presentation on Google Meet/ Classroom 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. Expected Participants

Third webinar in this series is proposed on 25th March, 2021 for Narmada and Water Resources, Water Supply and Kalpsar Department, Govt. of Gujarat in which Superintending Engineers, Executive Engineers, Assistant Engineers, Junior Engineers and Mamlatdars/ Dy. Mamlatdars/ Talatis along with relevant officials from the districts are the stakeholders whose capacities need to be strengthened through this webinar.
