Virtual Class Room Based Training Program on Flood Early Warning System in India/Gujarat

(Through Zoom Platform)

Date: 10th July, 2025 Time: (15:00 to 17:00 Hrs.)

Concept Note:

India has a flood early warning system that works at national, state, and district levels to reduce the impact of floods by giving advance alerts. At the national level, the Central Water Commission (CWC) keeps a watch on river levels and gives flood forecasts based on real-time river data, weather updates from the India Meteorological Department (IMD), and satellite images from national space agencies. These forecasts are shared 3 to 5 days in advance. The National Disaster Management Authority (NDMA) helps in making sure these alerts reach the right people, while the Ministry of Home Affairs monitors the situation and supports the coordination among different agencies.

In Gujarat, the flood early warning system is managed by the Gujarat State Disaster Management Authority (GSDMA), along with the State Emergency Operations Centre (SEOC), Irrigation Department, and district offices. Gujarat is often affected by floods because of major rivers like Narmada, Tapi, Sabarmati, and also because of heavy rains in urban areas and the Kutch region. The state collects real-time data from weather stations, river gauges, and rain sensors to predict flood situations. This information is studied using computer models to identify areas that may be at risk.

Once a risk is identified, warnings are shared quickly through multiple ways—such as SMS, WhatsApp groups, loudspeakers, TV, radio, and social media. These alerts use colour codes—green, yellow, orange, and red—to show how serious the flood threat is. The messages also tell people what action they should take. At the village level, trained volunteers, local officials, and school safety teams help to spread the message and guide people. Regular drills are held to prepare the community and build trust in the warning system.

Gujarat also keeps a close watch on large dams like Sardar Sarovar, Ukai, Kadana, and Dharoi. These dams help manage floods by holding or releasing water in a planned way. Water release is

based on weather forecasts, rainfall, and river flow levels. Before releasing water, alerts are sent to the villages and towns that might get affected. Cities like Ahmedabad, Vadodara, Surat, and Rajkot have special systems to handle urban flooding. Surat, for example, has a system that connects flood warnings to dam operations on the Tapi River. This helps the city avoid sudden floods during heavy rains.

The state uses modern technology to make the flood warning system stronger. It uses satellite maps, drones, mobile apps, and computer dashboards that show real-time rain and river data. This helps officials make quick decisions. Information is shared smoothly between different departments like police, health, water, and transport. These tools also help in planning rescue efforts and moving people to safe places before the flood water arrives.

Gujarat's flood early warning system is strong because it uses both technology and community support. It focuses on saving lives by giving timely information and preparing people to act. However, to keep improving, the system needs regular updates, training, and stronger local networks. With clear planning, quick alerts, and good teamwork between government and communities, Gujarat is constantly improving to face flood disasters and reduce their impact on people and property.

Flood Early Warning System in India/Gujarat is to educate the participants about the Preparedness and early warning mechanism in Gujarat.

Objectives:

- Understand real-time flood data and forecasts.
- Learn how to share timely flood alerts.
- Improve coordination among departments.
- Use technology and community support for flood response.

These all concepts, mechanisms, and practices going on in Gujarat will be discussed in detail in this training program. The training sessions will be delivered in Hindi/Gujarati and English.