

1. Urban Flood Monitoring

An integrated Urban Flood Model for Bangalore City (UFM) is being developed by Karnataka State Natural Disaster Monitoring Centre (KSNDMC) in collaboration with the Indian Institute of Science (IISc) Bangalore to manage floods in the city. An efficient forecast system with a well-established network of 100 Telemetric Rain gauge Sensors and 12 Telemetric Weather Stations with integrated two-dimensional flood model, along with 26 Water Level Sensors (105 WLS Proposed), provides information on the spread of the floodwater (vis-à-vis flood inundation).

An automated information dissemination Web Portal www.varunamitra.karnataka.gov.in and a Mobile app named Bengaluru Meghasandesha (BMS), has been developed to disseminate relevant information to stakeholders.

Bengaluru MeghaSandesh Mobile App

KSNDMC has been providing rainfall and flood forecast and early warning to the mobile phones of Government Agencies in the City through SMS, through Social Media Platforms, and a dedicated web portal. The information thus provided by KSNDMC has been of great help for the civic authorities in Bengaluru to take necessary action and effectively manage the floods in the city. To help the public and make them aware of the location-specific real-time weather and also near realtime and forecast weather parameters to plan the routine activities and to implement flood impact reduction activities.

The objective is to disseminate the rainfall and flood forecast location-specific dynamic weather information directly to the public, KSNDMC has developed a mobile Application, "Bengaluru Megha Sandesha" (BMS), as a product of the UFM (Urban Flood Modelling for Bangalore city) project.

The major Modules in the App includes "Live Weather", "Forecast", and "Safe Route."

- The "Nowcast Map: Lightning, Thunderstorm, Rainfall" connects to the "SIDILU" app, which provides a location-specific dynamic alert on Thunderstorms and lightning with three buffer rings (1km, 5kms, and 15kms). It indicates a possible lightning activity in that location in the next 30-45 minutes.
- The "Live rainfall map" tab gives the details about the ongoing rainfall event
- The "Live inundation map" tab provides real-time flood conditions in and around a specific location.
- The 'About' tab provides technical guidance for using different features of the App.
- The 'Safety tips' for the users has been given in the form of dos and don'ts during rainfall and flood events

- The "Emergency" icon will enable the people to connect to the BBMP Emergency control room during flood / extreme rain events.

The information provided through Bengaluru Megha Sandesha is based on real-time data received from 100 Telemetric Rain Gauges (TRG), 12 Telemetric Weather Sensors (TWS) and Water level sensors installed and maintained by KSNDMC in the city.