

Report on Capacity Building Program for Flood Control Cell, Gandhinagar

Topic: GeoSpatial Intelligence: Hands on Training with GEE & QGIS

Date: 30th June 2025

Time: 11.00 AM - 5.00 PM

Venue: Lab 330, GTU SET, Chandkheda, Ahmedabad

Event Summary

The Civil Engineering Department, School of Engineering and Technology, Gujarat Technological University, organized a one-day Capacity Building Program on “GeoSpatial Intelligence: Hands-on Training with Google Earth Engine (GEE) & QGIS” on 30th June 2025. The training program was designed exclusively for the engineers of the Flood Control Cell, Gandhinagar, including Executive and Deputy Executive Engineers from Sardar Sarovar Narmada Nigam Ltd & Kalpsar Department of Government of Gujarat.

The objective of the program was to equip participants with advanced geospatial tools and techniques, focusing on remote sensing applications, satellite data interpretation, and visualization through open-source platforms like QGIS and cloud computing-based Google Earth Engine (GEE).

In the first technical session, Dr. Pranavkumar Bhangaonkar, Principal, Neotech Faculty of Diploma Engineering, delivered hands-on training on:

- Integration of Web Map Services (WMS) from Bhuvan portal with QGIS.
- Application of QGIS in Land Use Land Cover (LULC) mapping.
- Use of Thematic Layers from Bhuvan portal for practical field applications.

In the next 2 technical sessions, Prof. Mridul Seth, Assistant Professor, GTU-SET, conducted comprehensive sessions covering:

- Overview of Google Earth Engine (GEE) and available satellite datasets.
- GEE user interface and basic JavaScript programming for geospatial analysis.
- Image Collection and Feature Collection handling in GEE.
- Use of key functions like clip, mosaic, variables, and exporting/importing data.
- Image analysis techniques for interpreting Earth Observation features.

The event was attended by 25 officers from Flood Control Cell, Gnadhinagar. The event was coordinated by Prof. Mridul Seth and Prof. Rasik Makwana, Assistant Professors, GTU-SET, under the guidance of Dr. Jignesh Amin, Professor, GTU-SET, and Dr. K. N. Kher, Registrar, GTU. The event was organized with the vision and support of Dr. Rajul Gajjar, Hon'ble Vice Chancellor, GTU.

Glimpses of Event

