

MAPO-MITE

Introduction:

Dakshina Kannada (formerly South Canara) is a district of Karnataka state in India with an area of 4866 Sq. K. M., with its headquarters in the port city of Mangalore. The district covers an area nestled in between the lush green Western Ghats to its east and the Arabian Sea to its west. Dakshina Kannada receives abundant rainfall during the Indian monsoon on an average annual rainfall in Dakshina Kannada is 4,030 mm.

ISRO data used:

Wetlands are mapped and a detailed inventory prepared using recent BHUVAN Resourcesat-1/Resourcesat-2 LISS-III Satellite Data of Dakshina Kannada District.

Specific steps in GIS:

- ❖ **Software used: QGIS (Open Source)**
- ❖ **Methodology involved during the process of Map**

- Satellite data downloaded from BHUVAN using Lat/Lang of the study area.
- Retained the existed projection and displayed in the QGIS through Add Map option.
- Downloaded district boundary from Mapathon provided link – displayed through Add layer option, then selected my district as area of interest – given export as selected feature.
- Created polygon layer to extract larger water body of the district through create layer, then to enter attribute given add field as text – Extracted water body using Band 4 and Band 5 (overlaid one over other)
- Drainages are extracted using line vector layer – Later smaller water bodies are demarcated by using point vector layer.
- Locations are marked using Google Earth, then exported file in the “kmz” format – displayed on the QGIS selected as “kmz” file.
- Finally, topology checker, check validity, fix geometries and add geometry attributes is done to maintain quality.

Complexities, if any involved:

Not much complexity faced except satellite image format as given Band wise separately – if FCC of RGB could have been better to interpret the raster data for more precise interpretation.

Application and use of these maps:

- In the present scenario conservation of and preserve the water resources of the world is one of the serious objectives for scientists, planners, sociologists, politicians and economists.
- Apart from their ecological significance, the high altitude wetlands play crucial role in biodiversity, wild life habitat and socio-economic aspects as well as climate change perspective.

Team Name: MAPO-MITE

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