**Methodology**

Data: Land Use Land Cover (250K)

(<https://bhuvan-app1.nrsc.gov.in/thematic/thematic/index.php>)

Time/ Year: 2005-06 and 2017-18

Season: Annual

Area: Kamrup District, Assam

**GIS Steps**

The present analysis was carried out using the BHUVAN WebService i.e. the WMS (Web Map Service) and plotted on QGIS version 3.16 browser.

* The desired data was selected in the Bhuvan- Thematic service window of the Bhuvan portal
* From the WebServices tab, the Web Map Service (WMS) URL was copied (<https://bhuvan-ras2.nrsc.gov.in/cgi-bin/LULC250K.exe>)
* The copied WMS URL is feeded into the QGIS WMS/WMTS window and once connected the required Land Use land Cover data is selected for display in the Layer panel.
* The Kamrup district polygon boundary is accessed from the Mapathon Resource database and accordingly overlaid on the Land Use Land Cover layer in the QGIS platform.
* The area of interest i.e. the Land Use Land Cover of the Kamrup district is extracted for both 2005-06 and 2017-18 year respectively.
* Subsequently, the maps for both the years are plotted on a single layout for visual comparison.
* Necessary map details including North arrow, scale, legend and co-ordinates were added to the final map.

**Application of the map**

The Land Use Land Cover (LULC) maps are very critical as they help in understanding the physio-cultural characteristics of a particular area. Such data when analysed at a temporal scale provide a wider scope to visualise the change that has been experienced by the area in terms of its physical and cultural context. The Land Use Land Cover map of Kamrup district, Assam for two periods i.e 2005-06 and 2017-18 helps in understanding the trend of change undergone by the as many as 18 identified LULC classes. This map seeks its potentiality in the sense that it provides the user to understand the pattern of change functioning in the area over a period of 12 years. A social and geo-scientist could, therefore, look into the underlying process behind such trend of change and accordingly can help to maintain a sustainable growth in the region.

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