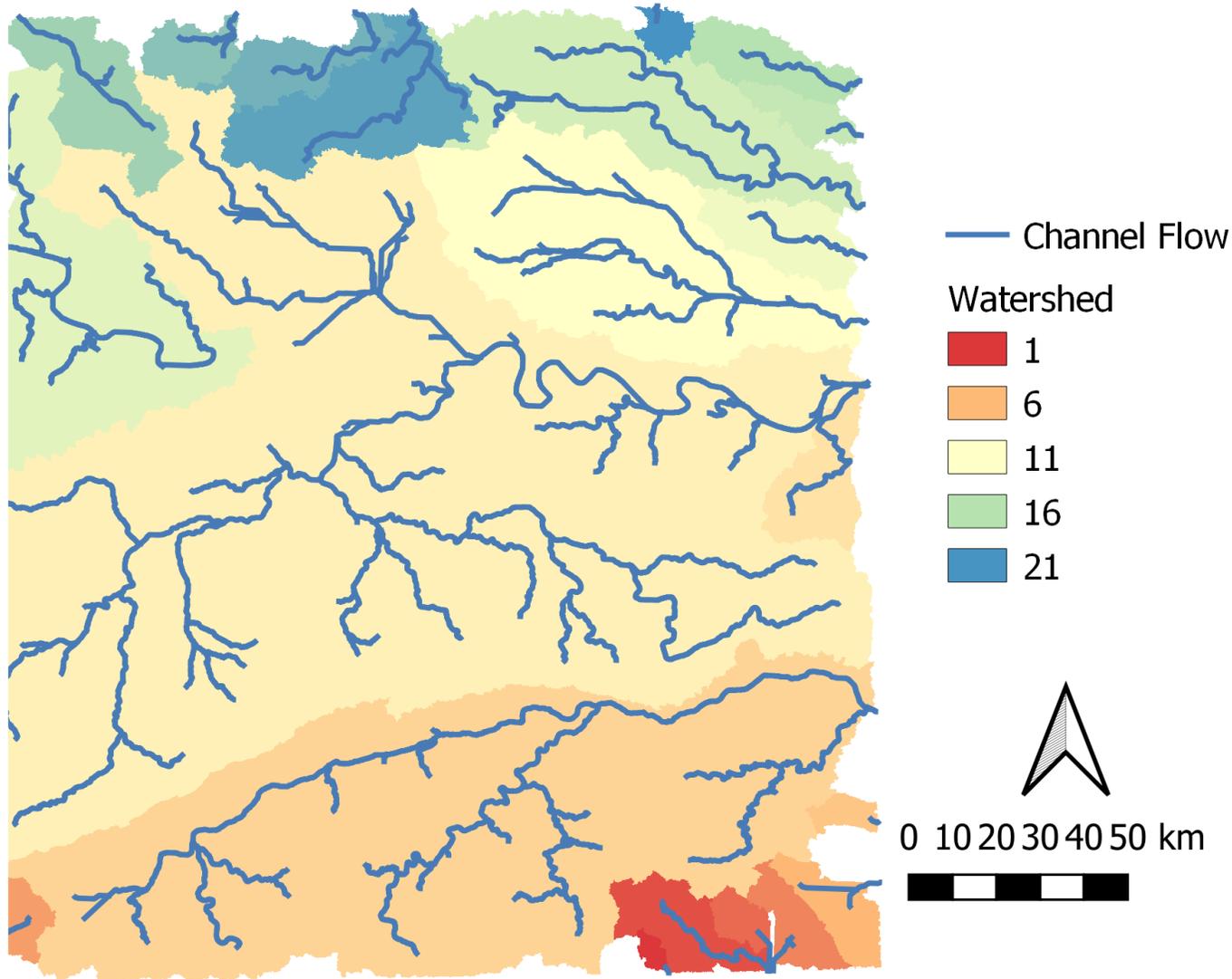


Watershed Mapping Map of Prayagraj Region

Map description and analysis



Map description

The watershed map is of Prayagraj region which consists of two main rivers Ganga and Yamuna as streamline. Analysis

The main aim of watershed management is to conserve the soil, plant, and water resources of a catchment while benefiting humanity. All environmental, social, and economic concerns are combined to treat watersheds in an integrated manner. It emphasises scientific soil and water conservation in order to increase the biomass production.

Advantages:

- (i) The main aim is to develop primary resources of land and water.
- (ii) To produce secondary resources of plants and animals for use in a manner which will ecological imbalance.

Methodology-

1. First 4 DEM tiles were taken and merged in QGIS.
2. Then, PRS was set at WGS 84/ UTM Zone 43N
3. Then the fill operator from SAGA is used to fill up the depression in the image.
4. After that, Strahler Order from SAGA is used to get river network frames
5. To get only main streams from the Strahler order Raster Calculation was used.

Strahler Order ≥ 9

6. Using the terrain analysis of the SAGA the catchment area was found and the watershed map of the region was mapped.

Team name- Vikings

Topic- Watershed analysis

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Data Preparation- (ISRO Data)

1. Cartosat 8 Dem data of Prayagraj is taken from <https://bhuvan.nrsc.gov.in/>
2. Prayagraj Shapefile Taken from <http://data.gov.in/>