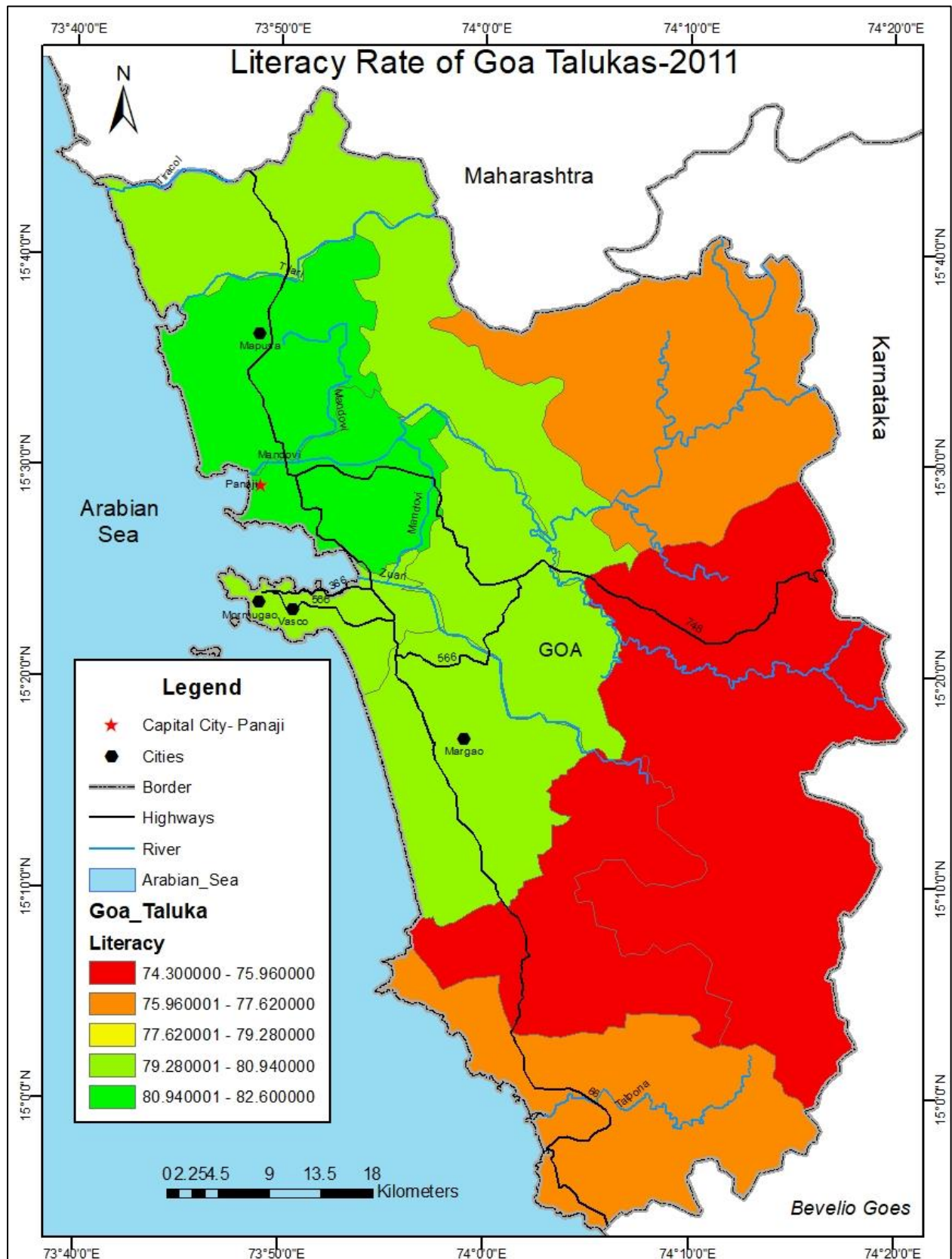


The below illustrations are exercises conducted as part of the Masters Course pursued by me. The majority of the study area is that of my native Goa; which is a state of the country India. One Geocoding example is that of Atlanta City illustrating the retail stores within it.

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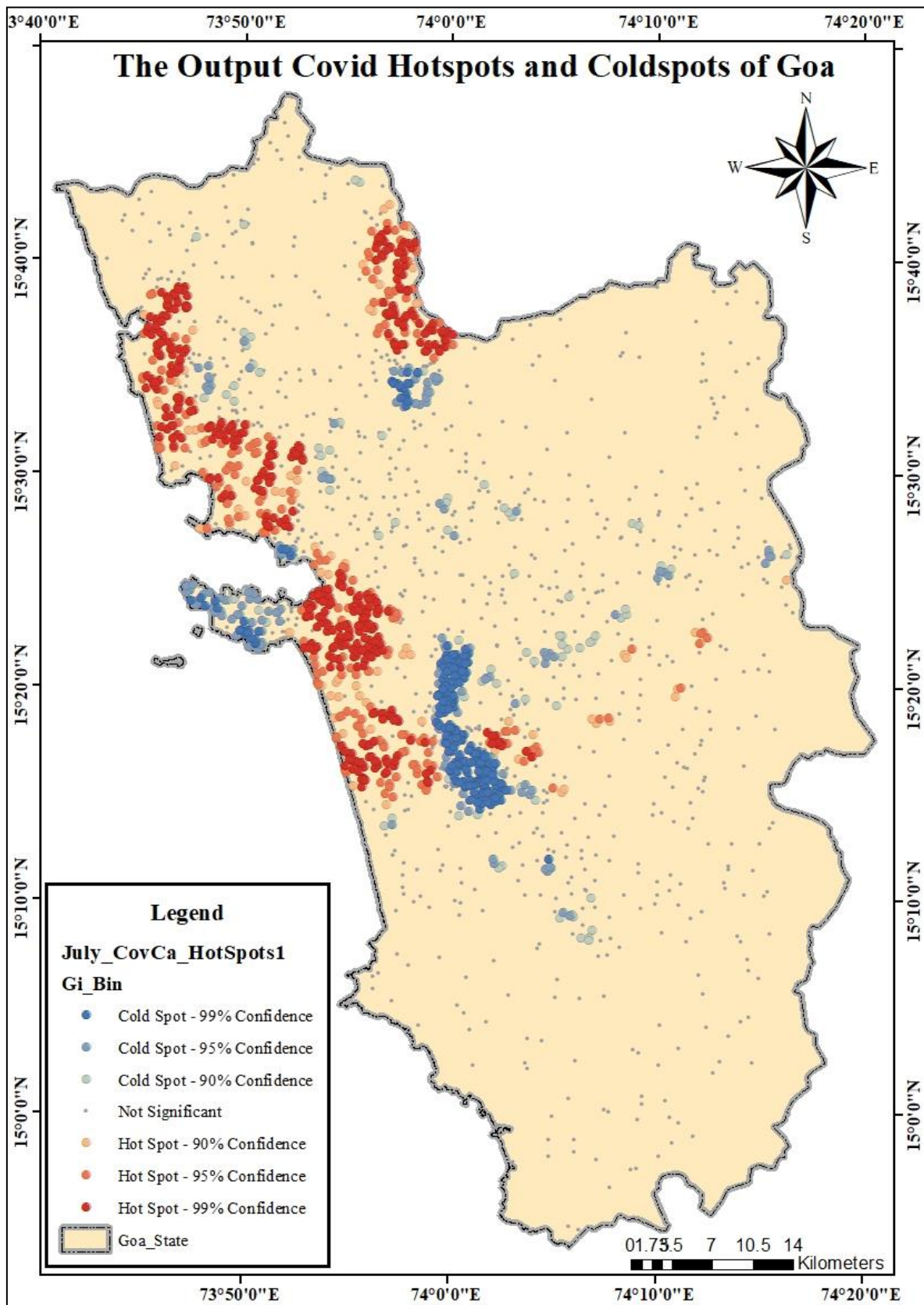
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01. Choropleth Map depicting the Taluka-wise literacy rate within the State of Goa

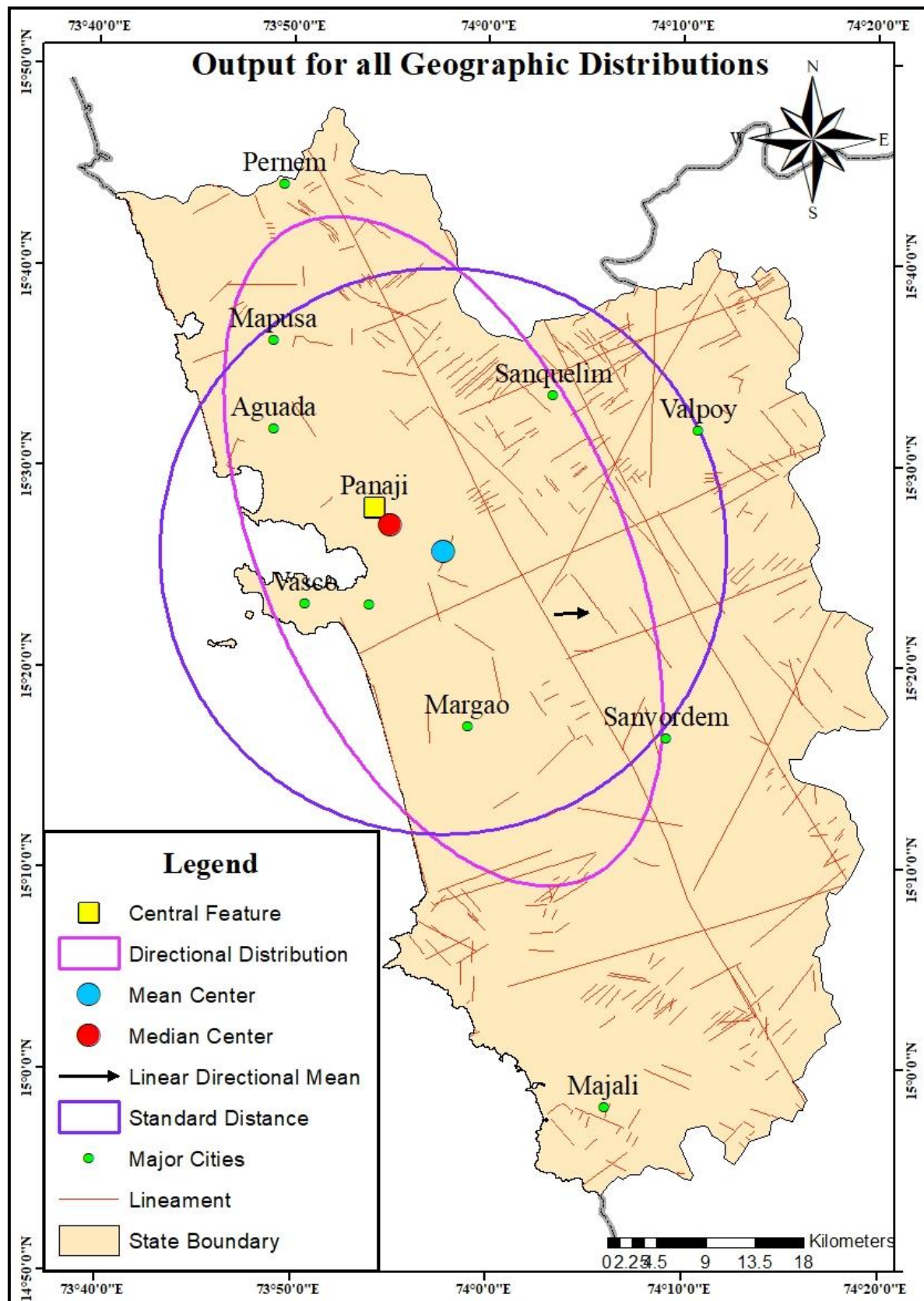


02. Determination of COVID-19 Hotspots within Goa

This data is as of 8th July 2021

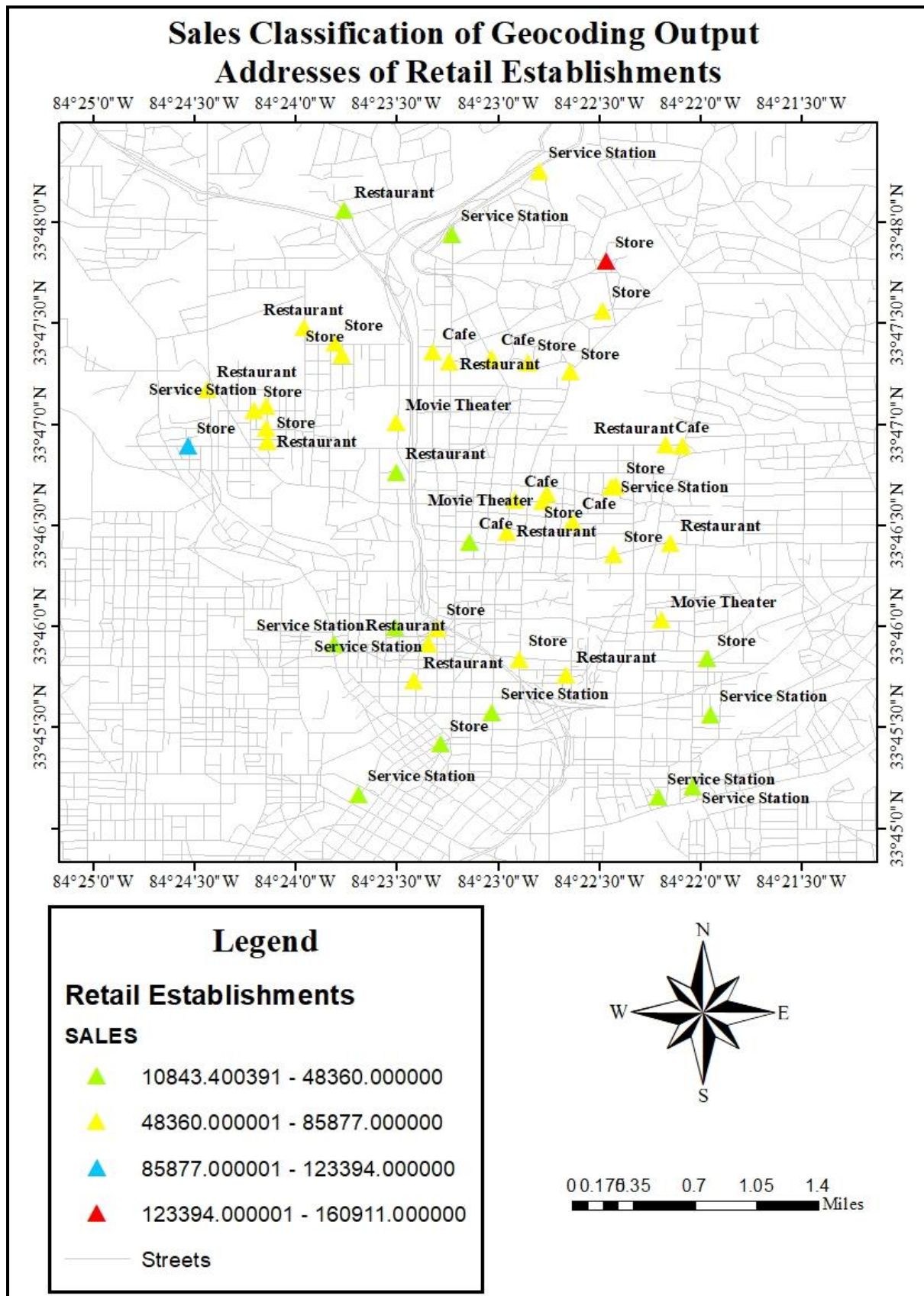


03. Statistically using Geographical distribution on Feature Classes (Major Cities & Lineaments) within Goa

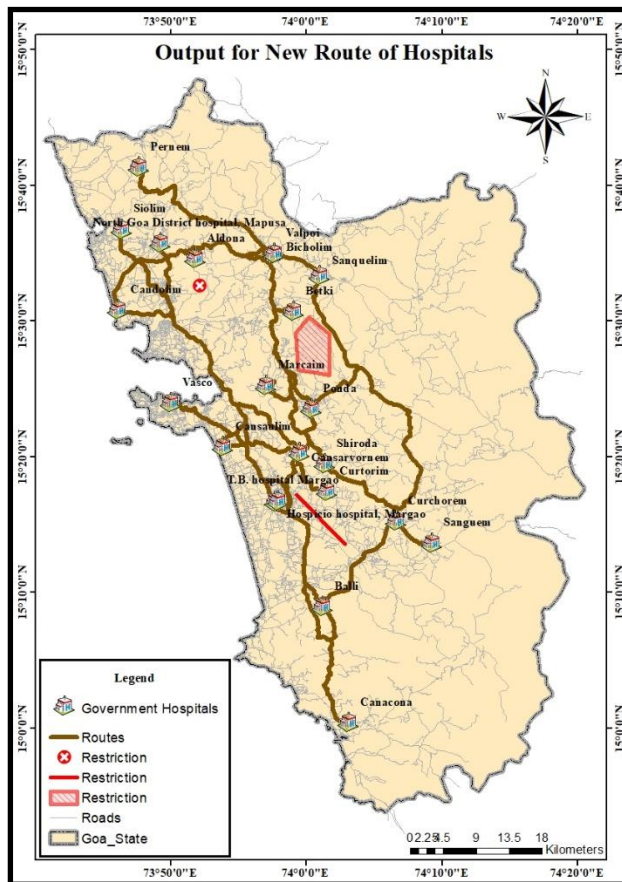


04. Geocoding addresses of Retail Stores in ArcGIS for Atlanta City

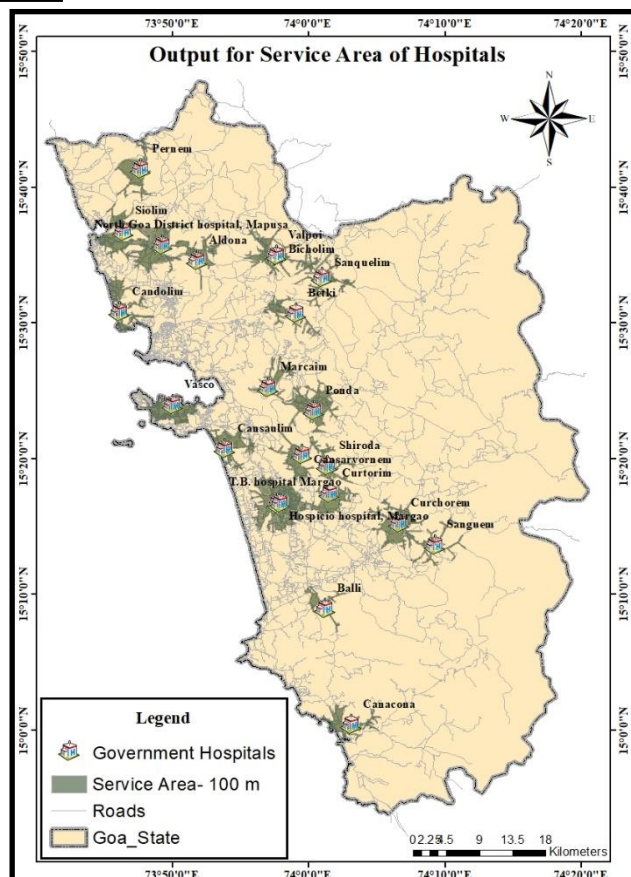
The Stores are classified based on sales



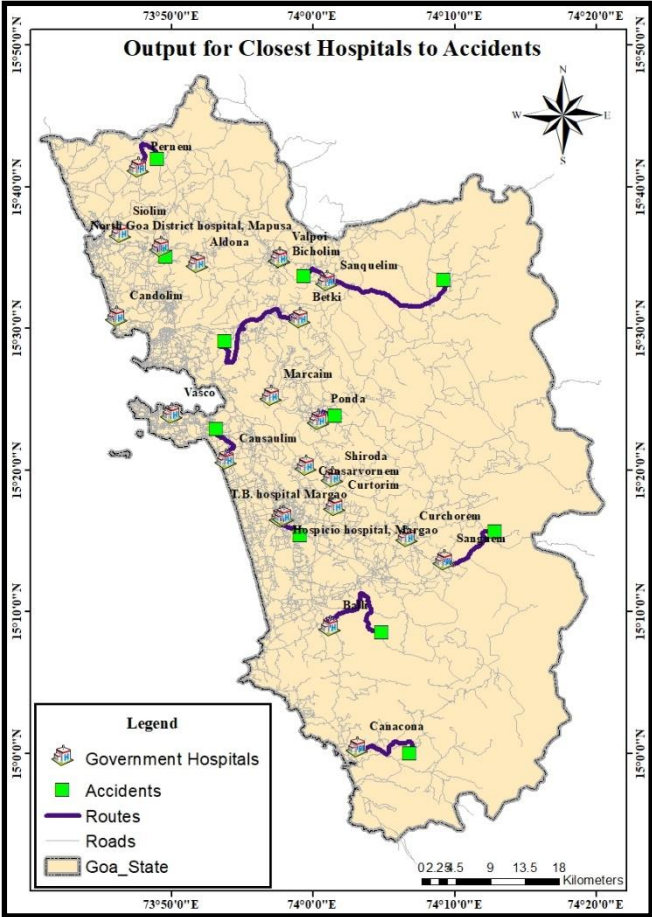
05. Network Analysis of Roads (routes) and Hospitals (placemarks) in Goa



Using New Route to create shortest path to all the hospitals

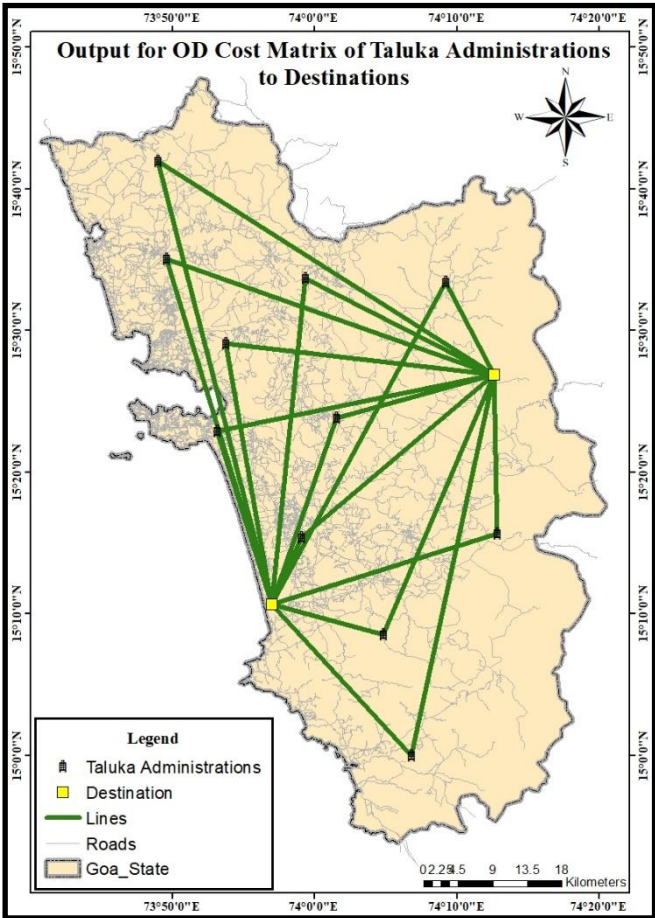


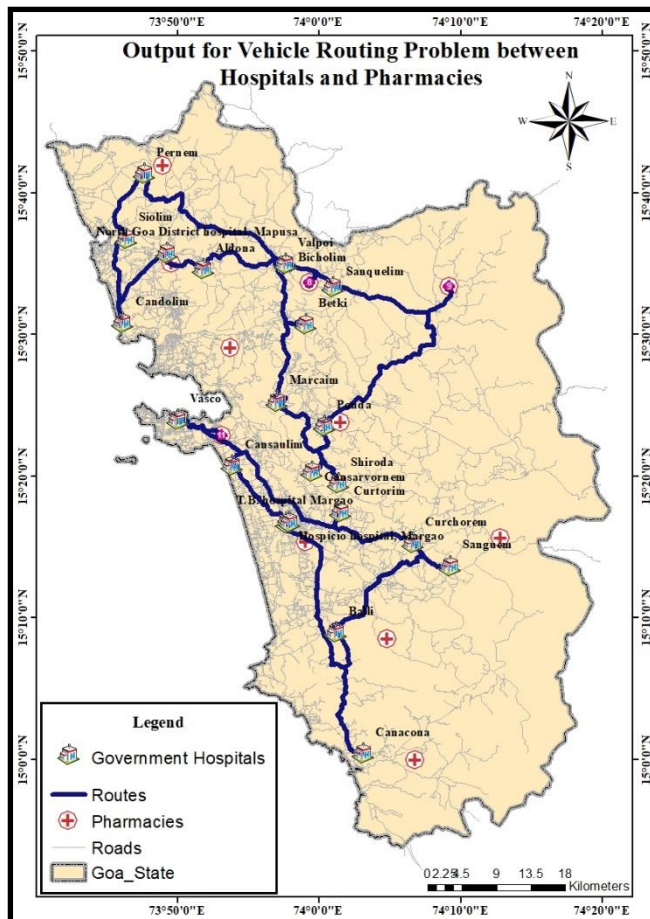
Creating a Service Area of 100 m radius to all the hospitals



Finding closest hospitals by route to the accident sites

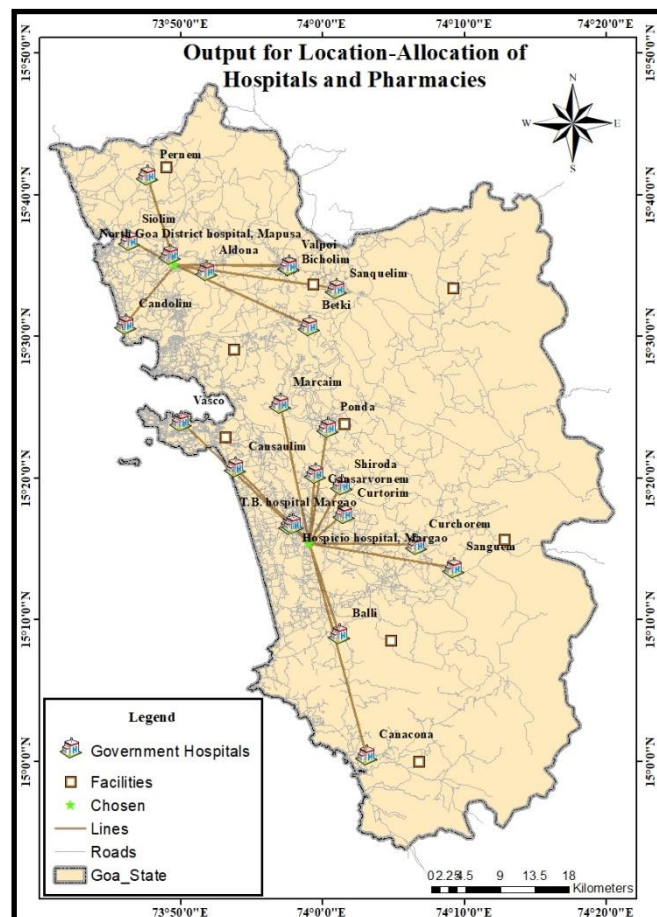
This depicts the displacements of destinations from a point. Such analysis is useful to calculate lowest cost for setting up linear features like pipelines.





Based on orders and supplies routes for three vehicles is created

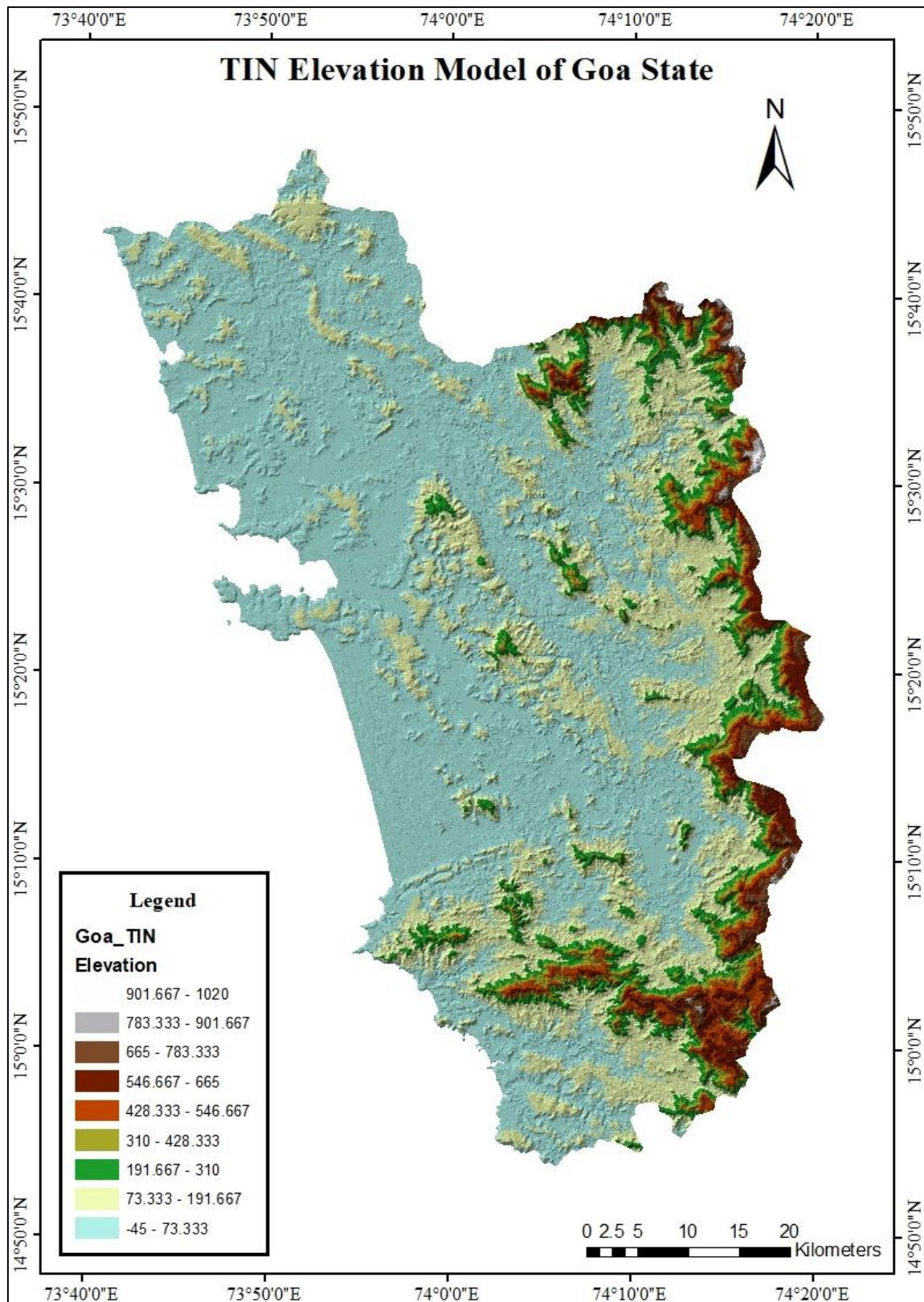
This provides the optimum location for a group of placemarks



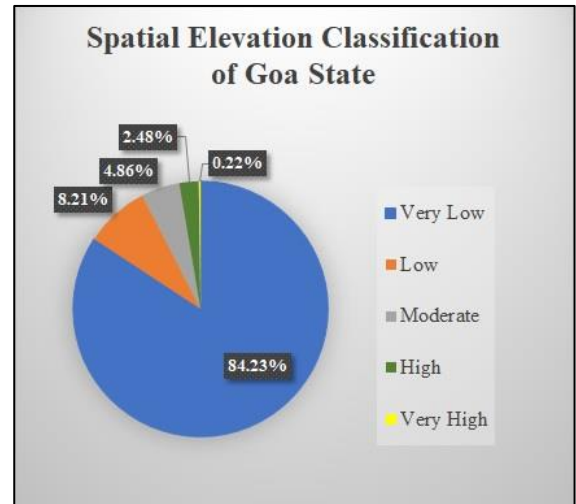
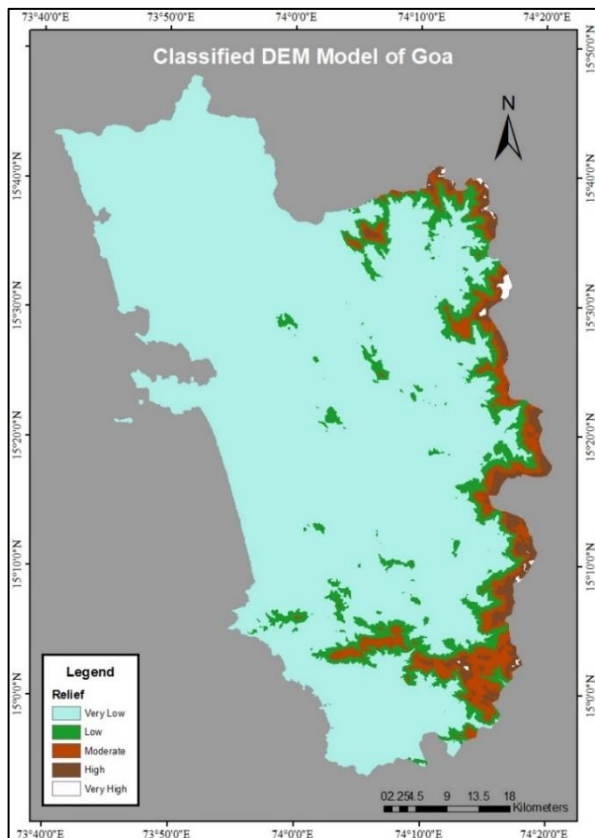
06. 3D Analysis of Goa

6.1. A vector based model: Triangulated Irregular Network (TIN) elevation model

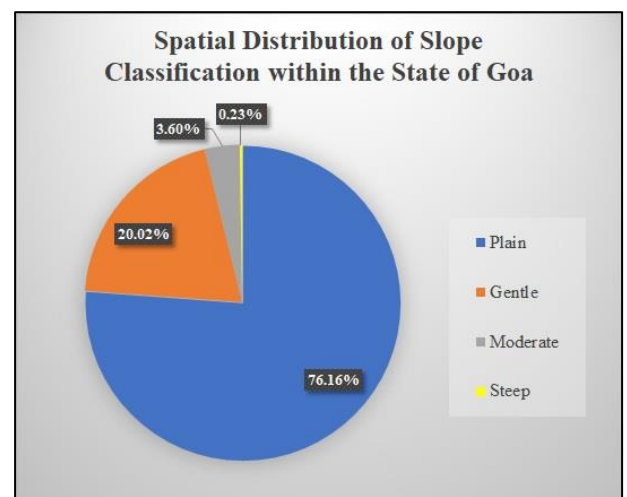
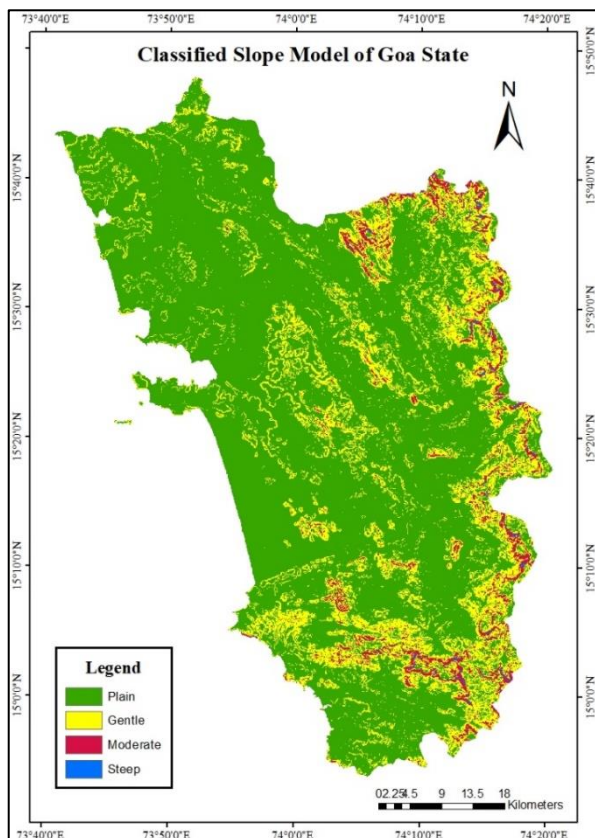
The elevation is depicted in meters



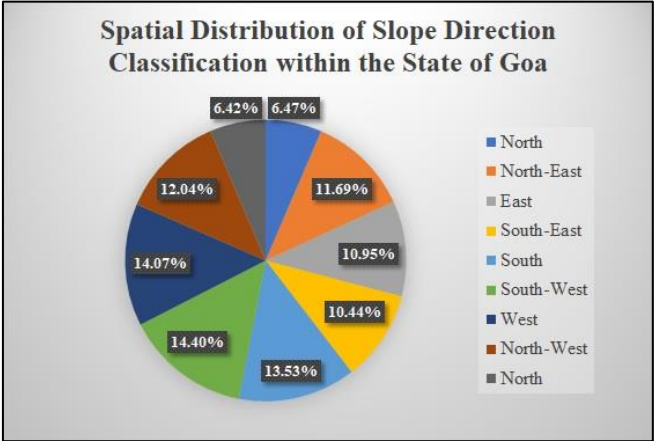
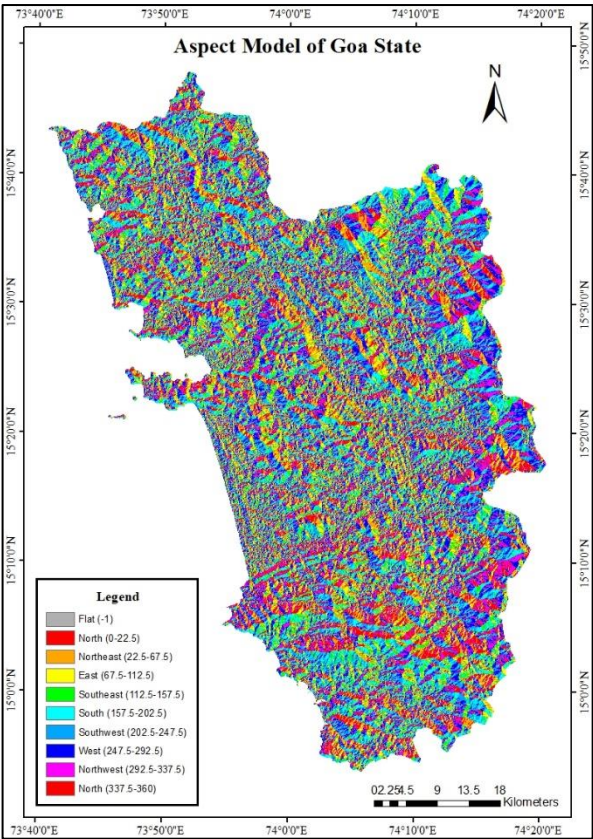
6.2. A Raster based model: Digital Elevation Model (DEM)



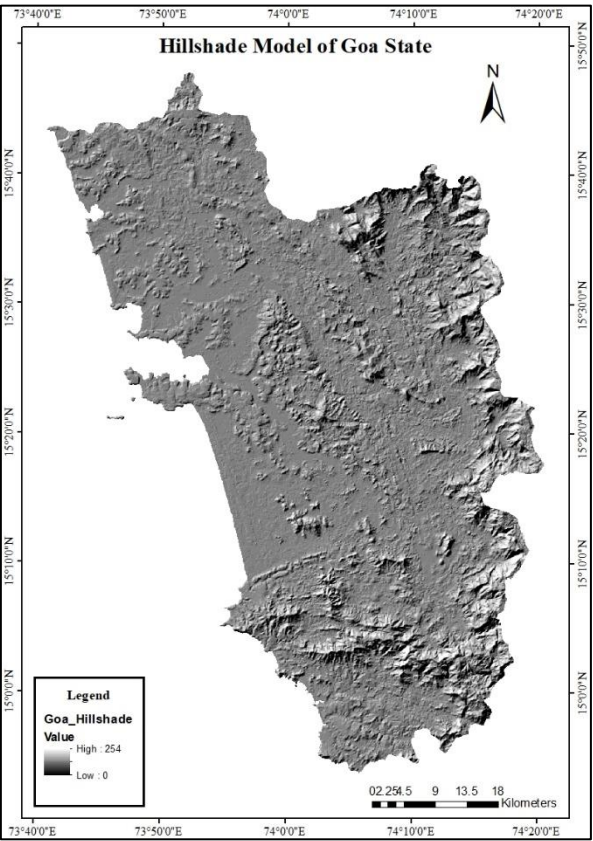
6.3. Slope Model with its Areal Classifications



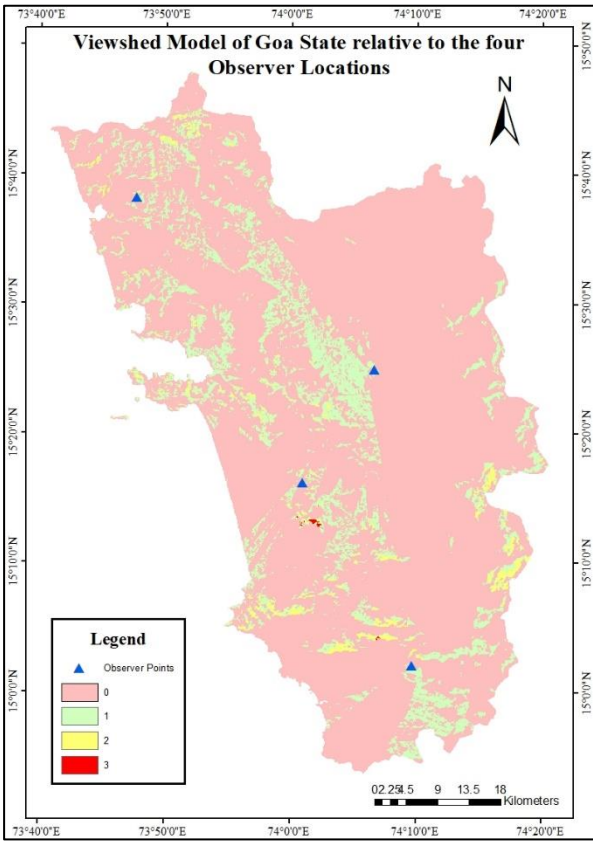
6.4. Aspect Model depicting slope direction



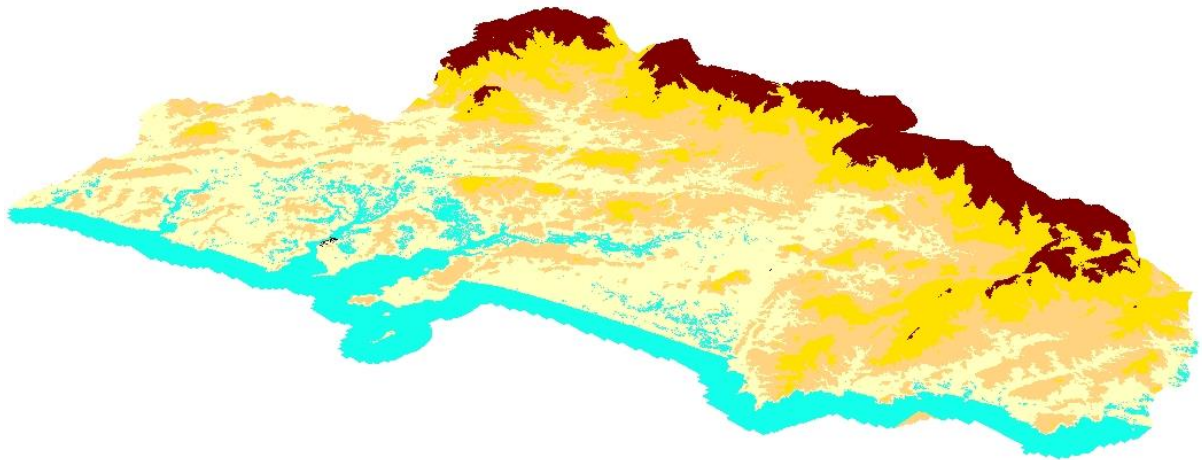
6.4. Hillshade Model with azimuth solar location



6.5. Viewshed Model in reference to 3 locations



6.6. 3D visualisation of Goa in ArcScene

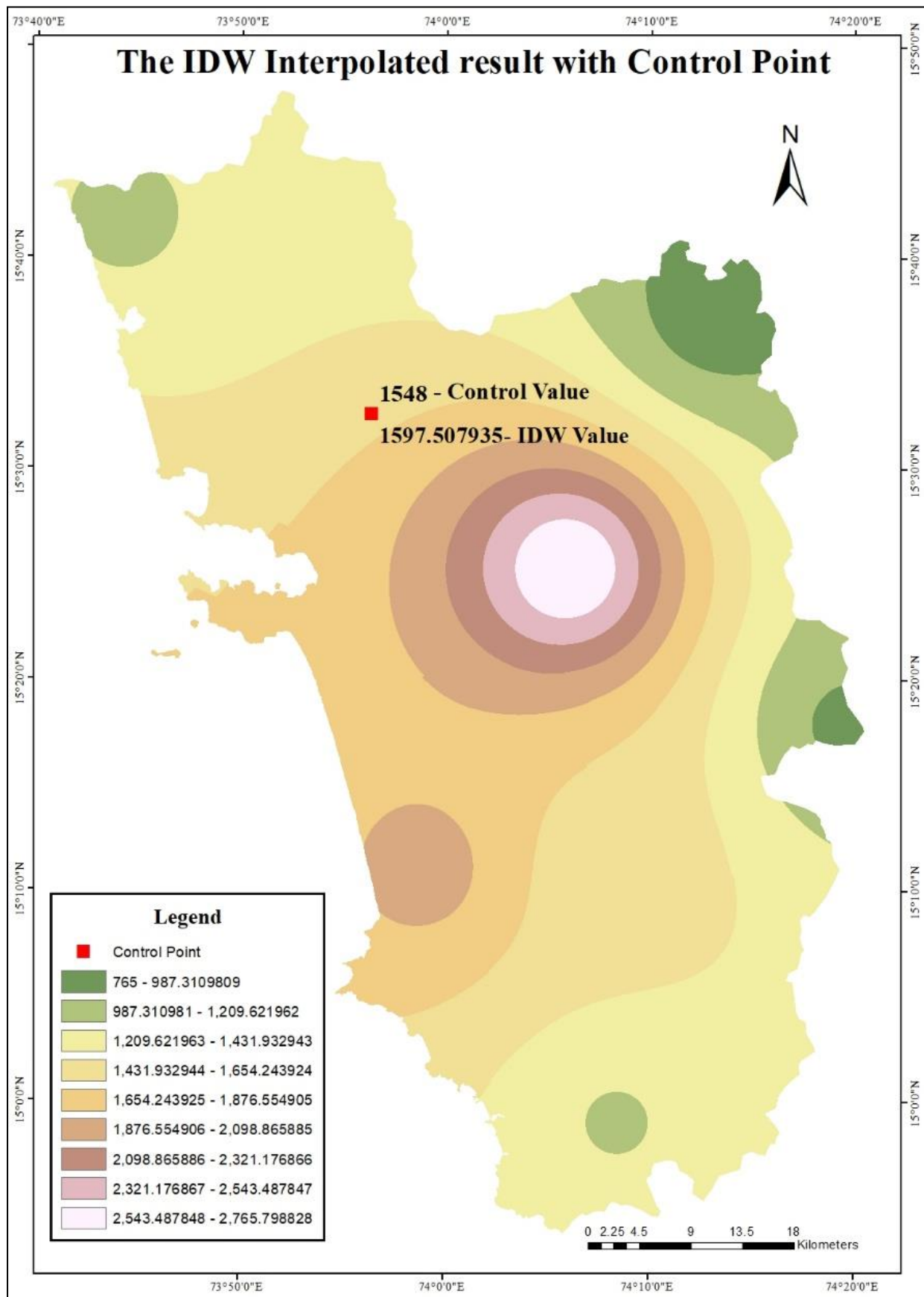


6.7. 3D Visualisation of Buildings and Routes in Panaji City



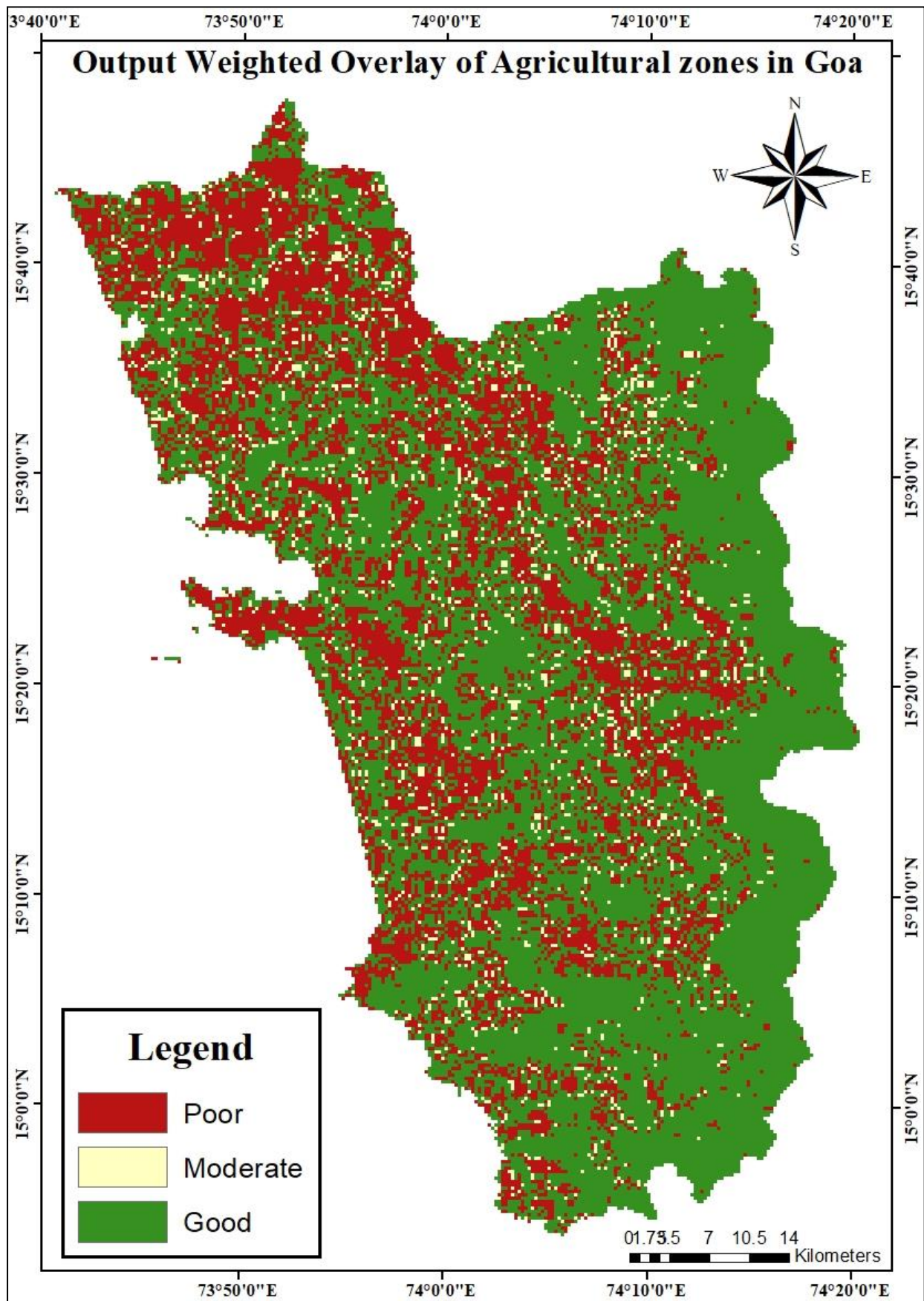
07. Creation of Rainfall distribution using interpolation tools

Values are represented in millimeters (mm)



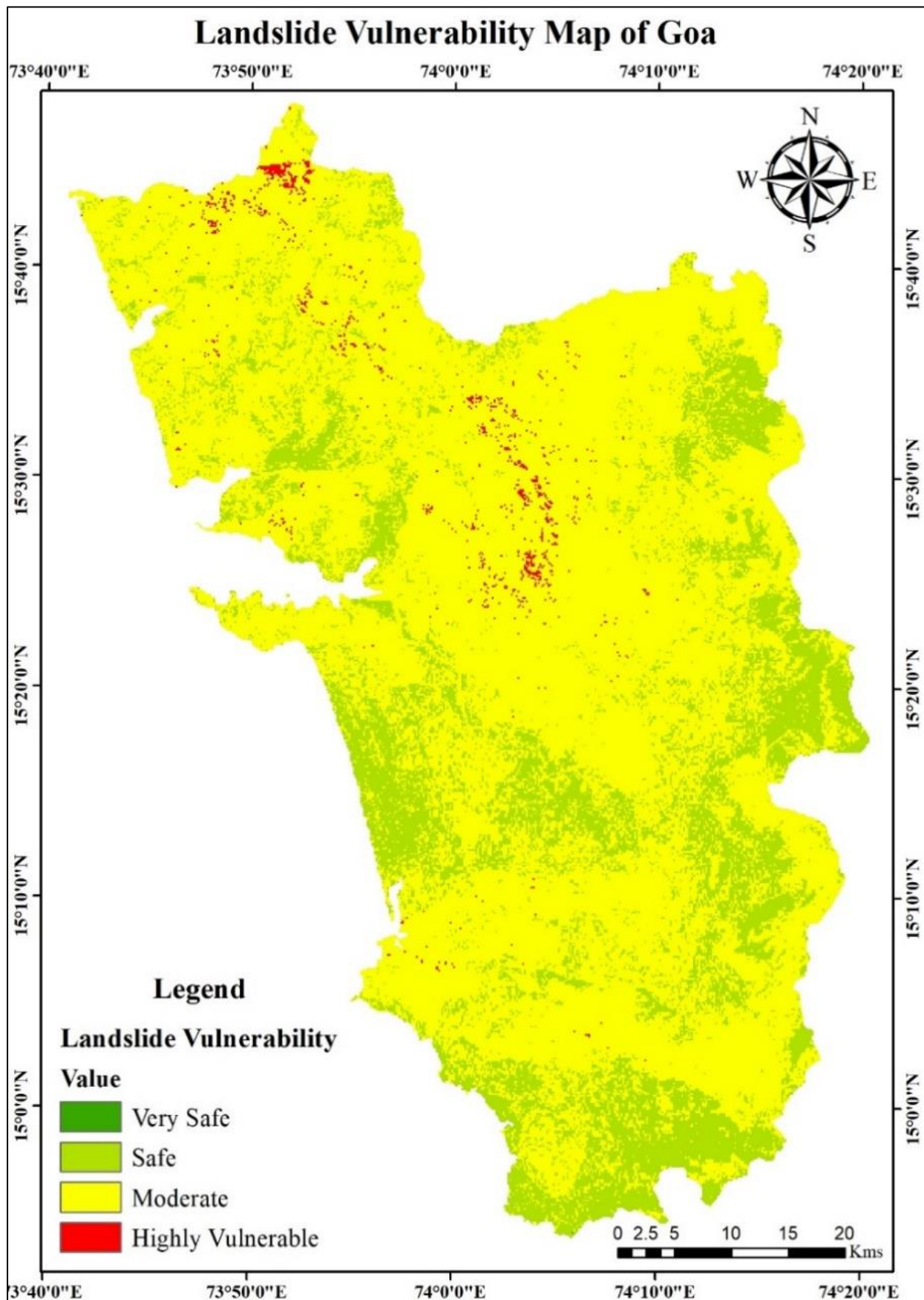
08. Classification of Agricultural Zones by Weighted Overlay

Weighted percentages for each parameter are adopted.



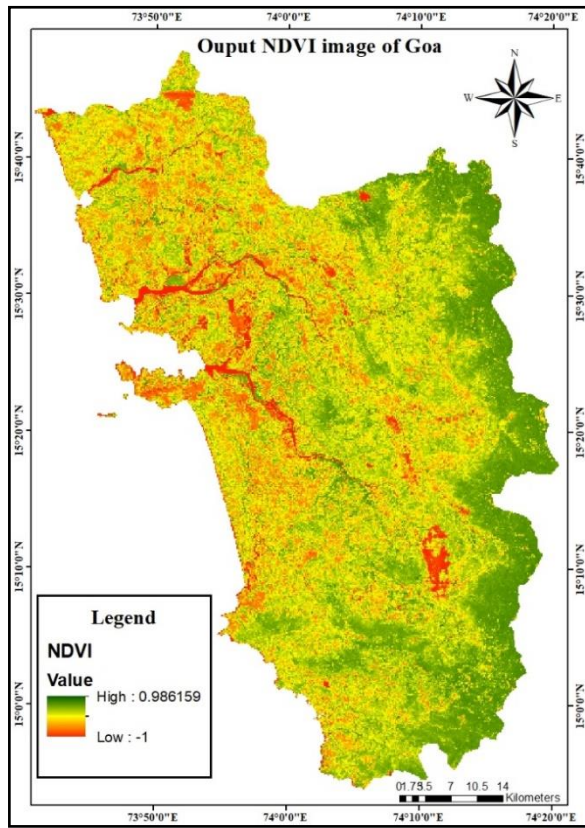
09. Depicting Landslide Vulnerable Areas using Weighted Overlay

Similar weighted percentages for the parameters are used

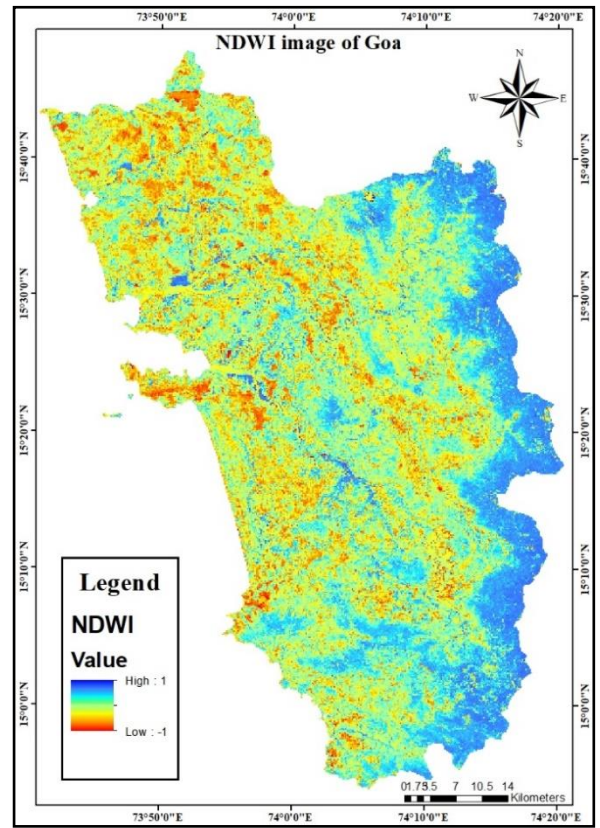


10. Indices

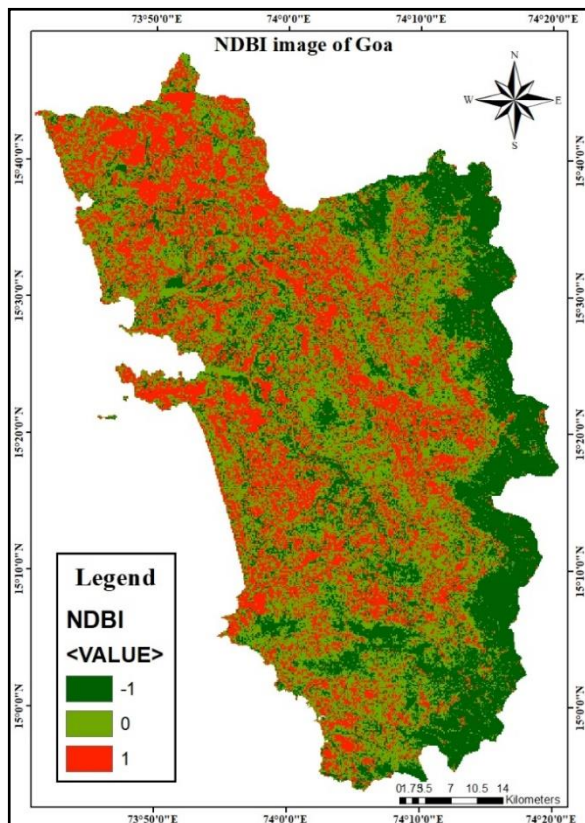
10.1. Normalised Difference Vegetation Index (NDVI)



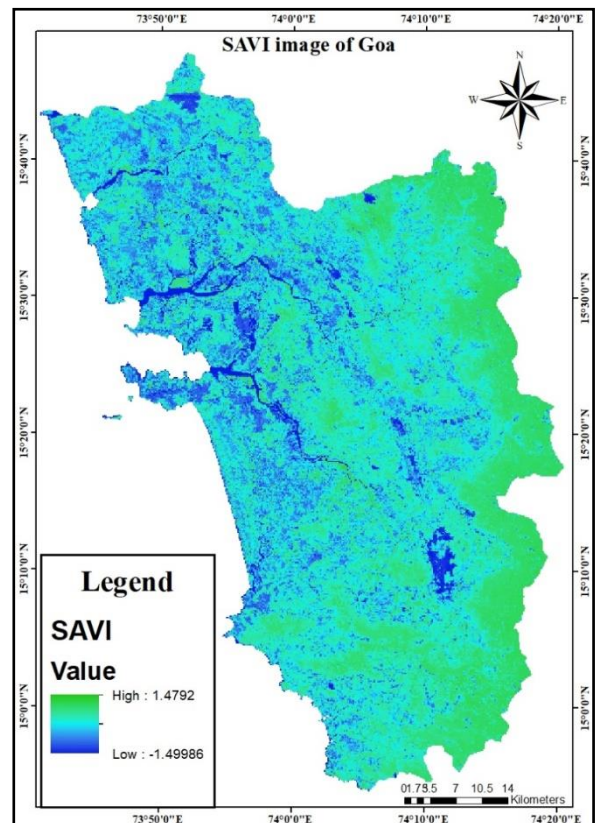
10.2. Normalised Difference Water Index (NDWI)



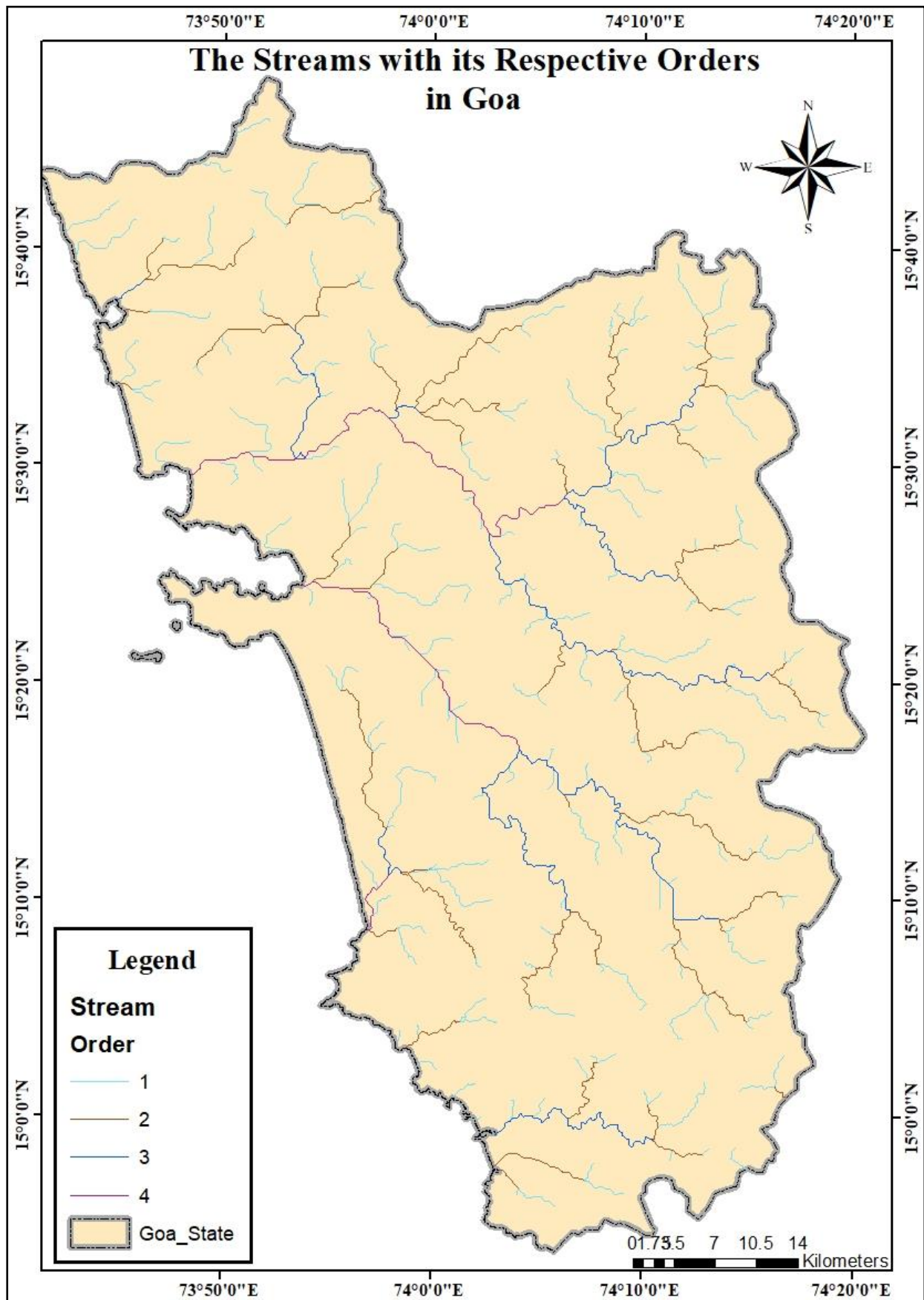
10.3. Normalised Difference Built-up Index (NDBI)



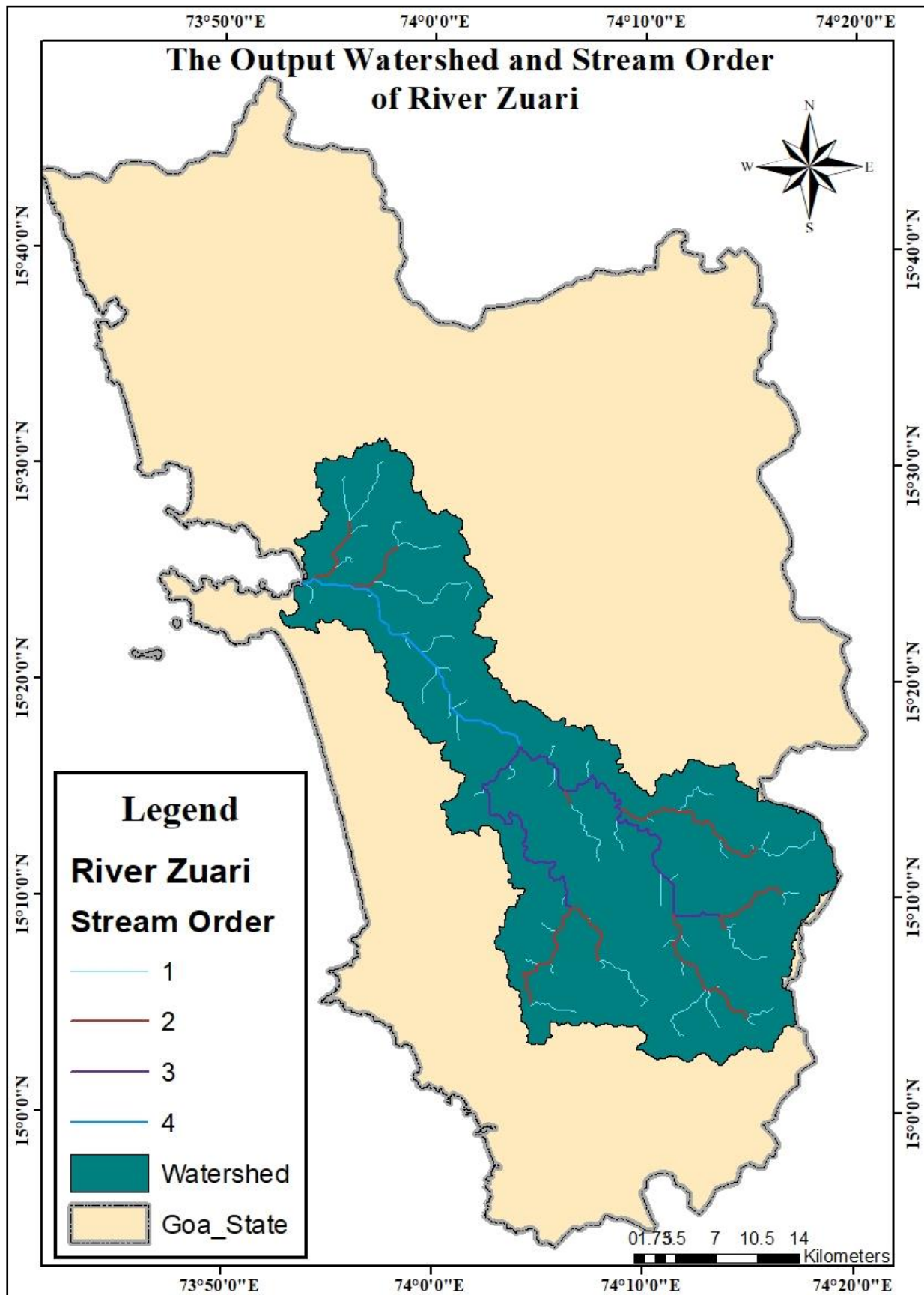
10.4. Soil Adjusted Vegetation Index (SAVI)



11. Streams in Goa and its Respective Stream Orders

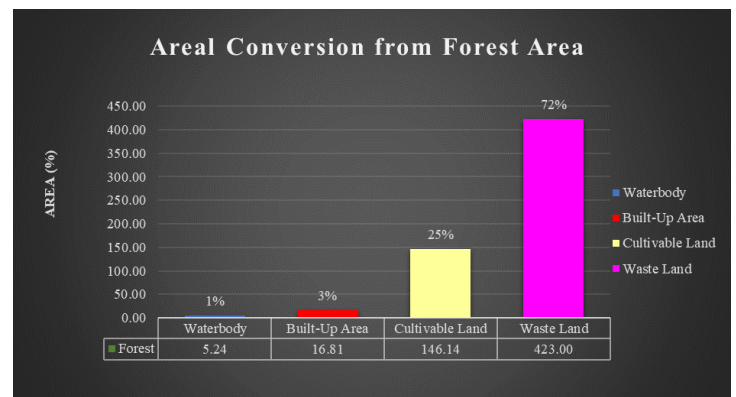
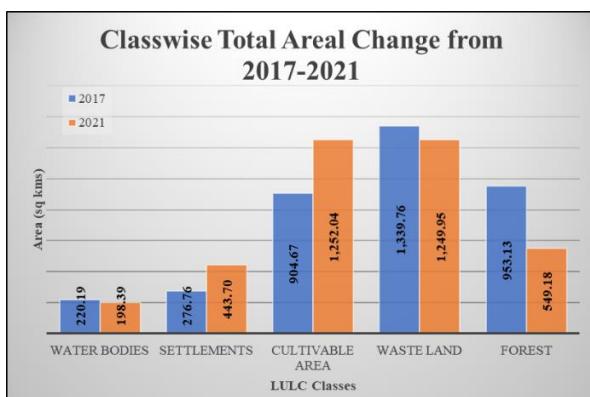
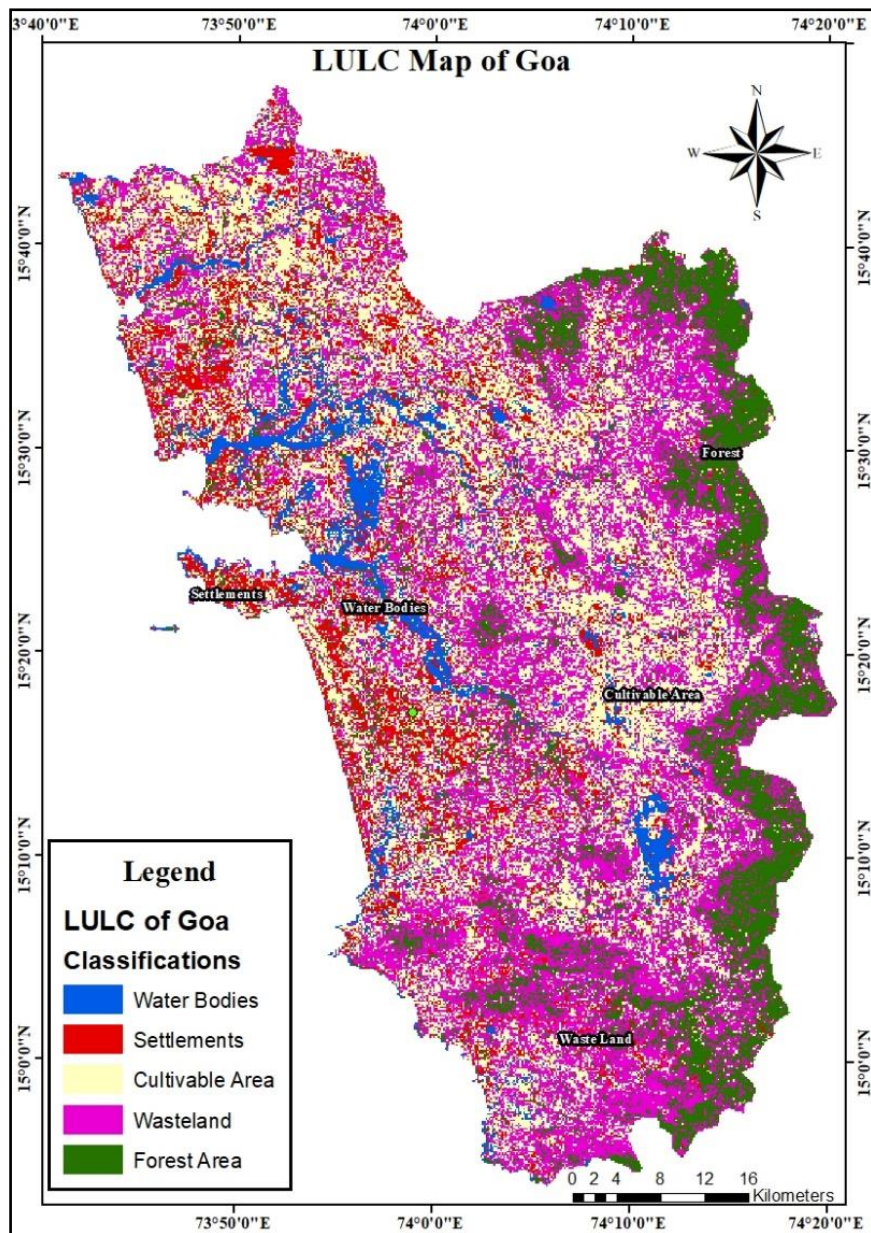


12. Stream orders and its Surrounding Watershed



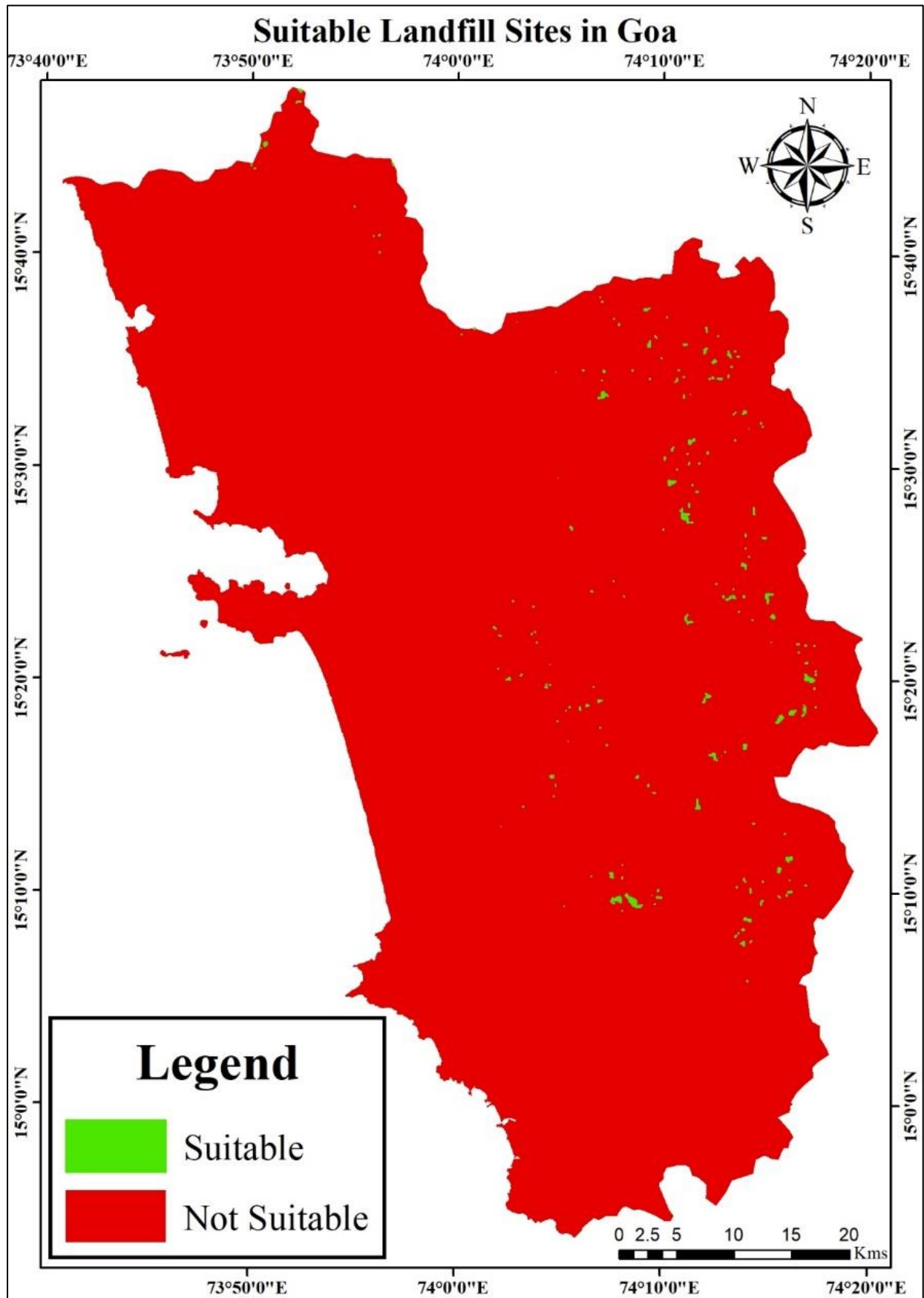
13. Land Use Land Cover Map of Goa and corresponding LULC change

The LULC changes is visualised graphically.



14. Site Suitability Analysis for Landfill Areas

Created using Vector data



15. Soil Errossivity Map of Goa

