

## Land Use Dynamics and Built-up transformation of Industrial Cities along the Corridor: Case of Ahmedabad and Surat

Purba Biswas, Priyanka Dey

Indian Institute of Technology, Kharagpur, India

### INTRODUCTION & AIM

- Cities are **active agents** for **economic growth**, as there is a positive **interrelationship** between urbanisation and economic growth.
- 21<sup>st</sup> century is marked by **rapid urbanisation** driven by **industrialisation**, population expansion and policy intervention, reshaping **land use land cover (LULC)** globally. Constant evolution leads to changes in land use, urban **growth pattern** and **city fabric**.
- Remote Sensing** and **GIS-based** spatio-temporal analysis acts as an effective tools to map, classify, and assess these changes.
- In India, **INDUSTRIAL CORRIDORS** have triggered major LULC transformations.

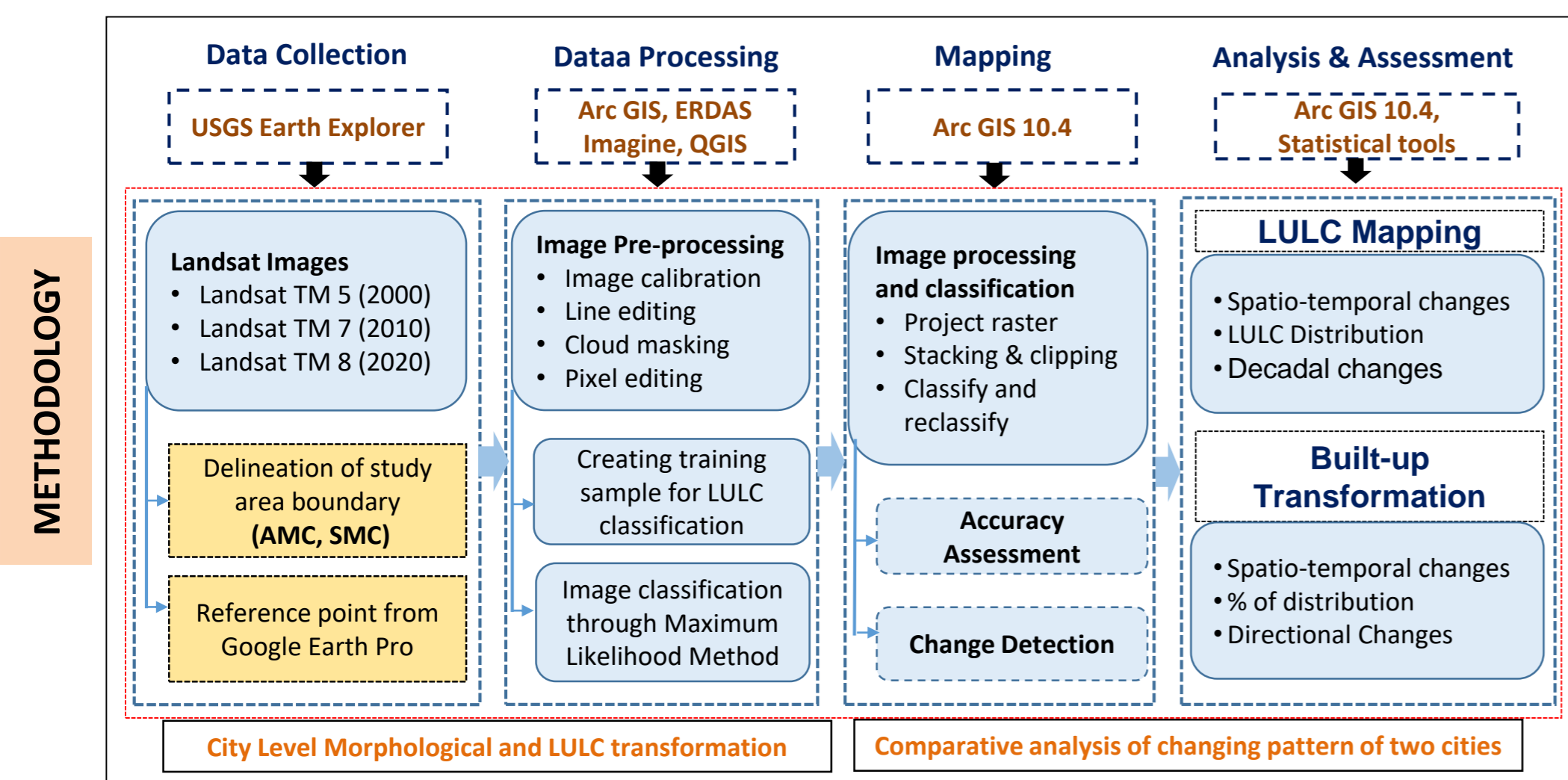
### AIM :

- Analysing **spatio-temporal built-up transformation** and **LULC dynamics** of industrial cities using geospatial techniques

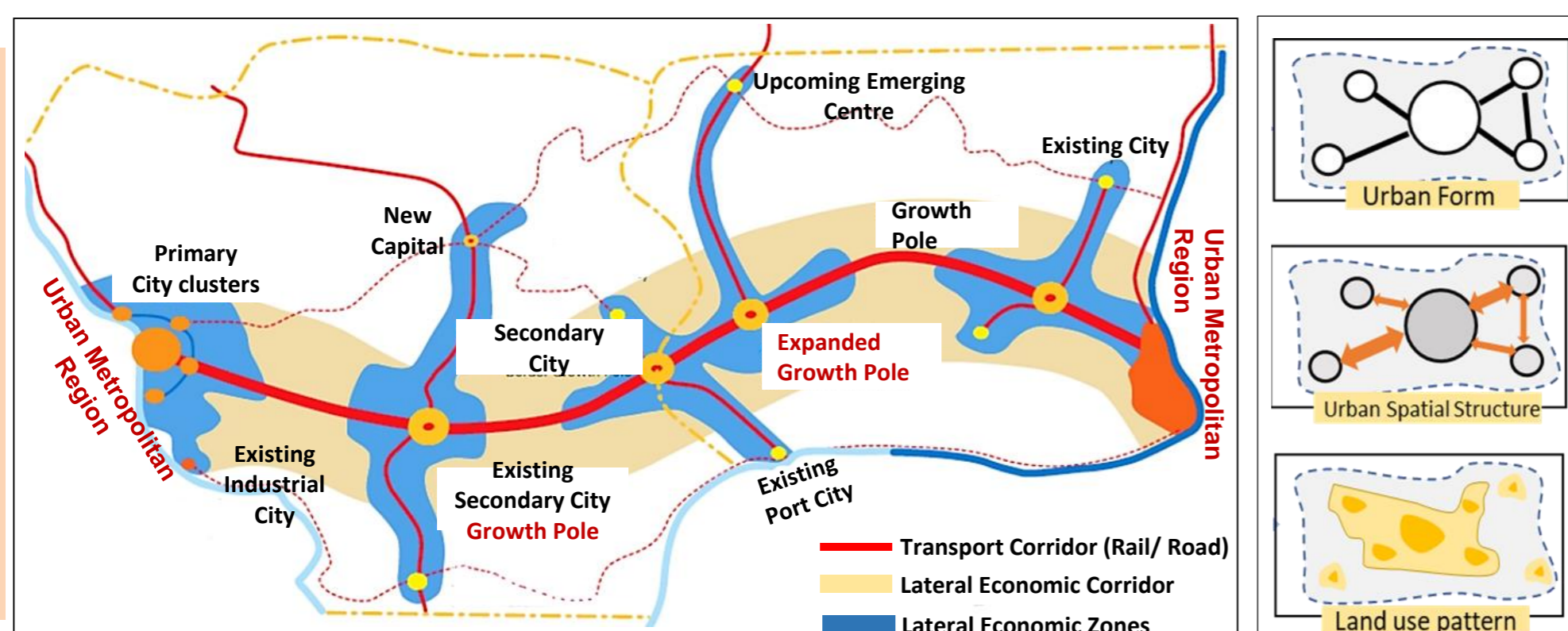
### OBJECTIVES :

- To identify the built-up transformation pattern and changing **urban land-use land cover**
- To assess spatio-temporal implications of industrialisation on **urban form** and **urban sprawl** over last two decades
- To assess and compare the morphological evolution and LULC dynamics of the two cities over time (**SURAT & AHMEDABAD**)

### METHOD



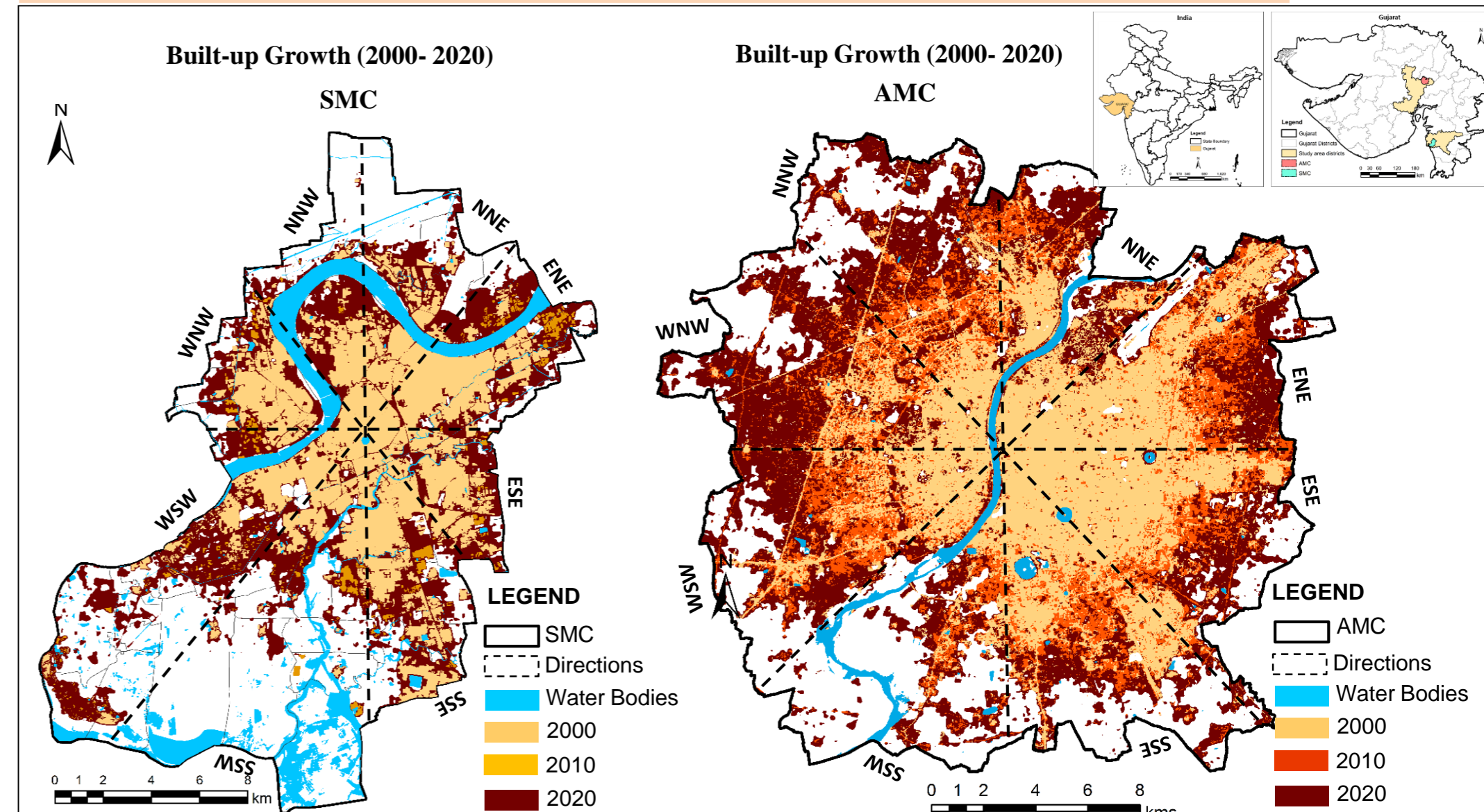
### Corridor and Urban Expansion



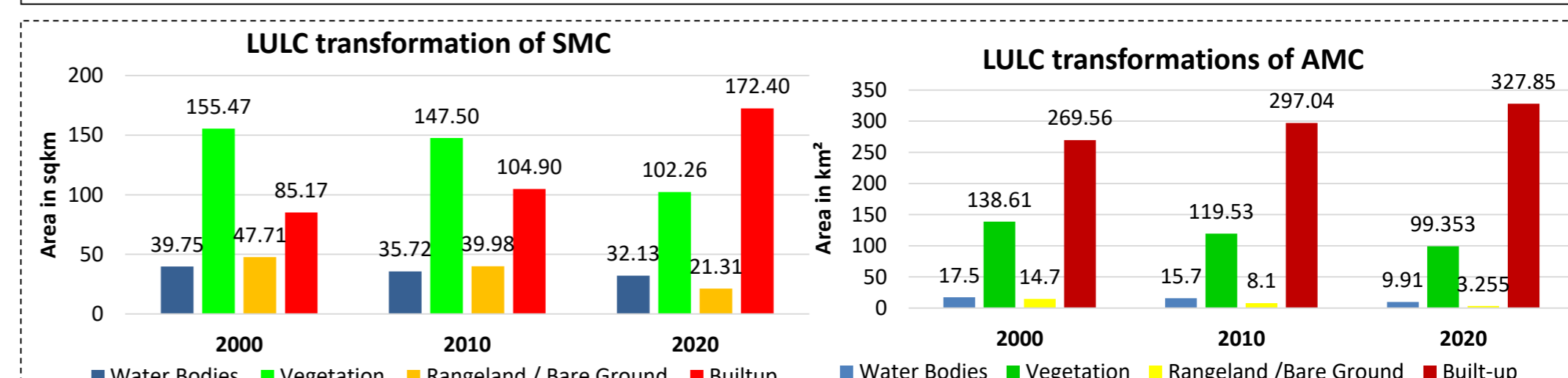
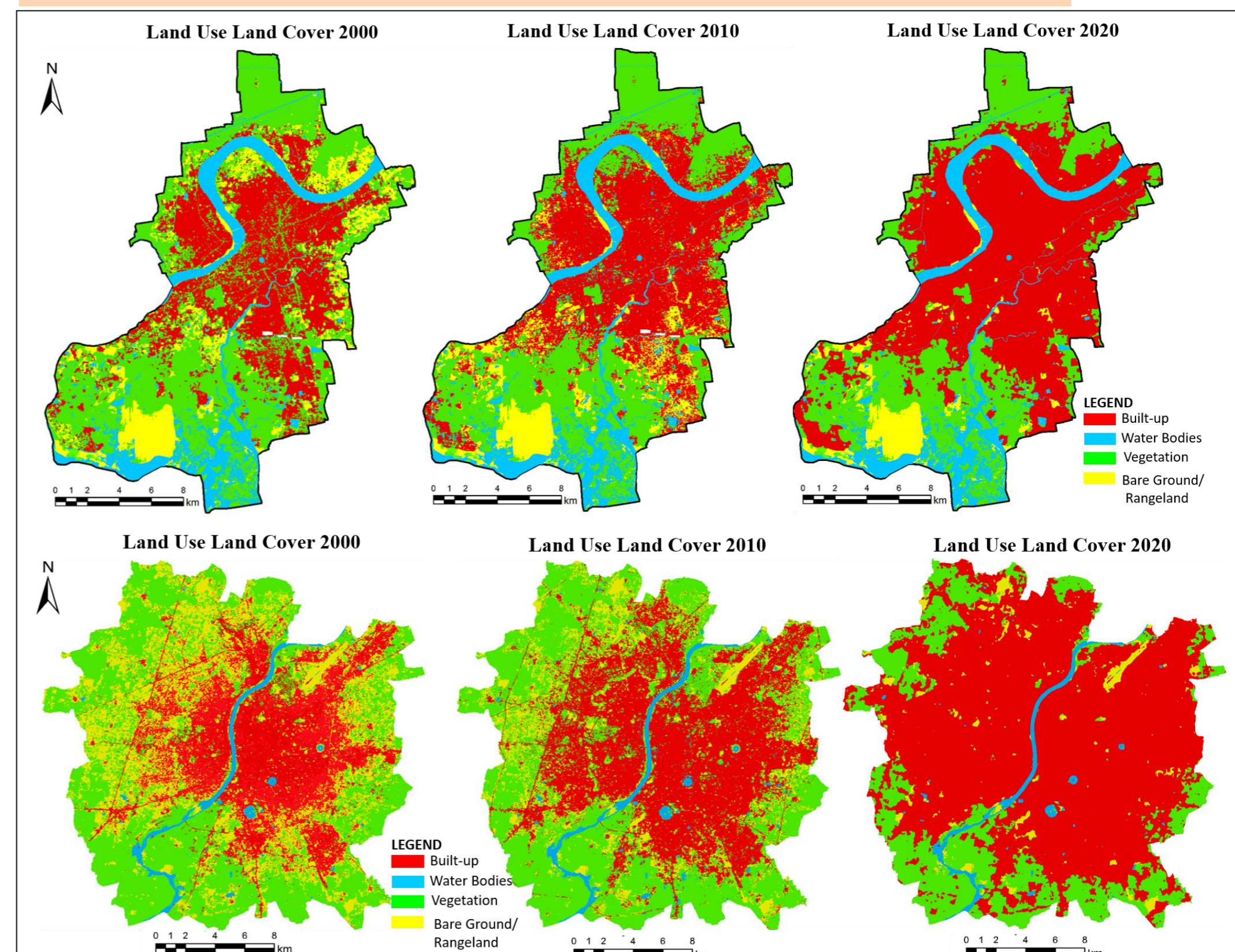
- Transport / Economic Corridors** development affect the overall **urban pattern** and **LULC** at local, regional and **national** level by giving opportunities to flourish **Economic Growth**.

### RESULTS & DISCUSSION

#### BUILT-UP TRANSFORMATIONS



#### LULC TRANSFORMATIONS



- Surat's** growth is **fragmented** and **sprawl-dominated**, in **southern** and **western** directions, reflecting industrialisation and migration-driven pressure.
- Ahmedabad's** growth is **structured** and **radial**, with directional spread towards industrial and transport corridors, but with compact morphology.

### CONCLUSION

- Both cities reveal **evidence of peri-urban sprawl**, agricultural land loss, and ecological fragmentation, with **industrialisation** acting as the **primary driver** of LULC change.
- Need to do detail study about **spatial changes** and **changing trends** before **plan formulation & new investments** using new tools and technology.