Spatio - temporal analysis of urban rural gradient modelling: Case of Gulbarga city

Dr. Sulochana Shekhar
Associate professor
Department of Geography
School of Earth Sciences
Central University of Karnataka
Gulbarga
Urban - rural Gradient

- An ordering of sites based on the predominance of buildings and infrastructure coupled with dense human population, in contrast with sites having sparse infrastructure and low human density.
- URG can be found as continuous lines from old downtown, through suburbs and ending in forested or agricultural areas.
Population Growth

Population

Census Year


0  1,00,000  2,00,000  3,00,000  4,00,000  5,00,000  6,00,000
## Growth of Gulbarga city

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Area</th>
<th>Population Density</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nos.</td>
<td>Sq. km</td>
<td>Persons per Sq km.</td>
</tr>
<tr>
<td>1971</td>
<td>145,588</td>
<td>25 sq.km</td>
<td>5823.52</td>
</tr>
<tr>
<td>1981</td>
<td>221,325</td>
<td>55 sq.km</td>
<td>4024.091</td>
</tr>
<tr>
<td>1991</td>
<td>310,920</td>
<td>55 sq.km</td>
<td>5653.091</td>
</tr>
<tr>
<td>2001</td>
<td>430,265</td>
<td>65 sq.km</td>
<td>6619.462</td>
</tr>
</tbody>
</table>

Source - DPR
Gulbarga is Growing!!!
Spatial Data

Temporal Data

2002

2007

2012
Classification- Built-up area
Creation of Zones – from Centre part of the city
Growth analysis- Directions radiating from the centre
Extraction of Built-up area
Built-up area - 2007
Urban – Rural Gradient  2002
Urban – Rural Gradient  2007
Urban –Rural Gradient  2012
Gradient Analysis
Temporal Analysis

![Temporal Analysis Graph](chart.png)
Future is Urban

Thank you