Geospatial integration of Socio-Economic Data
TCA Anant
National Remote Sensing Centre

• NRSC has designed, developed and deployed Geoportals for visualisation analysis and dissemination of space based products and services.
Bhuvan Portal

• Online Geoportal released in 2009
• Initially focussed on image and map visualisation services.
• Diversified over a period of time
  – 2.5 GB of data transfer per day.
  – Provides an android based application for field data collection of various govt. programmes
  – Transport network from National Highways to city roads populated with more than 8.5 million Points of Interest Location.
  – Bhuvan Panchayats facilitate decentralised planning at grass root level by providing information pertaining to local bodies in rural and urban areas,
  – Supports management of disasters
• 20 Ministries portals and 30 State portals linked to Bhuvan
Initiatives of Central Government

• Central Government has advised all ministries to effectively use the data produced by satellite images.

• Every Department including Culture, Skill Development and Sports have been asked to utilize the data.

• Some actions initiated in this direction follow.
Micro Irrigation

Plans to promote micro irrigation using satellite images produced by NRSC:

• Farms having wells and ponds to be identified using satellite imaging.

• Govt plans to encourage micro irrigation which runs on solar power. To check the level of availability of sunlight for solar power, satellite data will be used.
MGNREGA

- Geo tagging initiative of MGNREGA for entire nation rolled out by the Ministry of Rural Development in November 2016.
- Ministry of Rural Development in collaboration with NRSC and NIC to develop an exclusive Bhuvan-MGNREGA Geoportal which will provide a single and integrated view of asset information system pan rural India.
- Remote sensing and GIS to be used to collect, store and analyze MGNREGA assets.
- Spatial location is a major common aspect of all the asset data and GIS to be used to map all the assets along with information for visualisation and proper decision making.
Initiatives of MOSPI

• Digitisation of UFS Maps in collaboration with National Remote Sensing Center (NSRC) and National Informatics Center (NIC) has been taken up by NSSO.

• UFS maps for Rewari town digitized by NIC by identifying the boundaries of blocks as given in the hand drawn UFS maps on satellite imagery and marking them over the imagery.

• NRSC has
  – generated UFS maps on satellite imagery for Bodhan town of Hyderabad.
  – developed a mobile application which can capture the Geo-coordinates (latitude and longitudes) of any given location and push it to satellite imagery, provided the mobile has internet facility. In case internet facility is not readily available on the mobile, the application can save the coordinates and push it on satellite imagery after coming back to office where internet facility is available. With the help of such a mobile application, coordinates of the four corner points in addition to some other points along the boundary may be captured and the IV unit/UFS blocks may be carved out by joining these points.

• RO Hyderabad carried out a pilot in Bodhan town covering 2 wards having 8 EBs with total number of 700 households. RO Dehradun covered 2 IV Units having 88 Blocks.
Contd/-

• Digitisation of supervision of Crop Cutting Experiments (CCE) in collaboration with Mahalanobis National Crop Forecast Centre (MNCFC):
  – proposed to devise mechanism for integration of data on CCE collected by NSSO and the post stratification methodology for developing the model for Taluka/Tehsil wise estimates based on the data collected through satellite imagery by the MNCFC starting with onion and wheat crops.
  – As a first step, a pilot study would be conducted to test the feasibility of obtaining production estimates using Remote Sensing Technique in accordance with the methodology developed by MNCFC.
States Initiatives

Gujarat

• GIS based Decision Support System with the technical support of ‘Bhaskaracharya Institute for Space Applications and Geo-Informatics’ (BISAG) has been developed.

• Information of 300+ data items relating to the services/amenities available at village level covering 11 sectors have been collected and entered into the centralized database and being updated regularly in this online portal.

• Schedule for data collection devised on the basis of assessment of earlier Village amenity Survey and expert inputs.
Gujarat: Contd/-

• Results achieved:
  – **Gap Analysis** done using the information available from the portal which is used to carry out need based planning
  – Villages where some specific services to be strengthened or amenities to be created were selected for balanced regional development.
  – The mode of planning has shifted from being demand driven alone to being more proactive and vetted through the electronic system. It results in equitable distribution of resources.
<table>
<thead>
<tr>
<th>Sector</th>
<th>Coverage</th>
<th>No of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demography</td>
<td>Population, Literacy, Workers, etc.</td>
<td>51</td>
</tr>
<tr>
<td>Education</td>
<td>School-wise No. of students, Teachers, Amenities, etc.</td>
<td>77</td>
</tr>
<tr>
<td>Health</td>
<td>Availability of Facility by Type and Numbers</td>
<td>27</td>
</tr>
<tr>
<td>Electrification</td>
<td>Number of HH /Agricultural/Industrial Connection, etc.</td>
<td>9</td>
</tr>
<tr>
<td>Animal Husbandry</td>
<td>Dairy Co-Op., Service Availability</td>
<td>14</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Source-wise Area Covered</td>
<td>6</td>
</tr>
<tr>
<td>Land Use</td>
<td>Land Use Pattern, Social Forestry Area, Land Holding</td>
<td>19</td>
</tr>
<tr>
<td>Roads &amp; Transportation</td>
<td>Connectivity, Distance to City</td>
<td>11</td>
</tr>
<tr>
<td>Communication</td>
<td>Commutation, P.O., Telephone, Mobile etc.</td>
<td>14</td>
</tr>
<tr>
<td>Water Supply &amp; Sanitation</td>
<td>Source of drinking water, type of drainage facility etc.</td>
<td>18</td>
</tr>
<tr>
<td>Community Development</td>
<td>Anganwadi, Tourism, Employment, Social Security and Other Amenities</td>
<td>58</td>
</tr>
</tbody>
</table>
Delhi

- Demographic data of population census 2011 integrated with Economic Census data.
Ward Wise Information
List Of Queries

- Types Of Local Bodies
- Total No. of Males / Females
- Home Based Wards > 5k SC
- Comm. Wards > 5k Males
- Sex Ratio > 0.5
- Population per Ward
Dash Boards For Management – Decision Making
Thank You
Base Maps Available