2. VILLAGE INFORMATION SYSTEM

Project Investigator: Mr. H. Hemanth Kumar
Budget: Rs. 26.20 lakhs
Funding: DST – GOI
Duration: 2 years

Background:
The concept of Village Information System was identified through a consultative working group meeting held at Andhra University, Vizag during 11-12 November, 2014 coordinated by DST-GOI. Mr. H Hemanth Kumar the PI of this project is a member of the working group. The Village Information System project is envisaged to comprise of spatial data on demography, natural resources, climate, land use land cover patterns and socio economic aspects etc. to aid and support the decision makers and planners to make informed decision-making at village level. The Council is a partner in DST - GOI funded innovative programme on the development, validation and standardization of data structure and the optimum data requirements for providing village information system at cadastral level.

The Council has identified two locations in Karnataka for this R&D project i.e, Awaradi and Hirenandihalli Gram Panchayaths in Bailhongal Taluk, Belagavi district and Bilikere Gram Panchayaths in Mysore districts. Study area is identified based on contiguity of villages and further the selected villages also represent different agro climatic zones.

Activities:
The Council brought out guideline for preparing cadastral level base map for villages using existing cadastral maps, High Resolution Satellite Imageries and through field survey. Based on the document "Preparation of Digital Base Maps from Cadastral Maps and RS Data Products" listing the procedure for preparing cadastral and settlement information. The Council has completed the mapping of nine villages out of 12 villages for containing cadastral (parcel/hissa), settlements, assets and soil and water parameters using publicly available high resolution satellite imageries, cadastral maps, SOI topo maps, GPS/DGPS and extensive filed verification and validation. The Council has slightly revised the guidelines based on our experience in preparing the cadastral maps including unique code for settlements and land parcels.

Status of Cadastral Mapping, Soil & Water analysis and procurement of equipment/materials:

- The surveying and mapping of three Gram Panchayath containing 12 villages is under progress. The parcel and settlement mapping is completed for 9 villages.
- Settlement and asset mapping is under progress and expected to be completed by March, 2017 for all the villages.
✓ Necessary inputs were collected from Survey Settlement and Land Records Department for all the three Gram Panchayaths.
✓ The water sampling and analysis is completed for all the three Gram Panchayath for pre-monsoon period.
✓ Collected water samples of post monsoon period. Analysis is underway.
✓ Soil samples are to be analysed by the University of Agricultural Science, Bangalore.
✓ Procured Laptop, GPS enabled devices and EC/temperature water tracer.
✓ Procurement of HRSI from NRSC is under progress.
✓ Made a presentation to Zilla Panchayath, Mysuru about the outcome of VIS project taken up in Bilikere Gram Panchayath on 28th January, 2017. The Chief Executive Officer along with Zilla Panchayath Senior officers including Chief Planning Officer, Project Director, Deputy Secretary, Assistant Secretary, DIO - NIC and E-governance staff attended the presentation and appreciated the efforts made by the council. The CEO further requested the Council to submit a proposal for large scale implementation i.e., for entire district.

✓ Presentation to Gram Panchayath staff of Awaradhi and Hirenandihalli Gram Panchayath coming under Bailhongal Taluk, Belagavi district.

- Enabling Unique identification code for land parcels and settlements in a scientific way. The Council has tried two options.
  - Census revenue village code +c+ parcel id (three digit) - eg:-618462C001
  - Unique identification code for habitation/settlement (15 digit code) - Census revenue village code(six digit) +h+ plot id (four digit)+subdivision (two digit)+subdivision (two digit)
  - Mapcode: Mapcode a small Microsoft Windows console application that can add mapcodes to a database, or add decoded mapcodes (i.e. coordinates) to a database. It’s a easier and better option to locate both land parcels and settlements.
- Soil and water quality is also collected from other sources.
Salient features of villages mapped in two different agro climatic zone and HDI

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Particulars</th>
<th>Mallinathapura (near to Mysuru city and on adjacent to National Highway South Karnataka)</th>
<th>Jamalur (Interior village in North Karnataka)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Population (no.)</td>
<td>1312</td>
<td>1271</td>
</tr>
<tr>
<td>2</td>
<td>House Holds (no.)</td>
<td>213</td>
<td>299</td>
</tr>
<tr>
<td>4</td>
<td>Water facility - Individual water connection</td>
<td>97%</td>
<td>31%</td>
</tr>
<tr>
<td>5</td>
<td>Electricity</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>6</td>
<td>Sanitation</td>
<td>36%</td>
<td>25%</td>
</tr>
<tr>
<td>7</td>
<td>Bank Account</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>8</td>
<td>Aadhar</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>9</td>
<td>Electric Pole</td>
<td>With Street Light 84%</td>
<td>72.41%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Without Street Light 16%</td>
<td>27.58%</td>
</tr>
<tr>
<td>10</td>
<td>Agriculture Land</td>
<td>Landless 35%</td>
<td>4.26%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less than 2 Acre 40%</td>
<td>20.85%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 to 4 Acres 26%</td>
<td>37.44%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 to 6 Acre 8%</td>
<td>13.27%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More than 6 Acre 2%</td>
<td>24.17%</td>
</tr>
<tr>
<td>11</td>
<td>Occupation</td>
<td>Farmers 40%</td>
<td>75.33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Labourers 33%</td>
<td>15.69%</td>
</tr>
<tr>
<td>12</td>
<td>LPG</td>
<td>90%</td>
<td>12%</td>
</tr>
<tr>
<td>13</td>
<td>No. of persons per farm vehicles</td>
<td>54</td>
<td>11</td>
</tr>
<tr>
<td>14</td>
<td>Motor Vehicle (For every 3 house)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Drainage (m)</td>
<td>1185</td>
<td>162.00</td>
</tr>
<tr>
<td>16</td>
<td>CC Road (m)</td>
<td>0</td>
<td>300.00</td>
</tr>
<tr>
<td>17</td>
<td>Asphalted Road (m)</td>
<td>0</td>
<td>4350.00</td>
</tr>
<tr>
<td>18</td>
<td>Metalled Road (m)</td>
<td>800</td>
<td>1200.00</td>
</tr>
<tr>
<td>19</td>
<td>National Highway (m)</td>
<td>1850</td>
<td>0.00</td>
</tr>
<tr>
<td>20</td>
<td>Water Sources (For drinking)</td>
<td>a) Over Head tank (no.) 1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Bore well (no.) 1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Cistern tanks (no.) 1</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>Literacy (above 4th standard is the yard stick)</td>
<td>77%</td>
<td>49%</td>
</tr>
<tr>
<td>22</td>
<td>Mobile Phone</td>
<td>100%</td>
<td>99%</td>
</tr>
</tbody>
</table>

- Aadhar card, Bank account and mobile phones are available with almost all the villagers irrespective of their nearness to urban areas.
- More than 95% households are electrified.
- Sanitation in 30% of households and utility is even much less due to water and maintenance.
- Farming is no longer the main occupation in villages nearest to the urban areas.
- Individual water connection and good drainage system is a urban phenomena as reflected in the statistics.