

**102C. 9) DEVELOPMENT OF GEOSPATIAL WEB APPLICATIONS ON KARNATAKA GEOPORTAL FOR G-GOVERNANCE (KSSDI PHASE II PROJECT)**

Principal Investigator : Mr H Hemanth Kumar  
Co-PI's : Mr S N Sondur/Dr U T Vijay  
Budget : Rs. 80.36 lakhs  
Funded by : DST – GOI and DST – GOK  
Duration : 3 years

The council implemented the 2<sup>nd</sup> phase of the project funded by Department of Science and Technology, Government of India and Government of Karnataka. The geoportal now has a web based geospatial applications/decision support system for selected schemes of Watershed and Health Departments to support G-governance on Karnataka Geoportal platform.

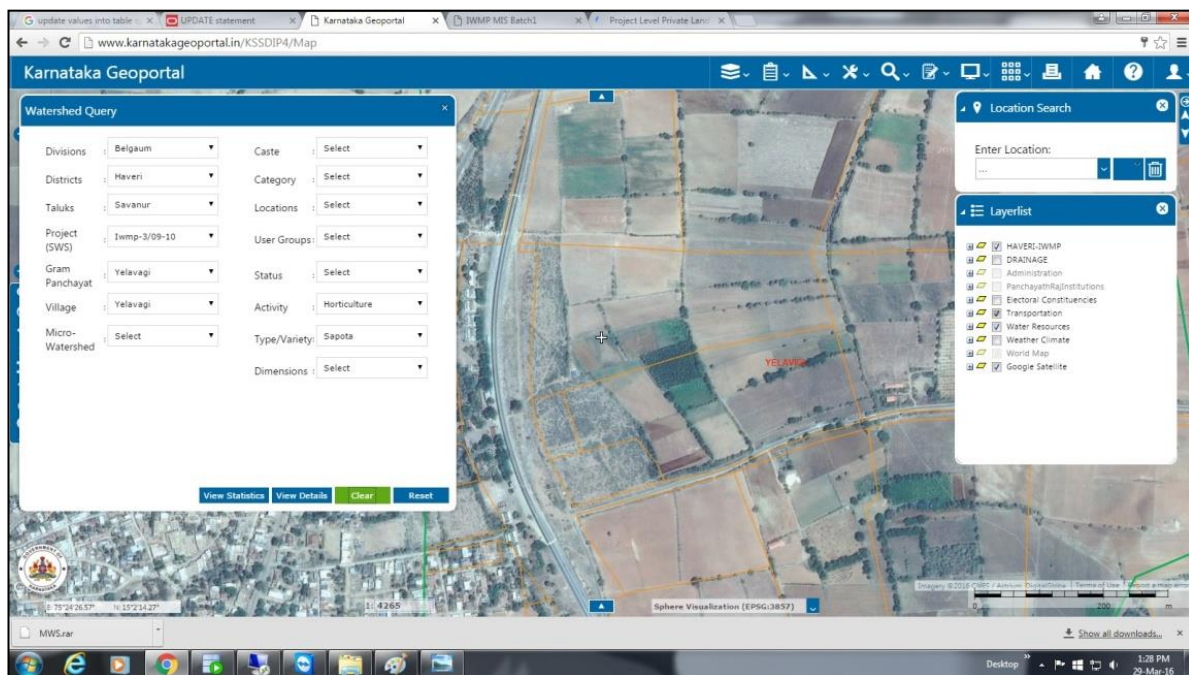
Karnataka Watershed Development Department (KWDD) – an agency under Government of Karnataka is in-charge of running various watershed schemes/Projects, formulating policies, planning, organizing, coordinating the activities and implementing the watershed programs. KWDD uses data sets for planning, implementation, monitoring and evaluation of Watershed Programs. Pradhan Mantri Krishi Sinchai Yojana (PMKSY) Program (earlier known as Integrated Watershed Management Program - IWMP) is a flagship program of KWDD with a financial outlay of above Rs. 400 Crores per annum. KWDD has multi-disciplinary technical experts drawn from Agriculture, Horticulture and Forest Departments who are pooling their experience, expertise and technology in the Watershed Programs being financed under External, Central, State and District Sector Schemes. The Department currently has an in-house online Management Information System (MIS) for monitoring Watershed Programs by its Head Office. It makes use of existing cadastral and thematic maps available with other departments, from planning to implementation stages and tries to document all the activities with geo-tagged time-stamped photographs before, during and after the implementation of various program-based activities. However, they do not have an easy and timely access to geospatial data of right resolution and currency for use in planning, implementation, monitoring, and evaluation processes. KSCST felt the need for integrating KWDD's MIS with the web-based SDI approach of NRDMS-NSDI/ DST to provide standards-based online geospatial information services to end users in KWDD by utilizing the Karnataka State Geo-portal already operational in the State. Towards achieving the above goal, the project "Development of Geospatial Web Applications on Karnataka Geo-Portal for G-governance" was launched by KSCST under the collaborative support of DST, Govt. of India and Govt. of Karnataka during April 2013 to March 2016.

On the launch of the above project, a user requirement analysis was taken up to understand and study the geospatial information needs of the KWDD to be accessed over the web. KSCST showcased the utilization of Geospatial Technologies by developing geospatial applications on the Karnataka State Geo-

portal to evaluate watersheds in Belagavi Division of Karnataka under the Phase I and Phase II projects of PMKSY. Development and deployment of the “State Geo-portal for Watershed Management” technology enables the users to query on various geo-spatial and non-spatial (attribute) parameters at cadastral/beneficiary level for activities taken up under agriculture/ horticulture/ forestry sectors. The Geo-portal enlists a host of Open Geospatial Consortium (OGC)/ International Standardization Organization (ISO) Standards-based Web Services for accessing data sets to support Watershed Management. Crowd sourcing of data for data updating, mobile (smart phone) compatibility and online editing of data sets are some of the Technology’s major highlights. Some of the screenshots showing the home page and query pages of the State Geo-Portal are shown below:



Home page of the Karnataka Geoportal providing access to the Watershed Information



Watershed Portal

Important features of the web-based Geo-Portal Information Services for Watershed Management include the following:

- Map viewer - Web Map Service (WMS),
- Product catalogue/metadata - Catalogue Service on Web (CS-W),
- Services for provision of feature data sets - Web Feature Service (WFS),
- Simple Applications (Query based decision support tool)
- Coverage services/images - Web Coverage Service (WCS)
- Web processing Service (WPS)
- Transactional Web Feature Service (WFS-T)
- Mobile Mapping
- Multi-spatial and multi-attribute query and analysis
- Multi-lingual support
- On-line help/ support to end user

**Future Plans:** The Council along with Indian Centre for Social Transformation and Strand Life Foundation has submitted a proposal to DST - GOI titled “Integrated property taxation platform for urban governance” to support the Smart city program of Government of India by providing geospatial applications/solutions mainly in the areas of property taxation to handle and manage real-world operations by municipal authorities. The geospatial application will provide well-defined solutions to urban local bodies and citizens. This initiative needs to be realized at this stage to cater to needs of urban local bodies to fill the gaps to address the development needs of the cities and municipalities.

The Council received funding from DST-GOI towards R&D project titled “Deployment of FME/ XML Spy/ EA software as a central facility for use by all the state SDI’s”.

- Project Cost: Rs. 23 lakhs.
- Duration: 9 months.

FME has been procured and basic & advanced training were conducted to representatives of NDR partners.

