

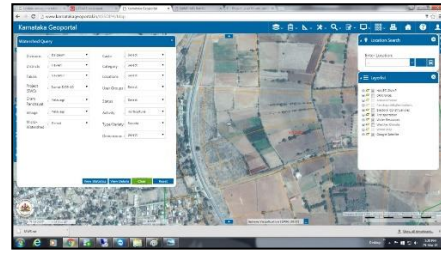
DEVELOPMENT OF GEOSPATIAL WEB APPLICATIONS ON KARNATAKA GEOPORTAL FOR G-GOVERNANCE (KSSDI PHASE II PROJECT)

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Budget	:	Rs. 80.36 lakhs
Funding Agency	:	DST – GOI and DST – GOK
Duration	:	3 years

The Council implemented the 2nd 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 geospatial 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 & watershed portal of the Karnataka Geoportal providing access to the Watershed Information

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)
- 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



"Demonstration of NDR GIS applications/use cases" at Zilla Panchayath Mysore

Activities:

- As a member of on NSDI-BIS Cadastral Data Content Standard constituted by DST – Gol, participated providing inputs to set up NDR in six nodes comprising of National mapping organizations.
- Working on Implementation of the National Data Registry (NDR) constituted DST – Gol.
- The Council has been entrusted with the task of bringing NSDI annual report/brochure/newsletter and pamphlet periodically solely for the purpose of creating awareness and dissemination of information of NSDI and its partnering agencies. DST-GOI has sanctioned Rs 8 lakhs to bring out these publications.
- Organized 3rd Expert Committee meeting on **"Technologies for NSDI Applications"** of **NSDI Division DST-GOI** on 8th July 2019, at KSCST, IISc campus, Bengaluru.
- Organized workshop on **"End user consultative meet on NDR use cases"** at KSCST, Bengaluru during 29-30 November, 2019.
- Participated in training program on **"Use of Geospatial Cloud-based Platform for Development of Data Services and Registers"** at IISM, SOI, Hyderabad during 10-11 December, 2019.
- Organized workshop on **"Demonstration of NDR GIS applications/use cases"** at Zilla Panchayath Mysore on 27th December, 2019.

Future Plans: National Data Registry and Cloud services for Karnataka Geoportal.