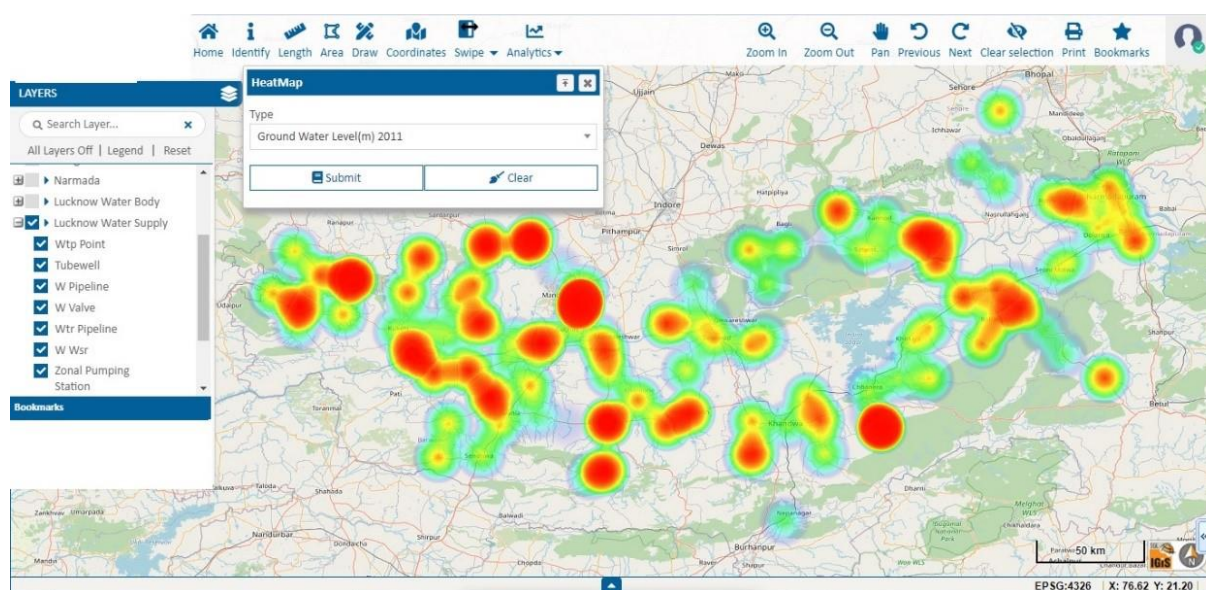**Land and Water resources management**

INTRODUCTION

Water availability is a critical issue in India, where many regions experience water scarcity and drought. Current research on water availability in India focuses on identifying areas of water stress and developing strategies to manage water resources more effectively. The implementation of advanced geospatial technology has made water resource management activities easier. It includes various water-related data collection, data storage, management, and analysis. IGiS, an indigenous technology, jointly developed by SGL and SAC, ISRO, provides valuable insights for efficient decision-making activities and helps to implement better water management policies through various geospatial analyses for sustainable water resource management.

IGiS provides a robust set of tools for data editing, manipulation, and processing, using advanced drawing and analysis tools. These are beneficial for mapping the water resources, and assets, monitoring water availability, and water quality, identifying potential zones of groundwater, water supply system management, and analyzing the impact of human activities on water resources effectively and efficiently. The Enterprise-based solution of IGiS empowers decision-makers to make enhanced strategies for water management proficiently and with ease.

There are numerous approaches to sustainable water resource management that can be achieved by using IGiS, an integrated GIS and Remote Sensing Platform. Following is a brief discussion of a few applications in the same field:

Ground Water Management

Geographic Information System (GIS) applications are making a major impact on groundwater management in several ways, such as mapping and tracking India's groundwater resources, including aquifer recharge and depletion rates, water quality, and well locations. Groundwater is an essential source of irrigation, drinking water, and industrial water, but it is often overused in certain regions. IGiS can be used to monitor and inspect water resources through comprehensive maps of groundwater resources, taking into account aquifer boundaries, water levels, and quality information which comes from remotely sensed images and sensors installed in the field. The platform incorporates diverse image-processing techniques that facilitate the identification of potential groundwater zones. It also enables the solution for how groundwater levels will respond when there are changes in rainfall amounts, pumping rates, or other factors. Thus, the integration of GIS technology in the groundwater management system, enhances decision-making, promotes conservation efforts, and facilitates sustainable use of this vital resource.


SGL

2. **Water Supply Management**

GIS (Geographic Information System) is an essential tool for managing water supplies, as it helps to visualize and assess spatial data related to water

resources. This includes creating detailed maps of water treatment plants, reservoirs, pipelines, and distribution networks, assessing population density, and other useful data. With IGiS, authorities can monitor the performance of the entire water system, identify areas with high demand or potential leakage, and decide on the best locations for new infrastructure. Additionally, IGiS can be used to analyse water supply scenarios like the demand for water in a particular area for giving insight to develop effective strategies for managing water sources. Ultimately, IGiS plays a major role in ensuring the sustainable management of water resources.
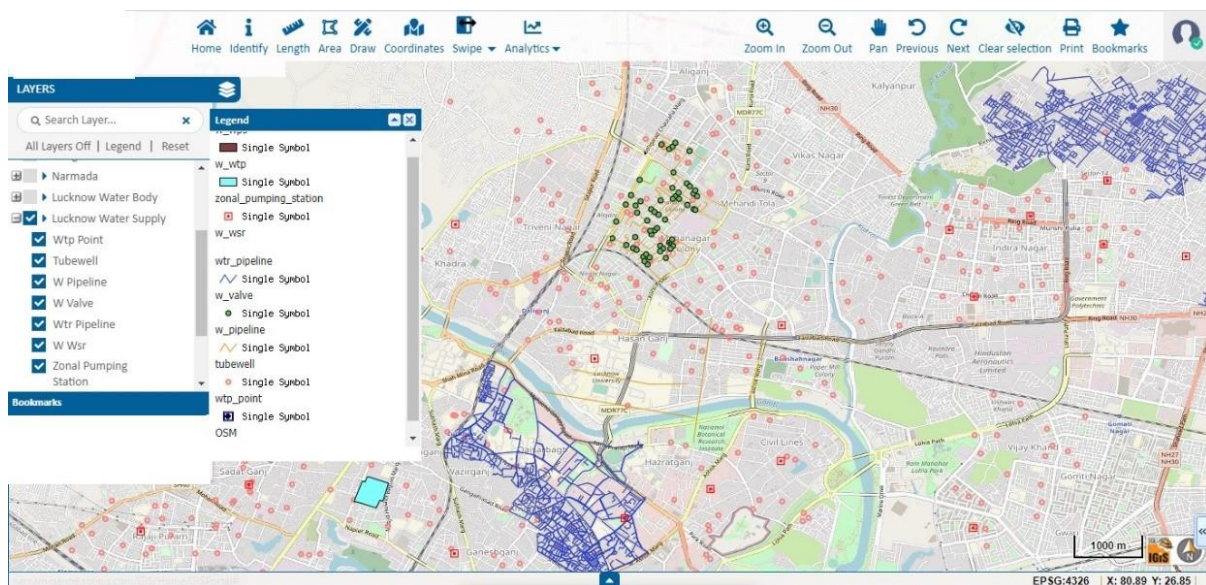
GIS can be highly beneficial in agricultural water resource management. It facilitates the gathering and examination of data related to water sources, such as streams, rivers, and lakes, as well as irrigation systems and soil moisture. This information can be used to enhance water utilization, spot likely water stress areas, and construct irrigation plans. With the help of IGiS, users can also monitor the effect of water usage on crops, soil, and surrounding ecosystems. Additionally, it can facilitate the creation of maps and models to gain knowledge of water movement and availability and identify regions that may necessitate additional water management actions. It also enables the integration of national crop advisory information within the system, to ensure nationwide effectiveness in agriculture. Ultimately, it can be employed to visualize crops, soil types, and water accessibility in agricultural locations for optimizing irrigation procedures and the production of drought-resistant crop varieties.

LAYERS

Schedule

Village Layer

Balpur

Water Schedule

8:00 - 12:00

| Submit | Grid Data | Clear |

Villages

SEARCH BY RESULT

Show 4 entries | Copy | Excel | PDF | CSV | Column visibility

Previous 1 2 3 4 5 ... 11 Next Search:

Sr No	Village	Lulc	Farmer Name	Supply Officer	Canal Officer	Location
1	Balpur	Crop Land	Manorama Sahoo	Piyush Sharma	K. S. Singh	●
2	Balpur	Crop Land	Mayadhar Nath	Piyush Sharma	K. S. Singh	●
3	Balpur	Crop Land	Madhabananda Patra	Piyush Sharma	K. S. Singh	●
4	Balpur	Crop Land	Dibyabhanu Samantaray	Piyush Sharma	K. S. Singh	●

Showing 1 to 4 of 43 entries

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