CSIR-NEERI's Technology Transfer under the Jal Jeevan Mission

As part of the national initiative under the **Jal Jeevan Mission**, CSIR-NEERI has made a significant contribution through the successful **technology development and transfer** of a **GIS-enabled IoT dashboard system**. This innovation is a key outcome of the collaborative project titled **"Affordable IoT-enabled Water Service Delivery Measurement and Monitoring Sensing System for Rural Deployment."**

The GIS-enabled IoT dashboard system was developed by **Er. Asheesh Sharma, Principal Scientist**, along with a team of researchers at the IT Cell of CSIR-NEERI. It is a robust software platform that integrates environmental sensing with advanced data visualization tools. The core innovation lies in a **GIS-integrated IoT dashboard** capable of real-time and historical monitoring of rural potable water supply systems. The dashboard system has been **licensed and transferred** to **M/s Biomimicry Technologies Pvt. Ltd.**, marking a successful commercialization of CSIR-NEERI's in-house technology.

This solution supports data-driven decision-making for water resource management in rural areas, aligning directly with the Jal Jeevan Mission's vision: *"Gaon Ka Pani Gaon Mein – Har Ghar Ko Nal Se Swachh Jal."*
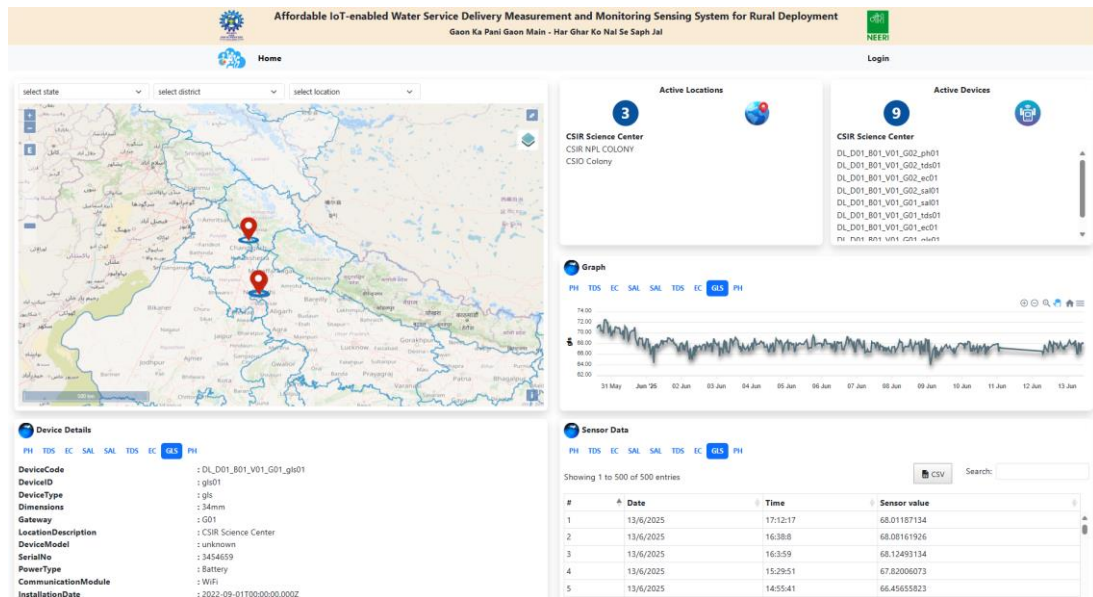
The system architecture integrates:

- **LoRa protocol** for long-range, low-power data transmission, ideal for sparsely populated rural regions.

- **Cloud computing services** for scalable data storage, processing, and management.

- **GIS-enabled dashboard** to provide spatially visualized, real-time monitoring of water service delivery.

- **Environmental analytics** for assessing water quality and distribution patterns.

The dashboard enables **remote monitoring** of multiple parameters, offering authorities and stakeholders an actionable overview of water availability, quality, and usage trends in rural areas.

This technology transfer reflects the **synergistic collaboration among five CSIR laboratories**, with **CSIR-CSIO** acting as the nodal lab. CSIR-NEERI's specialized input in environmental systems and software integration played a vital role in bringing this innovation to fruition.

By supporting **equitable and sustainable potable water delivery**, this innovation strengthens the **Jal Jeevan Mission's core mandate** of ensuring *"clean tap water in every rural household."*

The GIS-enabled IoT dashboard can be accessed at: **hargharnal.neeri.res.in**

GIS Enabled Iot Dashboard