

রাজশাহী, নওগাঁ ও চাঁপাইনবাবগঞ্জ জেলায় স্থাপিত ৫০টি ভূগর্ভস্থ পানি স্তরের
উপাত্ত ও তথ্য সংগ্রহ ও বৈজ্ঞানিক বিশ্লেষণ

বিশ্লেষকঃ ১। মোঃ আল-আমিন কবির ভূঁইয়া

উর্দ্ধতন বৈজ্ঞানিক কর্মকর্তা (পানি), ওয়ারপো

২। এ এম জোরাফ

বৈজ্ঞানিক কর্মকর্তা (সহকারী প্রোগ্রামার), ওয়ারপো

Groundwater Dynamics in Rajshahi, Chapai Nawabganj, and Naogaon: Trend Analysis

Groundwater is a critical resource, and understanding its long-term trends and sustainability is essential for effective water management. Under the "Operationalizing Integrated Water Resources Management (IWRM) in Compliance with Bangladesh Water Rules, 2018" project, a significant initiative had been taken to enhance water resource management. This endeavor involved the installation of 50 monitoring wells strategically placed in the regions of Rajshahi, Chapai Nawabganj, and Naogaon Districts. The daily collection of data from these monitoring wells adds a crucial dimension to the project, providing a comprehensive understanding of groundwater dynamics and trends.

This comprehensive dataset serves as a valuable resource for evaluating the sustainability of water resources in the targeted areas. The integration of data from these monitoring wells offers a unique opportunity to analyze the intricate details of groundwater levels, aiding in the formulation of effective water management strategies.

Analysis: Understanding groundwater trends is crucial for sustainable water management. To enhance comprehension, this analysis incorporates graphical representations, particularly line graphs, to visually depict the dynamics of groundwater levels in Rajshahi, Chapai Nawabganj, and Naogaon Districts.



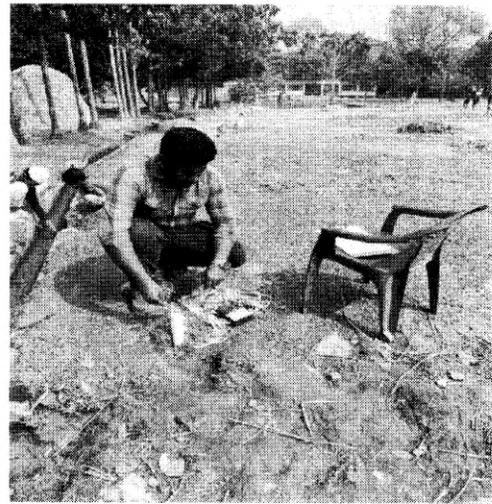
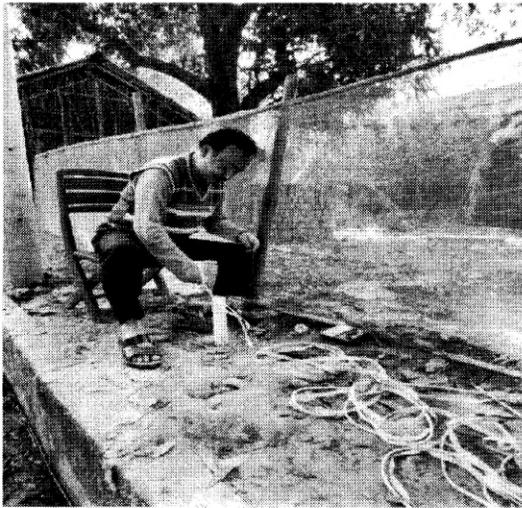
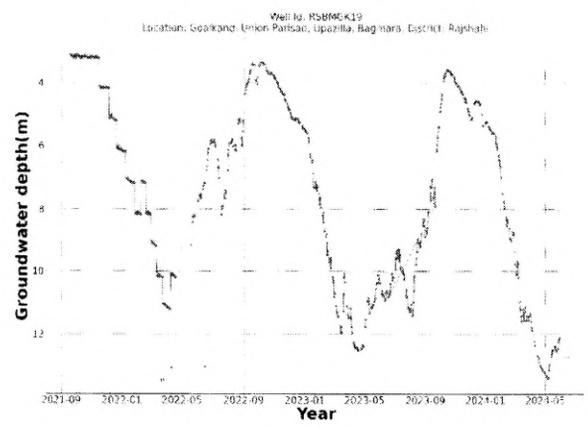
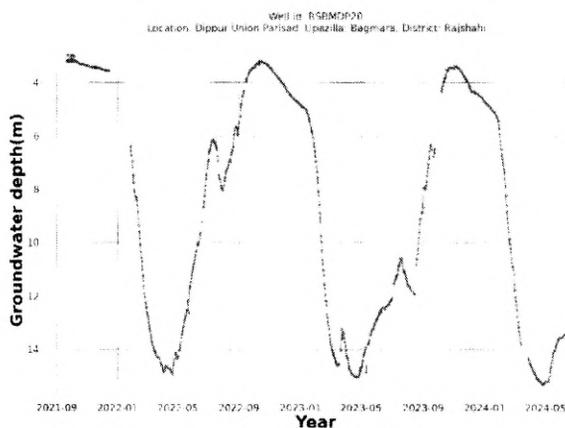
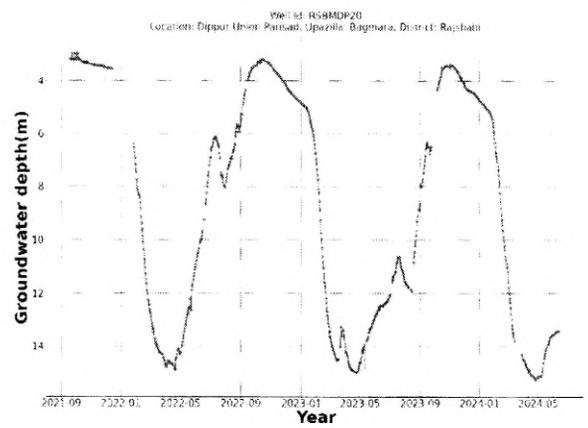
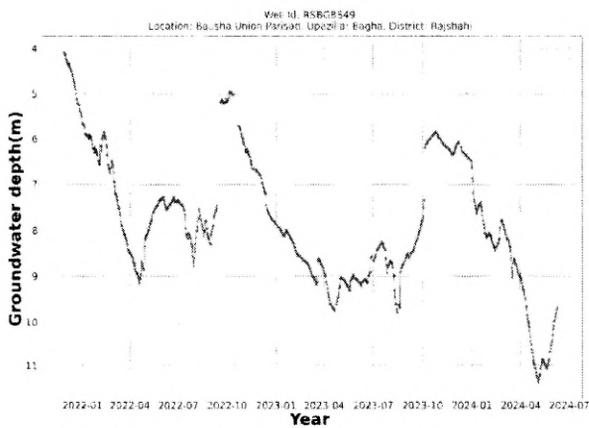


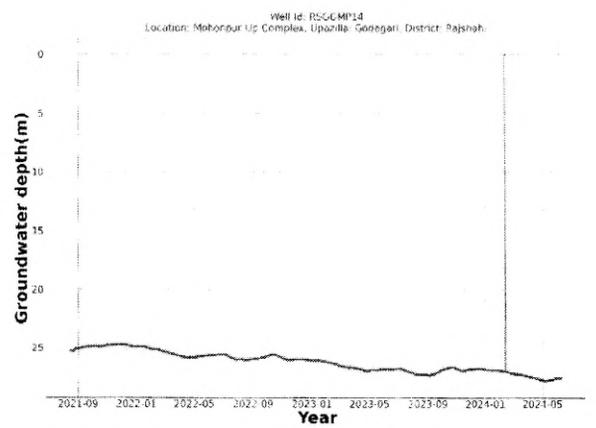
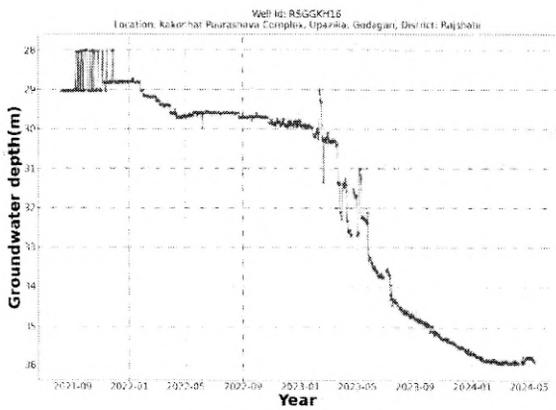
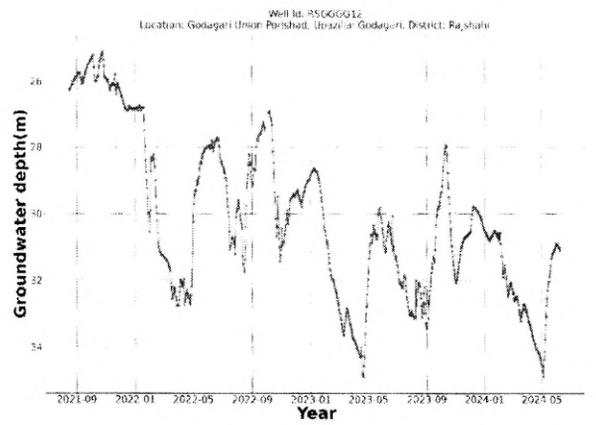
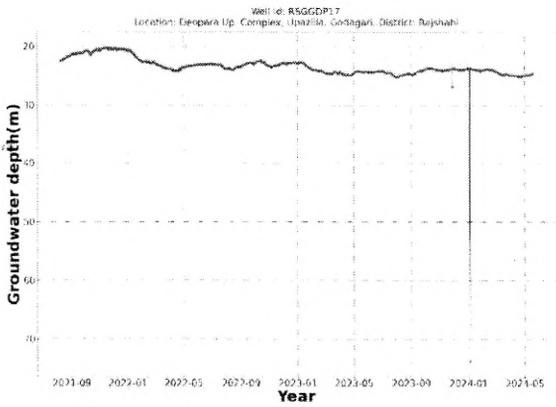
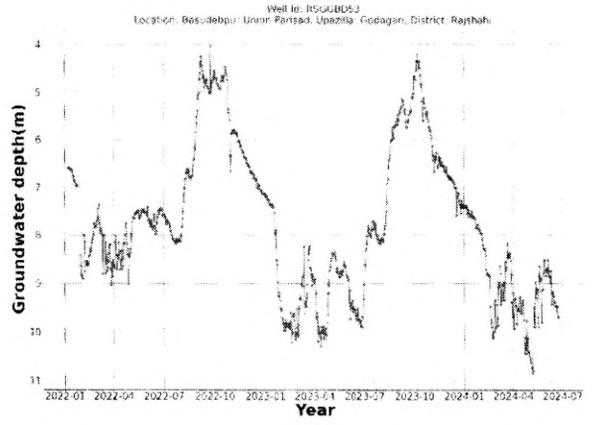
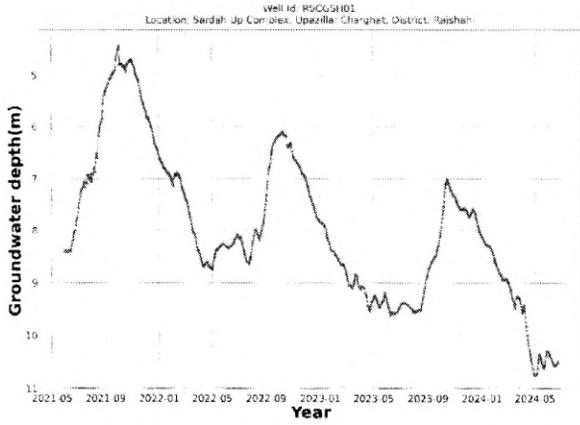
Fig: Actively collecting groundwater data in the field, ensuring accurate and timely monitoring of groundwater levels for comprehensive analysis and management.

Rajshahi District

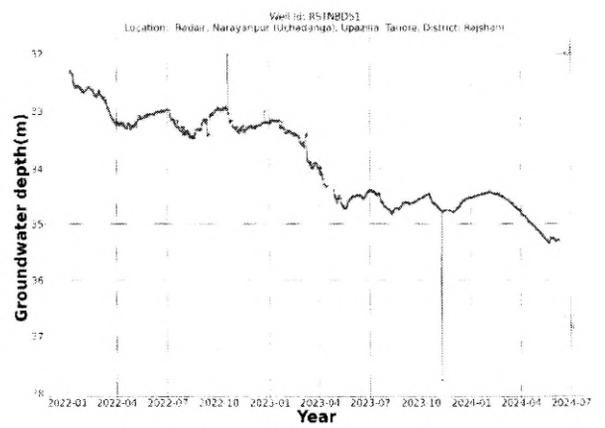
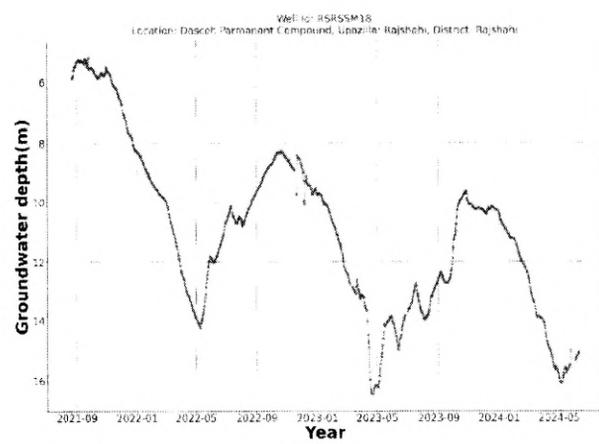
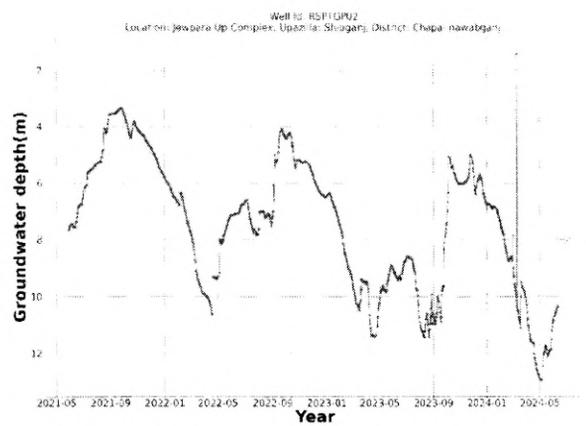
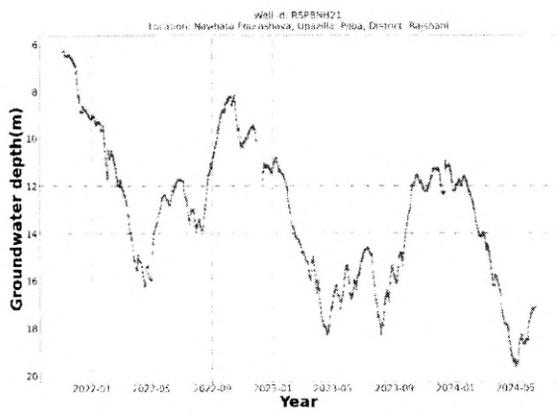
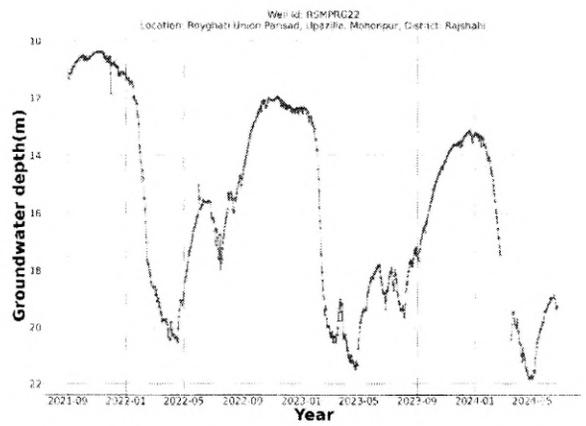
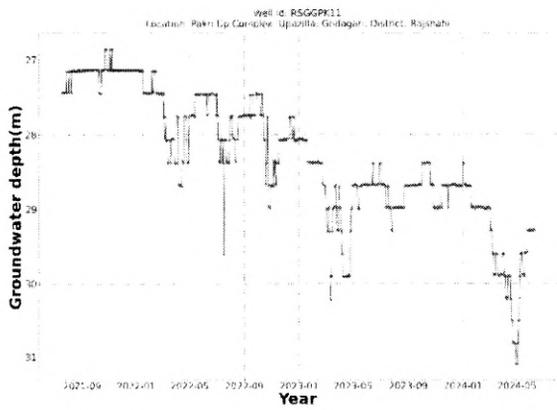


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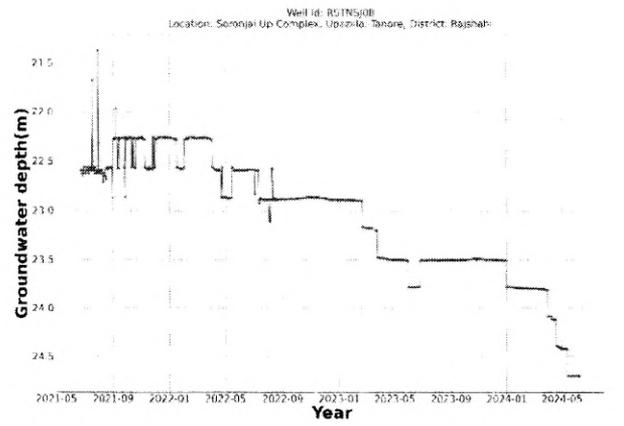
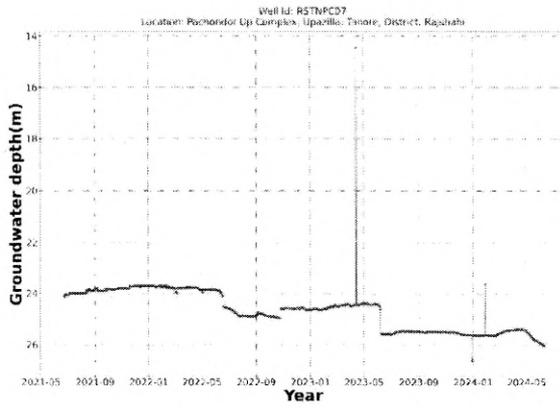
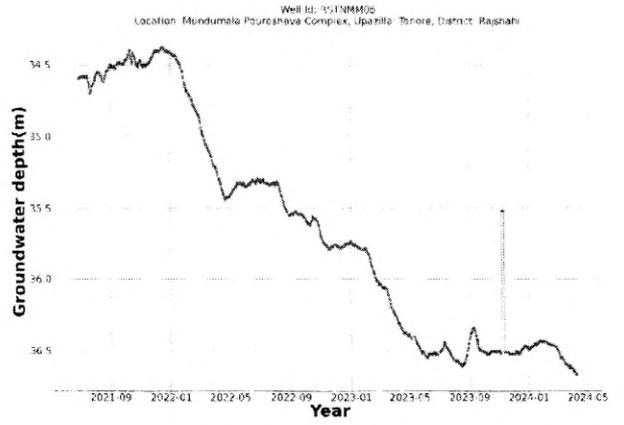
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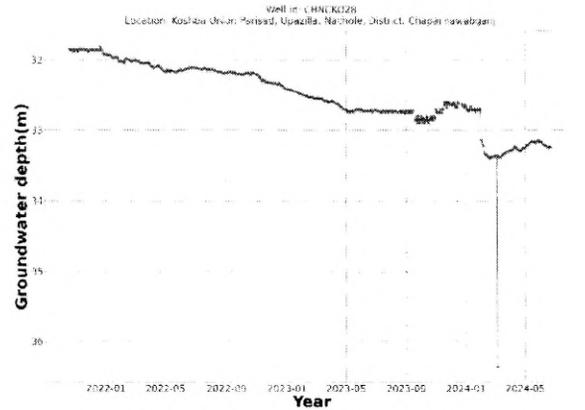
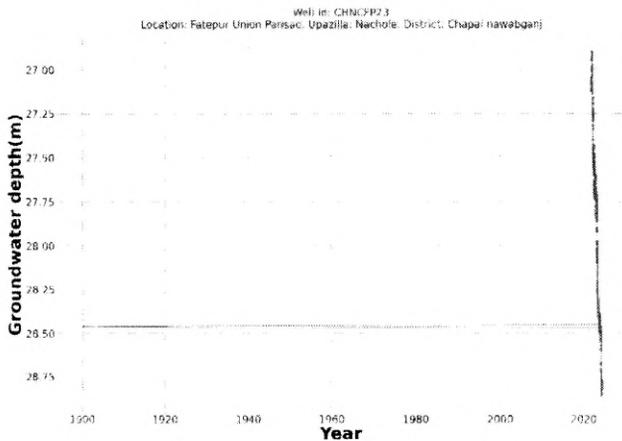
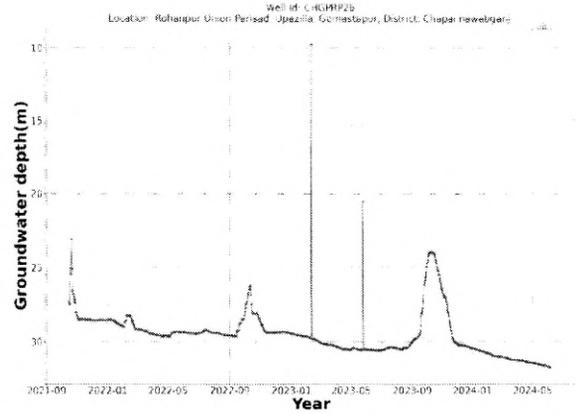
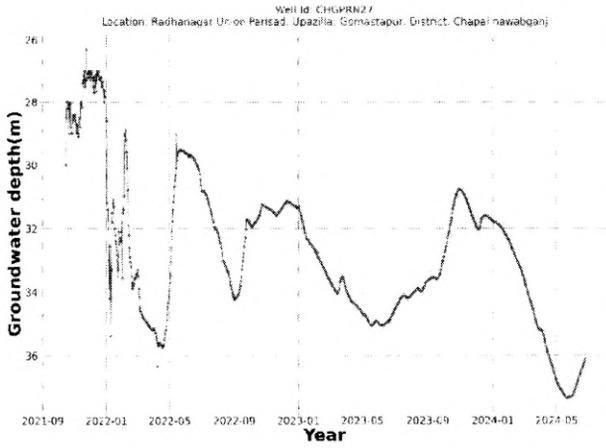
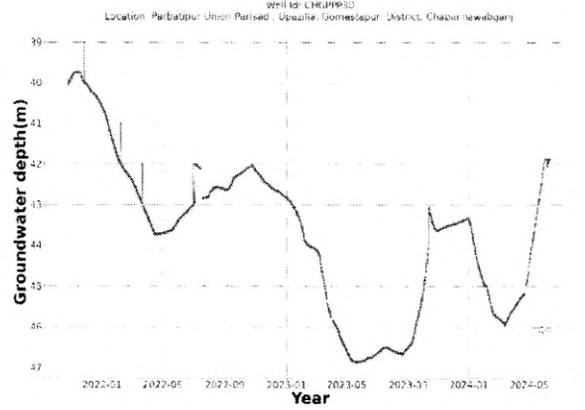
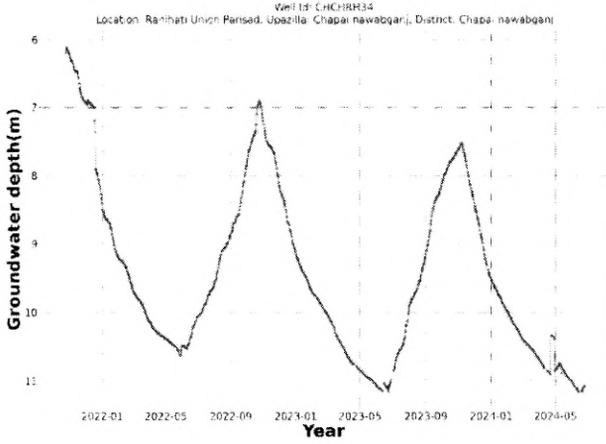


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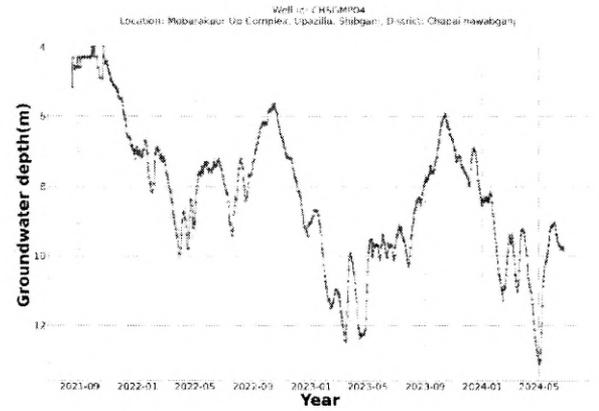
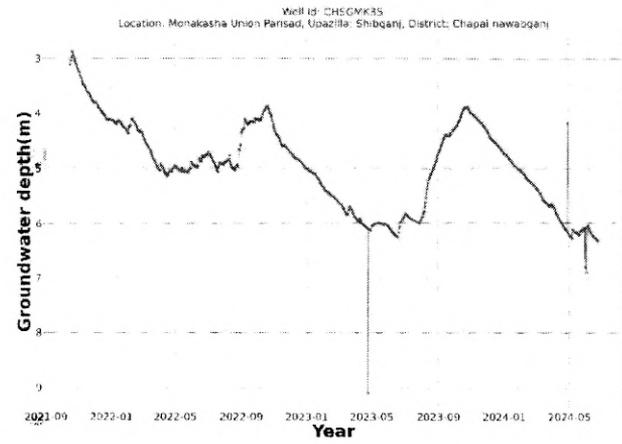
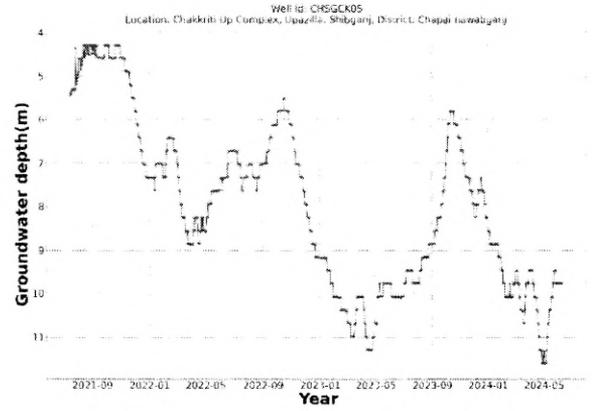
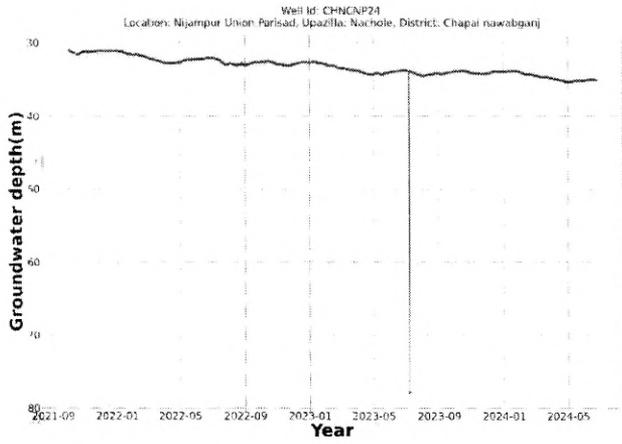
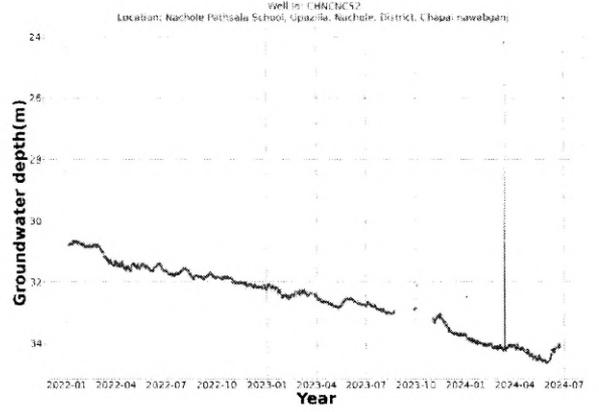
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Chapai Nawabganj District



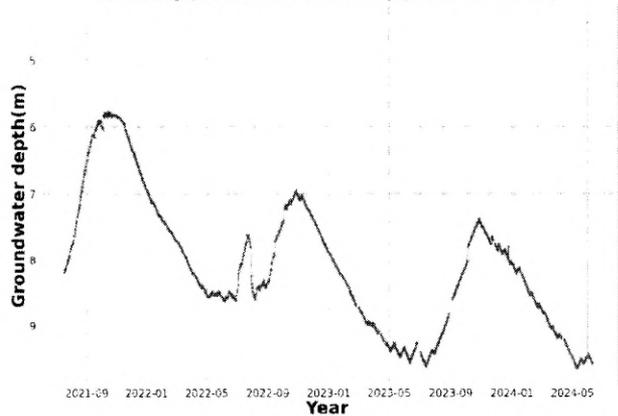
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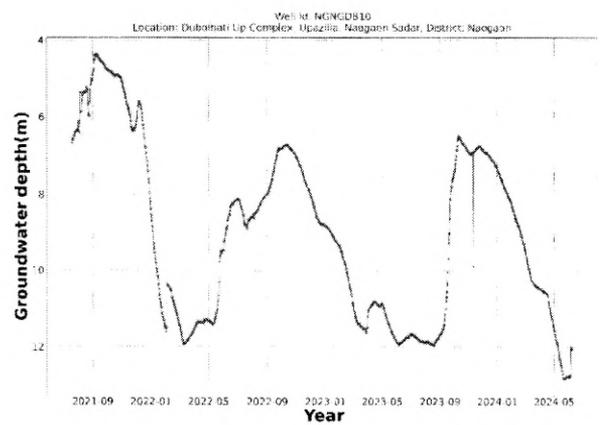
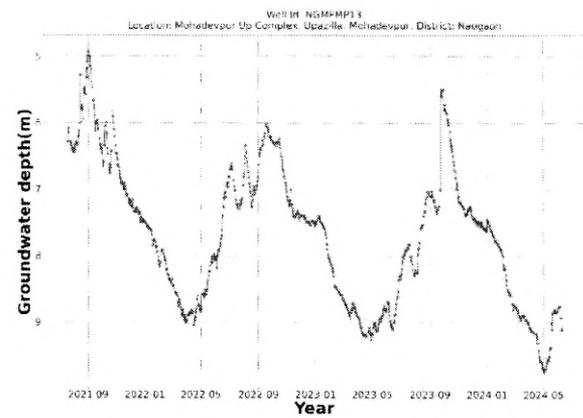
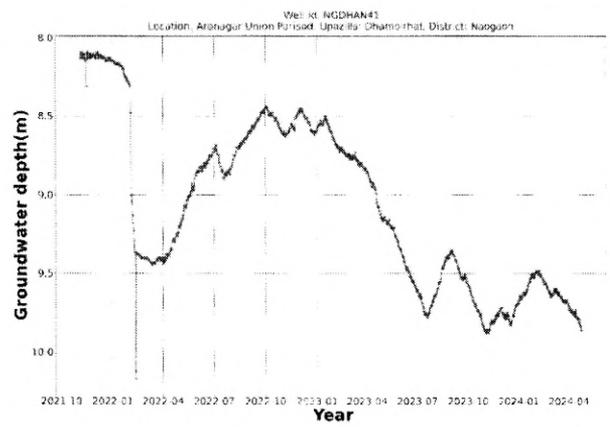
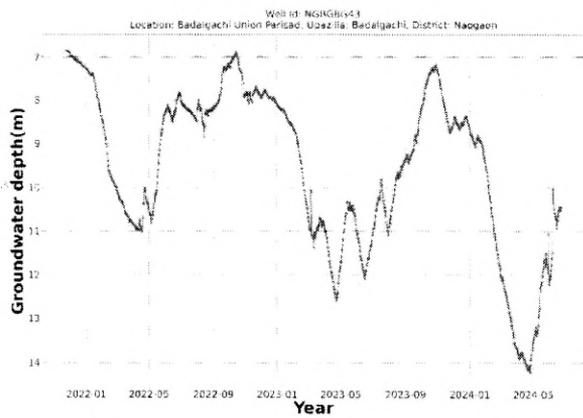
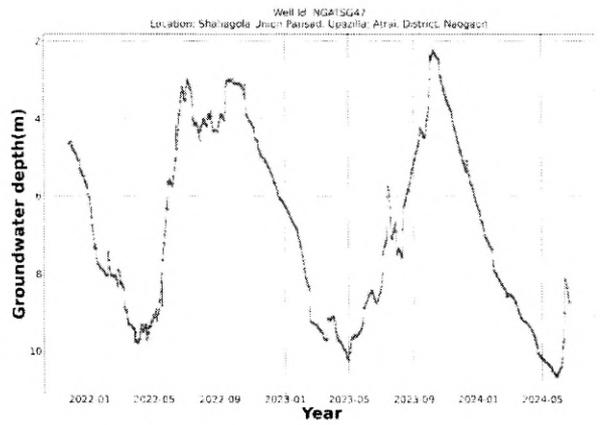
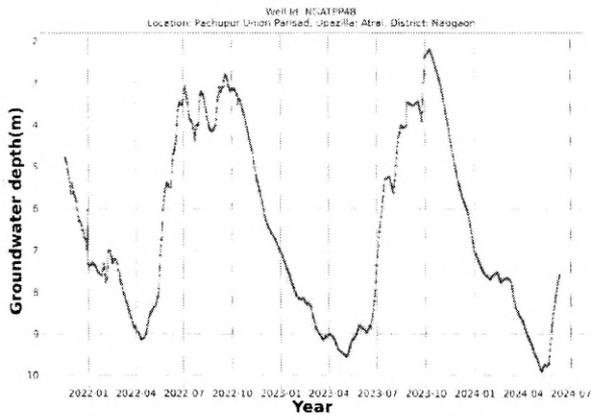
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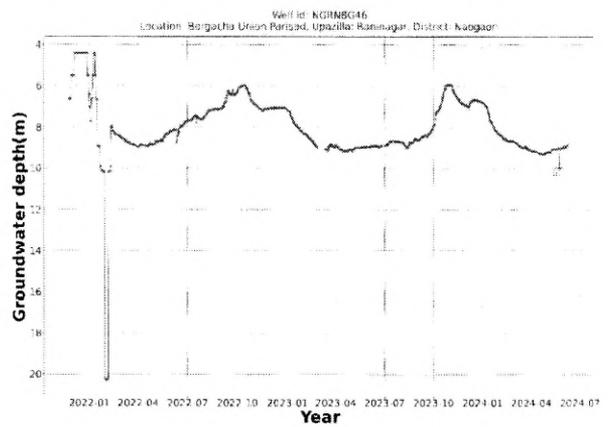
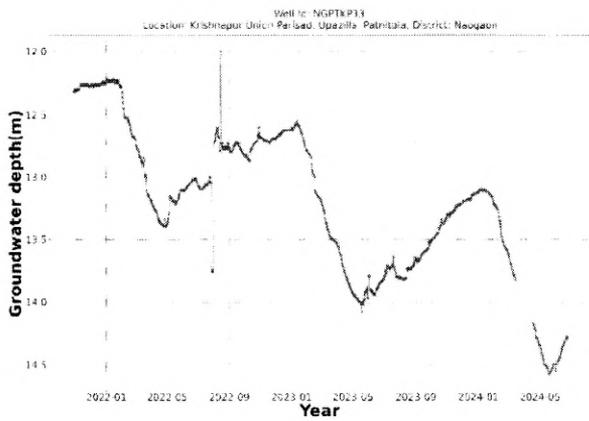
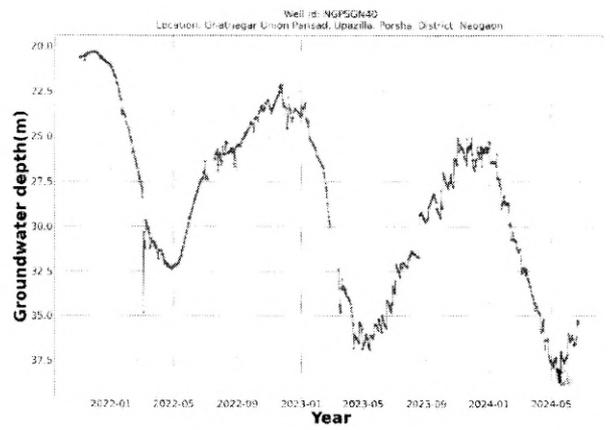
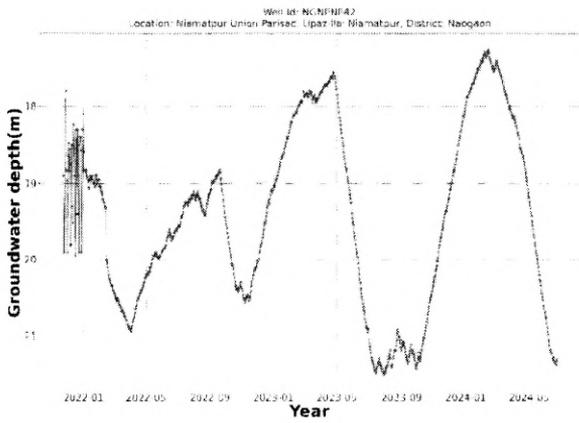
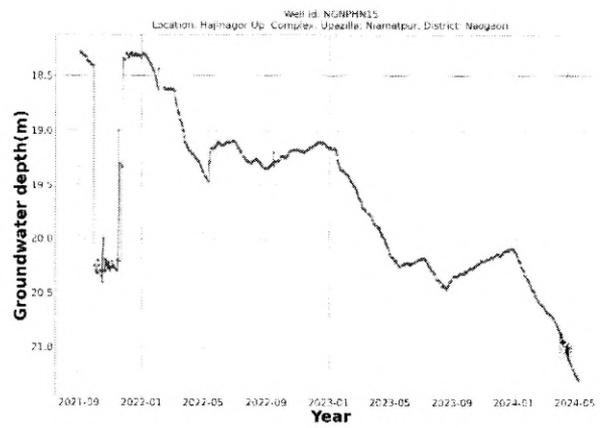
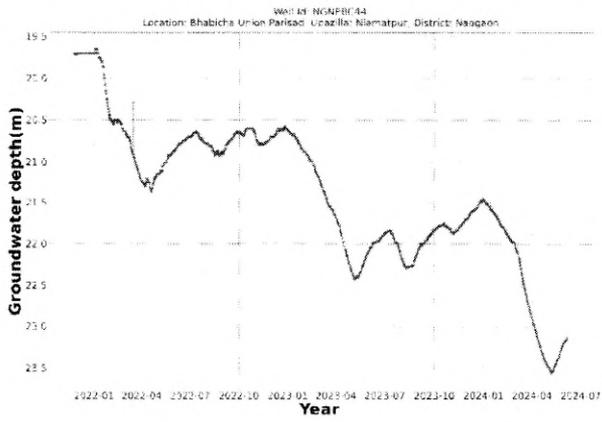
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Naogaon District



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Major Findings

Rajshahi District:

The groundwater level analysis for Rajshahi District shows a consistent and significant decline. This trend is particularly evident in the dry season when the levels drop sharply, indicating over-extraction and insufficient recharge. The areas most affected include Sarda Union in Charghat Upazilla and several unions in Godagari Upazilla, such as Deopara and Mohonpur, where the groundwater levels are critically low.

Chapai Nawabganj District:

In Chapai Nawabganj District, there is a noticeable decline in groundwater levels, especially during the dry season. The data shows significant drops in areas like Parbatipur Union in Gomastapur Upazilla and Koshba and Nachol Unions in Nachol Upazilla. These regions experience severe depletion, suggesting a need for urgent groundwater management and conservation measures.

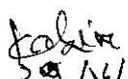
Naogaon District:

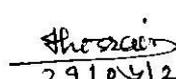
The groundwater levels in Naogaon District display a concerning downward trend, particularly in the Bhabicha and Hajinagor Unions of Niamatpur Upazilla. Although the decline is less dramatic compared to other districts, it is still significant enough to warrant attention. The data suggests that while some areas maintain relatively stable levels, the overall trend points towards gradual depletion, indicating potential future risks if current practices continue.

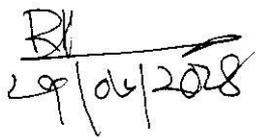
Data Quality and Completeness:

The analysis of groundwater trends across Rajshahi, Chapai Nawabganj, and Naogaon Districts is hindered by missing data points and errors in the dataset. These inconsistencies affect the accuracy of the trend analysis and may lead to incomplete or potentially misleading conclusions. Improving the quality and completeness of data collection is crucial for reliable groundwater monitoring and effective water resource management. Ensuring accurate, consistent, and comprehensive data will provide a more robust foundation for understanding groundwater dynamics and formulating appropriate management strategies.

These findings highlight the critical need for targeted interventions and sustainable water management practices in these districts to ensure the long-term availability of groundwater resources.


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পানি সম্পদ পরিকল্পনা সংস্থা
পানি সম্পদ মন্ত্রণালয়