

PREFACE:

Hyderabad, the capital of Telangana, is facing a severe water crisis due to rapid urbanization, industrial growth, and population influx. The pollution of water bodies by industrial and urban pollutants has exacerbated the situation, leading to degraded water quality in several areas. Utilizing Geographical Information System (GIS) technology, this study maps the water quality across Hyderabad Urban Agglomeration (HUA), revealing that while some regions like Ramanthapur and Musheerabad enjoy good water quality, others like Shapur Nagar and Langer Houz suffer from poor conditions.

The city's major drinking water sources, Osman Sagar and Himayat Sagar reservoirs, along with the Musi River, are crucial yet strained resources. Hyderabad is grappling with a 47% gap between water demand and supply, worsened by drying reservoirs, over-extraction of groundwater, and insufficient rainfall. This crisis has led to desperate measures such as deep bore wells, tapping ancient groundwater reserves, and dependency on monsoon rains.

The state government has taken steps to mitigate the crisis, including funding for water transportation to scarcity-hit areas and promoting rainwater harvesting. However, sustainable water management requires a comprehensive approach involving government, private sector, and community collaboration. Protecting wetlands, preventing pollution, and encouraging water conservation are essential for ensuring long-term water security in Hyderabad. This report delves into the challenges of water scarcity and security in Hyderabad and explores potential solutions for sustainable water management in the region