

## **Problem Statement**

### **Hackathon Challenge: Innovate for Clean Water in Rajasthan**

Rajasthan faces significant challenges with water pollution due to industrial/municipal discharge, agricultural runoff, and inadequate waste management, threatening both public health and the environment. The increasing polluted river stretches in the state is an emerging issue. Also, pollution in textile clusters of Balotra, Pali, Jodhpur, Sanganer and Bhilwara is an issue for the regulators. The regulators aim to monitor and improve water quality across the state to ensure safe and sustainable water resources. Join us in this crucial mission by developing innovative solutions to detect, analyze, and mitigate water pollution. We invite you to leverage cutting-edge technologies such as IoT, AI, and data analytics to create scalable and sustainable strategies for real-time water quality monitoring, contamination source identification, and efficient waste management.

Your ideas could include smart sensor networks, data visualization platforms, community awareness tools, and policy recommendations. Explore avenues such as decentralized water treatment solutions, advanced filtration systems, mobile apps for water quality reporting, and educational campaigns to promote water conservation. Consider integrating renewable energy sources to power water purification systems and developing low-cost, accessible solutions for rural areas. Together, let's ensure cleaner water and a healthier future for the people of Rajasthan.