



Underground rainwater harvesting for the Mundas

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The Mundas' are a small tribal community in southwest coastal district of Bangladesh

Understanding the intensified water crisis for the Mundas

The Mundas' were forcibly relocated to Bangladesh a century ago. The combined effects of climatic catastrophe, growing water crisis, and social exclusion for being of low caste intensified their marginalisation - putting their access to water, sanitation, and hygiene (WASH) in "double jeopardy". Due to the proximity to the sea and rampant shrimp cultivation, the surface and underground water is highly saline in the coastal areas. Munda girls and women used to spend an average of four hours to fetch water for their families.

Our work

We developed an underground rainwater harvesting system (RWHS) with a capacity of 65,000 litres. To make this facility climate resilient, several aspects were considered during its construction including hazards like cyclone, tidal surge, flood and increased salinity, along with the high flood level of 15 years return period, wind resistance up to 150 km/h and saline tolerance. The platform of the RWHS has been converted into a social space.

Additionally, three toilets were constructed for this community to promote a hygienic and healthy environment. These toilets are designed to be functional during any disasters due to affordances like sealing the septic tank. There is additional space inside the tank for retention of faecal matter with wastewater for around seven days.

Equitable access to WASH

These climate-resilient and context-specific initiatives fulfilled the unmet WASH demands of the Munda community and helped to minimise their state of double jeopardy. The community members are also equipped with the knowledge to operate and maintain the facilities. Women of this community can now use the time saved on productive and economic activities. These interventions equalised their access to WASH services and enhanced their dignity.

