

Strengthening Institutions for Climate Change Adapted Water Resource Management in Dhaka

Background

Dhaka, the capital of Bangladesh, home to approximately 20 million inhabitants, primarily relies on groundwater for its safe drinking water supply. However, this vital source is under threat due to over-extraction, and the effects of climate change. In the past, the water level has been declining by 2–3 meters per year. According to the projections, the groundwater will further decline by 5 meters annually by 2030. Therefore, there is an urgent need to utilize the surface water for the water supply of Dhaka.

The rivers around Dhaka such as the Buriganga, Sitalakhya, Dhaleshwari, Balu and Turag suffer from severe pollution. Main causes of the pollution is the rapid urbanisation, unplanned development along riverbanks including industries without or with non-functional effluent treatment plants and settlements without sewerage treatment facilities. Insufficient capacity and lack of integrated collaboration among responsible authorities to monitor water quality and enforce environmental regulations add to the pollution. The lack of incentives, capabilities, and awareness of industries to develop and execute pollution reduction strategies further exacerbates this issue.

The Government of Bangladesh has identified water resources management as a key sustainable development objective. To ensure long-term, sustainable and safe drinking water supply for Dhaka's residents, the Government of Bangladesh is working on conjunctive use of ground water and surface water as a strategic measure for adapting to climate change.

For this purpose, water is to be taken from the Meghna River outside of Dhaka, which is a central water source of acceptable quality. The water will be piped from Haria Intake point at Meghna River to the Saidabad Water Treatment Plant-III. Thus, maintaining good water quality in the vicinity of the Haria intake point is vital to keep the treatment efforts at Saidabad-III efficient and cost-effective.

Objectives

Improve institutional and technical foundations for safeguarding the water quality of the Meghna River at the level of concerned stakeholders in Bangladesh.

Project name	Strengthening Institutions for Climate Change Adapted Water Resource Management in Dhaka
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Commission value	EUR 4.5 million
Project region	Dhaka, Bangladesh
Partner ministry	Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C)
Implementing partner	Dhaka Water Supply & Sewerage Authority (DWASA)
SDG contribution	Good health and wellbeing (SDG – 3), Clean water and sanitation (SDG – 6), Climate action (SDG -13)
Duration	2022 – 2026



The majestic flow of the Meghna river



Untreated waste gradually changes the characteristics of the river water



Water testing facilities will be improved to meet standards

Expected Outputs and Main Activities

Output 1: A coordination process is established

It is expected that improved coordination between the water and environmental authorities, the private sector and local authorities enable better water resource protection.

- Twelve actors, including national and local authorities, have been identified to implement agreed measures aimed at preserving the water quality of the Meghna River.
- Capacity strengthening initiatives are planned to empower these national and local actors to implement agreed measures for the Meghna River
- A coordination mechanism is currently under development to support long-term protection of the Meghna River's water quality.

Output 2: An integrated system for water quality monitoring is established.

It is expected that an integrated monitoring system will provide essential technical and institutional prerequisites for effective water resource management in the Meghna River.

- An online river water quality monitoring system is being developed to oversee the water quality of the Meghna River, especially around Haria intake point.
- Dhaka Water Supply and Sewerage Authority (DWASA) and Department of Environment (DoE) are being guided to establish a collaborative process for continuous collection and analysis of data to verify water

quality at the withdrawal point, including the implementation of necessary quality assurance procedure.

- DWASA and DoE will own, operate, and maintain an online database on Meghna River water quality with free public access.



Output 3: Capacities of industries and SMEs to reduce surface water pollution are improved.

It is expected that strengthened capacities of the industries and small and medium enterprises (SMEs) on safe and efficient production approaches as well as more transparent wastewater treatment led to less pollutant discharge in the Meghna River.

- An online monitoring system is under development for Effluent Treatment Plants (ETPs) in 8 to 10 selected industries.
- A comprehensive database of Small and Medium Enterprises (SME) will be prepared.
- Innovative process optimization strategies are being implemented to reduce industrial water consumption and minimize emissions in both large industries and SMEs.
- Awareness-raising and capacity development activities are underway to help industries and SMEs to understand the impact of surface water pollution and explore mitigation measures.

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