

RAINWATER HARVESTING



Rainwater Harvesting is a sustainable, alternative source of potable water that can be captured, treated, and stored to serve climate impacted vulnerable communities in the coastal belt of Bangladesh facing drinking water crisis.

RAINWATER HARVESTING MAKES COMMUNITIES MORE RESILIENT TO CLIMATE SHOCKS

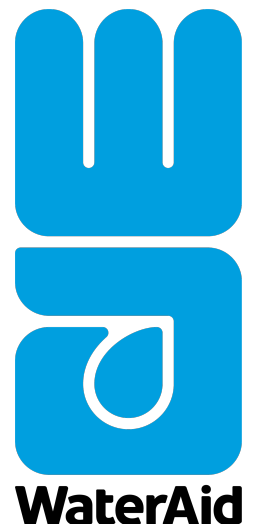
Southern-coastal belt of Bangladesh experiences an annual average rainfall of 1,800 to 2,000 mm - a considerable geographic advantage.



WaterAid/ Habibul Haque



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COASTAL REGIONS ARE PRONE TO FREQUENT FLOODS, CYCLONES, AND TIDAL SURGES

A poster example of climate change impact - the coastal belt faces devastating cyclones, tidal surges, and floods. This results in the destruction of vital infrastructures such as tube wells along with rendering water sources increasingly saline and unsafe to drink – fueling an acute water crisis.

CHALLENGES

stemming from the water crisis

Women suffer the most

Women take on the responsibility of collecting water in the grassroots - often travelling great distances to collect water because of unavailability in nearby areas. This takes a considerable toll on them - limiting their potential for engaging in productive and economic activities.

Hinders local service delivery

Because of the water crisis in coastal Bangladesh, vital facilities such as rural healthcare centers and schools fail to deliver services. As a result, increments in the burden of health and dropout from school becomes a common narrative.

Limitations of alternative treatment options

Other ways to get clean water exists in the coast such as Pond Sand Filters (PSFs), tube wells, and Reverse Osmosis (RO) plants. However, they have limitations. PSFs require a sweet water pond to set up, tube wells in many locations are plagued by arsenic and iron in shallow aquifers and saline in deep aquifers, and RO plants are expensive.

Traditional rainwater harvesting is not hygienic and efficient

Ancient rainwater harvesting methods are not always safe and efficient: Rainwater is a good alternative water source for poor communities in coastal region. However, traditional methods are used in harvesting it e.g. in open pots and pitchers which are not safe, and have limited capacity of storage to run for few days only.

OPTIMISING HARVESTING POTENTIAL AND CLIMATE RESILIENT FACILITIES:

WaterAid does this by implementing **primary and reserve storage** facilities, aided with **raised platforms** so that the facilities are flood proof for up to 25 years. In coastal region, WaterAid implements rainwater harvesting systems in rural households, schools, and healthcare centers - enabling access to drinking water in a wide range of contexts. This allows the facilities to withstand disasters and remain in working conditions in extreme weathers.



Students of the Burirdabur Model School celebrating the rainwater harvesting plant at their school in Dacope, Khulna.

WaterAid/ Habibul Haque



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Rainwater harvesting system at the Paikgacha Upazila Health Complex in Khulna, Bangladesh. Paikgacha experiences high saltwater infiltration due to recurring climate events.

FACTS & STATS

88 SCHOOLS covering over 52,000 students

54 HEALTH CLINICS covering 270,000 patients per month

The combined annual storage of harvested rainwater is **1.68~ million litres** from institutional rainwater harvesting systems.



Impact Case: Cyclone Yaas

When Yaas made landfall in 2021, reserve rainwater harvested at schools enabled the communities in Shyamnagar to access freshwater. Schools in coastal areas serve as cyclone shelters, where access to water is pivotal to building resilience.

