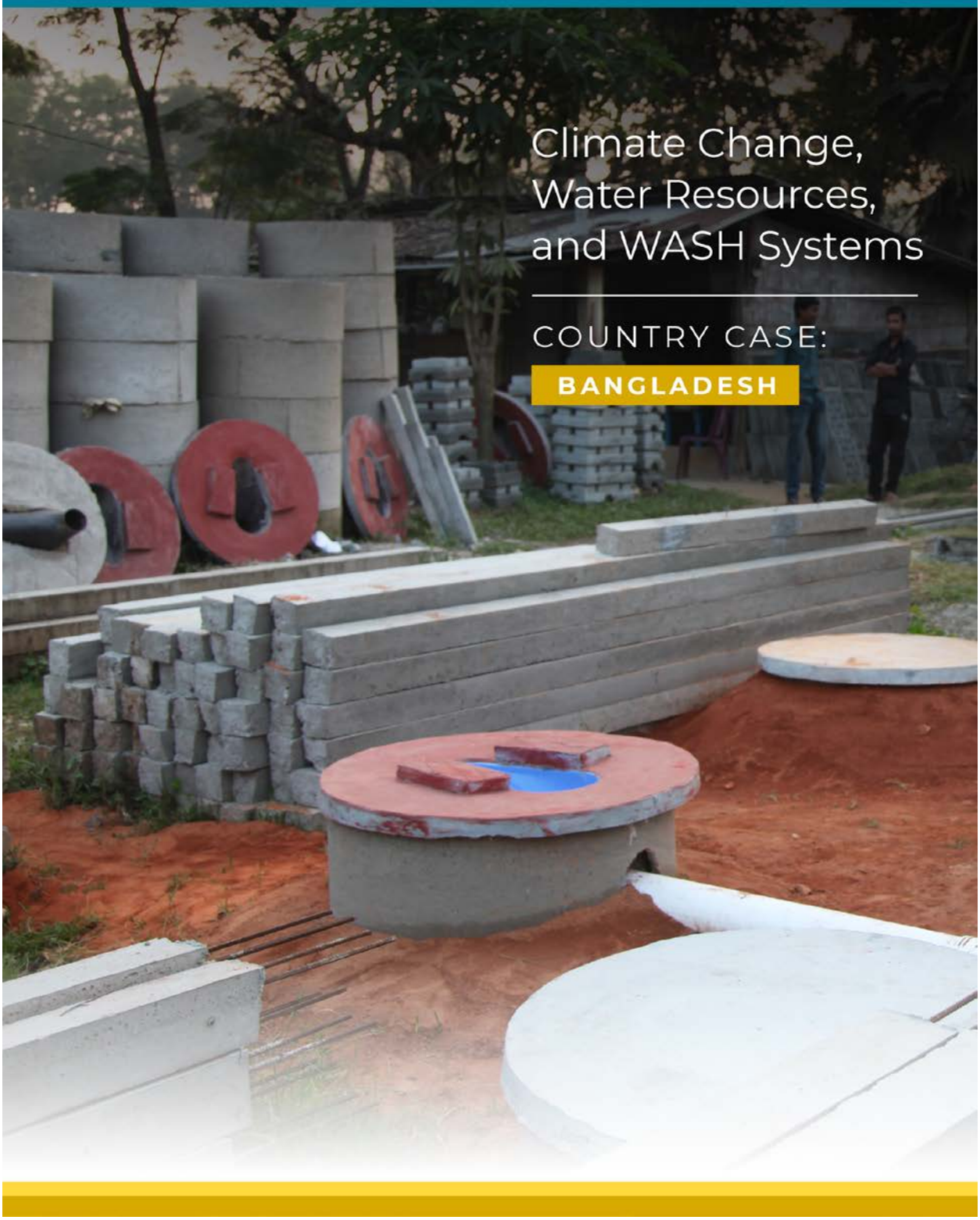
IRC + water for people



Climate Change, Water Resources, and WASH Systems

COUNTRY CASE:

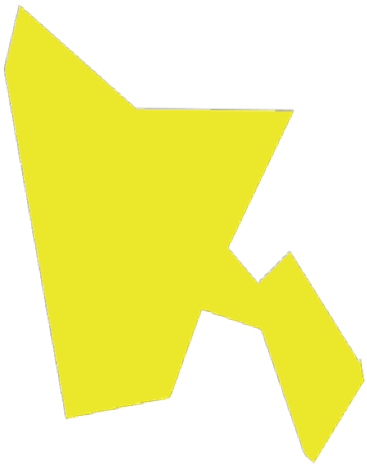
BANGLADESH

	Risk	Programming	Policy & Planning	
Polluted water	High	Related	NAP	No
Too little water	Low	Related	National climate policies & plans	Comprehensive
Too much water	High	Limited	Extent WASH is included	Moderate

Climate trends and impacts on water resources

Key trends and impacts include:

- More frequent and severe cyclones affecting the south-western part of Bangladesh, with related saline intrusion affecting surface and groundwater sources.
- Changes in rainfall patterns with more rain in the pre-monsoon season and less during the monsoon. This is linked to flooding in the north and north-eastern areas of Bangladesh with increased siltation of rivers increasing risks.
- Increased drought affecting the north-western areas of Bangladesh.
- Higher temperatures leading to increased need for water.



Impacts on WASH infrastructure and services

Sanitation infrastructure is often severely affected by cyclones and post-cyclone water logging. Rural areas mostly depend on off-set pit latrines, which are also very common in smaller towns and peri-urban areas. These latrines are easily washed away or flooded, and superstructures can be damaged by strong cyclone winds. Cyclones can lead to high waves and flooding, leaving land and toilet sub-structures inundated for days.

Cyclones also affect boreholes in coastal zones. They can damage the borehole superstructure, and water logging can pollute surface water sources with saline water and fecal matter. Due to the high salinity in surface water sources, people rely on deeper groundwater. By depleting this deeper fresh water, saline intrusion and other contaminants like iron and arsenic are increasing in the groundwater.

The north and north-eastern areas face similar impacts due to heavy rainfall and flash floods in the pre-monsoon and monsoon seasons, affecting the boreholes and pit latrines similarly. Due to poor sanitation and water supply, water borne diseases become prevalent in those areas. High moisture in the air also reduces the lifecycle of infrastructure due to high corrosion.

Climate and WASH policy and initiatives

The Bangladesh WASH sector has many policies and strategies in place. The key water management policy is the Water Policy 1999,[1] supplemented by the Water Act 2013[2] and

[1] http://nda.erd.gov.bd/en/c/publication/national-water-policy-1999
[2] http://old.warpo.gov.bd/acts/WaterActEnglish.pdf

Water Rule 2018.[3] The Water Policy elaborated the importance of all forms of surface and ground water management in an equitable manner. It also prioritized the need for a legal and regulatory environment in water management systems. Climate change was not seen as a priority area then but has been part of the Water Act and Rule.

The Water Act was commissioned in 2013 and stated measures to prevent ground and surface water from chemical and organic contamination. The Coastal Zone Policy 2005[4] first pointed out the impact of climate change in water resources such as erosion, water logging, and salinity intrusion.

The Bangladesh Climate Change Strategy and Action Plan[5] was commissioned in 2009, followed by the development of a National Action Plan[6], both of which contain overarching elements on climate change and WASH.

The National Environment Policy[7] 2018 considered the impact of climate change holistically across 24 sectors, including water resources management (WRM). It included the provision of environmental impact assessment and strategic environmental assessment for developing any project on water resources or an environmentally critical area.

For WASH, the National Water and Sanitation Strategy 2014 is in place and was updated in 2019 to align with the Sustainable Development Goal (SDG) targets. This strategy is supported by two other strategies: the National Hygiene Promotion Strategy for Water and Sanitation[8] 2012 and the Pro-poor Strategy for Water and Sanitation Sector 2005 (updated in 2019)[9]. The latter highlights the link of poverty, access to WASH, and climate change by prioritizing those living in extreme poverty such as those in coastal saline-prone islands, draught areas or households migrated due to river erosion.

Country program activities: mitigation and adaptation

WRM is a critical IRC activity, such as the Watershed project and the WASH SDG Consortium. The Watershed project is building the capacity of civil society organizations (CSOs), local government institutes, and community members for WASH and integrated water resources management (IWRM).[10] It recognizes climate change as an overarching and overlapping issue for WASH and IWRM. The Watershed Bangladesh project team focused on operationalizing the Water Rule 2018.[11] The rule provided for water resource planning and management at district, upazila, and union levels. More importantly, it allows community people to become members of IWRM committees at the district, upazila, and union levels. Development Organisation of the Rural Poor (DORP), the CSO partner of Watershed Bangladesh, utilized the opportunity to help community members become members of the

[3] Government Gazette 18 August 2018
[4] http://nda.erd.gov.bd/files/1/Publications/Sectoral%20Policies%20and%20Plans/Costal-Zone-Policy-2005.pdf
[5] http://nda.erd.gov.bd/en/c/publication/bangladesh-climate-change-strategy-action-plan-bccsap-2009
[6] https://info.undp.org/docs/pdc/Documents/BGD/SDGs-National_Actional_Plan.pdf
[7] http://nda.erd.gov.bd/en/c/publication/environment-policy-1992
[8] https://www.ircwash.org/resources/national-hygiene-promotion-strategy-water-supply-and-sanitation-sector-bangladesh-2012
[9] www.psb.gov.bd/policies/ppse.pdf
[10] https://watershed.nl/wp-content/uploads/sites/2/2020/08/WASH-and-IWRM-Booklet-final.pdf
[11] http://old.warpo.gov.bd/acts/Gazette_BWR2018.pdf (only available in Bangla)

WRM committees. Additionally, Watershed a water security plan for each of the 13 unions of Bhola Sadar.

IRC has introduced community-based social mapping that plots existing WASH services and quality of water resources. The social mapping is completed for all 18 wards of Bhola Sadar and 18 wards of Ramgati, and the social maps are considered a valuable advocacy tool for WASH and WRM at the local level.

With the WASH SDG Consortium, IRC develops the WASH service chain in small towns. This includes financing disaster resilient latrines with partner Hope for The Poorest. The project introduced new designs for boreholes with raised platforms which reduce flooding damage. The project also supports communities in testing water quality like salinity, arsenic, or iron following flooding events or intrusion. IRC is further carrying out sustainability checks of projects throughout Bangladesh.

IRC also carried out various mitigation and adaptation studies. In 2019, IRC carried out a mid-term evaluation for the BRAC WASH Integration project with focus on climate vulnerable areas. A follow-up in-depth study has been delayed due to the COVID-19 pandemic.

IRC is exploring waste-to-energy projects which have the potential to mitigate climate impacts. The vision is to develop a sustainable and adaptive model for solid and fecal waste collection, transportation, and treatment.

Key challenges

Key challenges include:

- Developing disaster-resilient, affordable WASH technologies.
- Developing a service delivery model which is adaptive to climate change.
- Generating a common understanding for climate change among different ministries.
- Developing capacity of professionals and increasing coordination among the sector.