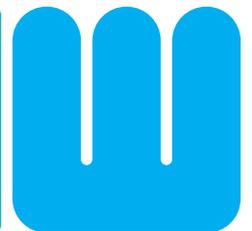
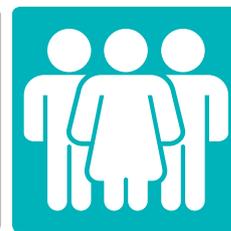
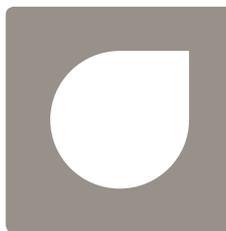




WASH and climate: Policy and financing (dis)connects in Bangladesh

31 March 2021



ICCCAD

International Centre for
Climate Change and
Development



WaterAid

The *WASH and climate: Policy and financing (dis) connects in Bangladesh* is a report highlighting the gaps that exist in the climate and WASH policy landscape in Bangladesh. This report was developed as a joint initiative by the International Centre for Climate Change and Development (ICCCAD) and WaterAid Bangladesh.

This study methodology included a process of systematic reviews, interviews, and consultations with key informants including representatives working in government, NGOs and CSOs working in the field of WASH and climate change adaptation.

The views expressed and recommendations suggested in this publication are those of the authors and the informants who participated in the study. It does not necessarily represent the view of WaterAid Bangladesh and International Center for Climate Change and Development (ICCCAD) and/or their affiliated organisations.

The findings from this study will help WaterAid Bangladesh promote strategies coherent with national and sectoral priorities on WASH and climate change adaptation. This will also support the global agenda of increasing synergies between SDG 6 – Clean Water and Sanitation, and SDG 13 – Climate Action.

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An under-construction embankment in Mora.
Gabura, Shyamnagar, Satkhira.

WaterAid/Drik/Suman Paul



Abbreviation

| | | | |
|---------------|--|---------------|--|
| ADB | Asian Development Bank | DPs | Development Partners |
| ADP | Annual Development Programme | DSK | Dushthya Shashthya Kendra |
| BBS | Bangladesh Bureau of Statistic | FAO | Food and Agriculture Organization |
| BCAS | Bangladesh Centre for Advance Studies | FBCCI | Federation of Bangladesh Chambers of Commerce and Industries |
| BCCSAP | Bangladesh Climate Change Strategy and Action Plan | FCDO | Foreign, Commonwealth and Development Office |
| BCCTF | Bangladesh Climate Change Trust Fund | FSM | Fecal sludge management |
| BDP | Bangladesh Delta Plan | FY | Fiscal Year |
| BDRCS | Bangladesh Red Crescent Society | GCF | Green Climate Fund |
| BIDS | Bangladesh Institute of Development Studies | GED | General Economics Division |
| BWDB | Bangladesh Water Development Board | GoB | Government of Bangladesh |
| C3ER | Centre for Climate Change and Environmental Research | HCTT | Humanitarian Coordination Task Team |
| CCGAP | Climate Change and Gender Action Plan | HtR | Hard to Reach |
| CDC | Centre for Disease Control and Prevention | ICCCAD | International Centre for Climate Change and Development |
| CEGIS | Center for Environmental and Geographic Information Services | IDA | International Development Association |
| CLTS | Community led Total Sanitation | IDB | Islamic Development Bank |
| CSR | Corporate Social Responsibility | IDCOL | Infrastructure Development Company Limited |
| DAE | Department of Agricultural Extension | IFC | International Finance Corporation |
| DCCI | Dhaka Chamber of Commerce & Industry | IPCC | Intergovernmental Panel on Climate Change |
| DCCSU | Disaster Climate Change Support Unit | IsDB | Islamic Development Bank |
| DER | Disaster Emergency Response | ITN | International Training Network Centre |
| DFID | Department for International Development | IWFM | Institute of Water and Flood Management |
| DMB | Disaster Management Bureau | JICA | Japan International Cooperation Agency |
| DoE | Department of Environment | JMP | Joint Monitoring Programme |
| DORP | Development Organization of the Rural Poor | JTWC | Joint Typhoon Warning Centre |
| DPHE | Department of Public Health Engineering | KII | Key Informant Interview |
| | | LCG | Local Consultative Group |
| | | LGD | Local Government Division |
| | | LGED | Local Government Engineering Department |

| | | | |
|----------------|--|---------------|--|
| LGI | Local Government Institution | SIDA | Swedish International Development Cooperation Agency |
| LGSP | Local government support program | SMA | Statistical Metropolitan Areas |
| MHM | Menstrual hygiene management | SREDA | Sustainable and Renewable Energy Development Authority |
| MICS | Multi Indicator Cluster Survey | T1P7 | Theme 1 Programme 6 of BCCSAP |
| MoA | Ministry of Agriculture | TLCC | Town level coordination committee |
| MoDMR | Ministry of Disaster Management and Relief | TNO | Thana Nirbahi Officer |
| MoEF | Ministry of Environment and Forests | UDMC | Union Disaster Management Committee |
| MoF | Ministry of Finance | UNDP | United Nations Development Programme |
| MoHFW | Ministry of Health and Family Welfare | UNICEF | United Nations Children's Fund |
| MoLGRDC | Ministry of Local Government, Rural Development and Cooperatives | WARPO | Water Resource Planning Organization |
| MoLJPA | Ministry of Law, Justice and Parliamentary Affairs | WASA | Water Supply and Sewerage Authority |
| MoP | Ministry of Planning | WASH | Water, Sanitation and Hygiene |
| MoWCA | Ministry of Women and Children Affairs | WatSan | Water and Sanitation |
| MoWR | Ministry of Water Resources | WB | World Bank |
| NAP | National Adaptation Plan | WHO | World Health Organization |
| NAPA | National Adaptation Programme of Action | WSS | Water Supply and Sanitation |
| NAWG | Need Assessment Working Group | | |
| NDA | National Designated Authority | | |
| NDC | Nationally Determined Contributions | | |
| NGO | Non-Governmental Organizations | | |
| NIE | Nationally Implementing Entity | | |
| NWMP | National Water Management Plan | | |
| O&M | Operations and Maintenance | | |
| PKSF | Palli Karma-Sahayak Foundation | | |
| PPP | Public-Private-Partnership | | |
| PSF | Pond Sand Filter | | |
| R&D | Research and Development | | |
| SAF | Severity- Area-Frequency | | |
| SDG | Sustainable Development Goal | | |
| SDP | Sector Development Plan | | |



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Rojina Begum (24) lost her home to Cyclone Aila in 2009. Since then, she has been staying on a broken embankment. Gabura, Shyamnagar, Satkhira.

Executive summary



The effects of climate change are already becoming evident in Bangladesh. The south-western coastal regions are experiencing slow-onset climatic stresses, such as rising temperatures and salinity intrusion, and sudden shocks, such as cyclones and storms. At the same time, the north-western regions are facing prolonged droughts and recurring floods are becoming more common.

Climate change will alter the water cycle, affecting the availability of freshwater for drinking as well as for sanitation and hygiene. In addition to environmental changes, factors affecting the climate-resilience of water, sanitation and hygiene (WASH) services include policies, legal frameworks, governance structures and resource management.

We analysed Bangladesh's WASH and climate change policies and financing to identify gaps and make evidence-based recommendations.

Our findings show that the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, one of the main national climate change documents, has a targeted WASH programme that proposes increased investment in WASH. However, the Bangladesh Climate Change Trust Fund (BCCTF), which implements BCCSAP projects, has no specifically WASH-related projects.

The dominance of prioritised areas, inadequate government knowledge on the impacts of climate change on WASH, and bias in the selection of projects are the biggest causes behind this discrepancy.

Over the years, the annual budget allocated to WASH and the flow of climate finance to WASH-related ministries have increased. However, inequalities prevail in sub-sectors and across the country. Climate vulnerable areas, such as the coastal region, char lands and hilly areas, receive the least amount of WASH budget compared with urban metropolitan areas. And the allocation is skewed towards water and sanitation, while hygiene is largely overlooked.

The poor alignment of WASH policies to climate change and a lack of concern about the sustainability of WASH infrastructure are additional challenges. WASH projects are carried out on an ad-hoc basis without considering long-term climate change impacts during project planning and implementation.

To better integrate WASH interventions and climate change adaptation policies, we recommend:

- Developing and implementing WASH policies that reflect and address the long-term impacts of climate change, using scientific scenario analysis and prioritising those most affected.
- Building the capacity and enhancing the knowledge of government officials to ensure policies and strategies can be actioned effectively.
- Implementing climate-resilient WASH policies and properly allocating and using funds to ensure sustainable WASH services that allow communities to adapt to the impacts of climate change.



WaterAid/Drik/Suman Paul

A mother and her son busy with household chores using the saline water from the river as there no source of clean water. Gabura, Shyamnagar, Satkhira.

Introduction



Bangladesh is the seventh country most vulnerable¹ to climate change in the world. Its geographic location and landscape make it highly exposed to climate-related shocks and stresses. Socio-economic factors and poor infrastructure leave millions of people unprepared to withstand the impacts.

The effects of climate change can already be seen in Bangladesh. Over the last few decades, there has been a rise in average temperatures and a decreasing trend in average precipitation.

The coastal regions of south-west Bangladesh are being affected by increasingly frequent and intense floods, cyclones and storms.

1 Global Climate Change Index, Germanwatch 2020

There is growing concern that the effects of climate change will affect the availability of clean water for drinking, as well as for sanitation and hygiene.

As sea levels rise and less rain falls in the dry season, saltwater intrudes into agricultural soil and groundwater. In the north-west, decreased rainfall in the dry season and rising temperatures are causing prolonged droughts. As climate change continues, these impacts are likely to increase in frequency and severity.

Bangladesh has made significant progress towards providing everyone with water, sanitation and hygiene (WASH) services over the last two decades. Around 47% of the population now has access to safely managed drinking water² (MICS, 2019). However, this is the second-lowest coverage among South Asian countries. Only 45.3% of households have access to sanitary toilets with a water seal (BBS, 2019) and 35% of the population has basic handwashing facilities at home (Unicef, WHO 2018).

There is growing concern that the effects of climate change will affect the availability of clean water for drinking, as well as for sanitation and hygiene.

Many people in Bangladesh still rely on surface water sources, such as rivers and ponds, which are vulnerable to climate-related shocks and

stresses. Domestic ponds, which cover 10% of the country's total land area (excluding rice paddies) (Jones et al., 2020), are open to flooding and contamination by human and animal waste and saltwater. Around 35 million people, 29% of the population, living along the coast are already affected by varying degrees of salinity in the water they collect for everyday use (Jones et al., 2020).

With climate change making rainfall less predictable and flooding more likely, the need to reach everyone with secure WASH services is more urgent than ever. Without climate-resilient services, communities will struggle to adapt to climate change and withstand natural disasters.

Climate change-induced water insecurity is also driven by inter-related non-climatic factors, such as geographic location; demographics; water availability, use and management; legal frameworks for water management; governance structures and institutions; and the resilience of ecosystems. This report focuses on the degree to which policies and financing support Bangladesh's WASH and climate change adaptation needs.

2 Safely managed source of drinking water services refers to availability of water source at household premise. Household members have access to use services with an improved drinking water source s, whose source water was tested and free of E. coli and available when needed (MICS, 2019) with 44.7 percent in urban areas and 48.8 percent in the rural areas (GED, 2020). This illustrates a significant difference in ensuring safely managed drinking water from the global perspective. But among them, 98.5 percent of are using improved sources of drinking water (MICS, 2019).



WaterAid/Drik/Tapash Paul

A shrimp farm at Assasuni, Satkhira.

WASH and climate change policies and financing



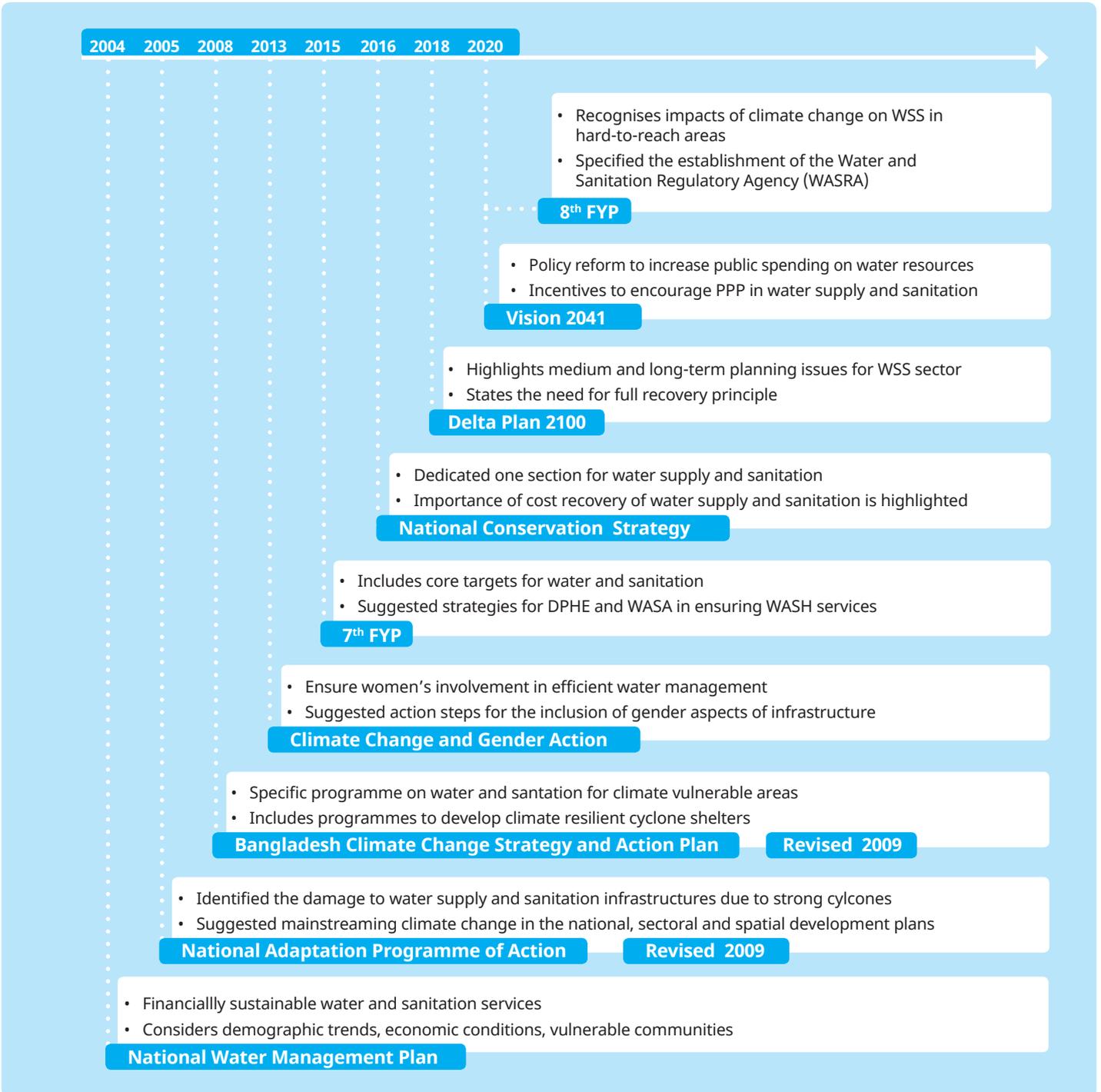
Given the severe impacts of climate change on water security and the critical role of access to resilient WASH services in climate change adaptation, we researched Bangladesh's WASH and climate change policies and financing.

This has informed recommendations to enable the country to prioritise secure WASH and integrate it into climate change adaptation.

Our study involved a systematic review and analysis of scientific literature, national policies and global frameworks. Interviews were also carried out with relevant stakeholders to complement the review findings.



National development plans

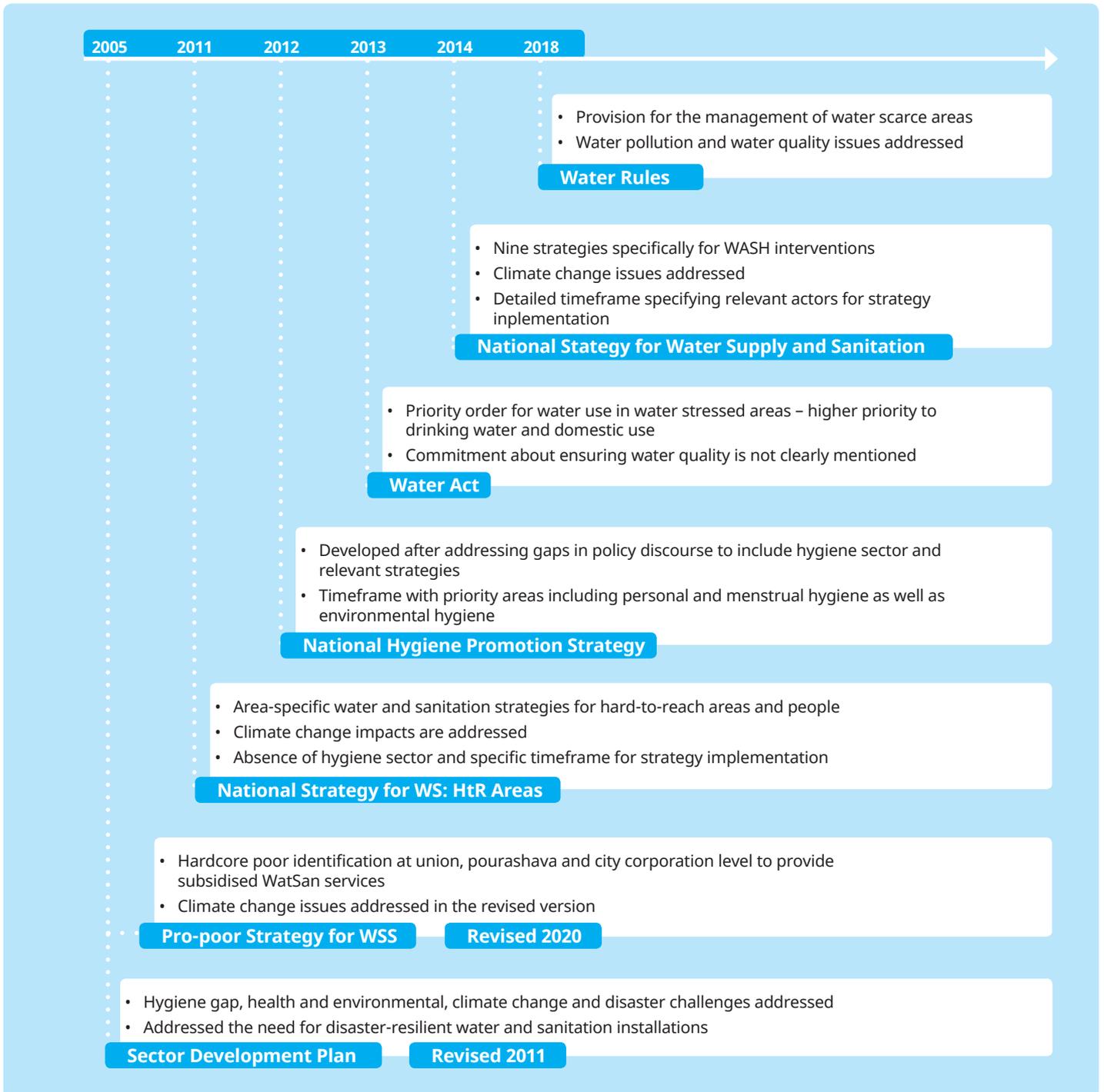


The timeline outlines Bangladesh's national development plans that include WASH and climate change. While the National Water Management Plan of 2004 did not address the impacts of climate change on WASH services,

subsequent national policies slowly began to incorporate climate change concerns. Increasingly, WASH has been integrated into climate change plans and policies.



National strategies and Rules related to WASH



Although the climate change component was missing in initial national strategies and laws incorporating WASH, it was addressed in revised versions and later documents.

Strategies were developed that incorporated detailed WASH implementation plans as well as including hard-to-reach areas and hygiene.



A woman is coming out of an inadequate sanitation facility, lacking roof and strong walls. Gabura, Shyamnagar, Satkhira.



Main stakeholders in WASH and climate change

The main stakeholders in planning, implementing, influencing and financing WASH and climate change interventions in Bangladesh are:

| | Stakeholders | Interests and incentives |
|------------------------|---|--|
| Government ministries | <ul style="list-style-type: none"> • Environment, Forests and Climate Change (MoEFCC) • Local Government, Rural Development and Cooperatives (MoLGRD&C) • Planning (MoP) • Finance (MoF) Economic Relations Division (ERD) • Women and Children’s Affairs (MoWCA) • Water Resources (MoWR) • Disaster Management and Relief (MoDMR) • Health and Family Welfare (MoHFW) • Agriculture (MoA) • Education (MoE) | <ul style="list-style-type: none"> • Key nodal ministries at the intersection of WASH, disaster management and climate change are MoEFCC, MoDMR and MoLGRD&C • MoWR, MoA and MoHPW require more integration with MoEFCC, MoDMR and MoLGRD&C • MoE introduces WASH and climate change issues in the academic curriculum |
| Government departments | <ul style="list-style-type: none"> • Public Health Engineering (DPHE) • Environment (DoE) • Bangladesh Water Development Board (BWDB) • Local Government Engineering (LGED) • Water Resource Planning Organisation (WARPO) • General Economics Division (GED) • Agricultural Extension (DAE) • Disaster Management Bureau (DMB) • Sustainable and Renewable Energy Development Authority (SREDA) | <ul style="list-style-type: none"> • DPHE is the key government agency to provide water and sanitation services in the country, except in Dhaka, Chittagong and Narayanganj where WASAs operate • DoE is the central department under MoEFCC that looks after issues related to climate change • DPHE is currently undertaking two big projects related to WASH and climate change: 1) World Bank-funded ‘Emergency multi-sectorial response mechanism project’; 2) Asian Development Bank (ADB) funded emergency project |

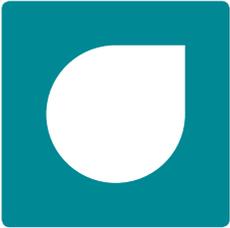
| | Stakeholders | Interests and incentives |
|---|---|--|
| Other government | <ul style="list-style-type: none"> • Bangladesh Climate Change Trust Fund (BCCTF) • Palli Karma Sahayak Foundation (PKSF) • Infrastructure Development Company Ltd (IDCOL) | <ul style="list-style-type: none"> • BCCTF is entitled to implement projects of short, medium and long term according to BCCSAP • PKSF is accredited as national implementing entity (NIE) of the Green Climate Fund (GCF) • PKSF can play a big role in securing internationally funded projects related to WASH and climate change • IDCOL is the first direct access entity (DAE) of GCF from Bangladesh. As an accredited entity, IDCOL is able to access the GCF fund directly for any climate change mitigation/adaptation project |
| Sub-national (district) government | <ul style="list-style-type: none"> • Water supply and sewerage authorities (WASAs) • Municipalities • City corporations | <ul style="list-style-type: none"> • WASAs provide water supply and sewerage disposal services to city dwellers in Dhaka, Narayanganj and Chittagong. Climate change-related issues are not included in their mandate |
| Union-level government | <ul style="list-style-type: none"> • Union disaster management committees (UDMCs) • Task forces / WatSan (water and sanitation) committees • Town-level coordination committees (TLCCs) | <ul style="list-style-type: none"> • Most of the UDMCs and WatSan committees are not functional and often work in silos. No specific committee on climate change exists at union level • Union parishads lack the financial and technical capacity to facilitate such integrations |
| Donors | <ul style="list-style-type: none"> • Asian Development Bank (ADB) • The World Bank • UK Department for International Development (DfID) / Foreign, Commonwealth and Development Office (FCDO) • Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) | <ul style="list-style-type: none"> • One of the key country-level targets of ADB includes investments in the WASH sector but this is yet to be properly aligned with climate change |

| | Stakeholders | Interests and incentives |
|---------------------------|---|---|
| Donors | <ul style="list-style-type: none"> • Islamic Development Bank (IsDB) • Japan International Cooperation Agency (JICA) • United Nations Development Programme (UNDP) • Swedish International Development Cooperation Agency (SIDA) • Green Climate Fund (GCF) • KfW • International Finance Corporation (IFC) • USAID | <ul style="list-style-type: none"> • IsDB is supporting DPHE in a project related to climate change, livelihoods and WASH, implemented in ten municipalities • Almost all GCF-funded projects directly or indirectly accommodate WASH aspects |
| International NGOs | <ul style="list-style-type: none"> • Oxfam • WaterAid • Unicef • United Nations High Commissioner for Refugees (UNHCR) • World Health Organization (WHO) • SNV • Care • Plan International • ActionAid • Practical Action | <ul style="list-style-type: none"> • Provide local-level services, facilitate promotion of knowledge, deliver training, monitor progress, and influence policy making and finance |
| National NGOs | <ul style="list-style-type: none"> • BRAC • Development Organisation of the Rural Poor (DORP) • NGO Forum for Drinking Water Supply and Sanitation • Dushthya Shashthya Kendra (DSK) • Proshikha | <ul style="list-style-type: none"> • Provide community-level services, loans and technical assistance, WASH budget and activity monitoring |

| | Stakeholders | Interests and incentives |
|---|--|--|
| Private sector | <ul style="list-style-type: none"> • Federation of Bangladesh Chambers of Commerce and Industries (FBCCI) • Dhaka Chamber of Commerce and Industry (DCCCI) • Pragati Insurance • Unilever • HSBC • Bangladesh Garment Manufacturers and Exporters Association (BGMEA) • Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA) • Ready-made garments (RMG) sector • Coca-Cola • Local entrepreneurs providing sanitation services | <ul style="list-style-type: none"> • FBCCI and DCCI play a key role in influencing policy outcomes • HSBC and Unilever invest in ensuring access to water and sanitation • Local entrepreneurs provide sanitary equipment, installation services, and some also offer system maintenance • Bangladesh has around 3,000 garment industries operating in Dhaka, containing a wide range of pollutants • By 2021, wastewater coming from textile industries will reach 349 million m³ |
| Research and academic institutions | <ul style="list-style-type: none"> • Institute of Water and Flood Management (IWFM) • ITN-BUET Centre for Water Supply and Waste Management • Centre for Climate Change and Environmental Research (C3ER) • Center for Environmental and Geographic Information Services (CEGIS) • International Centre for Climate Change and Development (ICCCAD) • Bangladesh Institute of Development Studies (BIDS) • Bangladesh Centre for Advance Studies (BCAS) • Cox's Bazar Government College (CGC) • Institute of Disaster Management and Vulnerability Studies, Dhaka University | <ul style="list-style-type: none"> • Conduct research and facilitate capacity building on climate change, WASH and integrated water resources management (IWRM) |
| Media | <ul style="list-style-type: none"> • Prothom-Alo • Daily Star • Dhaka Tribune • ATN Bangla • Channel-I • Channel-24 • Jamuna TV | <ul style="list-style-type: none"> • Publish reports on the implementation of climate change- and WASH-related projects, op-eds of critical thinkers and documentaries focusing on the impact of climate change |



Drought prone area, Jadukata river, Tahirpur, Sunamganj.



Gaps and challenges in national policies and strategies and governance processes

Several gaps and challenges exist in national policies and strategies as well as in governance processes:

| Gaps in national policies and strategies | Gaps in governance processes |
|--|---|
| <p>Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009</p> <p>BCCSAP has a targeted WASH programme – T1P7 – that talks about more investment in WASH. The Bangladesh Climate Change Trust Fund (BCCTF) has also been formed to exclusively implement BCCSAP. However, BCCTF, as of now, hasn't received a single proposal related to WASH, though some of the projects indirectly address it</p> | <p>Prioritization of certain vulnerable areas, poor understanding of the effects of climate change on WASH were highlighted as reason for lack of WASH specific projects</p> |
| <p>The timeline for the action plan is split into three stages – short, medium and long term. As it was set consistent with Millennium Development Goal (MDG) targets, it needs to be reviewed to incorporate Sustainable Development Goal (SDG) targets, especially SDG 6, and water and sanitation goals</p> | <p>Since BCCSAP is currently being reviewed, it needs to be understood how much it considers the impacts of climate change on WASH infrastructure and services. Most of the WatSan (water and sanitation) committees at the union level are not functional anymore. During the MDG period, they were most active – after that, their functionality has gradually decreased. They have not been revitalised during SDG period. The union- and ward-level disaster management committees are not active. The union parishads also lack the capacity to integrate the works among the standing committees and deliver a comprehensive output</p> |
| <p>Climate-vulnerable areas addressed in T1P7 of BCCSAP are mainly drought-prone and saline-affected areas. However, other hard-to-reach areas, like the hilly and char areas, as well as urban slums, have not been incorporated in regard to providing water and sanitation services</p> | <p>The policy addressed WASH as one of the sectors affected by climate change, and included a separate WASH programme. However, it didn't consider WASH-sector-specific vulnerable areas</p> |

| Gaps in national policies and strategies | Gaps in governance processes | |
|--|---|--|
| | <p>All climate change policies, including BCCSAP, address vulnerable groups together, and often the intersectionality lens is not used. There are different challenges specific to certain age groups that need to be identified. The lifecycle approach should be considered</p> | <p>Poor understanding of the intersectionality concept and how climate change affects groups differently</p> |
| <p>Bangladesh National Conservation Strategy on Water Resources</p> | <p>Despite having a comprehensive and detailed outline, the Bangladesh National Conservation Strategy on Water Resources still has gaps in differentiating between climate change and disaster. The disaster-preparedness plans and actions for water supply and sanitation are a kind of response system, which is barely sustainable in the long term</p> | <p>Poor understanding and capacity to differentiate between climate change-induced disasters and other disasters</p> |
| <p>Climate Change and Gender Action Plan (CCGAP)</p> | <p>The plan recognises the challenges women face to collect water during disasters and after they strike. However, sanitation facilities also become damaged in disasters, posing extreme challenges for women, as shared facilities are often not gender sensitive. There is scope for inclusion of sanitation and hygiene concerns in the plan</p> | |
| <p>Water Act 2013</p> | <p>The Water Act of 2013 was unable to demonstrate a clear government commitment to ensure water quality. Water pollution issues are referred to in the provision of the Environmental Protection Act of 1995, but no further clarification is given. There is a need for amendments that address the drawbacks of the Act</p> | |

| | Gaps in national policies and strategies | Gaps in governance processes |
|--|---|--|
| National Water Management Plan (NWMMP) | NWMP mentioned affordable and financially sustainable water supply and sanitation services. However, consideration of environmentally sustainable/climate-resilient services is missing from the narrative. The plan considers issues such as demographic trends and economic conditions but lacks emphasis on climate change and its impacts on WASH | In terms of managing water and safeguarding sanitation facilities during climate change-induced shocks and stresses, there is still a gap in accessing and adopting context-specific adaptation technologies. Lack of knowledge at the sectoral level in terms of differentiating between climate change impacts and environmental/social impacts is one big reason behind this |
| | It took 14 years to convert the National Water Policy (1999) into the Water Act (2013), and to implement the Water Act, the Water Rules were developed four years later in 2018 | When it comes to water governance, an inter-ministerial coordination gap has been identified as one of the biggest challenges. The Water Rules 2018 highlights several rules and provisions on the management of water resources as well as the responsibilities of relevant authorities. WARPO oversees implementing the Water Rules together with DPHE, LGED and BWDB. But communication and collaboration among the agencies have been found to be poor. Integrated water resource management (IWRM) committees have been formed at both upazila and union level to implement the policies, headed by DPHE, LGED and BWDB at union, upazila and district level respectively. But the coordination of the agencies and communication with local communities are questionable |
| | The first document to reference sanitation was the National Policy for Safe Drinking Water and Sanitation 1998. Since then, no changes were seen until 2018 when civil society organisations put pressure on MoLGRD&C to update the document in line with the SDGs. This is yet to be published | |
| National Hygiene Promotion Strategy 2012 | The only legal document regarding hygiene is the National Hygiene Promotion Strategy for Water Supply and Sanitation Sector in Bangladesh 2012. As of now, this has no roadmap or action plan to be implemented at the local level or considerations of the long-term impacts of climate change | Among the three components of WASH, hygiene is most neglected and responsibilities for it are spread among different ministries, including MoHFW, MoE and MoLGRD&C. Although a policy-support branch of local government has formed working committees to update the national hygiene strategy in line with the SDGs, this has been halted due to the Covid-19 pandemic |

| Gaps in national policies and strategies | Gaps in governance processes | |
|--|---|--|
| Water Rules 2018 | <p>The Water Rules 2018, despite being quite a recent document, fails to effectively address climate change-related issues, including adaptation and mitigation, in the provisions for water scarcity and water resource management. The document mostly highlights provisions for water scarcity in terms of man-made crises – for instance, excessive water extraction or water pollution. Long-term water scarcity issues due to climate change and waterlogging issues could be researched and incorporated</p> | <p>The operation and management of water infrastructure is a major challenge in ensuring sustainable access to WASH services. ‘In Bangladesh, there are around 2,000 tube well mechanics, with each upazila having four tube well mechanics. But we don’t know necessarily who these mechanics are. This increases the out-of-pocket expenditure of people, as they have to fix their tube well by themselves.’ – Stakeholder interview</p> |
| Sector Development Plan | <p>In the Sector Development Plan, there is one key point on ensuring sustainability of WASH. It does not cover the climate change perspective when proposing plans. In the environment, climate change and disaster action point, there is emphasis on constructing disaster-resilient WASH infrastructure</p> | <p>Most of the WASH-related interventions in Bangladesh are implemented on an ad-hoc basis when disasters strike. Planning for the long-term climatic perspective has been absent. When it comes to the sustainability of infrastructure, community ownership plays a major role. But in Bangladesh, most communities don’t know the assigned roles and responsibilities of different government agencies. There is scope to create public awareness regarding WASH rights</p> |



WASH and climate budgets

It is important to understand how WASH and climate change policies and programmes are financed and where the gaps are.

WASH and climate allocation in national budgets³

Bangladesh has produced the Citizen's Budget Report, which presents the ministry allocation of the climate budget. As of FY 2020–21, climate allocations have been made for 25 relevant ministries to carry out government plans related to climate change.

Over the past five years, allocation of climate-relevant interventions has increased by 0.15%. However, as a percentage share of the total budget, the FY 2020–21 climate relevant budget stands at 7.52%, compared with 7.81% in FY 2019–20. The top five ministries – Environment, Forest and Climate Change (MoEFCC); Water Resources (MoWR); Agriculture (MoA); Disaster Management and Relief (MoDMR); and Fisheries and Livestock (MoF&L) – have allocated around 35% of their total budget for climate change-relevant activities from 2015 to 2020. When it comes to the allocation of the WASH budget, the Government of Bangladesh has made a significant increase of 11.6% from FY 2007–08 (25.63 billion BDT / 0.3075 billion USD) to FY 2019–20 (BDT 106.87 billion / 1.28 billion USD) however WASH budget didn't indicate any specific points on climate change.

In relation to climate spending, WASH investments are not satisfactory. Though skewed towards urban centers The water sector has received a relatively high budget over the years, and sanitation is being

prioritised too; however, hygiene needs more budget allocation. The faecal sludge management (FSM) sector has also received a smaller allocation than the water and sanitation sectors to date.

WASH budget³ inequality by geographical area

Geographical inequalities exist in budget allocation. The metropolitan cities (including the water supply and sewerage authorities – WASAs) received the highest budget in FY 2018–19 (55.2 billion BDT / 0.66 billion USD) followed by the towns and pourashava (11.04 billion BDT / 0.13 billion USD). But the most climatically vulnerable areas, such as the coastal areas and hilly areas have received the lowest allocation (0.36 billion BDT / 0.004 billion USD and 0.2 billion BDT / 0.0025 billion USD respectively), with no WASH budget allocation in the chars (Riverian islands).

WASH budget allocation in urban areas has been high compared with rural areas, with slight decreases in the urban budget. As 70% of people in Bangladesh live in rural areas, many of which are those most vulnerable to climate-related impacts, this is a serious concern.

BCCSAP thematic area allocation

Under the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) thematic area, climate relevant budget is allocated for 25 ministries and divisions. The themes of food security, social protection and health received the highest allocation over the last five years

³ In this section, 1 USD is equal to 84.33 BDT (as of 8 Feb 2021).

(FY 2016–17 to 2020–21), totalling 41.25% of the climate-relevant budget. Programme 7 under thematic area 1 is related to water and sanitation, although no programme-specific allocation is found.

For the themes of food security, social protection and health, the highest percentage of climate relevant allocation for T1 of BCCSAP has been made for the Rural Development and Cooperatives (RD&C) division, followed by MoDMR. The lowest allocation over the years has been received by MoWR. Though TP7 of BCCSAP claims to increase investment in water supply and sanitation, no specific data on that aspect has been found. The climate relevant allocation for TP7 of BCCSAP for the Ministry of Chattogram Hill Tracts Affairs is only 2.8% in FY 2020–21. While P7 explicitly mentions investing more in water supply and sanitation, such poor allocation in hard-to-reach hilly areas is a matter of great concern. Some of the climate and WASH-relevant projects being implemented by the ministry include: ‘Strengthening inclusive development in Chittagong Hill Tracts’; and ‘Safe drinking water supply & sanitation system development at different important bazars with surrounding locality under Bandarban District’ (MoF, 2019; MoF, 2020).

A hole is dug deep in a dry pond to bring the water out. Kalinchi, Shyamnagar, Satkhira.



Other national climate-related funds

The Environment, Forestry and Climate Change (EFCC) Country Investment Plan (CIP) is a strategic tool the government developed to translate policies into investment programmes linked to measurable results. The CIP has four pillars (1: Sustainable development and management of natural resources; 2: Environmental pollution reduction and control; 3: Adaptation and resilience to, and mitigation of, climate change; 4: Environmental governance, gender, and human and institutional capacity development) under the thematic areas and programmes through which climate funds are allocated. Under the EFCC-CIP, 981.08 billion BDT / 11.77 billion USD has been allocated for FY 2016–21, with 196.22 billion BDT / 2.35 billion USD per year under the programme. Pillar 2 is most focused on WASH, with sub programme 2.2.4 aiming to reduce waterborne diseases by improving WASH. The Local Government Engineering Department (LGED), Department of Public Health Engineering (DPHE), Ministry of Health and Family Welfare (MoHFW) and city corporations and municipalities are the main agencies responsible for implementing the programme.

NDC Adaptation Programmes (2015-30) has 672 billion BDT (8.064 Billion USD) allocation for food security and livelihood and health protection which includes water security aspects as well (MoF, 2019). In FY 2020-21, 53.5 billion BDT (0.642 Billion USD) (MoF, 2020) and in FY of 2019-20, 50.2 billion BDT (0.6024 Billion USD) (MoF, 2019) have been allocated

WASH budget allocation in urban areas has been high compared with rural areas, with slight decreases in the urban budget. As 70% of people in Bangladesh live in rural areas, many of which are those most vulnerable to climate related impacts, this is a serious concern (world Bank, n,d).

A house broke down due to devastating impact of Cyclone Amphan. Sreeula, Ashashuni, Satkhira.



under the Food security and livelihood and health programme. Also, the NDC has “Salinity Intrusion and Coastal protection” with 252 Billion BDT” this is 3.024 Billion USD4, “River flood and erosion protection” with 504 Billion BDT” which is 6.048 Billion USD program, “Urban Resilience” with 252 Billion BDT (3.024 Billion USD) and “Community based conservation of wetlands and coastal areas” with 84 billion BDT (1.008 Billion USD) programs allocated as per the 2015-30 NDC Roadmap (MoF, 2020). However, the analysis of the allocated of total allocation with 395 projects which is the highest among the allocations whereas Food Security, Social Protection and Health theme receiving 11 percent allocation with 103 projects (MoF,2020).

Furthermore, an estimation has been made that, to implement the projects under Bangladesh Delta Plan 2100, under to ensure food and water security to address disaster risk, there is a need to raise 37 billion USD by 2030 (MoF, 2019).

Due to a lack of climate finance from both multilateral and bilateral sources, the government created the Bangladesh Climate Change Trust Fund (BCCTF) in 2009 from its own revenue. To give BCCTF some legal footing, the Climate Change Trust Act 2010 was enacted. In FY 2019–20, BCCTF received a total allocation of 38 billion BDT / 0.456 billion USD, with a total of 788 projects until May 2019. Government ministries and divisions are implementing most of these projects, while some are being carried out by non-governmental organisations (NGOs) under the supervision of the Palli Karma Sahayak Foundation (PKSF). MoWR, LGD and MoEFCC have been allocated the highest amount of resources. No WASH-specific project proposals have been received yet by BCCTF, though some of the projects indirectly address WASH

Water being collected from a mountain stream. It is the only source of water in Hajongpara community. Tahirpur, Sunamganj.



issues. So far, all BCCTF projects have been financed by the Government of Bangladesh. However, the fund is also interested in co-financing. Under the BCCTF, Khulna (coastal area) and Sylhet (haor⁴ area) regions have had fewer projects allocated than other divisions in Bangladesh until 2020. Under the BCCSAP themes, infrastructure accounts for 61% of budget allocation, with 395 projects. Food security, social protection and health receive just 11%, with 103 projects.

An estimation has been made that, to implement the projects under the Bangladesh Delta Plan 2100, to ensure food and water security and address disaster risk, there is a need to raise 37 billion USD / 307,100 crore BDT by 2030.

International WASH and climate-related funds

To access the Green Climate Fund (GCF), the Government of Bangladesh designated the Economic Relations Division (ERD) in the Ministry of Finance (MoF) as the National Designated Authority. Up to 2020, GCF has approved four projects for Bangladesh – ‘Climate resilient infrastructure mainstreaming’, ‘Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity’, ‘Global clean cooking program – Bangladesh’ and ‘Extended community climate change project – flood (ECCCP-Flood)’. The total project value for these projects is 167.3 million USD / 14.1 billion BDT. Most of the GCF projects reference WASH directly or indirectly.

Water and sanitation are among the top five targets in the World Bank’s country framework. Through the ongoing Bangladesh Municipal Water Supply and Sanitation Project, the World Bank has committed 100 million USD / 8.456 billion BDT. The project is focused on water, sanitation and waste management, aiming to reach 600,000 people with piped water and improved sanitation. Through the Bangladesh: Dhaka Sanitation Improvement Project, the Government of Bangladesh is funding 143

million USD / 1.18 billion BDT to improve sanitation services in Dhaka city, benefitting 1.5 million people.

Asian Development Bank has funded quite several projects for WASH. As of December 2019, ADB has committed to mobilize 2.17 Billion USD for Water and other urban infrastructure services for Bangladesh (ADB, 2020). Furthermore, some of their projects that are currently active and have WASH components in them are as follows:

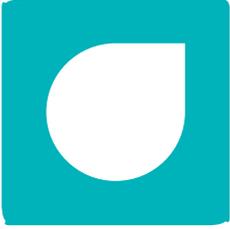
Private sector financing for WASH and climate-related projects

Private companies such as Advanced Chemical Industries (ACI), Lal Teer and PRAN are financing climate change mitigation and adaptation measures by investing in, developing and marketing new varieties of climate-resilient seeds and other products. While Rahimafrooz Renewable Ltd has created a business selling solar home systems.

Infrastructure Development Company Limited (IDCOL) is another national implementing entity along with PKSF for accessing GCF mitigation-related funds. In 2018, it received approval from GCF for a 345,800 USD / 2.87 million BDT project on ‘Promoting private sector investment through large scale adoption of energy saving technologies and equipment for textile sector of Bangladesh’. However, no water security and WASH-focused private sector-financed climate adaptation project has been carried out yet by the private sector (MoF, 2020).

Regarding WASH, HSBC, together with WaterAid, started a water programme in 2012. In phase one (2012–16), the programme supported communities in hard-to-reach areas, coastal zones and isolated tea gardens with strengthened WASH systems. In phase two (2017–19), it focused on reaching communities in climate-vulnerable areas with resilient water and sanitation technologies and supporting local authorities to improve WASH in schools and healthcare facilities.

4 “haor” means a saucer shaped large shallow depression created naturally in between two separate river as defined in the Bangladesh Water Act



Challenges related to WASH and climate finance

- Climate financing is heavily skewed towards mitigation, with less focus on adaptation. The infrastructure and mitigation thematic areas receive the highest allocation of BCCTF funds. Adaptation is underfunded and funds specifically allocated to WASH are even less or next to none.
- Budgets are heavily skewed towards urban areas compared with rural areas. Climate finance allocation is least in the climate-vulnerable haor, coastal and hilly areas.
- FSM and hygiene have historically been neglected, with the 2019–20 budget having no specific allocation for hygiene. This poses a serious threat to human health (Wateraid, PPRC, Unicef, 2020) .
- Among the BCCSAP thematic areas, thematic area 1 – food security, social protection and health – receives the third highest allocation, after infrastructure and mitigation. But data on the budgets allocated for programmes could not be found, creating a challenge to investigating areas for improvement.
- Bangladesh has received world-wide recognition for the establishment of BCCTF, but several instances of misallocation have been brought to light by journalists and NGOs such as Transparency International Bangladesh (TIB) and the Network on Climate Change, Bangladesh (NCC,B). An analysis of the 281 government projects funded through BCCTF shows that the coastal divisions of Khulna, despite being more vulnerable than Chittagong and Barisal, have received substantially lower funds. It is widely perceived that politically motivated influences have led to more projects and funds being allocated to Barisal and Chittagong.
- Despite increased investment in water supply and sanitation being explicitly mentioned in T1P7, no project proposal on WASH has been received by BCCTF.
- In terms of global funds such as the GCF, Bangladesh has been successful in securing projects through multilateral implementing entities (MIEs), but the success rate with national implementing entities (NIEs) hasn't been the same, due in part to the complex process of getting accreditation and accessing funds.
- Though many international NGOs and development banks have started considering climate change issues, most have integrated climate change aspects into their WASH programmes with no additional funding.
- As more attention and consequent funding is diverted to climate change, everyone is trying to link climate change with their existing programmes. But such links are often not properly defined, so donors are unconvinced.
- Co-financing and partnership with the private sector is still not widely practised. The public-private partnership (PPP) (World Bank, 2016) concept is not well understood by many central agencies of government and perhaps least understood by local government. The incentives for the private sector to engage in PPPs WASH are not well defined.

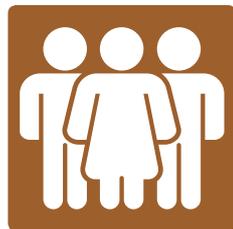
To store rainwater, people use temporary plastic drums and pipes, connecting it with the roofs of their houses in Mora. Gabura, Shyamnagar, Satkhira.





The Jadukata River is now a land full of sand. The local people collect coal underneath the surface, which comes floating in with water. Tahirpur, Sunamganj.

Conclusion



Our research gives a clearer picture of how Bangladesh's WASH and climate change-related policies and their implementation, governance and budgeting play a major role in ensuring secure and resilient WASH services in the face of a changing climate.

Despite the existence of comprehensive policies for both WASH and climate change, many are not updated and do not reflect the current understanding of the severity of the climate emergency.

The areas most vulnerable to climate change, such as coastal, hilly and haor areas, are not well recognised in WASH policies or receiving a share of budget allocation in line with their level of exposure to climate-related shocks and stresses.

There is a lack of coordination and communication among relevant government agencies when it comes to implementing policies and programmes.

Financing to ensure climate-resilient WASH infrastructure is not explicitly allocated in most nationally and internationally funded projects.

If the present environmental and socio-political situations persist, communities' water security and the resilience of WASH services are likely to deteriorate substantially, further worsening health and wellbeing. An enabling political environment is needed through the creation and implementation of climate-resilient WASH policies, the inclusive management of water resources and infrastructure, and the proper allocation and use of funds for sustainable WASH services.

The drinking water collected by Munda community from faraway location is highly contaminated with iron and includes salinity. Kalinchi, Shyamnagar, Satkhira.



Despite the existence of comprehensive policies for both WASH and climate change, many are not updated and do not reflect the current understanding of the severity of the climate emergency.



A woman is dragging fishing net in the river of Sundarbans. Ramjannagar, Shyamnagar, Satkhira.

Recommendations



Based on the impacts of climate change on the impacts of WASH services, together with a review of the relevant policies, governance and financing in Bangladesh, we make the following recommendations. These are grouped into three broad categories:

Creation and implementation of climate-resilient WASH policies

- To achieve SDG 6 and 13 and ensure WASH services for all, climate-resilient WASH policies should be created and implemented using scientific scenario analysis.
- In the revised BCCSAP, more attention should be given to areas that are both climate vulnerable and difficult to provide with WASH facilities – the hilly areas, char islands and urban slums, together with coastal zones.

A lifecycle approach to identify age-specific vulnerabilities should be adopted.

- Monitoring, evaluation and learning systems should be invested in to demonstrate what has been done, learn lessons and measure outcomes systematically. Data is needed on the distribution of services to align policy with reality. The knowledge and capacity of government officials in this area needs improvement.
- Important plans such as the Sector Development Plan need to be assessed to identify how much of the assigned action has been carried out so far. It could then be assessed whether the long-term plans are viable or need updating.
- The National Policy for Safe Drinking Water and Sanitation 1998, National Hygiene Promotion Strategy for Water Supply and Sanitation Sector in Bangladesh 2012, and Water Rules 2018 should be updated as soon as possible to better align them with climate change. Each should have a specific roadmap for implementation.

Pumping water out of tube-wells becomes difficult, as months-long waterlogging on the outer surface damages its functionality. Ashashuni, Shyamnagar, Satkhira.



Photo: WaterAid/Drirk/Suman Paul

Inclusive management of water resources and infrastructure

- The government departments engaged in water and sanitation-related interventions should be better coordinated and understand their roles and responsibilities clearly. These departments should be actively coordinated with MoEFCC and MoDMR.
- WARPO should work closely with the Department of Environment (DoE) to identify climate change-related impacts and take actions accordingly.
- To increase awareness and action on hygiene, MoHFW, MoE and the Ministry of Local Government, Rural Development and Cooperatives (MOLGRD&C) should be closely coordinated.
- At the union level, the reactivation of standing committees to deal with climate change impacts is vital.
- An overall assessment of government officials' climate change knowledge and capacity to implement climate change-related projects should be made, and capacity built accordingly.
- To tackle the poor management of WASH facilities, the responsibility should be given to local communities, with the beneficiary-pays principle introduced for all local water projects and operation and maintenance (O&M). Women-led management of

Monitoring, evaluation and learning systems should be invested in to demonstrate what has been done, learn lessons and measure outcomes systematically.

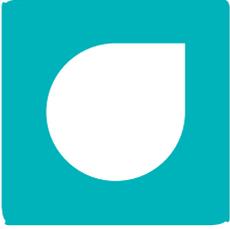
water resources should be promoted and practised.

- Measurable indicators should be developed to monitor the progress of different WASH and climate change interventions.
- Communities should be introduced to context-specific climate-resilient WASH infrastructure and services, alongside education and capacity building.
- To bring about positive hygiene behaviour changes, the Ministry of Education (MoE) can play a major role by introducing hygiene into the curriculum. Upazila education officers should carry out their mandated duties.
- When agreeing work plans, ministries and departments should consult with Thana Nirbahi Officers (TNOs) to check the feasibility of actions.
- In terms of accessing international funds, nodal agencies can develop projects creating the link between health and hygiene and climate change, and make proposals for GCF together with PKSF.
- Considering the importance of WASH in climate change adaptation and having a specific programme on WASH in BCCSAP, projects should be carried out explicitly on WASH under BCCTF.
- Instead of relying only on BCCTF to fund the recovery and repair of emergency services from the reserve, the relevant ministries should allocate funds to repair damaged WASH infrastructure after disasters.
- Investment from private sector companies, as well as households and entrepreneurs, should be encouraged to fund WASH and climate change-related interventions.

Proper allocation and use of funds for sustainable WASH services

- To allocate WASH budgets in different geographical areas, per capita WASH spending should be estimated and allocated accordingly. Considering the vulnerability of coastal, char, haor and hilly areas, more budget should be allocated and spent in these areas.
- For the money to be used effectively, WASH and climate budgets should be developed with local communities and those in charge of implementation.
- More budget should be allocated to hygiene, enabling country-wide hygiene promotion campaigns. More investment should be devoted to FSM.
- To ensure government transparency and accountability, open budgets and public hearings should be widely introduced.
- Actual expenditure of WASH allocation should be systematically tracked to improve targeting and decision-making around WASH investments.

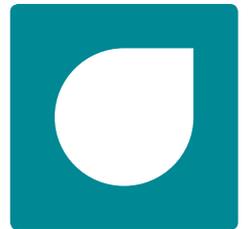
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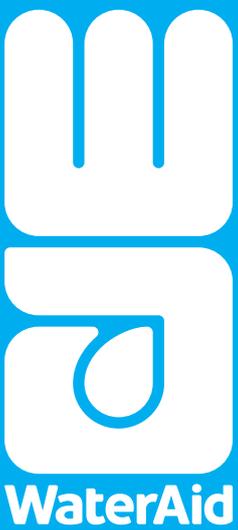
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Climate change will alter the water cycle, affecting the availability of freshwater for drinking as well as for sanitation and hygiene. We analysed Bangladesh's WASH and climate change policies and financing to identify gaps and make evidence-based recommendations.



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