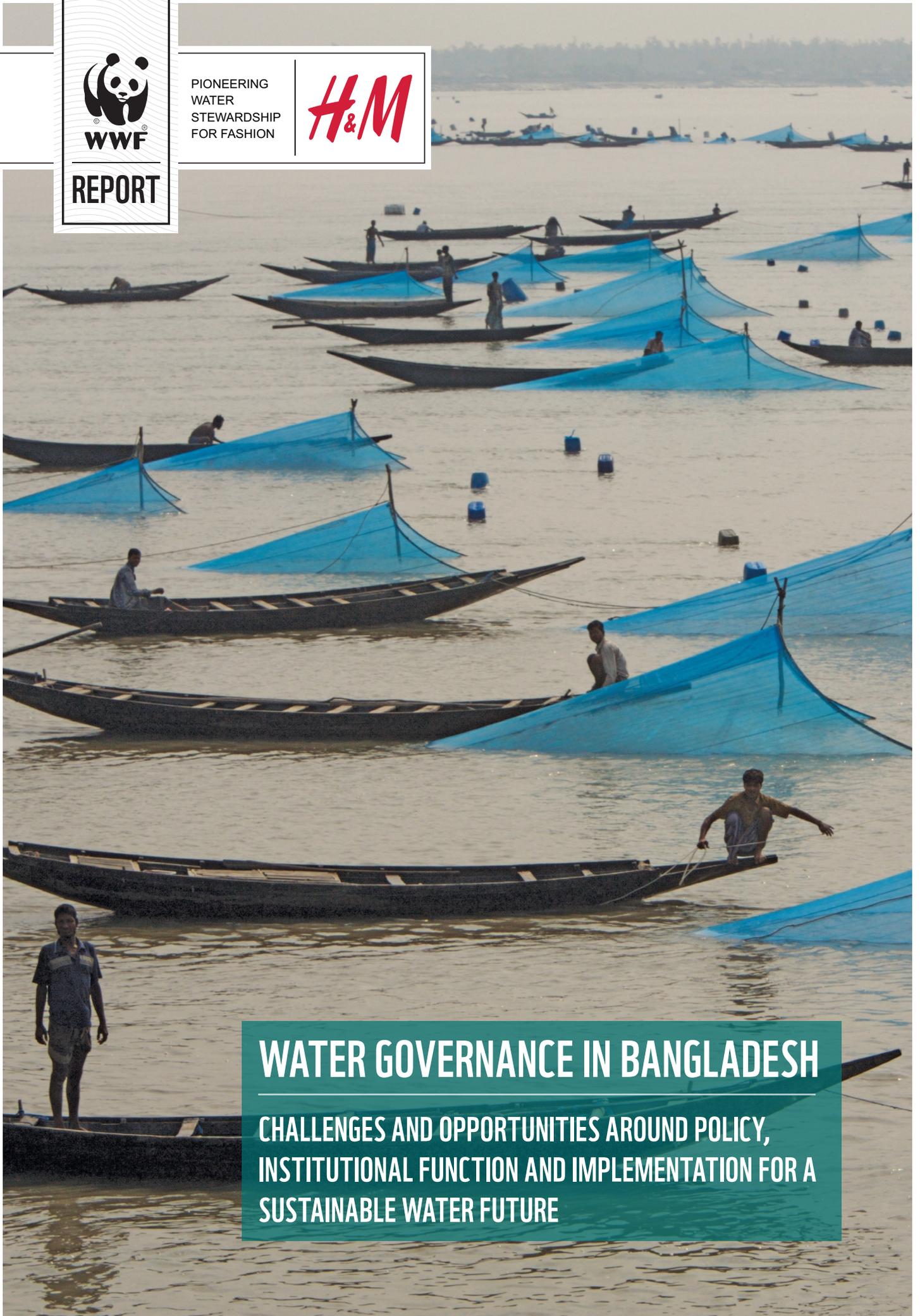




PIONEERING
WATER
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REPORT



WATER GOVERNANCE IN BANGLADESH

CHALLENGES AND OPPORTUNITIES AROUND POLICY,
INSTITUTIONAL FUNCTION AND IMPLEMENTATION FOR A
SUSTAINABLE WATER FUTURE

LIST OF ABBREVIATIONS

BAPA	Bangladesh Poribesh (Environment) Andolon (Movement)	GoB	Government of Bangladesh
BBS	Bangladesh Bureau of Statistics	H&M	Hennes & Mauritz
BELA Association	Bangladesh Environmental Lawyers Association	IFC	International Finance Corporation
BFLLFEA	Bangladesh Finished Leather, Leather Products and Footwear Exporters Association	IRBM	Integrated River Bank Management
BGMEA	Bangladesh Garment Manufacturers and Exporters Association	IUCN	International Union for Conservation of Nature
BKMEA	Bangladesh Knitwear Manufacturers and Exporters Association	IWRM	Integrated Water Resources Management
BoI	Board of Investment	JMP	Jalmahal Management Policy 1999
BSCIC	Bangladesh Small & Cottage Industries Corporation	LGD	Local Government Division
BTA	Bangladesh Tannery Association	LGED	Local Government Engineering Department
BWDB	Bangladesh Water Development Board	MoA	Ministry of Agriculture
BWITA	Bangladesh Inland Water Transport Authority	MoHA	Ministry of Home Affairs
CBO	Community Based Organization	MoI	Ministry of Industry
CEGIS	Centre for Environment and Geographic Information Services	MoL	Ministry of Land
CETP	Central Effluent Treatment Plant	MoLGRD&C	Ministry of Local Government, Rural Development and Cooperatives
CGC	Centre for Global Change	MoS	Ministry of Shipping
CIDA	Canadian International Development Agency	MoU	Memorandum of Understanding
CRDS	Center for Resource and Development Studies	MoWR	Ministry of Water Resources
C3ER	Centre for Climate Change and Environmental Research	NAP	National Agriculture Policy 2013
CZP	Coastal Zone Policy 2005	NAPA	National Adaptation Programme of Action
DANIDA	Danish International Development Agency	NGOs	Non-Government Organizations
DC	District Commissions	NILG	National Institute of Local Government
DoE	Department of Environment	NIP	National Industrial Policy 2010
DoT	Department of Textiles	NRM	Natural Resource Management
DPHE	Department of Public Health Engineering	NRPC	National River Protection Commission
EC	Executive Committee	NWC	National Water Council
ECA	Environment Conservation Act	NWMP	National Water Management Plan
ECNWRC	Executive Committee of the National Water Resources Council	NWP	National Water Policy 1999
ECR	Environment Conservation Rules	NWRC	National Water Resources Council
EIA	Environmental Impact Assessment	PaCT	Partnership for Cleaner Textile
EQS	Environmental Quality Standard	PPP	Public Private Partnership
ETP	Effluent Treatment Plant	PsPP	Polluter's Pay Principle
FAP	Flood Action Plan	SIDA	Swedish International Development Agency
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry	SOD	Standing Order of Disaster
		WARPO	Water Resources Planning Organization
		WASA	Water Supply and Sewerage Authorities
		WPP	Water Purification Plant
		WWF	World Wide Fund for Nature

FOREWORD

This piece of research was carried out as part of the collaborative partnership and shared priorities of two organisations – WWF and H&M – that both understand the importance of supporting strong action on water and water governance in Bangladesh.

Since the rapid development of the Bangladesh export industries in the last 30 years, increases in growth and production have been accompanied by high environmental impacts and risks – in particular around water. Because Bangladesh has historically faced challenges around access to improved water and sanitation for its people, these impacts are particularly important for the health of communities in and around production areas. But water risks are also becoming increasingly important for the continuing operations of key industries and the long-term economic health of Bangladesh.

This report hopes to support the excellent progress and commitment already being shown by the public sector in Bangladesh by identifying challenges and opportunities in existing water policy, institutions and implementation, and creating a roadmap for optimisation of governance.

Our research relied heavily on the knowledge and insights of a range of senior expert stakeholders within public, private and academic organisations in Bangladesh, alongside the voices of local communities and SMEs. All recommendations are based upon this collective feedback.

The work was carried out in partnership with two expert Bangladeshi research organisations - the Centre for Resource Development Studies and the Centre for Climate Change and Environmental Research.



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WWF is one of the world's largest and most experienced independent conservation organizations, with over 5 million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

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INTRODUCTION

PURPOSE AND SCOPE OF STUDY

This report is a holistic review of water governance in Bangladesh, with the aim of providing insight to government and non-government actors on the current challenges and opportunities around water governance. The hope is that the findings will help all actors in Bangladesh to align on a positive roadmap for strong water governance and a sustainable water future. The study examines different elements of water governance in Bangladesh - including relevant policies, strategies, rules, regulations and their implementation by institutions in Bangladesh - in order to pinpoint important challenges and opportunities. The research particularly focussed on four key questions:

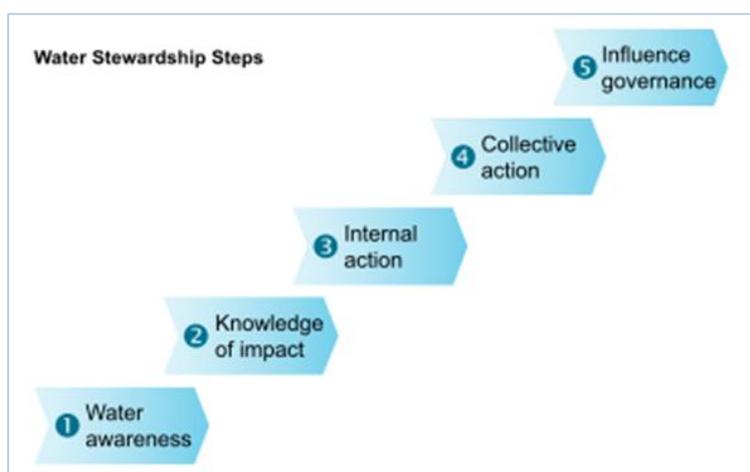
- Do existing water-related policies adequately address the major challenges of water management in Bangladesh?
- Are legal instruments and institutions adequately enforcing water-related policies to ensure good water governance in Bangladesh?
- What legal and institutional reforms are required to appropriately address water management issues?
- What is the best way for the private sector and civil society to support improved water governance and Integrated River Basin Management (IRBM) in Bangladesh?

Overall analysis was carried out based on the strength, weakness, opportunities and challenges identified by Key Informants from different sectors in Bangladesh including; government organizations and ministries, non-government organizations, and agricultural producers, industrialists, and domestic water users/citizens.

ABOUT WWF

The World Wide Fund for Nature (WWF) is one of the world's largest and most experienced independent conservation organizations, with over 5 million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

As part of its long-term conservation strategy, WWF has partnered with many national and international companies on *Water Stewardship*. WWF understands Water Stewardship for business as a progression of increased improvements in water use and a reduction in the water-related impacts of internal and value chain operations. More importantly, it is a commitment to the sustainable management of shared water resources in the public interest through collective action with other businesses, governments, NGOs and communities. Water stewardship emphasises the role of private sector and other actors to work together to create shared solutions to shared water risks, with a focus on strengthening water governance.



THE WATER STEWARDSHIP STEPS:

- 1. Water awareness –* Internal engagement on water issues, engagement with external stakeholders and debates, understanding of water topics
- 2. Knowledge of impact –* Hot-spot and risk analysis including the context of the basin, operational and supply chain performance, and the identification of high risk caused by water quantity and/or quality issues.
- 3. Internal action –* Can include the following crucial activities for both operations and supply chain: company targets to reduce water use and implement site best practices; improvement of water quantity and quality reporting; pollution prevention.
- 4. Collective action –* A company recognises that working with others is a necessary part of a robust water stewardship strategy. Collective action can help mitigate basin-related risks, boost reputation on water issues, and build brand trust and loyalty. It can take the form of participation in public fora to address water management issues, partnerships with watershed groups, NGOs or other companies that pool technical, human and financial resources to conserve freshwater resources, and participation in collective actions to improve water management and governance.
- 5. Influence governance –* Will often consist of collective advocacy, partnership, financial support, facilitation, and institutional strengthening in collaboration with others (often as part of collective action), and may take place at the local, watershed, state or national level.

WWF believes that water governance is at the heart of how water is managed in any country. It is the mechanism by which different and sometimes competing water interests can be balanced in the long-term interests of the nation's people. It is also the mechanism by which harmful activities from particular actors can be regulated, to prevent damage to shared water resources and systems. Governance is about the policies in place, about the institutions implementing those policies, and about how water management is functioning on the ground.

WWF AND H&M IN PARTNERSHIP

H&M was founded in Sweden in 1947, with a business concept is to offer fashion and quality at the best price. The H&M Group has around 2,700 stores in 48 markets including franchise markets. This includes Europe, Asia, Middle East, North Africa, North America and South America.

WWF and H&M have been working in partnership on water stewardship since 2012, and have a comprehensive programme of activities across the WWF water stewardship ladder, including: raising water awareness within H&M's value chain; identifying supplier water risks and minimizing negative water impacts in its supply chain; working in multi-stakeholder platforms and supporting collective action on water; creating better practices that others can adopt in the countries where H&M works; and working to educate H&M's consumers.

The partnership has focussed efforts on collective action and water governance in two priority places – China and Bangladesh. As part of this work, WWF and H&M commissioned the Centre for Resource and Development Studies (working in partnership with the Centre for Climate Change and Environmental Research (C3ER), a research wing of BRAC University in Bangladesh) as delivery partners for this study. A companion study was also carried out with local delivery partners PPRC to analyse the economic outcomes of different water governance scenarios. These studies will form the backbone of WWF's engagement plan on water in Bangladesh, in alignment with H&M and other local and international actors.

EXECUTIVE SUMMARY

WHY GOVERNANCE MATTERS

Water governance is at the heart of how water is managed in any country. It is the mechanism by which different and sometimes competing water interests can be balanced in the long-term interests of the nation's people. It is also the mechanism by which harmful activities from particular actors can be regulated, to prevent damage to shared water resources and systems. Governance is about the policies in place, about the institutions implementing those policies, and about how water management is functioning on the ground.

Our research method is based not only on a desk-top review of policies, but also crucially on the feedback from stakeholders within Bangladeshi governance institutions, other organisations working on water issues, industry stakeholders and local communities. The aim was to reflect the views of actors implementing water governance and affected by water governance. In this way, we hope to facilitate the sharing of views and concerns on water governance issues and support ongoing efforts to address challenges and explore opportunities for further strengthening.

WHAT WOULD STRONG WATER GOVERNANCE LOOK LIKE IN BANGLADESH?

There are many well-regarded measures for good water governance, but for the purpose of this study we took a simple concept of how strong water governance would look in Bangladesh:

- Legal frameworks would be consistent and integrated, and account for all major water impacts and risks within Bangladesh. This includes ambitious regulation for key sectors, in line with realistic limits for water availability and quality, taking account of environmental needs and limits and ensuring effective penalties are available for non-compliance.
- Legal documents would also support the provision of WASH for the population, provide clear guidelines on how all relevant stakeholders can be included in water decision-making, and give clarity around institutional responsibilities, mandates and powers.
- Institutions would function effectively to allow for strong implementation of policy, with adequate capacity and clear boundaries/mandates. Each institution would collaborate with other organisations where necessary.
- Institutions would be structured in such a way as to allow for implementation at relevant geographical levels and have clear mechanisms for inclusive decision-making on water trade-offs.
- Monitoring and penalty systems would be functional, free of corruption and adequately funded, so that any legal non-compliance would be addressed.
- All sectors in Bangladesh would be included in governance mechanisms and have clear incentives in place to ensure compliance and self-regulation for improved water performance.
- International organisations would align on a clear vision for strong water governance and support implementation in a consistent way.

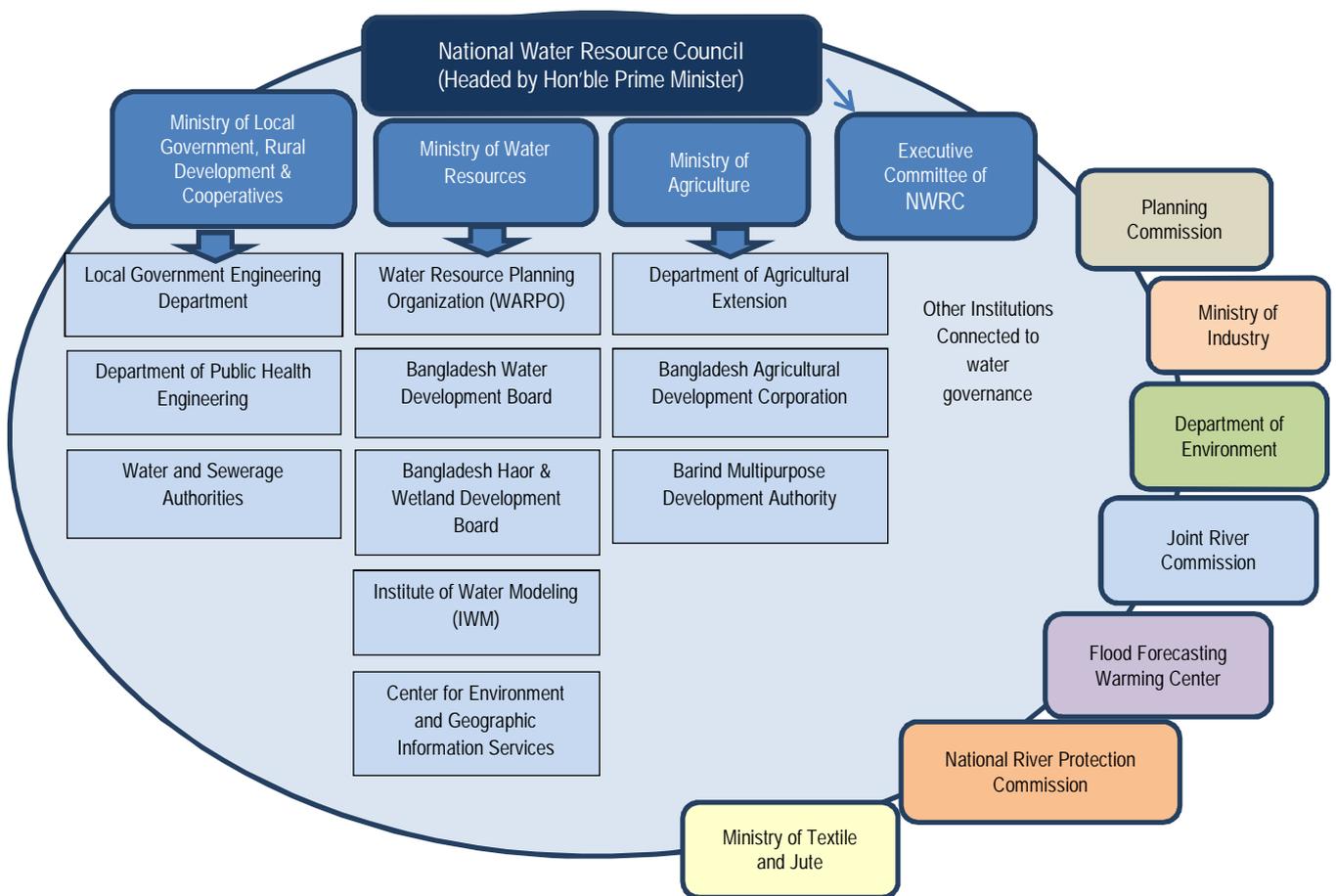


CURRENT STATUS OF WATER GOVERNANCE IN BANGLADESH

The 2013 Water Act is the latest and most important water policy in Bangladesh. It absorbs content from previous water regulations, and supersedes all previous water-related policies. There are also a number of additional policies that overlap and connect to the present Water Act; the Disaster Management Act 2012, Integrated Small-Scale Irrigation Policy 2011, Coastal Development Strategy 2006, the Coastal Zone Policy 2005, National Policy for Safe Water Supply & Sanitation 1998, Environment Conservation Act 1995, National Forest Policy 1994, Groundwater Management Ordinance 1985 and the Forest Act 1927.

Our research has examined the content and interactions between these different policies and how well they have facilitated implementation and institutional functioning. It also reflects feedback from within governance institutions about how well those institutions are functioning and how they can be strengthened, both within their individual mandates and in their interactions.

Figure 1 – Water Governance bodies and connected Institutions



STRENGTHS, CHALLENGES AND OPPORTUNITIES – POLICY

Feedback from key informants on water policy illustrated the following:

- The Water Act 2013 is broadly a strong policy. However there are some aspects (such as water pollution and drinking water provision) that are not adequately covered, and some contradictions with previous water policies and other connected policies.
- Policy documents are sometimes unclear about the mandate and powers of individual water institutions, and there are contradictions in scope where it is not clear which agency is responsible for implementation of particular activities.
- There are some opportunities for improving the stipulations for implementing mechanisms, although in general the mechanisms are sufficient. Policy contradicts a verdict passed by the high court on riverbank land holdings.

Potential roadmap for addressing challenges and opportunities:



STRENGTHS, CHALLENGES AND OPPORTUNITIES – INSTITUTIONS

Feedback from key informants on institutional functioning illustrated the following:

- Interactions between institutions are one of the biggest challenges for implementing good water governance. Promotion of inter-ministry and inter-agency coordination would greatly improve the situation.
- Individual institutions like the MoE&F have specific capacity needs such as increased knowledge of non-point source pollution for EIA. Others, like the MoI, need to be fully included in water policy discussions.
- WARPO as an institution has challenges in terms of unclear mandate and shortages in specialist manpower and financial resources. There is a persisting inter-ministry coordination gap and high uncertainty around their mandate to implement the Water Act although they are named as the implementing organisation.

Potential roadmap for addressing challenges and opportunities:



STRENGTHS, CHALLENGES AND OPPORTUNITIES – IMPLEMENTATION

Feedback from key informants on institutional functioning illustrated the following:

- There are substantial challenges around monitoring on the ground and major opportunities for improved monitoring of groundwater extraction and ETP functionality through de-centralised monitoring approaches and, if possible, increased staff resources.
- Penalties for non-compliance are too low to be effective, and the mechanisms for pursuing penalties have opportunity for improvement.
- There is significant potential in the delegation of monitoring powers to local public representatives to improve implementation.

Potential roadmap for addressing challenges and opportunities:



STRENGTHS, CHALLENGES AND OPPORTUNITIES – OTHER ACTORS

Feedback from key informants on institutional functioning illustrated the following:

- Community groups did not feel that their views were taken into account during policy setting processes, and complaints were not visibly dealt with. Good opportunities exist for increased, visible community engagement and follow up mechanisms.
- Awareness raising activities and legal enforcement are needed to create better water impact in the agricultural sector
- Industrial sector is not aware of significant impacts from their operations. Industrial bodies should be incorporated into water governance mechanisms and government support options explored for ETP and CETP investment.
- NGOs (representing community interests) could be better represented in governance processes.
- Donor organisations are currently supporting specific activities, but could be aligned on single plan for supporting improved governance and infrastructure
- International buyers are motivated to support good on-site water practices but struggle with influence and resources
- All parties agreed that a multi-stakeholder platform will be a positive way to include all actors into governance, at national or local level

Potential roadmap for addressing challenges and opportunities:



METHODOLOGY

The research team took a multi-stage approach to evaluating water governance in Bangladesh, in order to capture the different aspects of governance and varying perspectives from stakeholders within Bangladesh.

The scope was also limited to exclude trans-boundary water allocation and specific climate adaptation policies. These are important elements of water management in Bangladesh that are worthy of additional research, but for the purposes of this analysis an all-inclusive scope was felt to be unmanageable.

The first stage of research was a desk-based evaluation of existing legislation related to water, including policies with a water element such as agriculture. Each policy was evaluated on strengths, weaknesses and opportunities, to understand how they functioned as a stand-alone piece. Next, the team evaluated how these policies interact and overlap, to create a holistic analysis of how water-related policy as a whole addresses water challenges in Bangladesh.

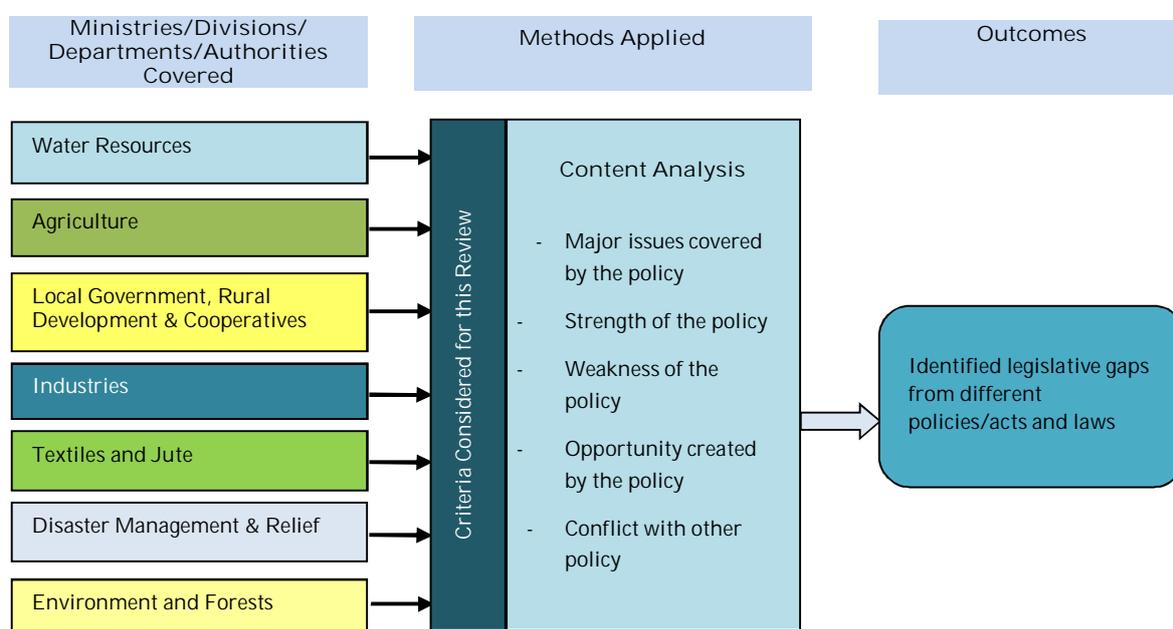


Figure 2: Review criteria of content analysis – water-related policy

The second stage of research was to engage directly with stakeholders in Bangladesh to understand how governance institutions are interacting and how effective current implementation of water policies is on the ground.

The stakeholders were selected through a prioritisation process, looking at level of influence, impact and support. They were then engaged through an iterative process of interviews and review sessions, culminating in a group discussion and review of the final report findings. Stakeholders were selected from the public sector, NGOs, industry bodies and expert groups.

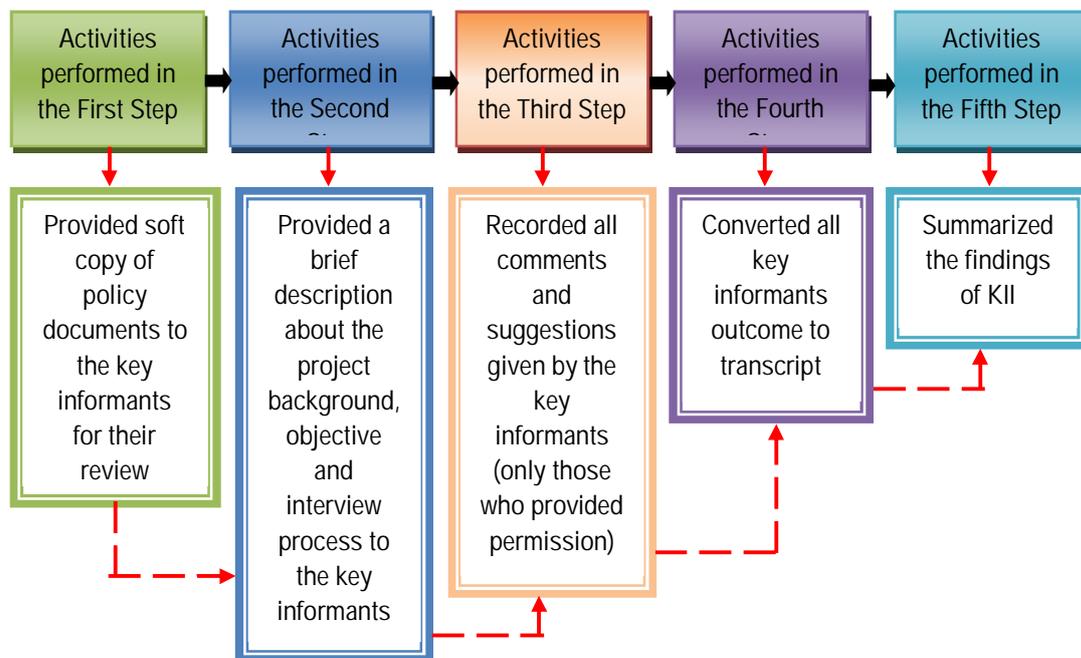


Figure 3: Process for Key Informant interviews

Importantly, industry and community stakeholders were also engaged directly through adapted processes. This allowed them to reflect on implementation challenges and opportunities and on the role for communities and the private sector in supporting good water governance. Industry and community stakeholders are not commonly part of policy discussions in Bangladesh, but since they are major impacted and impacting groups it is vital to understand how they interact with water governance mechanisms.

Three community consultation meetings were organized with three different groups in three different strategic locations – groups with lives and livelihoods completely dependent on the rivers: (i) a community next to the river Buriganga, (ii) a community neighbouring the river Turag and (iii) a community living in vulnerable areas in the coastal districts, who that depend on natural resources for their livelihoods. For community consultation meetings, a structured communication technique was used to ensure appropriate engagement. Local elected leaders, representatives from women's groups, agriculture farmers, fishermen, river dependent communities etc. were invited to participate on the consultation meeting.

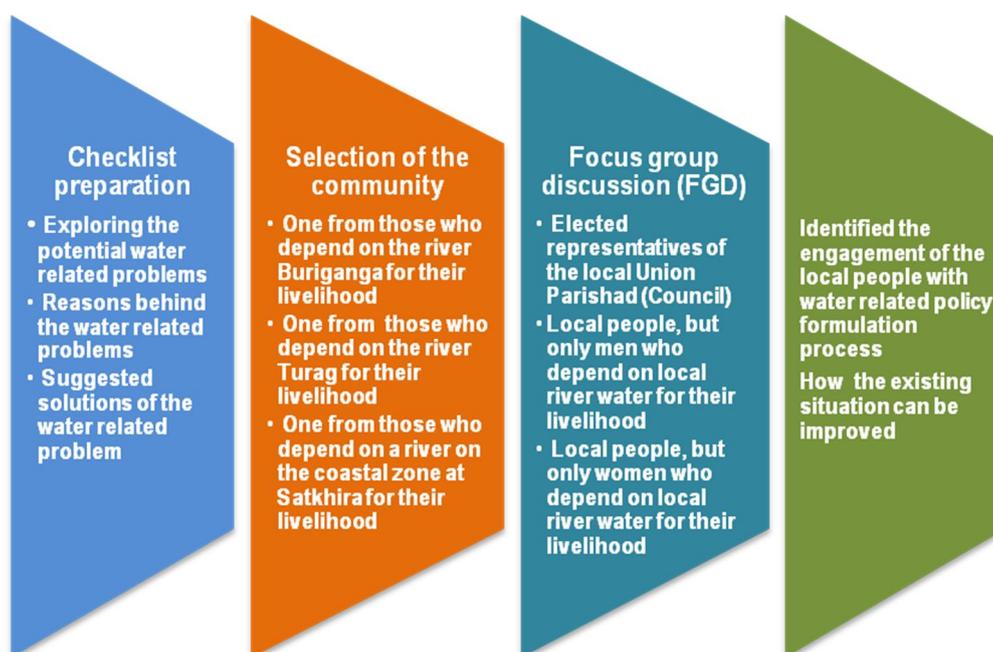


Figure 4: Process for community engagement

KEY INFORMANTS

Representatives were carefully chosen for their depth of knowledge and ability to represent a broad range of different interests and sectors. Key informants participated with a background or senior role in the following organisations:

Bangladesh Environmental Lawyers' Association (BELA)
Bangladesh Garment Manufacturers and Exporters Association (BGMEA)
*Bangladesh Poribesh Andolon (BAPA)**
Bangladesh Water Development Board
Bangladesh Water Partnership
Bangladesh Small and Cottage Industries Corporation (BSCIC)
Centre for Environment and Geographic Information Services (CEGIS)
Centre for Global Change (CGC)
Department of Textiles (DoT)
Department of Environment (DoE)
Dhaka Water and Sewerage Authority (DWASA)
Federation of Bangladesh Chamber of Commerce and Industry (FBCCI)
Ministry of Industry (MoI)
Ministry of Water Resources (MoWR)
Ministry of Agriculture (MoA)
Bangladesh Planning Commission (BPC)
Water Aid Bangladesh
Water Resources Planning Organization (WARPO)

** Poribesh (Environment) & Andolon (Movement)*

Three community consultation meetings were also organized with three different groups, all of whom were in communities connected to rivers:

Communities on the banks of the river Buriganga
Communities on the banks of the river Turag
Communities in vulnerable areas of coastal district

Local elected leaders, members from women's groups, agriculture farmers, fishermen and other community members were invited to participate on the consultation meeting. A total of three separate community consultation meetings were conducted, one with the local administrative body and the Union Parishad (which included Chairman, Member, Councillors etc.), the second with local men and the third with local women.

Consultation was also made with the following Bangladesh companies:

Mohammadi Fashion Sweaters Ltd
Mohammadi Group Ltd.
Evince Garments Ltd. & Evince Group Ltd.
DBL Group Ltd.

EVALUATION OF WATER-RELATED POLICY

Key Question: How well does existing water policy and law cover the important water issues facing Bangladesh, including specifying the relevant institutional roles and implementation mechanisms?

For this report, all major policy documents connected to water were reviewed, in order to gain a holistic understanding of the current state of water governance in Bangladesh. The Bangladesh Water Act 2013 is the newest water-related policy in Bangladesh, and has absorbed the National Water Policy 1999 and superseded all other direct water acts. Therefore, it is vital to understand how this policy functions and how well it has covered the key aspects of effective water governance.

There are also a number of additional policies that overlap and connect to the present Water Act; the Disaster Management Act 2012, Integrated Small-Scale Irrigation Policy 2011, Coastal Development Strategy 2006, the Coastal Zone Policy 2005, National Policy for Safe Water Supply & Sanitation 1998, Environment Conservation Act 1995, National Forest Policy 1994, Groundwater Management Ordinance 1985 and the Forest Act 1927.

The research team found that although the 2013 Water Act has many positives and strengths, there are certain aspects that could be strengthened. In particular, Key Informants highlighted:

- Some gaps in the topics covered within the existing policy (for example, lack of specification on water quality control and drinking water).
- Opportunities to improve the stipulations within the policies on how institutions should function to deliver the policies
- Opportunities to improve the enforcement mechanisms described within the policies and some contradictions with judicial rulings that are connected to policy specifications.
- Opportunities to address a number of contradictions with other policies, both with the policies it was meant to absorb and with other policies such as the Disaster Management Act 2012.



Charcoal wood collectors, Sundarbans, Bangladesh © naturepl.com / Tim Laman / WWF

THEMATIC GAPS WITHIN POLICIES

Key Question: How well are the main topics of water management covered within laws and policies?

The 2013 Water Act is politically important and has champions at the highest level of government in Bangladesh. Broadly, it covers a number of key water issues very well. However our key informants highlighted several areas where coverage of topics was inadequate or occasionally missing. In particular, they reported that the issues of water pollution (both point source and non-point source) and access to safe drinking water were inadequately covered.

They also highlighted that there are discrepancies between the Bangla and English versions of the Act, and gaps between what is covered by the Water Act and what was covered by the previous policies (which are now superseded by the Act). This can lead to differing interpretations of the Water Act by different actors.

Stakeholders suggested that policy overlap in the water sector is due in part to a top-down approach to policy formulation. Policy formulation is mostly centralized, and simultaneously there are political influences and pressures on individuals and departments. One option is to consider a more bottom-up and holistic approach to policy formulation.

Thematic gaps within policies	
Gaps	Recommendation
The Bangladesh Water Act 2013 has been developed by the Ministry of Water Resources (MoWR) within their scope as water regulator. However, other ministries also have policies related to water, such as the Ministry of Shipping with policies covering navigation and all waterway transportation. Therefore, co-coordination of topics among all water-related policies is a major challenge.	Policy interactions and overlaps should be urgently reviewed to understand how all relevant policies can be optimized as an interactive and mutually supportive system of legislation.
Previous water policies required that the government should develop a water code to ensure rational use of water for all needs, water rights and management. However, the issue is absent in the latest Water Act 2013.	The relevant government authorities should initiate the development of a micro plan to this end, and further review the Water Act 2013 for implementation by the Water Resources Planning Organization (WARPO).
There are no guidelines relating to non-point water pollution sources like fertilizer and pesticides in the Water Act 2013, and some non-significant mentions in the National Water Policy (NWP) 1999.	The issue of non-point water pollution should be incorporated with adequate guidelines in the Water Act 2013.
The National Policy for Safe Water Supply and Sanitation 1998 addressed the issue of drinking water for all; however, this is not captured in the latest Water Act 2013 despite the fact that Bangladesh is one of the signatories in the United Nations declaration of safe drinking water for all by 2010 (and also despite the fact that The Water Act 2013 sets up a priority order for water usage in critical water stress areas as: drinking water>domestic usage>irrigation>fish culture>bio-diversity>wildlife>in stream flow> industry> salinity control>power generation> recreation>miscellaneous).	The Water Act 2013 should be updated to reflect this previous stipulation of drinking water for all. There is also an opportunity to include indigenous knowledge and modern technology for the supply of safe drinking water as in the previous policy.

<p>One of the significant gaps of the Water Act 2013 is the issue of participation of women in decision making during planning, operations and maintenance of water projects. It is overlooked in the Water Act even though it was mentioned in the National Policy for Safe Water Supply & Sanitation (NPSWSS) 1998.</p>	<p>The Water Act 2013 should explicitly include mechanisms for the participation of women (and other community perspectives and potentially marginalised groups) in water decision-making processes.</p>
<p>The Bangladesh Forest Act 1927 says that the government can stop any public or private way and watercourse to prevent destruction of forest. Therefore no other laws of Bangladesh (including water regulations) are applicable within the forest area.</p>	<p>The scope of these policies could be reconciled so that water regulations are also enforceable within forest areas -either by ensuring that recommended water policies are taken up by forest governance or by ensuring that the 2013 Water Act is applicable within forest areas.</p>
<p>There is no specific mention of the protection of the environment (particularly the coastal environment) from industrial pollution in the National Industrial Policy (NIP) 2010.</p>	<p>Considering the importance of this aspect, the issue of industrial pollution should be included in the NIP 2010.</p>
<p>There are some serious issues where the policies have been translated or interpreted. For example, in the Bangla version of the Bangladesh Water Act 2013 it states that safe drinking water for all will get first priority - however in the English version of this water act the wording is not clear. Therefore, according to the Water Act 2013, the government is not legally obligated to ensure safe drinking water in the coastal area i.e. in a village where there is no source of drinking water.</p>	<p>Translations and interpretations of all policies should be reviewed to ensure that they are consistent. Any discrepancies should be corrected, and any areas of explicit confusion addressed directly.</p>
<p>In the Water Act 2013, there is a provision for using ground water for industrial and irrigation purposes. However, some stakeholders suggested that there should be bans on extensive withdrawal of groundwater (particularly for irrigation) using tube wells in specific high-risk areas, for example the Barind Tract area.</p>	<p>Options should be considered to create exclusion zones to avoid extensive withdrawal of groundwater using tube wells in areas with low groundwater levels and/or high groundwater depletion risk.</p>
<p>The Cyclone Shelter Management Policy (CSMP) 2011 describes setting rainwater harvesting systems on top of cyclone shelters, in order to supply water for use by users of the shelters. But the policy can't be implemented due to lack of detailed guidelines about estimated demand for potable water, number of latrines, water points, O&M system, management process etc.</p>	<p>The CSMP 2011 should be revised to include the required guidelines on water sources and needs, with specific bottom-up and participatory process to ensure safe water supply and sanitation.</p>
<p>The National Agriculture Policy (NAP) 2013 has not created provisions for dealing with tension between the landowner farmers and the shrimp cultivators. There are stipulations for the installation of tube wells on farmers' field for small-scale withdrawal of groundwater for activities like irrigation, but none for larger uses such as shrimp cultivation.</p>	<p>Land use zoning and prioritization can be a good instrument to reduce tensions between farmers and shrimp-gher owners and provide clarity on water use priorities.</p>
<p>The NIP 2010 does not cover the provision of basic water facilities to help revitalise small scale industries and provide basic requirements to public sector enterprises.</p>	<p>Specific criteria could be introduced in order to include all basic facilities along with relevant types of industry so that the Bangladesh Small and Cottage Industries Corporation (BSCIC) Industrial Estate 2010 policy can be more effective.</p>

Effective guidelines are lacking on water pollution, scarcity and accessibility within the Disaster Management Act (DMA) 2012.	Issues of water pollution, scarcity and accessibility should be incorporated in the DMA 2012.
The Jalmahal Management Policy (JMP) 2009 included a set of criteria used to judge the eligibility of fishing cooperatives to lease areas for aquaculture in a Jalmahal (a large, flat bowl-like area that remains under shallow depth round the year) for a specific time. But there is no clear directive as to what measures the leaseholders should take to protect a Jalmahal and improve the surrounding environment.	The JMP 2009 can be updated to specify a guideline on what the leaseholders should do to protect a Jalmahal and improve surrounding environment.
The Water Act 2013 uses the lowest planning unit i.e. Mouza and its plot numbers to identify point-water sources for ground water conservation using tube wells. However, the plot demarcation lines indicating the boundaries of haor, baor and similar natural surface water sources are not demarcated in the same way.	The procedure for demarcation of haor, baor and similar natural surface water sources should be specified clearly in the Water Act 2013.

“Policies related to the water sector need to be reviewed individually, and also institutional specifications and overlaps between institutions and policies should be identified. Currently, there is a serious lack of coordination and cooperation amongst different ministries.” ----- CEGIS

“There is a serious policy gap where the policies have been translated or interpreted.” ----- CGC

INSTITUTIONAL SPECIFICATIONS WITHIN POLICIES

Key Question: How well do the water-related policies describe the way governance institutions should be implementing these policies?

Until recently, a total of 7 Ministries have been involved with the country's water management. The Ministry of Water Resources is meant to be the principal water regulator, whilst the Ministry of Environment & Forests has acted as the principal water monitor (with authority to take legal measures against various water polluters, particularly industries). The other five ministries represent the principal water users, namely the Ministries of Agriculture (MoA), Local Government, Rural Development & Cooperatives (MoLGRD&C), Industries (MoI), Textiles & Jute (MoT&J) and Disaster Management & Relief (MoDM&R).

Within the reviewed policy documents, it is clear that the law and enforcement power actually remains with the Ministry of Home Affairs (MoHA). The only exception is identified in the Water Act 2013, where there are several provisions for enforcement measures (such as compliance orders, protection orders, removal orders, imprisonment, compensation etc.) to be implemented through WARPO. However, there is no specific provision for WARPO to receive implementation support from the MoHA, and WARPO itself has no real implementation powers. Similar issues were found with the implementation of other policies.

Institutional Specifications within policies	
Gaps	Recommendation
According to the latest National Water Policy (NWP) 1999, an institution, namely WARPO, should be formed to hold the authority for execution/implementation of the Water Act 2013. However, the policy has not provided any guidelines on the institutional setup of WARPO.	A clear specification is required on the institutional set-up of WARPO within the Water Act 2013.
Water Act 2013 does not specify which institution will ensure the Environmental Quality Standard (EQS); is it WARPO or Department of Environment (DoE)?	Clarification of institutional responsibility on EQS is needed.
There is a lack of clarity around the specific, differentiated functions of the WARPO and the DoE in the Water Act 2013.	The National Water Resources Council should provide specific guidelines on the roles of the WARPO and the DOE.
WARPO is the main body to implement the Water Act 2013, however there is no specific clause regarding the financial mechanisms for this implementation.	A specific clause should be added in the Water Act 2013 to recommend a suitable financial mechanism for implementation through WARPO.
The task and responsibilities of WARPO officers are not mentioned in the Water Act 2013.	The task and responsibilities of WARPO officers should be specified in the Water Act 2013.
According to the Disaster Management Act (DMA) 2012, policing of the ban on destruction of water resources and implementation of imprisonment or fines should be the responsibility of the Ministry of Home Affairs. However, the specific role of The MoHA is not clearly articulated.	The DMA 2012 should clarify the role of the MoHA in providing police support, as required. Alternatively, responsibility for policing activities could be delegated to other institutions.
A sustainable institutional framework is yet to be put in place for the Bangladesh Water Development Board (BWDB) to implement the Master Plan for Agricultural Development in Coastal Region of Bangladesh 2013.	Relevant government agencies should take well-coordinated measures to develop an efficient institutional framework for proper implementation of the Master plan for Agricultural Development in Coastal Region of Bangladesh 2013.

<p>In the ECA 1995 and the ECR 1997, the DoE has specified that any water related project requires an Environmental Impact Assessment (EIA) before approval. However, the Water Act 2013 states that WARPO should instead give clearance to any type of water related project.</p>	<p>A review of the ECA 1995, the ECR 1997 and the Water Act 2013 is needed to establish a consistent approach to conduct EIA and issue project approval. Responsibility should be given either to WARPO or DoE, or to both the agencies within a specific, agreed collaboration mechanism.</p>
<p>The National Water Management Plan (NWMP) 2001 stated that all water related projects will be coordinated at national level by the Planning Commission, with specialist support from WARPO - and at local level by the District Committees under Local Government with technical support from the BWDB. However, the Water Act 2013 stated that WARPO will plan, design, monitor and supervise all water related projects throughout Bangladesh. This is a major contradiction which will hinder proper implementation of the Act.</p>	<p>Mandated activities of different government agencies shouldn't contradict each other. The policies of different water-related agencies should be clear and policy documents should be reviewed to prevent overlaps and promote inter-agency coordination at all levels. It is critical to clarify the role of WARPO and reconcile it with the NWMP 2001. There is, therefore, an opportunity to prepare a National Water Code based on specifications of the NWMP.</p>

“MoWR should focus significant resources to conduct an in-depth review of the gaps in institutional mandates. WARPO could also review the legal mandates of different ministries in order to produce coordinated regulations in line with the Water Act 2013.” -----WARPO

“DoE has gained regulatory power only after a long process, and WARPO will have significant challenges in enforcing and implementing the Water Act 2013. DoE developed the Environment Policy in 1992 followed by ECA 1995 and ECR in 1997 quickly. By contrast, the National Water Policy was turned into the national law in 1999 and after long interval, only recently, the Water Act 2013 has come into being as a policy document.” ----- DoE

ENFORCEMENT SPECIFICATIONS WITHIN POLICIES

Key Question: How well do water related policies describe the mechanisms by which implementation should take place?

There are a few particular areas where the mechanisms for implementation are not sufficiently described, or there is contradiction between policy stipulation and judicial rulings. In particular, the enforcement mechanisms within the NRPC Act 2013 and the Water Act 2013 require more explicit guidelines about how implementation should be carried out. There is also a contradiction between the ruling of the Bangladesh High Court on the definition of ‘foreshore’ extension – and this highlights that judicial stakeholders have not been part of the policy development process.

Enforcement specifications within policies	
Gaps	Recommendation
The NRPC Act 2013 does not provide any specific instructions/indications on enforcement mechanisms for implementing the policy; there are some unclear specifications that are open to incorrect interpretation.	Explicit guidelines should be developed about how implementation/enforcement of NRPC Act 2013 will take place.
According to Water Act 2013, there are several mechanisms available for enforcement, such as compliance orders, protection orders, removal orders, imprisonment and fines/compensation. However there is a lack of information on how these can be enforced.	Clarification is needed to ensure that the enforcement provisions within the Water Act 2013 are clear and practical.
BWDB has no mechanism to deal with the land use trade-offs according to the Master Plan for Agricultural Development in Coastal Region of Bangladesh 2013.	Land zoning or local multi-stakeholder dialogues could be used to create mechanisms for resolving land use trade-offs. BWDB should specify particular measures for resolving these trade-offs.
There are a few tensions between judicial rulings and the Water Act 2013. For instance, “foreshore” is defined in the Water Act 2013 as “any part of land thereof which is 10 meters extended from the highest water level”. However in 2009, the High Court declared the foreshore as land area which is 50 meters extended from the highest water mark.	A clear definition of foreshore should be added to the Water Act 2013. Furthermore, judicial institutions like the High Court should be included as one of the key stakeholders during policy formulation processes, to prevent contradictions between policy and the judicial system in future.

“In the Water Act of 2013, the foreshore of any river should be 10 meters (Section 2:20); however in 2009, the Bangladeshi High Court declared that the foreshore of any river around Dhaka city and port area should be 50 meters.”-----BAPA

CHALLENGES AND OPPORTUNITIES AROUND INSTITUTIONAL FUNCTIONING

Key question: How are different water related institutions functioning individually and as a system of governance? How can institutions be strengthened in their capacity and collaboration to ensure quality implementation?

There are altogether 30 ministries with 35 departments that are responsible for use of river water and other water resources. Lack of coordination among these institutions is identified as the main hindrance to good water governance.

Institutions need a variety of high-quality resources and capacities: for example, sound knowledge and capacity on scientific and technical matters; availability of modern and appropriate technologies; proper institutional mandates; skilled manpower for effective execution; sufficient funds and equitable financial allocation; appropriate institutional infrastructure; and transparency and accountability.

The Ministry of Water Resources (MoWR) is the highest authority in the water sector of Bangladesh, and leads on policy formulation and all monitoring and implementation relevant to water. However, the MoWR is not directly involved with implementation, but rather accomplishes it indirectly through other actors. The MoWR has five other supporting organizations i.e. BWDB, JRC, RRI, BHWDB and WARPO through which they execute their plans and policies.

Stakeholders reported that whilst many institutions have their own challenges and capacity gaps, the biggest hurdle to effective water governance is that inter-ministerial coordination is very weak (and the mechanisms for fund disbursement inefficient). Collaboration between institutions is the most important aspect of water governance in Bangladesh, and urgent attention is needed to ensure that it is strengthened as much as possible for the implementation of the Water Act 2013.

*“The National River Protection Commission (NRPC) has the mandate to protect the rivers. In reality, it is still at advisory stage and need coordination among various ministries. For instance, Ministry of Land (MoL) is responsible for river bank management and Ministry of Shipping (MoS) is accountable for maintaining navigability and waterway transportation. The MoWR is playing a role to support coordination to implement the River Protection Commission Act 2013 in the appropriate forum.” -----
MoWR*

INTERACTIONS BETWEEN WATER RELATED INSTITUTIONS

Key question: How can all the different institutions involved in water governance work together better to ensure quality implementation?

Interaction between institutions is so vital to effective water governance that if just one issue were to be tackled, this should be the priority. The Key Informants highlighted many areas in which institutions currently have challenges with interaction, and many opportunities for improving their functions and collaboration.

Interactions between water related institutions	
Gaps	Recommendation
The MoWR was responsible for developing the Water Act 2013, and other ministries do not necessarily understand their connection to the Act or role within its implementation.	<p>Mapping of cross-ministry connections and implementation responsibilities will help identify common scopes and start a dialogue on strengthening institutional ownership. Discussion is also needed on which institutions should be part of the Executive Committee of the Water Act.</p> <p>Greater collaboration and outreach between institutions would support much stronger enforcement of the present water-related policies. Institutions could conduct a scope analysis across different departments to identify and reconcile contradictions and assess potential opportunities for closer collaboration and support.</p>
WARPO does not have sufficient institutional capacity to initiate the collaboration between diverse stakeholders (such as LGED, DPHE, WASAs, NGOs, CBOs and the private sectors) required for developing the technical packages within the Water Act. WARPO will also need data and information from these institutions in order to develop effective regulations.	Measures can be taken to strengthen WARPO in its capacity to facilitate collaboration with all other departments for implementation of the Water Act 2013. Alternatively, the MoWR or other relevant institutions need to formally take over the responsibility of this inter-agency coordination function.
The BWDB is the key implementing organisation for almost all water-related projects including macro-environmental protection like flood control. Some of these projects are seen to provide social value while some others are controversial. The issue is due to the lack of community consultation in the planning process. Furthermore, sometimes WARPO itself is seen to approve ill-advised projects due to lack of capacity to overcome political interference and vested interest.	Priorities should be predetermined based on community consultation, since successful implementation of these projects largely depends on participation of the target beneficiaries in the process (from planning to completion of the projects). It is also important that WARPO addresses its approach to project approval to ensure that it has sufficient capacity to ensure high quality and independent decision-making.
All water-related projects currently need to be approved by two different organizations - WARPO and the Planning Commission. This causes delays in project approvals and implementation. The Planning Commission approves hundreds of projects every year and due to limited WARPO resources it is difficult for them to be part of every project approval meeting (whether the implementer is BWDB, LGED or DPHE). A more practical mechanism is needed to streamline the project approval process.	The existing approval procedure for water projects needs to be improved. WARPO should be involved at the project development stage, which will reduce work pressure on both WARPO and the Planning Commission. The organisations can also clearly split tasks, so that the Planning Commission would manage project planning while WARPO would approve specific technical issues. Finding a workable solution should significantly reduce project approval time.

<p>Some water-sector stakeholders report that the Planning Commission closely coordinates with the ministries and their departments in developing project proposals and at times organizes and conducts public consultation on water-related projects of special importance. It is also reported that the Planning Commission holds meetings with ministries and departments to motivate them to formulate innovative policies, and that it provides expert support on project proposals. There are suggestions that the Planning Commission is keen to support implementation of good water governance countrywide.</p> <p>However, other stakeholders report that the Planning Commission is not at all cooperative and encroaches on the mandate of other institutions. These stakeholders believe that the role of the Planning Commission should be minimised and private sector professional agencies should be involved.</p>	<p>Further review is needed into the role of the Planning Commission. It can exert positive coordination and extend planning support to the ministries and departments to improve on their capacity to prepare project proposals as per the country's needs, but concerns about its approach and mandate should not be ignored.</p>
<p>The National River Protection Commission (NRPC) 2013 has the mandate to protect rivers. In reality, it is still at the consultation stage and needs support and coordination from other ministries. For example, the Ministry of Land (MoL) is responsible for river bank management while the Ministry of Shipping (MoS) is accountable for navigation and waterway transportation. The MoWR is playing a coordinating role, to place the NRPC Act 2013 in the appropriate institutions.</p>	<p>The NRPC should be further empowered in implementing river protection, and coordination with other organisations should be facilitated wherever possible.</p>
<p>The Department of Textiles (DoT) approves ETP setup for textile facilities, but does not have capacity to conduct EIAs, monitor and supervise the performance of textile sites or to enforce penalties against polluters. Instead, these duties are in the remit of the Department of Environment (DoE). This is contradictory from both administrative and legislative viewpoints.</p>	<p>To ensure consistency of approach, either the DoT should take full responsibility for monitoring of the textile sector and enforcing relevant penalties OR ETP setup approval should go to the DoE. The relevant government authorities should urgently resolve such contradictions, as ETP mismanagement has a direct link with the pollution of natural water bodies.</p>
<p>Although the Coastal Zone Policy 2005 addressed coordination among the institutions, there is a lack of coordination and cooperation among the Bangladesh Navy, the Department of Environment (DoE), the Ministry of Shipping (MoS) and the Department of Forest (DoF) to control coastal pollution.</p>	<p>Specific focus on the coordination among the concerned organizations will strongly benefit implementation of the policy as well as controlling coastal pollution.</p>
<p>Contradictions in scope for the same organisations can be found within institutional setup. For instance, WASA cannot supply safe water in city areas where the public sector has the legal responsibility for providing drinking water. However, in the capital city of Dhaka, DWASA has permission to sell bottled water.</p>	<p>The contradiction in the scope of WASA or public sector to provide drinking water should be reviewed.</p>
<p>For effective implementation of the Master Plan for Agricultural Development in Coastal Region of Bangladesh 2013, the necessary coordination among Ministry of Agriculture (MoA), BWDB, Forest Department (FD) etc. is missing.</p>	<p>Specific focus on the coordination between institutions on the Master Plan for Agricultural Development in Coastal Region of Bangladesh 2013 would strongly benefit effective implementation.</p>

<p>The Center of Environmental and Geographic Information Services (CEGIS) is conducting all EIAs related to the water sector as a trustee of the MoWR. Therefore, mechanisms are needed to demonstrate that evaluations are objective and ensure free feedback from CEGIS as an organization.</p>	<p>MoWR can look into mechanisms that will explicitly demonstrate independent evaluation of the capacity of external organization like CEGIS.</p>
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“According to the Water Act 2013, WARPO is the apex body of the water sector and it is responsible for providing clearance to any project related to the water sector. However, the Planning Commission approves more than one thousand projects on a yearly basis, and it is difficult to call upon WARPO in every project approval meeting. Policy formulation by the Planning Commission is of a participatory nature and the Planning Commission acts as the coordinator among the ministries and agencies of the government. The Planning Commission also reviews reasons for ineffective implementation of policy and takes action to ensure it is being effectively coordinated” ----- GED, Planning Commission

“To ensure developing effective regulations, WARPO may seek necessary data and information from Water Supply and Sewerage Authority (WASA), Department of Public Health Engineering (DPHE), Bangladesh Water Development Board (BWDB) etc. Once data is collected from these different institutes, WARPO could decide the threshold of using surface and ground water based on a full situation analysis” -----WARPO



Harvesting shrimps, Bangladesh © naturepl.com / Tim Laman / WWF

CAPACITY AND EMPOWERMENT OF WATER RELATED INSTITUTIONS

Key question: Aside from WARPO, which institutions are important for delivery of water governance, and how can their capacity be built to ensure quality implementation?

Each institution connected to water governance in Bangladesh will have specific challenges to ensure adequate political mandate and resources to carry out their responsibilities. Our research has pinpointed particularly that WARPO needs greater empowerment if it is to implement the 2013 Water Act, but this will be addressed in the next section. For the other institutions connected to water, there are a variety of challenges - the Ministry of Industry needs a strengthened mandate to be included in the National Water Council and Executive Committee of the Water Act. Others, such as the Department of Environment or the Department of Textiles, are in need of additional resources and capacity in order to fully implement activities that fall under their mandate.

Capacity and empowerment of water related Institutions	
Gaps	Recommendation
Ministry of Industry (MoI) has not been empowered to take a lead role on water issues, despite the fact that industry is a major source of water impacts and is subject to strong operational water risks. MoI could play a substantial role in implementation by putting tighter controls on waste water quality and water use. However there is no representative of MoI in the National Water Resources Committee (NWRC) (the highest decision making body for water planning headed by the Prime Minister and formed by Water Act 2013), or the Executive Committee. This means that industry interests are not embedded in planning decisions. Moreover, as the Prime Minister's Office is monitoring the textile sector through Investment Board, active participation of MoI should be ensured by law.	MoI should play a specific role to raise water pollution and groundwater related problems and should be included in the NWRC formed through Water Act 2013. MoI could also be included in the Executive Committee of Water Act 2013 so that industrial water use and pollution issues are raised regularly.
Another significant gap from an institutional perspective is not involving the Federation of Bangladesh Chambers of Commerce and Industry (FBCCI), the BGMEA or the BKMEA in any of the national level committees/councils/forums. These organisations represent high impact industrial sectors and are very important as influencers and representatives of industry	The FBCCI or the BGMEA and BKMEA together should be included in the formulation of water related policies in future.
<p>The DoE is suffering from lack of manpower to monitor EIAs and low familiarity of staff with non-chemical pollution components.</p> <p>The DoE regularly monitors the industrial areas and imposes penalties for violation of environmental controls. However, some concerns were raised by stakeholders as to whether the DoE has the ability to ensure management of impacts in the face of corruption.</p>	<p>The DoE can explore options for building staff capacity in EIA monitoring. The DoE could establish a liaison office in the WARPO buildings to deal with EIAs.</p> <p>The DoE can also review the effectiveness of its monitoring and explore options for strengthening its impact and ability to overcome corruption.</p>

<p>The Department of Agricultural Extension (DAE) has staff at the grass-roots level, but there is a gap in on-ground delivery of the major agricultural resources (e.g. irrigation support) stipulated in the Master Plan for Agricultural Development in Coastal Region of Bangladesh 2013.</p>	<p>DAE should assess the needs for on-ground delivery of major agricultural inputs, to deliver against the recommended activities of the Master Plan for Agricultural Development in Coastal Region of Bangladesh 2013 in an efficient and effective manner.</p>
<p>The Bangladesh Bureau of Statics (BBS) has legal authorization under the Planning Commission for developing sector based policies. But their data is not detailed enough to use for preparing these policies. The Planning Commission hires consultants to write sector policies, and they select experts based on their own judgment.</p>	<p>Further data support and in-house capacity should be considered to carry out fully informed sector policies. This can only be achieved if WARPO has access to better data sources through the BBS.</p>
<p>The LGED (Local Government Engineering Department) implements a large number of projects in the water sector, mostly to strike a balance between water use for small-scale and large-scale water-related projects. The small-scale projects are implemented mainly by LGED, and the large-scale projects are implemented exclusively by BWDB. Given that the demand for small-scale water-related projects greater than for large-scale projects, LGED receives around 60% of the money allocated by the Planning Commission to implement projects in the water sector. At present, LGED is facing a lack of skilled manpower, appropriate scientific and technical knowledge alongside insufficient allocation of funds, an inadequate research base and low access to modern technologies.</p>	<p>LGED needs access to better technical support and capacity. They could consider collaboration with WARPO or another technical organisation.</p>
<p>The Department of Textiles (DoT) is trying to improve its capacity to modernize the textile industry and to monitor and supervise their performance alone. Textile education centres provide students with the knowledge and skills to establish modern textile mills and take care of their O&M, various grades of yarn spinning, dyeing, drying etc. But they are reportedly not provided with necessary knowledge and skills to deal with industrial effluent and ETP management. This implies that, despite continuing efforts, there is a knowledge gap in dealing with water pollution from textile industries.</p>	<p>The DoT should explore options to close this knowledge gap around industrial effluent and ETP management. It should also take measures to improve overall technical capacity in the sector, and review its mandate in order to strengthen its own monitoring powers.</p>
<p>Local government agencies and public representatives do not have sufficient power to follow up on violations of legal limits at local level, even if they are aware of violations.</p>	<p>Legal provision needs to be endorsed for active involvement of Local Government in protection of water bodies and pollution control. The authority to penalize offenders for polluting natural water may be delegated to locally elected public representatives.</p>

“There is no representation of Industry in the NWRC (National Water Resources Council) and EC (Executive Committee) as formed under the Water Act 2013. This is probably due to the direct involvement of the Prime Minister’s Office, through the Board of Investment, as the monitoring body for textiles”----- DoT

“MoI should be represented in the NWRC and ECNWRC of the Bangladesh Water Act 2013, because no industry could run without water. Moreover, the industrial sector pollutes both the surface and ground water significantly.” -----GED, Planning Commission

CAPACITY AND EMPOWERMENT OF WARPO

Key question: If WARPO is a key delivery institution for water regulation, how can its capacity be built to ensure quality implementation?

WARPO is functioning under MoWR as the lead organization of the overall water sector, as stipulated by the Bangladesh Water Act 2013. During our research, it has become clear that many stakeholders regard WARPO as central to delivery of the 2013 Water Act. However WARPO as an institution has many challenges and some contradictions in mandate. It is particularly important to clarify and strengthen the mandate of WARPO to implement the act, and to ensure that there is sufficient capacity and institutional memory to perform the relevant technical and monitoring functions.

The relationship between WARPO and other institutions can be challenging and WARPO does not wield a great deal of institutional power. If WARPO is to be the key implementer of the water act, its relative status to other institutions will need to be improved. If WARPO is not the relevant institution for certain activities, such as EIA or prosecution of non-compliance, this needs to be clarified so that the organisation has a clear set of responsibilities.

Capacity and empowerment of WARPO	
Gaps	Recommendation
According to the Water Act 2013, WARPO is the main implementing body under the MoWR. Other ministries are working independently on water-related issues, and WARPO is not empowered enough to ensure inter-ministerial co-ordination for water related matters. Under the present arrangement, other relevant ministries considered themselves to be senior to WARPO and therefore ignore WARPO even though it should be the approval body for water projects. There is a lack of awareness raising activities among the ministries to correct this issue.	The mechanisms for empowering WARPO could be reconsidered in the Water Act 2013. More institutional power and formal collaboration is required for WARPO to ensure inter-ministerial co-ordination. The institutional status of WARPO should be clearly recognized and an inter-ministerial communication mechanism should be used to create a network of collaboration (particularly for MoWR, MoS, and MoL). If specific activities are not appropriate for WARPO to carry out, this should be reviewed and clearly defined.
The NWP 1999 provides a comprehensive framework for the development of WARPO as an institute. However WARPO couldn't follow the framework due to internal inefficiency. Presently, WARPO is acting as a technical advisor under BWDB and the Planning Commission. The sustainability of the organization is a great concern.	An independent mandate could be given to WARPO so that the sustainability of the organization could be ensured. WARPO needs a continuous research mandate so that evidence based recommendations can be channelled directly to decision makers.
Ideally, the technical development and implementation/enforcement of water related policies would be done by the same organization. Presently, WARPO is contributing mainly on technical issues although it is officially responsible for implementing Water Act 2013. WARPO has produced some regulations on water allocation but there is no formal management of allocations by WARPO.	Technical and enforcement functions could be clarified so that WARPO is an enforcement agency in reality as well as on paper. WARPO should hold the mandate for decision-making on thresholds of surface and ground water use, based on data gathered from other institutions.
Cost benefit analysis and current scenario analysis are important for effective water allocation and demand estimation. The MoWR is currently in charge of water allocation in water scarce zones. However, maintaining all these procedures is a challenge for them.	WARPO could take over the role of selecting the threshold of water use and allocation of water use by different sectors such as agriculture, fisheries, etc.

WARPO (as with past bodies) is heavily dependent on donor support. This poses a risk to the institutional sustainability of WARPO. WARPO was consciously designed to house a broad range of relevant water experts. However, under the present practice, a large part of its expert work is being carried out through the private sector and NGOs rather than through in-house capacity.	The funding and in-house capacity of WARPO is crucial to the effective delivery of the Water Act 2013. A long-term funding plan should be considered to ensure that WARPO can be sustained in a more consistent way. Staff retention and gathering of strong in-house capacity is also an important focus area.
Due to lack of institutional capacity of WARPO, only the projects of BWDB are passing through WARPO and the Planning Commission.	WARPO institutional capacity can be strengthened to ensure that all relevant projects pass through WARPO and the planning commission.
WARPO does not have a permanent office building at the national level. In their temporary office, the organization has misplaced many valuable documents, maps and graphs. Inadequate office space is a barrier against creating a favourable working environment and could be a threat to their long-term sustainability. Moreover, they lack relevant regional staff, office space and manpower.	Fund disbursement should be ensured for WARPO to develop their office building at national and regional level. Recruitment of proficient staff is urgent for better implementation of policies.
Director Generals (DGs) of WARPO are actually transferred for a short period of time from BWDB, and therefore DGs have separate mandate and view their appointment as additional duties on a temporary basis. A total of 22 directors have worked with WARPO during the last 10 years. This frequent change does not support the development of a strong organization or institutional memory. Some of the highly qualified professionals appointed couldn't contribute in significant ways; many professional positions are still vacant. The Director General is appointed to carry out the research function, with two deputy directors and staff. But due to issues with senior staff, in practice the Chief Scientific Officers are overseeing the department.	Steps should be taken to reduce turnover and ensure longer term commitment from WARPO Director General position rather than temporary cover by BWDB staff. The appointment procedure of all levels of staff needs to be reviewed to ensure that a high-quality, committed team is built.
WARPO has the technical knowledge to conduct EIA of non-chemical pollution of water which is difficult for DoE. Institutional collaboration among WARPO and DoE is not observed in this regard.	WARPO and DoE could explore closer institutional co-operation and potentially build WARPO capacity to take over overseeing duties. Alternatively, DoE can increase technical knowledge for EIAs.
The Coastal Development Strategy 2006 is formulated by WARPO and they have stake in it. However, the institutional capacity of WARPO is not sufficient to act as an implementing body of this strategy.	The Institutional capacity of WARPO should be enhanced to be an implementing body of the Coastal Development Strategy 2006.

“One of the key activities of MoWR is to exercise water allocation in identified scarcity zones on the basis of specified priorities, and to determine the priority for allocating water during critical periods. The issue of allocation of water is very important among different sectors like agricultural, different types of industries etc. So, there should be a proper plan on water allocation among several sectors. The water allocation issue must be executing in accord with WARPO. In this regard, WARPO needs to develop some regulations to manage the allocation of water.” -----WARPO and CEGIS

“DoE has the culture of enforcement and is considered a natural authority. In spite of being established in 1999, WARPO does not have any regulatory system and mainly treated as a technical organization. However, DoE and WARPO can share EIA, after effective execution of Water Act 2013.” -----DoE

“WARPO was consciously designed to be a highly professional but a very lean organization by outsourcing a large part of its work to the private sector and NGOs. It is headed by a Director General who, in turn, is assisted by two Directors. At the real working level are the Chief Scientific Officers who are in charge of the technical sections overseeing the work of other professionals. Compared to other related organizations in the water sector, there is relative stability in the tenure of the top management. However, there is a lingering staff problem at mid-level. WARPO tried couple of times in the past to recruit good quality manpower from the market but did not succeed. A few of them who are already there are not considered mature enough to be promoted to the mid-level; nor can those positions be filled by seconded staff from related public organizations. In some cases, officials with the requisite qualification are not available. While at other times, the lending departments nominate dispensable persons who are not found acceptable by the WARPO management. In consequence, professional positions are still vacant.” -----WARPO

“WARPO has assigned responsibilities that require professional knowledge and skills of the highest order in the relevant fields. It has to be truly a centre of excellence and for that it must have a core in-house capacity by attracting high-quality professionals, ensure their career and professional advancement and be able to retain them for a reasonable duration.” -----WARPO



CHALLENGES AND OPPORTUNITIES IN POLICY IMPLEMENTATION

Key question: Beyond the specific challenges with institutions, what other issues are preventing good on-ground implementation of governance?

Although institutional functioning is key to implementation of good water governance, there are a few other aspects that arose from Key Informant feedback that are directly felt as barriers to implementation on the ground. Some are connected to monitoring, while others are about specific application of penalties for non-compliance.

MONITORING AND SCOPE

Key question: How is monitoring being carried out on the ground, and what opportunities exist for improvement?

Monitoring of compliance to regulation is one of the most challenging aspects of effective water governance, since it is often labour-intensive and requires a high level of capacity. Ground water extraction and ETP functionality are two of the most vital aspects of water management in Bangladesh, and if monitoring of these aspects is not effective then improving water impacts and risks will be extremely challenging. All actors in Bangladesh will need to find effective mechanisms of monitoring that enable effective control with minimum resources. And long-term funding mechanisms are needed not just for infrastructure, but for this type of governance capacity.

One example of on-ground challenges is around river demarcation. A government department under MoWR established 2000 poles on the both sides of the Turag River as the demarcation of the river boundary, however last year only 29 poles were found in the right place, according to the Bangladesh High Court. A total of 52,300,000 sq. feet of river land has been lost by the water resources management authority. This type of encroachment is a serious threat to the river and illustrates the challenge of enforcing controls in the face of pressure from external interests and individual corruption.

Monitoring and scope	
Gaps	Recommendation
There is no control over the groundwater withdrawal of the industrial sector by the MoWR and DoE. DoT does not have the monitoring capability to control ground water extraction in the textiles sector.	Discussion and review of ground water extraction monitoring processes would be recommended. Either the DoE or the DoT needs to increase monitoring capability to control ground water extraction by industry.
The DoT does not approve the registration of a dyeing site if they do not have Effluent Treatment Plant (ETP) provision. However the DoE does not have the capacity to monitor all ETP systems on a regular basis due to lack of manpower.	Regulatory bodies of DoE could be decentralized in order to monitor the industrial sector more effectively. Key issue to monitor is whether ETPs are operated consistently since there are high running costs.
According to the Groundwater Management Ordinance 1985 licensing of tube wells (mostly irrigation) should be approved by the Thana Executive Office. In the National Agriculture Policy 2013 there is provision for minor irrigation. However, Thana Executive Officers do not have access to a ground water table map showing the suitable zones.	There is a need for clear mapping of zones and ground water levels in order to ensure that the licensing of tube wells can be overseen properly by the Thana Executive Office in line with groundwater availability limits.
As per the National Agriculture Policy (NAP) 2013, farmers could install tube-wells for minor irrigation on their crop land, as required. The Upazila Irrigation Committee (UIC) had been given the responsibility to assess requests and issue licenses for individual farmers or farming groups as per the Ground Water Management Ordinance (GMO) 1985. However, the procedure is usually not followed or enforced at farm level.	In line with the National Agriculture Policy (NAP) 2013 the distance between two tube-wells should be so chosen that it would meet both the requirements of safe extraction of groundwater and increase of irrigation efficiency. Increased resources are needed to improve licencing and monitoring mechanisms.
There are many incidents of river encroachment, mainly due to political pressures upon the DCs and the corruption of individuals in charge of demarcation (for example moving standing poles at the river edge).	The MoS has formed a task force on river bank encroachment to demolish all the illegal structures along the river bank. This task force should contact DC and other encroachment management organizations to ensure encroachment does not continue and demarcation is being maintained appropriately.

“DoT is enthusiastic to play a vital role in monitoring. They have already started to monitor whether the industries have an ETP or not and provide registration accordingly. Sometimes it becomes difficult to maintain transparency and accountability. Moreover, technical knowledge, skilled manpower and a clear institutional mandate are also essential for DoT to ensure effective implementation.” -----DoT

“The overall monitoring of DoE and MoWR on the industrial sector is weak” -----DBL Group

ENFORCEMENT

Key question: How are legal violations punished, and how can enforcement mechanisms be strengthened?

Enforcement mechanisms for policy are often where theoretical controls become a reality. In Bangladesh, the mechanisms for enforcement of water regulations do exist, but applying them causes major challenges. For individual sites and water users, the benefit from non-compliance often far outweighs the potential penalty they will face if caught, and therefore there is a strong incentive to go against regulations. Self-regulation and understanding of shared risks can go a certain way to helping this, but this is likely to influence only those who are already more concerned. The only way to target all actors and sites is to ensure that non-compliance has material consequences that outweigh the benefits of breaking the rules, and that the system for pursuing non-compliance functions efficiently and effectively.

Though there are provisions for imposing penalties against legal violations (for example through the Environment Conservation Act 1995 and Water Act 2013), the DoE can't execute these due to institutional constraints and struggles with corruption from industrial sites unwilling to accept penalties.

Enforcement	
Gaps	Recommendation
Industry owners are not motivated to comply with water regulation, as the penalty imposed by DoE for non-compliance is negligible. The Environmental Conservation Act 1995 includes a 'Polluter Pay Principle' in general terms that 'if any particular activity is causing damage to the ecosystem, the responsible party will have to apply corrective measures'. According to the NIP 2010, the government may impose tax and duty concessions to control industrial water pollution. However this is not currently being implemented.	WARPO, DoI and DoE should review mechanisms and penalties for non-compliance to water extraction and pollution regulations, and create more stringent sanctions and more effective mechanisms for penalizing non-compliant parties (particularly within industry). These could include fines, tax and duty concessions, blacklisting or even removing operating licenses.
Public representatives have no authority to take direct actions against those industries that are polluting the river.	There is a need for delegation of authority to the public representatives to control water pollution.
The legal mechanisms for prosecuting non-compliance are too complex and are preventing effective management of penalties.	The process for prosecuting non-compliance is in need of review and simplification.

"CEGIS strongly believe that the issue of Polluter's Pay Principle (PsPP) should need to be applied widely. The industrial sector is polluting both the surface and ground water significantly; unless taking any strong pragmatic initiative and to stop immediately otherwise would severely affect biodiversity. Therefore, the industrial sector should pay higher penalty for not only polluting the water resources but becomes a serious threat by destroying natural biodiversity." -----CEGIS

"The penalty imposed by the DoE on the industry is not effective if it violates the Environment Conservation Act 1995, Water Act 2013, etc. Moreover, the industry owners simply do not care about the penalty imposed by DoE because the penalty is negligible." -----DBL Group

INCLUSION OF OTHER ACTORS IN GOVERNANCE

Key question: How are actors outside government influenced by governance? How can they take part in strengthening water governance?

Our research included the views and experiences of different non-government stakeholders - including community and industry groups- on how they interact with water governance and opportunities for improvement. Although communities, industry, agriculture, and NGOs and other international organisations all have different concerns and connections with governance, there were some clear areas of alignment.

The most significant outcome is that all different stakeholders expressed positive support for the formation of a multi-stakeholder water management platform, with representatives of the public sector, private sector, community based organization, elected leaders, and citizens. This type of approach can work both at national level on high-level policy consultation, and at local level to support shared water solutions between all local actors. If successful, stakeholders believed that such efforts would provide positive impact on effective governance and impact and risk reduction.

In alignment with this feedback, there was also interest in establishing de-centralised forms of monitoring and enforcement that would connect local stakeholders and multi-stakeholder groups to locally empowered agencies. For example, this could be done by endorsing active involvement of the local government on environmental protection and water monitoring, and establishing a legal framework where the local police force worked under the relevant local representative to support enforcement.

“Opinions from the government, non-government and civil society are reflected in the Water Act 2013 as local level consultation meetings were organized at the grassroots levels, though it was inadequate.” ----- WARPO



Fishermen, Sundarbans National Park, Bangladesh. © David Woodfall / WWF-UK

ROLE OF COMMUNITIES

Key question: How do local communities experience water governance? How can they be included in strengthening water governance?

Feedback from communities and their local representatives expressed both general disenfranchisement and frustration over particular issues. Although mechanisms do exist for communities to give feedback on policy questions and to raise concerns, it was not clear to community actors that their views were being heard or that their concerns were being addressed. They also felt that specific local decisions had been made without consulting them, which resulted in unintended negative consequences.

The local members and councillors said that they always take steps to collect messages from the local people and share with the higher authorities like District Commissioner or Upazila Chairman. However, they are not at all aware about the after effects of these conveyed messages.

Role of communities	
Gaps	Recommendation
There is a serious gap in awareness raising activity in the water sector among all different stakeholders. There are no promotional activities at national radio and television to stop uncontrolled extraction of ground water.	Awareness of the general public could be increased through advertisement in television, radio etc.
The communities surveyed did not believe that their views and comments had been incorporated in the Water Act 2013. There was not a sufficient or visible engagement process where the general public in Bangladesh was consulted. One of the clear public interest issues was to declare drought as a national hazard, but the issue is not addressed in policy. This is also a lost opportunity to benefit from in-depth local knowledge of communities.	Direct community voice and indigenous knowledge should be incorporated in the development of water related policies and mechanisms. This can be through government consultation OR through local multi-stakeholder water governance platforms.
Communities felt that local decisions were made without consulting them and resulted in unintended negative consequences. Local example: the government has taken various decisions to protect the river Buriganga without consulting local people. When the government decided to launch water bus in the river Buriganga, they didn't discuss the issue with the local people.	When specific local decisions are being made that connect to public health, livelihoods or culturally important issues, clear mechanisms need to be created to consult with local stakeholders. This could be done through empowering local decision making bodies with a multi-stakeholder approach, or perhaps by a community impact assessment similar to EIA.
The concerns of local people are always shared with the higher authorities through the members and councillors. However, this feedback can often be lost in the decision-making process and local people and councillors do not see that their messages are delivered to the right people.	Clearer communications and structure is needed to illustrate how concerns from the general public are managed and how their contributions are used. Institutions at the national and local level can illustrate how they respond to the views of all stakeholders to prove that there is a transparent and legitimate consultation process.

<p>As public representatives, the members and councillors at local level need to be responsive to the concerns of local people and local water issues. However, the Public representatives have no authority to take direct actions against policy violations or harmful impacts. There is a need for delegation of authority to the public representatives. Local populations have taken initiative many times to complain against dyeing industries to the public representative and also to the industrialists, but all efforts have been in vain. Vested commercial interests mean that the voice of the public is not strong enough to be taken seriously.</p>	<p>Legal provision is needed for the active involvement of Local Government in environmental protection and water management. This could be supported by ensuring that local police forces work under the public representatives for taking actions on water pollution and environmental issues.</p> <p>To ensure accountability, this type of approach should go hand-in-hand with improved representation of all local stakeholders in a balanced, multi-stakeholder platform.</p>
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“Indigenous knowledge should be incorporated in the water related policies and the awareness of the general people should be increased through advertisement in television, radio etc.” -----MoWR

“WARPO has engaged several NGOs to assist in developing and implementing a People's Participation and Consultative Process to support national level planning. This sort of outsourcing and cooperation would be an important element in the institutionalization of WARPO.” -----WARPO

Case Study

Dhaka city has grown up around the Buriganga River for more than a hundred years. The river is very significant from an economic perspective, and a large proportion of people depend on the river Buriganga for their lives and livelihoods. Local people beside the Buriganga River feel that they are the key stakeholder of the river, as their lives and livelihoods are directly related to the river. However, they report that the government has taken various decisions to protect the river Buriganga without consultation with the local people, and that they are affected by the misuse of the river by others. For instance, when the government decided to launch water bus in the river Buriganga, they didn't discuss the issue with the local people. The inhabitants of Baluchar expressed high level of dissatisfaction, as the water bus creates heavy waves as it passes. As a consequence, houses that are situated at both sides of the river shake all the time and land is eroded. Sometimes water overflows the land and creates water-logging.

There is also a major issue with the quality of the river water, and locals say it is entirely unusable for all sorts of activities including domestic, commercial or even navigation - although many people are still using this highly polluted water for domestic uses as they lack access to alternatives. Some locals collect water for drinking purposes from other sources by sacrificing valuable working hours, often waiting in a long queue to collect the water. This impacts their income and can create stress and unrest within the community.

The issues with waves, drinking water and water pollution could be addressed in an effective way by including local communities into the decision making processes, and reviewing current issues. This would empower the local communities and support strong enforcement simultaneously (particularly if local communities can directly report visible violation issues). A controlled, win-win solution could be applied, where the Ministry of Water Resources (MoWR) and other key agencies could play a vital role to support local implementation of central water control requirements.

ROLE OF AGRICULTURE

Key question: How do agricultural stakeholders experience water governance? How can they be included in strengthening water governance?

Agricultural water users are different from industry water users in important ways: they are generally less connected to export trade, and have less visible water quality impacts. However, there has been a significant increase in groundwater-sourced irrigation, and agricultural runoff can be a harmful source of non-point water pollution. Agricultural water users may lack awareness of the issues around groundwater depletion in Bangladesh, and regulation of their water use is not effective. Action is needed to specifically target this sector, as part of an effective water governance system.

Role of agriculture	
Gaps	Recommendation
According to the NWMP, demand for irrigation is expected to increase by 25% between 2000 and 2025. Innovations in mechanical irrigation have led to a rapid expansion of irrigated agriculture in Bangladesh. Extraction of irrigation water is not effectively controlled.	A review of irrigation management approach is needed, with clear focus on managing increase in demand and mechanisms for enforcement.
The agricultural sector is not included within local water governance. Local example: Irrigation is a big problem in the Barandra area for uncontrolled withdrawal of water from the ground level aquifer, but no initiatives exist to raise awareness of the problem or to include agricultural actors in local water decision-making.	The creation of a multi stakeholder platform consisting of public sector, private sector, business sector, community based organization, elected leaders, and common people is well appreciated to raise awareness on water pollution issue and come to shared water management decisions. This can be done both at national and local level.

“Innovations in mechanical irrigation have led to a rapid expansion of irrigated agriculture in Bangladesh. The demand of water for irrigation is growing very fast, as it holds the key to agricultural development, especially for food crops such as rice.”

-----CGC

ROLE OF INDUSTRY

Key question: How do industry stakeholders experience water governance? How can they be included in strengthening water governance?

The industrial sector is significant for Bangladesh both in terms of GDP and export, and also in terms of water impacts. Widespread groundwater extraction for production has led to a significant depletion in groundwater levels, and regulation of extractions is often problematic. Similarly, large volumes of waste water are discharged into surface water bodies, often untreated or treated to poor standards. WARPO reported that more than 200 rivers of Bangladesh directly or indirectly receive a large quantity of untreated industrial wastes and effluent. Every day approximately 700 tanneries of Dhaka city are discharging about 16,000 cubic meters of toxic waste. The DOE has listed 1,176 factories that cause pollution throughout the country.

If the industrial sector can be made aware of the risks they are creating for their own operations through these unsustainable water practices, then the 'externalities' of water issues become core business risks that need to be tackled together. If industry can be included in policy and implementation decision-making, this would also allow them a voice and sense of ownership over shared water issues, both at a national and local level.

Some representatives of industry felt that a more positive approach was required, since media coverage of the sector is often negative and they face a lot of pressure to reduce impacts. They suggested it would be better to acknowledge the social and economic benefits of industry (alongside potential water impacts) and have a long term, positive policy from government to support industry whilst improving its practices, rather than over-burdening them with regulation. Reconciling this desire with the need for reduced impacts and improved compliance suggests that including industrial stakeholders in governance mechanisms at local and national level -as well as simplifying and clarifying their regulatory mechanisms - could provide clear benefit.

Role of Industry	
Gaps	Recommendation
More than 200 rivers of Bangladesh directly or indirectly receive a large quantity of untreated industrial waste and effluent. The main impacting sectors are textiles and dyeing, tannery, pulp and paper, pharmaceuticals, metal processing, food industry and agriculture. These actors are not well informed about water issues and are not aware of their vulnerability to the water risks created by their own industries.	The awareness of the industrial sector should be increased, as they are not sufficiently aware of the impact of industrial pollution and groundwater depletion on their own operational risk. An evidence base is needed to demonstrate the scale, relevance and financial consequences of these risks (alongside awareness of regulatory consequences of non-compliance).
The contribution of the industrial sector to the policy making process is insufficient. The Industrial sector does not have substantial contact with the MoWR. There is no representative from industry sector in the NWC and EC formed by the Water Act 2013 probably due to the direct involvement of Prime Minister's Office in monitoring the textile sector through Investment Board up to June 2014.	The industrial sector could share their challenges and capacity if the sector is included during decision-making stages of policy. This could be done through direct engagement or through MoI having a position on the National Water Council and Executive Committee of Water Act 2013.
The industries are not operating ETPs properly because of high expense, lack of space, and lack of knowledge and awareness. The small industries and sites cannot set up ETPs because of huge capital cost involvement. The extra expense of running ETPs in a competitive open market creates negative impact on per unit production cost. Without strong enforcement, those who do not run their ETPs will therefore have a market advantage.	Specific industry types (i.e. textile, tannery, etc.) could be clustered in production zones e.g. in Chittagong, Khulna, etc. rather than being scattered. This would facilitate investment in specific industry-appropriate CETP infrastructure, reduce monitoring burden, and operational and management costs would be reduced. The utilization of land would also be improved by this specific zoning for industry.

<p>Local example: Hazaribagh tannery is the cause of severe surface water pollution in the upper region of Buriganga River due to inadequate ETP function-creating a risk of pollution for whole Buriganga River around Dhaka city.</p> <p>Local example: The tannery industry in Savar has established a CETP and a Management Board will be formed to monitor the CETP after the completion of the project. The main challenges remain in the relocation of tannery industry of BSCIC from Hazaribag to CETP at Savar.</p>	<p>Options should be explored for creating government subsidies or access to capital for ETP investments (potentially through a development agency or similar). This would be particularly useful for SMEs.</p> <p>Taking a CETP approach would require avoiding the issues previously experienced in Savar, since vested interests have created major barriers there.</p>
<p>DoE report that they are closely monitoring the function of ETPs for industry. Similarly, FBCCI, BGMEA, BKMEA etc. are monitoring site water use reduction. According to the policy of the BGMEA, if a site is established with no ETP after 2010 then the company is not allowed to join BGMEA. BGMEA also has a large compliance team to monitor the factories in terms of security, human resources development, ETP functioning, etc.</p> <p>Textile and leather sector associations have provided efforts to control the usage of water in operations and invested heavily in improvements. <i>However, impacts from industry and textiles/leather sectors are still high.</i></p>	<p>There is a need to formulate a separate policy in the form of strategy or action plan by streamlining roles and responsibilities of the industry sector and process mechanism for reducing water. Specifically, a guideline is required for the small and medium industries on how to minimize water use and ensure water treatment in cost effective ways.</p> <p><i>If the sector is focussing on ETP functionality and still having water impacts, the industry and government should also considered whether the current legal minimum for water quality is high enough to prevent wide-scale pollution from industry.</i></p>
<p>BSCIC in collaboration with the tanners' association (i.e. BTA and BFLLEA) is providing awareness raising activities among the owners through sensitivity workshops, events etc. though the organization suffers low staff numbers. BGMEA provides training through compliance team. The Department of Textile (DoT) is contributing to development of skilled Textile Engineers under a diploma program not only through technical learning but to enhance their knowledge on environment protection and reduction of water pollution. <i>However, stakeholders reported that awareness in industry is still low.</i></p>	<p>An evaluation is needed of the approach to engaging industrial stakeholders on water impact reduction. It should examine whether they are engaging the right types of actor, whether the training is appropriate for the audience, whether there are factors meaning that the training is ignored.</p>
<p>Currently there is a gap between industry and water management authorities. The industrial sector is not adequately embedded in water governance mechanisms at local or national level.</p>	<p>One option to consider is the creation of a multi stakeholder platform consisting of public sector, private sector, business sector, community-based organizations, elected leaders, and common people to raise awareness on water pollution issue and come to shared water management decisions. This is something that can be done at both local and national level.</p>
<p>The approach of Public Private Partnership (PPP) has not been effectively leveraged to manage water impacts, potentially due to perceptions of corruption by a few individuals.</p>	<p>CETPs and other infrastructure investments are urgently needed – for example water reuse, rain water harvesting, and surface water treatment plants. They could be set up through a renewed PPP approach that has strong, visible anti-corruption mechanisms in place.</p>

“FBCCI doesn't have regulatory authority. It is an umbrella organization. FBCCI can carry out awareness-raising and try to convince industrialists to fully operate ETPs, but it cannot force them. Some of the FBCCI's members are very influential with the government, and could play a proactive role in this regards. The government should take the initiative to influence them and encourage them to contribute to ensuring pollution free water for the next generation.” -----FBCCI

“BGMEA and other such organizations are powerful because they have millions of workers in their industries. These types of organizations may influence the government, to ensure more effective implementation. Industrial zones for specific industries should be developed where one common ETP can be developed within the industrial zone for all; and every industry will contribute equally and effectively. Such an initiative may provide positive impacts in terms of environmental improvement, as well as lower costs for industrialists compared with individual investment.” -----BGMEA

ROLE OF NGOS, INTERNATIONAL BRANDS AND INTERNATIONAL DEVELOPMENT ORGANISATIONS

Key question: How can NGOs and international organisations support stronger water governance?

A number of national and international NGOs are working on water-related issues in Bangladesh, aiming to increase awareness, reduce impact and improve access to WASH through various projects and programs. Many are also aware that balancing water issues and interests is a complex process, and are already working towards a more integrated form of participatory water management at local level as well as trying to support strong water governance at national level. However, current NGO involvement in national policy formulation processes is still fairly low.

International buyers have strong influence on the industrial sector in Bangladesh, in particular in the textile and leather sectors. However there are some challenges with exerting this influence. Due to supply chain fragmentation, individual buyers often are not able to strongly influence sites to make water impact reductions – they may as an individual company only represent a small percentage of sales from the production site and therefore have limited leverage. Production sites are often also unwilling to make costly investments in improved infrastructure without a significant commercial commitment from the buyer (although this type of commitment is also difficult or impossible for the buyer to give).

Another important role in Bangladesh is that of the various international development agencies and donor banks that are already investing in infrastructure development and policy engagement. These organisations often have good resources and technical capacity, and are vital to implementing high-cost water solutions. They are powerful if aligned behind a shared vision of good water governance, particularly if they are provided with transparent accountability mechanisms by Bangladesh institutions.

Role of NGOs, buyers, development agencies	
Gaps	Recommendation
NGOs are experienced in on-ground water stewardship and WASH work, and can report back community and stakeholder issues. However they are not well represented within governance mechanisms- for example, according to the Bangladesh Water Act 2013, only one representative from the NGO sector was selected by the Prime Minister to be a member of the National Water Resources Council, and one to be a member of the Executive Committee.	To ensure effective and practical policy documents, the number of NGO representatives with community water engagement experience could be raised, perhaps to at least two representatives in the National Water Resources Council and the Executive Committee.
NGOs and other actors are setting up collective water governance work on the ground in Bangladesh, but de-centralised water governance is not a well know approach and Integrated River Basin Management has not been fully implemented in Bangladesh.	Institutions looking at water management should be aware of this type of collective water stewardship project and discuss the role of de-centralised multi-stakeholder water management at local level.
Local Government policy guidelines recommend that government organizations should work in partnership with NGOs. However, there are many challenges with this approach – for example, while implementing the Flood Action Plan (FAP), lack of cooperation between them was identified as a serious problem.	After the adoption of a new approach by the relevant departments, NGOs are now better integrated within implementation processes. In fact, WARPO has engaged several NGOs to assist it in developing and implementing a People's Participation and Consultative Process to support national level planning. This sort of outsourcing and cooperation would be an important element in the institutionalization of the WARPO.

<p>International buyers for industry (especially textiles and leather) want to see higher standards of water management and water quality treatment. However they are not able to influence sites where they have a small buy, and sites do not have access to capital or a desire to act without a commercial incentive. Much of the attention for the buyers and suppliers is currently focussed on factory safety.</p>	<p>Attention should not be distracted from other important problems such as worker safety, but buyers can work together to support improvement of industry standards. Consistent, ambitious targets for supplier standards across different companies would be a huge step forward, alongside programmes to help sites access technical information and financial mechanisms.</p> <p>Local example: the PaCT programme is working with multiple international brands and Bangladesh productions sites to give technical and financial support to site environmental improvements.</p>
<p>International brands have some voice with industry bodies and other important institutions, but are often engaging individually or not at all on water issues. Brands often look at water as a site technical problem and not a country-level governance challenge.</p>	<p>If brands are able to come together in joint support of strong water governance, this can help ensure that the importance of governance is not forgotten. It also sends a strong signal to the international sourcing communities that reducing the impacts of their own suppliers will not address shared water risks, and that collective action is needed.</p>
<p>The World Bank plays a key role to harmonise different institutions in Bangladesh.</p> <p>The World Bank has also suggested that village water should be commercialized. This is viewed with some caution by many stakeholders since it would be a major change, would require massive planning all over the country and would necessitate the development of an acceptable payment mechanism for rural people.</p>	<p>The World Bank clearly has the opportunity to facilitate a better collaborative approach between water governance institutions and could be a vital player in carrying out the recommendations from this report. However, certain aspects of their recommendations such as privatisation of water resources are potentially controversial and counter to cultural norms.</p>
<p>Donor agencies are mainly responsible for providing funds for water-related projects. Bangladesh institutions are managing deficit funds from IDA under the Riverbank Protection Project; CIDA is supporting WARPO in producing necessary regulations for the Water Act 2013; a number of experts are being supported by bilateral donors like DANIDA and SIDA. Expenses for program development, capacity building and training as well as a large part of establishment cost are being met from different project based funds.</p>	<p>There is great potential to align different development/donor agencies behind a joint vision for strong water governance in Bangladesh. However transparency, accountability and fund disbursement are the major challenges with the use of donor funds. Donor support can be strengthened if a strong mechanism for transparency and accountability are put in place. There also needs to be a discussion on how institutional processes can be funded in the future, beyond donor support.</p>

ROADMAP FOR CHANGE

Policy



Key actions:

1. Policy interaction and overlaps should be urgently reviewed to understand how all relevant policies can be optimized as an interactive system of legislation.
2. The relevant government authorities should initiate the development of a micro plan to this end, and further review the Water Act 2013 for implementation by the Water Resources Planning organization (WARPO).
3. The issue of non-point water pollution should be incorporated with adequate guidelines in the Water Act 2013.
4. The Water Act 2013 should be updated to reflect this previous stipulation of drinking water for all.
5. Translations and interpretations of all policies should be reviewed to ensure that they are consistent. Any discrepancies should be corrected, and any areas of explicit confusion addressed directly.
6. Issues of water pollution, scarcity and accessibility can be incorporated in the DMA 2012 for the better development of the water sector.
7. The roles and responsibilities of different government organizations should be clear and policy documents should be reviewed to ensure effective water related services. The National Water Resources Committee should provide specific guidelines on the roles of DoE and WARPO. A specific clause should be added to recommend the best financial mechanism for implementation through WARPO.
8. Better specification is needed of the role of the MoHA in policing the DMA 2012 and Water Act 2014.
9. Clarification is needed to ensure that the enforcement provisions are usable within the Water Act 2013 and NRPC 2013.

Institutions



Key actions:

1. Cross-ministry mapping of connections and implementation responsibilities could help identify common scopes and create an open dialogue between ministries on strengthening institutional ownership, alongside a rationalization of which institutions need to be part of the Executive Committee of Water Act 2013. One institution should take responsibility for coordination.

2. Clarified scope and responsibility for each ministry and department can be formally captured and embedded within legislative framework where needed.
3. Further review is needed into the role of the Planning Commission. They could potentially exert a positive coordinating function, but concerns about their approach and mandate should not be ignored. WARPO should be involved at the project development stage of all of the government initiated projects relating to water, and the Planning Commission would only look after the issues other than the technical aspects.
4. Either the DoT should take responsibility for regular monitoring, or the ETP approval process should sit with DoE. The relevant government authorities resolve such contradictions as ETP management has a direct linkage with reduction of water pollution.
5. MoI could play important role to raise the water pollution and groundwater related problems and should be included in the NWRC and executive committee. The FBCCI, or the BGMEA and BKMEA should also be included in decision-making.
6. DoE could review the effectiveness of its monitoring and violation approaches, and explore options for strengthening its impact and ability to overcome corruption. The DoE could establish a liaison office in the WARPO buildings to deal with EIA.
7. Legal provision needs to be endorsed for active involvement of Local Government on environmental protection and water sector. Authority on water pollution violations could also be delegated to local the Public Representatives.
8. More institutional power and formal collaboration is required for WARPO to ensure inter-ministerial co-ordination. The institutional status of WARPO should be clearly recognized and an inter-ministerial communication mechanism should be developed and introduced for ensuring useful communication and network system.
9. Technical and enforcement functions could be clarified so that WARPO is an enforcement agency in reality as well as on paper. WARPO should hold the mandate for decision-making on thresholds of surface and ground water use, based on data gathered from other institutions.
10. A long-term funding plan should be considered to ensure that WARPO can be sustained in a more consistent way.
11. Steps should be taken to reduce turnover and ensure longer term commitment from WARPO Director General position rather than temporary cover by BWDB staff.

Implementation



Key actions:

1. Discussion and review of ground water extraction monitoring processes would be recommended. DoT needs to increase monitoring capability to control ground water extraction by industry.
2. Regulatory bodies of DoE could be decentralized in order to monitor the industrial sector more effectively. Key issue to monitor is whether ETPs are operated consistently since there are high running costs.
3. There is a need for clear mapping of zones and ground water levels in order to ensure that the licensing of tube wells can be overseen properly by the Thana Executive Office.
4. WARPO, DoI and DoE should review mechanisms and penalties for non-compliance to water extraction and pollution regulations, and create more stringent sanctions and more effective mechanisms for penalizing non-compliant parties (particularly within industry). There is a need for delegation of authority to the public representatives to control water pollution.
5. The process for prosecuting non-compliance should be reviewed and simplified.

Other actors



Key actions:

1. Direct community voice and indigenous knowledge should be incorporated in the development of water related policies and mechanisms. This can be through government consultation OR through local multi-stakeholder water governance platforms.
2. Legal provision is needed for the active involvement of Local Government on environmental protection and water sector. This could be supported by ensuring that local police forces work under the public representatives for taking actions on water pollution and environmental issues.
3. Industrial sector could share challenges and capability if the sector is included during decision-making stages of policy. Could be done through direct engagement or through MoI position on the National Water Council and Executive Committee of Water Act 2013.
4. Specific industry types (i.e. textile, tannery, etc.) should be clustered in production zones e.g. in Chittagong, Khulna, etc. with CETPs
5. Options should be explored for creating government subsidies or access to capital for ETP investments. Specific action plans and guidelines are needed for industry, esp. SMEs
6. Industry and government should consider whether the current legal minimum for water quality is good enough to prevent wide-scale pollution from industry.
7. Multi-stakeholder platforms should be established at local and national level, consisting of public sector, private sector, business sector, community based organization, elected leaders, and common people to raise awareness on water pollution issue and come to shared water management decisions.
8. A review of irrigation management approach is needed, with clear focus on managing increase in demand and mechanisms for enforcement.
9. International buyers can work together to support improvement of industry standards and in joint support of strong water governance.
10. There is great potential to align different development/donor agencies behind a joint vision for strong water governance in Bangladesh. Donor support can be strengthened if strong mechanism for transparency and accountability are in place.

NEXT STEPS

Next steps for WWF and H&M in Bangladesh

WWF and H&M have action plans in Bangladesh focussed on strengthening water governance and supporting collective action on water.

H&M sector engagement:

H&M will continue working to support its Bangladesh supply chain in implementing leading practices at site level, as well as sharing best practices with other industry actors and associations.

Bangladeshi tourists © David Woodfall / WWF-UK



Companion report:

WWF and H&M have also carried out an additional piece of work to support strong action on water in Bangladesh: an analysis of the economic risks connected to varying water governance scenarios in Bangladesh, from business as usual to ambitious water action and governance. The outcome of this analysis will be to calculate the potential growth or loss for the GDP of Bangladesh, in relation to the costs of action on water.

These two reports will be published together, to create a holistic examination of the current challenges and risks for water management and governance in Bangladesh.

Raising water awareness:

WWF and H&M will engage broadly with key sectors in Bangladesh, to raise awareness on report findings and catalyse action on water risks. In particular, the focus is on outreach to key governance actors, local and INGOS, development orgs, and actors in the textile sector.

Collaboration with other initiatives:

WWF is carrying forward the findings of the two reports through specific collaborations with other organisations. In particular, WWF will collaborate with the 2030 Water Resources group to create a workstream on governance within their programme on water in Bangladesh. This group will gather national level actors from a broad range of sectors to examine the opportunities outlined in this report and create an action plan for strengthening water governance in Bangladesh.

WWF will also maintain dialogue with other key organisations working in Bangladesh, such as Wateraid and the Partnership for Cleaner Textiles (PaCT), to continue exploring on-ground engagement on water issues and alignment on key water topics.

Getting involved

- For more information on WWF's water stewardship programme, please visit <http://wwf.panda.org/ws>
- If you would like to join H&M's efforts in site level impact reduction, please contact H&M's Bangladesh team for more information.
- Public sector actors are particularly encouraged to get in touch with WWF International for further information on the report findings
- To help raise water awareness and engage on the findings of WWF and H&M's three reports, actors should feel free to share report findings within their own sector and consider the implications for their own activities and engagement with governance.

- To join WWF in the collective action projects underway in Bangladesh, please engage WWF International for more information
- Local stakeholders are also encouraged to contact PaCT or WRG for more details of potential involvement in their programmes

Key Contacts

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WWF in numbers

100%
RECYCLED

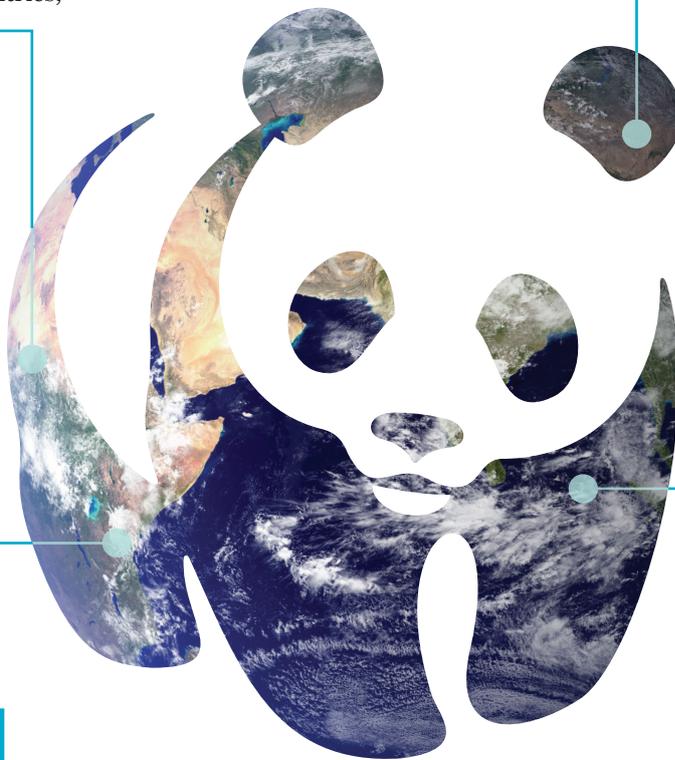


1961

WWF was founded in 1961

+100

WWF is in over 100 countries,
on 6 continents



+5M

WWF has over 5 million
supporters

+16M

WWF has over 16
million followers on
Facebook, Twitter and
Google+



Why we are here

To stop the degradation of the planet's natural environment and
to build a future in which humans live in harmony with nature.

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