Country Survey Instrument for SDGIndicator 6.5.1

Degree of integrated water resources management implementation(0 – 100)

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| **Submission Form** | |
| **Country** | **BANGLADESH** |
| Date this document was submitted | 3.11.2020 |
| **National SDG 6.5.1 Focal Point information** | |
| Name | MANTU KUMAR BISWAS |
| Organisation | MINISTRY OF WATER RESOURCES |
| Title | ADDITIONAL SECRETARY |
| Are you the national Focal Point for any other SDG indicator (apart from 6.5.1)? **If yes, please insert ‘X’forall that apply:** \_\_6.1.1 \_\_6.2.1 \_\_6.3.1 \_\_6.3.2 \_\_6.4.1 \_\_6.4.2 \_\_6.5.2 \_\_6.6.1\_\_6.a.1 \_\_6.b.1 \_\_Other SDG indicator(s) (please specify here): | |
| **SDG 6.5.1 in-country data collection and reporting process overview***(Please provide further details on the consultation process in Annex E)* | |
| Were other institutions/stakeholders involved and consulted in the reporting process for this indicator? \_√\_Yes \_\_No | |
| If yes, please indicate the mode(s) of consultation (please provide further details in Annex E): \_\_Phone calls \_\_Email exchanges \_\_In-person meetings \_√\_Dedicated stakeholder workshop(s) \_\_Other (please specify): | |
| **Contact person regarding further questions/clarifications relating to this submission** | |
| \_√\_SDG 6.5.1 Focal Point listed above \_\_Other (please specify contact details here): Mr. Motaleb Hossain Sarker, Director, Water Resources Management Division, email: [mhsarker@cegisbd.com](mailto:mhsarker@cegisbd.com); [motalebsarker@gmail.com](mailto:motalebsarker@gmail.com) | |

## Part 1 – Introduction

This is the official surveyinstrument for country reporting on Sustainable Development Goal (SDG) indicator 6.5.1: “Degree of integrated water resources management implementation (0 – 100)”. The indicator measures progress towards target 6.5: “By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate”. The target supports the equitable and efficient use of water resources, which is essential for social and economic development, as well as environmental sustainability. The actions to achieve target 6.5 directly underpin the other water-related targets within SDG-6: “Ensure availability and sustainable management of water and sanitation for all”. Further guidance on completing this survey instrument is provided in the SDG indicator 6.5.1 [monitoring guide](http://iwrmdataportal.unepdhi.org/).Both this survey instrument and the monitoring guide are available from UN Environment in six UN languages (Arabic, Chinese, English, French, Russian and Spanish), and Portuguese through the Help Desk by emailing [iwrmsdg651@un.org](mailto:iwrmsdg651@un.org).

### About the indicator:

Indicator 6.5.1 represents the degree of integrated water resources management (IWRM) implementation, on a scale of 0 – 100. It is calculated based on scores from approximately 30 questions covering different aspects of IWRM.

### About the survey instrument

The primary purpose of the survey instrument is global monitoring and reporting on indicator 6.5.1. It has been designed to also be useful as a simple diagnostic tool for countries to identify strengths and weaknesses of different aspects of IWRM implementation. It measures implementation in incremental steps, which allows countries to identify barriers and enablers to furthering IWRM. The completed survey instrument can be used as an input to planning and working towards target 6.5.

The survey contains four sections, each covering akey dimension of IWRM (see definition in Annex A: Glossary):

**1. Enabling environment:** Policies, laws and plans to support IWRM implementation.

**2. Institutions and participation:** The range and roles of political, social, economic and administrative institutions and other stakeholder groups that help to support implementation.

**3. Management instruments:** The tools and activities that enable decision-makers and users to make rational and informed choices between alternative actions.

**4. Financing:** Budgeting and financing made available and used for water resources development and management (apart from drinking water supply and sanitation) from various sources.

Each section has two sub-sections covering the “National” and “Other” levels, to address the target 6.5 wording “… at all levels.” “Other” levels include sub-national, basin, local and transboundary (see Annex A - Glossary). Questions relate to these levels depending on their relevance to the particular aspect of IWRM.For most “other level” questions, the score should reflect the situation in most of the basins/aquifers/jurisdictions, unless specified otherwise. For the transboundary level questions, the score should reflect the situation in most of the ‘most important’transboundary basins / aquifers, which should be listed in the table in Annex B. Filling out that table: increases the transparency of the transboundary questions; makes the information more useful for dialogue with neighbouring countries; and enhances coordination with [SDG indicator 6.5.2](http://www.sdg6monitoring.org/indicators/target-65/indicators652/) on arrangements for transboundary cooperation.It is recognised that water resources management in federal countries may be more complex due to responsibilities at different administrative levels. You may further explain any specific circumstances relating to the level of decentralization of water resources management and responsibility in your country (e.g. federal countries and other large countries)in Annex C.

### How to complete the survey

**Scoring:**For each question, a score between 0 and 100 should be selected, in increments of 10, unless the country judges the question to be ‘not applicable (n/a)’. It is not possible to omit questions. The score selection is guided by descriptive text for six thresholds, which are specific to each question.If a country judges the degree of implementation to be between two thresholds, the increment of 10 between the two thresholds may be selected. The potential scores that may be given for each question are: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.

The thresholds for each question are defined sequentially. This means that the criteria for all lower levels of implementation must be met in order for a country to respond that it has reached a specific level of implementation for each question. Furthermore, if an aspect of IWRM is specified in a lower threshold, it is implicit that this aspect is also addressed in the higher thresholds for that question. **Bold** text in the thresholds helps the reader differentiate between thresholds.

**The thresholds are indicative and are meant toguide countries in choosing the most appropriate responses, i.e. selected responses should be a reasonable match,but do not have to be a perfect match, as each country is unique**.

Instructions on how to calculate the overall indicator 6.5.1 score are provided in section 5.

**Narrative responses:** for each question, there are two free-text fields: “Status description” and “Way forward”. General guidance on the type of information that countries may find useful to include in each field is as follows:

**Status description:**e.g. refer to relevant activities/initiatives/laws/policies/plans/strategies or similar; comment on the degree of implementation as it relates to the threshold descriptions; barriers/enablers; and reflect on progress since thefirst round of reporting on SDG indicator 6.5.1 (baseline in 2017/18). Where possible, provide a brief explanation of why the score is different to the baseline. If reporting was not submitted for the SDG baseline, reflect on recent rates of implementation of relevant activities.

**Way forward:**e.g. already planned or recommended activities to advance implementation of that aspect of IWRM, including identifying barriers and enablers. Include draft interim target-setting for each question where appropriate (e.g. consider actions or recommendations for making progress). Any actions or recommendations provided in this field are neither binding nor comprehensive, but may be used as inputs to country planning processes.

Specific additional guidance is provided in each field for each question. Experience from baseline reporting shows that the free-text responses to each question are important, as they: increase the robustness, transparency and objectivity of the indicator scores; facilitate stakeholder consensus on each question score; help countries track progress between reporting periods; and help countries to analyse what is required to reach the next threshold.

In each field, enter the narrative response by replacing “xxx”. It is recommended that the guidance text is left in the free-text fields during the data collection process, but that this guidance text is deleted before final submission.

### Progress and differences since baselinereporting

172 countries established a baseline for indicator 6.5.1 in 2017/18. This is the second round of data collection. Where available, countries should refer to the baseline survey responses, available here: <http://iwrmdataportal.unepdhi.org/>. Countries are encouraged to consider progress, or lack of progress, since the baseline, in the ‘Status description’ fields, and give reasoning for differences in scores.

The current survey version is highly comparable, though not completely identical, to the baseline survey. Some minor amendments have been made following a review process, and noteworthy changes to the baseline are described in footnotes for relevant questions. A summary of changes is provided in the SDG indicator 6.5.1 [monitoring guide](http://iwrmdataportal.unepdhi.org/).

### Data collection and submission

A broad stakeholder engagement process is encouraged to complete the survey instrument. This helps to increase stakeholder participation and ownership of water management and decision-making processes, and makes the completed survey instrument a more robust and useful diagnostic tool for further discussions and planning. Country Focal Points are asked to fill in the Reporting Process Form in Annex Eto increase transparency and increasestakeholder confidence in the results at all levels. The extent and mode of stakeholder engagement is up to each country, and further guidance is provided in themonitoring guide.Coordination with Focal Points for other SDG indicators is encouraged where feasible and relevant.[[1]](#footnote-2)

The national IWRM Focal Point is responsible for the Quality Assurance and formal submission ofthe completed survey instrument to UN Environment. The survey instrument should be emailed to the IWRM Help Desk at UN Environment: [iwrmsdg651@un.org](mailto:iwrmsdg651@un.org).

Upon request, the Help Desk will provide support to the national IWRM focal points on matters such as interpretation of questions and thresholds, the appropriate level of stakeholder engagement in countries, and support to submitting the final indicator scores.

# Part 2 – The survey

# Enabling environment

This section covers the enabling environment, which is about creating the conditions that help to support the implementation of IWRM. It includes the most typical policy, legal and planning tools for IWRM[[2]](#footnote-3).Please refer to the glossary for any terms that may require further explanation.**Please take note of all footnotes as they contain important information and clarification of terms used in the questions and thresholds**.

Enter your score, **in increments of 10**, from 0-100, or “n/a” (not applicable), in the yellow cell immediately below each question. Enter free text in the “Status description” and “Way forward” fields below each question as advised in the Introduction in Part 1. This willhelp achieveagreement among different stakeholders in the country, as well as help monitor progress over time.Suggestionsfor the type of information that may be useful are provided. You may also provide further information you think is relevant, or links to further documentation.

| **1. Enabling Environment** | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Degree of implementation (0 – 100)** | | | | | | | | |
|  | | **Very low (0)** | **Low (20)** | | **Medium-low (40)** | | | **Medium-high (60)** | **High (80)** | **Very high (100)** |
| **1.1 What is the status of policies, laws and plans to support Integrated Water Resources Management (IWRM) at the national level?** | | | | | | | | | | |
| **a.** National water resources **policy,** or similar. | | Development **not started** or not progressing. | **Exists**, but not based on IWRM. | | Based on IWRM, **approved** by the government and starting to be used by authorities to guide work. | | | Being **used** by the majority of relevant authorities to guide work. | Policy objectives consistently **achieved.** | Objectives consistently achieved and periodically **reviewed** and revised. |
| **Score** | **80** |
| **Status description**: National Water Policy (NWPo), 1999; Coastal Zone Policy (CZPo), 2005; National Environmental Policy 2018, National Agriculture Policy, 2013; Integrated Minor Irrigation Policy, 2017; National Forest Policy, 2016, Fisheries Policy, 1998; National Jalmahal Policy, 2009; Industrial Water Use Policy 2019 approved by MoWR; National Agricultural Mechanisation Policy, 2020. More over Draft National Food and Nutrition Security Policy 2020 and Draft of the land Easements Acceptance Act 2020 are also prepared and hosted in the websites by respective Ministries and Divisions for Public Opinion. As per NWPo, Bangladesh Water Development Board (BWDB) will implement all major surface water development projects and other FCDI projects with command area above 1000 hectares. The Local Government will implement FCDI projects having a command area of 1000 hectares or less after identification and appraisal through an interagency Project Appraisal Committee. Accordingly, BWDB under Ministry of Water Resources and Local Government Division implement projects in conformity of NWPo. At the project formulation stage, the implementing agencies review the environmental and other relevant policies to integrate the policy directives for better integration, coordination and sustainability of the environment. Application of policy directives in the planning and implementation of all BWDB’s project. | | | | | | | | | | |
| **Way forward:** Water related policies of Bangaldesh are sound and they are being implemented by most of the government agencies. The policies need to be used by all of the agencies. Though the policies are available, those should be revisited in every five years to match with the global standard and innovations. | | | | | | | | | | |
| **b.** National water resources **law(s)**. | | Development **not started** or not progressing**.** | **Exists**, but not based on IWRM. | | Based on IWRM, **approved** by the government and starting to be applied by authorities. | | | **Being applied** by the majority of relevant authorities**.** | All laws are being **applied** across the country. | All laws are **enforced** across the country, and all people and organizations are held accountable. |
| **Score** | **70** |
| **Status description:** Bangladesh Water Act 2013, Embankment and Drainage Act, 1952; River Research Institute Act, 1990; National River Protection Commission Act, 2013; Act for Ground Water Management in Agriculture 2018; Water Resources Planning Act, 1992; Bangladesh Water Development Board Act, 2000; Participatory Water Management Rules, 2014; Bangladesh Water Rules, 2018; Bangladesh River Conservation Commission Act, 2013; Bangladesh Environment Conservation Act, 1995 (amended 2010), Environment Conservation Rules, 1997; Environmental Court Act 2010 (Amendment); Draft Forest Act 2019; The Climate Change Trust Act 2010; Fisheries Conservation Act, 1950; Bangladesh Haor and Wetland Development Board Act, 2013; Forest Act, 1927; Groundwater Management Rules 2019; Groundwater Management Act, 2018; Bangladesh Water Resources Development and Management Act, 2019 (Draft), Bangladesh Water Resources Development and Management Rules, 2020 (Under Preparation). Water Resources Projects need to be cleared by WARPO as per Bangladesh Water Act 2013 and Bangladesh Water Rules 2018. For environmental clearance, all the projects are submitted to the Department of Environment depending on the necessity as per Act. The concerned department applies the laws for protecting the fisheries, forest and other natural resources. | | | | | | | | | | |
| **Way forward:** The laws are being implemented in the national and sub-national levels. However, those should be enforced to all. | | | | | | | | | | |
| **c.** National integrated water resources management (IWRM) **plans**, or similar. | | Development **not started** or not progressing**.** | **Being prepared**, but not approved by the government. | **Approved** by the government and starting to be implemented by authorities. | | | Being **implemented** by the majority of relevant authorities. | | Plan objectives consistently **achieved**. | Objectives consistently achieved and periodically **reviewed** and revised. |
| **Score** | **70** |
| **Status description:** National Water Plan, 1986 and 1989; National Water Management Plan, 2001 approved in 2004; Haor Master Plan, 2012; Agricultural Master Plan for Southern Region, 2013; Bangladesh Delta Plan-2100, Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009; National Adaptation Plan of Action, 2005 updated in 2009; Five Year Plan; Perspective Plan (2010-21), Updated Bangladesh Climate Change Strategy and Action Plan 2019(Draft). Bangladesh Country Investment Plan for Environment, Forestry and Climate Change, 2016-2021; District Integrated Water Resources Management Guideline, 2019; Upazila Integrated Water Resources Management Guideline, 2019 and Union Integrated Water Resources Management Guideline, 2019 Strategic Action Plan of BWDB for Sustainable Water Resources Management to attain the Status of Prosperous Country by 2041. As per Bangladesh Water Act, WARPO is under the process of preparing the National Water Resources Plan (NWRP). Developing operation Shadow Prices for water and Online Clearance of Water Sector project, which will help in smooth Implementation of the IWRM plans in the country. During formulation and approval of any project, the link with the said plan is judged critically and therefore approved. For example, WARPO is acting as the clearing house for the project related to the water resources development and management and asses the relevancy of the project with this policy and plan. | | | | | | | | | | |
| **Way forward:** All of the plans need to be implemented and revisited if necessary. | | | | | | | | | | |
| **1.2 What is the status of policies, laws and plans to support IWRM at other levels?** | | | | | | | | | | |
| **a. Sub-national**[[3]](#footnote-4)water resources **policies** or similar. | | Development **not started** or delayed in most sub-national jurisdictions. | **Exist** in most jurisdictions, but not necessarily based on IWRM. | Based on IWRM, **approved** by the majority of authorities and starting to be used to guide work. | | | Being **used** by the majority of relevant authorities to guide work. | | Policy objectives consistently **achieved** by a majority of authorities. | Objectives consistently achieved by all authorities, and periodically **reviewed** and revised. |
| **Score** | **60** |
| **Status description:** National Water Policy (NWPo), 1999; Coastal Zone Policy (CZPo)2005; National Environmental Policy 2018, National Agriculture Policy, 2013; Guidelines for Participatory Water Resources Management, District Integrated Water Resource Management Guideline 2020, Upazilla Integrated Water Resources Management Guideline 2020, Union Level Integrated Water Resources Management Guideline 2020, Guideline for Environmental Assesment of Water Management (Flood Control, Drainage and Irrigation) Projects 2005. The government system of Bangladesh is unitary and the national level policies prepared considering the issues of sub national as well as local levels and applicable for the whole country. | | | | | | | | | | |
| **Way forward:** There are several sound policies in place. All of the agencies need to follow the policies and guidelines. The coordination between the agencies need to be stronger to properly support IWRM. | | | | | | | | | | |
| **b**. **Basin/aquifer management plans**[[4]](#footnote-5) or similar, based on IWRM. | | Development **not started** or delayed in most basins/aquifers of national importance. | **Being prepared** for most basins/aquifers. | **Approved** in the majority of basins/aquifers and starting to be used by authorities. | | | Being **implemented** in the majority of basins/aquifers. | | Plan objectives consistently **achieved** in majority of basins/aquifers. | Objectives consistently achieved in all basins/aquifers, and periodically **reviewed** and revised. |
| **Score** | **50** |
| **Status description:** Haor Master Plan, 2013; National Water Management Plan (NWMP), 2001; Regional Plan on NWMP 2001, Act for Ground Water Management in Agriculture 2018, Bangladesh Delta Plan-2100, 2018. Now, Support to the Implementation of Bangladesh Delta Plan 2100 projects is underway.  Concept Paper on Managing Brahmaputra-Jamuna River System, Detailed Feasibility Study on Karnafully and Sangu-Matamuhuri River Basins Management (Ongoing). The national water policy states to take considerable effort and time for Bangladesh to work out joint plans for different riverbasins with other co-riparian countries. As a long-term measure, therefore, it is the policy of the government to undertake essential steps for realizing basin-wide planning for development of the resources of the rivers entering its borders. The NWMP outlines and priorities the development of the Ganges, Brahmaputra and Meghna Basin respectively. WARPO has taken the initiative for developing DPP/TAPP for the preparation of National Water Resources Plan (NWRP), where sustainable aquifer management plan will be considered. The Haor Master Plan includes the development plan for the Northeast region (Haor basin) of Bangladesh, The BDP-2100 divides the whole country into six hotspots and outlines the integrated development of theses hotspots. | | | | | | | | | | |
| **Way forward:** The available plans need to be implemented fully and upgraded if necessary. | | | | | | | | | | |
| **c**. **Arrangements for transboundary water management.**[[5]](#footnote-6) | | Development **not started** or not progressing. | **Being prepared** or negotiated. | Arrangements are **adopted**. | | | | Arrangements’ provisions are **partly implemented**. | Arrangements’ provisions are **mostly implemented**. | The arrangements’ provisions are **fully implemented**. |
| **Score** | **30** |
| **Status description:** Land Boundary Agreement Act, 1974; Ganges Water Sharing Treaty, 1996; Arrangement between Bangladesh and India for sharing the flood related data of transboundary rivers, MoU between Bangladesh and China for Hydrological Data Sharing 2008 (renewed on 2014), Joint Working Group of Bangladesh, Bhutan, India and Nepal ; Initiatives to Teesta River Treaty including other transboundary rivers.  The Ganges Water Sharing Treaty ensures the dry season flow in the Ganges River. India is sharing the flood data of different stations of the transboundary rivers during flood season. The hydrological data of the upstream of the Brahmaputra River is provided by China. On the other hand, the transboundary navigation has significantly improved. | | | | | | | | | | |
| **Way forward:** Bangladesh is receiving about 30% of its flow through the Ganges River and we have treaty for sharing the Ganges water. Bangladesh needs more international cooperation for preparing the arrangement on agreement for other transboundary rivers | | | | | | | | | | |
| **d. Sub-national** water resources **regulations**[[6]](#footnote-7)(laws, decrees, ordinances or similar).[[7]](#footnote-8) | | Development **not started** or delayed in most sub-national jurisdictions. | **Exist** in most jurisdictions, but not necessarily based on IWRM**.** | Based on IWRM, **approved** in most jurisdictions and starting to be applied by authorities in some jurisdictions. | | | | **Some** regulations **being applied** in the majority of jurisdictions. | **All** regulations **being applied** in the majority of jurisdictions. | All regulations being applied and **enforced** in all jurisdictions, and all people and organizations are held accountable. |
| **Score** | **50** |
| **Status description:** Bangladesh Water Act, 2013. Bangladesh Water Rules 2018; Environmental Conservation Rules 1997, Guidelines for Participatory Water Resources Management, District Integrated Water Resource Management Guideline 2020, Upazila Integrated Water Resources Management Guideline 2020, Union Level Integrated Water Resources Management Guideline 2020, Integrated Minor Irrigation Policy, 2017; Integrated Minor Irrigation Act, 2019; Groundwater Management Rules 2019; Groundwater Management Act, 2018; is in action which has been used in District as well as local level. The government system of Bangladesh is unitary but the Districts has been considered as sub-national level. The laws are in central level, but most cases applicable for whole country and for some departments that are working in the water supply and sanitation sectors has some different arrangement for the people. | | | | | | | | | | |
| **Way forward:** The regulations need to enforce for all | | | | | | | | | | |
| **Average ‘Enabling Environment’ score** | | | **59** | | |  | | | | |

# Institutions and participation

This section is about the range and roles of political, social, economic and administrative institutions that support the implementation of IWRM. It includes institutional capacity and effectiveness, cross-sector coordination, stakeholder participation and gender equality. The 2030 Agenda stresses the importance of partnerships that will require public participation and creating synergies with the private sector.

The burdens of water-related work carried out predominantly by women have been acknowledged for decades,[[8]](#footnote-9) which has led to a focus on women’s practical needs around water, especially in relation to carrying water and managing it within the home. In the context of water resources management, there has been growing recognition that, a strategic and practical focus on increasing women’s voice and influence,at all levels of decision-making, must become a priority.Furthermore, mainstreaming gender in the water sector supports a range of targets in the SDGs, including under Goal 5 on achieving gender equality and empowering all women and girls.[[9]](#footnote-10)Including a gender-related question in this survey (q.2.2d) also addresses the call for gender disaggregated data in the 2030 Agenda.[[10]](#footnote-11)

**Please take note of all footnotes as they contain important information and clarification of terms used in the questions and thresholds**.Please refer to the glossary for any terms that may require further explanation.

Enter your score, **in increments of 10**, from 0-100, or “n/a” (not applicable), in the yellow cell immediately below each question. Enter free text in the “Status description” and “Way forward” fields below each question as advised in the Introduction in Part 1. This will help achieve agreement among different stakeholders in the country, as well as help monitor progress over time. Suggestions for the type of information that may be useful are provided. You may also provide further information you think is relevant, or links to further documentation.

| **2. Institutions and Participation** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Degree of implementation (0 – 100)** | | | | | |
|  | | **Very low (0)** | **Low (20)** | **Medium-low (40)** | **Medium-high (60)** | **High (80)** | **Very high (100)** |
| **2.1 What is the status of institutions for IWRM implementation at the national level?** | | | | | | | |
| **a.** National **government authorities**[[11]](#footnote-12) for leading IWRM implementation. | | **No** dedicated government authorities for water resources management. | Authorities **exist**, with a clear mandate to lead water resources management. | Authorities have a clear mandate to lead IWRM implementation, and the capacity[[12]](#footnote-13) to effectively lead IWRM plan **formulation**. | Authorities have the capacity to effectively lead IWRM plan **implementation**. | Authorities have the capacity to effectively lead periodic monitoring and **evaluation** of the IWRM plan(s). | Authorities have the capacity to effectively lead periodic IWRM plan **revision**. |
| **Score** | **70** |
| **Status description:** Apex bodies like National Water Council, Delta Commission is in action at the national level. Under the apex bodies, MoWR, BWDB, WARPO, BHWDB, LGED, BMDA, JRC, BADC, BIWTA, DPHE, NARS, BARC are working to implement IWRM projects.  **MoWR:** The Ministry of Water Resources is the apex body of the Government of the People's Republic of Bangladesh for development and management of the whole water resources of the country. It is the principal executive body responsible for all aspects of water management including expansion of irrigated areas, water conservation, surface and groundwater use, and river management. The renaming and subsequent activities of the MoWR reflect the recognition of integrated nature of water resources management, a shift from sectoral approach.  **BWDB:** Construction of dams, barrages, reservoirs, embankments, regulators or other structures for development of rivers, flood control, drainage, surface irrigation and drought prevention; Dredging, re-excavation and de-siltation of water channels and removal of obstacles from the mouths of river for improvement of water flows or diversion of water for assisting fisheries, navigation, forestry, wildlife preservation and up gradation of environment; Works for preservation, land accretion, land reclamation and estuary control; River training and river bank protection for the protection of towns, bazaar, hats and places of historical and public importance from the hazards of land erosion; Construction and maintenance of coastal embankment; Prevention of salinity intrusion and desertification, Flood and drought forecasting and warning; Hydrological survey and investigation; Development of forestry and fisheries on land available around BWDB’s infrastructures, in conjunction with relevant government agencies, for the preservation and improvement of the environment as well as for poverty alleviation;, Basic and applied research on water management; and Development of water user’s association and other water users/ stakeholders organizations, their training and participation in project planning, implementation, operation and maintenance and project cost recovery for long-term sustainability of benefits to the beneficiaries of completed project. River management and Integrated coastal zone and climate change Management and Dam & Barrage Creation.  **WARPO:** The vision of WARPO is to ensure integrated and sustainable water management of the country. The mission is to prepare and periodic update of Master Plan in water resources management; maintain, update and upgrade of National Water resources Database (NWRD), to act as the central coordinating body in implementation of Bangladesh Water Act and to act as secretariat to the Executive Committee of the National Water Resources Council (ECNWRC) and provide clearance of water sector projects for integrated and sustainable water management of the country.  The Mission of WARPO is to achieve sustainable water resources development in Bangladesh by pursuing Integrated Water Resources Management (IWRM). The vision is to become an apex organization in macro-level planning; a center of excellence for the management and integrated development of water resources, to act as the central coordinating body for all relevant activities in the water sector, the custodian of National and Regional Water Resources Databases and Information systems and to act as secretariat to the National Water Resources Council (NWRC) and Executive Committee of the National Water Resources Council (ECNWRC).  Formulation of national policy, water sector macro plan relevant to the management of the water resources in an integrated way, Serving as the clearing house for the water sector projects, prepare and update National Water Law revising and consolidating the laws governing ownership, development, appropriation, utilization, conservation, and protection of water resources and resolve interagency conflicts related to water development and management and report to ECNWRC is the key mandated tasks.  **DBHWD:** Department of Bangladesh Haor and Wetlands Development coordinate the development activities in the Haor areas in an integrated manner  **IWM and CEGIS**: Provides support services for the planning phase of the project  **LGED:** involved in small-scale water resources development for several decades.  **BMDA:** develop a groundwater based irrigation system using mainly deep tube wells (DTWs) for agricultural development in the north and north-western part of Bangladesh  **JRC:** For sharing and management of water of transboundary rivers, Joint Rivers Commission (JRC) was established in 1972  **IWFM:** pursues research and capacity development in the field of water and flood management that is vital for economic development and social prosperity of the country. | | | | | | | |
| **Way forward:** Bangladesh has government agencies who are working to implement IWRM project. They also have the capacity to effectively lead in IWRM. The trainings are also going on to increase the capacity to its fullest. | | | | | | | |
| **b. Coordination between** national government authorities representing **different sectors**[[13]](#footnote-14) on water resources, policy, planning and management. | | **No information** shared between different government sectors on policy, planning and management. | **Information** on water resources, policy, planning and management is made available between different sectors. | **Communication:** Information, experiences and opinions are **shared between** different sectors. | **Consultation:** Opportunities for different sectors to **take part** in policy, planning and management processes. | **Collaboration:** Formal **arrangements** between different government sectors with the objective of agreeing on collective decisions on important issues and activities. | **Co-decisions and co- production:**  Shared power between different sectors on joint policy, planning and management activities. |
| **Score** | **60** |
| **Status description:** Guidelines for Participatory Water Management, 2000, Participatory Water Management Rules, 2014; NWMP-2001, National Water Resources Council, District Water Resources Development and management Committee(DWRDMC) , Video Conferencing with DWRDMCat Regular interval, MoU between BWDB, WARPO, LGED, DoF, DoFL, DPHE, BADC, BIWTA, BMDA, DAE etc.  Bangladesh Water Development Board (BWDB) is implementing several project in a coordinated manner involving agencies such as LGED, Ministry of Agriculture, Ministry of Environment and Forest, Ministry of Land, Department of Agriculture Extension, Department of Fisheries ect. WARPO also coordinating the Integrated Coastal Zone Management (ICZM) with 34 agencies and Clearing the projects considering the relevancy with guidelines, policy and plans of different agencies for approval. | | | | | | | |
| **Way forward:** The coordination between the government agencies are quite good to implement IWRM project. The coordination can further be improved. | | | | | | | |
|  | | | | | | | |
| **c. Public participation**[[14]](#footnote-15)in water resources, policy, planning and management at national level. | | **No information** shared between government and the public on policy, planning and management. | **Information** on water resources, policy, planning and management is made available to the public. | **Communication:**  Government authorities **request** information, experiences and opinions of the public**.** | **Consultation:**  Government authorities regularly **use** information, experiences and opinions of the public. | **Collaboration:**  **Mechanisms**[[15]](#footnote-16) established, and regularly used, for the public to take part in relevant policy, planning and management processes. | **Representation:** Formal representation of the public in government processes contributing to decision making on important issues and activities, as appropriate. |
| **Score** | **80** |
| **Status description:** The preparation of key documents of the water sector i.e. National Water Policy, National Water Management Plan and Bangladesh Water Act have been developed based on very extensive public consultation. For the preparation and dissemination of draft Bangladesh Water rules mass public consultation is still ongoing. All the institutes working in the water sector encourages stakeholder’s participation in all the phases of a project. The participation in local level has three tiers (based on the area of the project), Water Management Group (WMG), Water Management Association (WMA) and Water Management Federation (WMF). The board of the governors of BWDB is multidisciplinary and includes member from the stakeholders as well. | | | | | | | |
| **Way forward:** Though the public is included in different plans, their participations need to be increased. | | | | | | | |
| **d. Private sector**[[16]](#footnote-17) **participation** in water resources development, management and use. | | **No information** shared between government and private sector about water resources development, management and use. | **Information** made available between government and private sector about water resources development, management and use. | **Communication** between government and private sector about water resources development, management and use. | **Consultation:** Government authorities regularly involve the private sector in water resources development, management and use activities. | **Collaboration: Mechanisms**[[17]](#footnote-18) established, and regularly used, for private sector involvement and partnership. | **Representation:** Effective private sector involvement established for water resources development, management and use activities. |
| **Score** | **50** |
| **Status description:** There are some Public Private Partnership (PPP) projects. BWDB signed several MoUs with different Chinese companies to explore the opportunities of PPP. About 80% of the irrigation are done by groundwater. This groundwater irrigation is operated by private sectors mostly using shallow tube-wells and low lift pumps. | | | | | | | |
| **Way forward:** More private sectors can be involved in future. | | | | | | | |
|  | | | | | | | |
| **e. Developing IWRM capacity**.[[18]](#footnote-19) | | **No** capacity development specific to water resources management. | **Occasional** capacity development, generally limited to **short-term/**ad-hoc activities. | **Some long-term** capacity development initiatives are being implemented, but geographic and stakeholder coverage is **limited**. | **Long-term** capacity development initiatives are being implemented, and geographic and stakeholder coverage is **adequate**. | Long-term capacity development initiatives are being implemented, with **effective** outcomes, and geographic and stakeholder coverage is **very good**. | Long-term capacity development initiatives are being implemented with **highly effective** outcomes, and geographic and stakeholder coverage is **excellent.** |
| **Score** | **70** |
| **Status description:** For capacity development both short and long term plan are adopted. There are extensive training program, short courses, post-graduation, on-job training for the capacity development including gender issues are ongoing for every department of the government i.e. BWDB, WARPO, LGED, BADC, BMDA are giving different training program. Continuous capacity building initiatives is prerequisite for ensuring sustainability. | | | | | | | |
| **Way forward:** More long term initiatives need to be taken for capacity development. | | | | | | | |
| **2.2 What is the status of institutions for IWRM implementation at other levels?** | | | | | | | |
| **a. Basin/aquifer level**[[19]](#footnote-20)**organizations**[[20]](#footnote-21)for leading implementation of IWRM. | | **No** dedicated basin authorities for water resources management. | Authorities **exist**, with clear mandate to lead water resources management. | Authorities have clear mandate to lead IWRM implementation, and the capacity[[21]](#footnote-22) to effectively lead IWRM plan **formulation**. | Authorities have the capacity to effectively lead IWRM plan **implementation**. | Authorities have the capacity to effectively lead periodic monitoring and **evaluation** of the IWRM plan(s). | Authorities have the capacity to effectively lead periodic IWRM plan **revision**. |
| **Score** | **30** |
| **Status description:** There are regional/basin level training institute for the capacity development under Bangladesh Water Development Board (BWDB). BADC, BMDA, Department of Bangladesh Haor and Wetland Development are planning to implement IWRM in small scale as basin level organization. However, the government organizations are mandated to increase the capacity to effectively lead the IWRM plans. | | | | | | | |
| **Way forward:** committees can be formed at basin level coordinating with available agencies within the basin. | | | | | | | |
| **b. Public participation**[[22]](#footnote-23) in water resources, policy, planning and management at the **local level.**[[23]](#footnote-24) | | **No information** shared between government and the public on policy, planning and management. | **Information** on water resources, policy, planning and management is made available to the public**.** | **Communication:**  Government authorities **request** information, experiences and opinions of the public**.** | **Consultation:**  Government authorities regularly **use** local level information, experiences and opinions of the public. | **Collaboration:**  **Mechanisms**[[24]](#footnote-25) established, and regularly used, for the public to take part in relevant policy, planning and management processes. | **Representation:** Formal representation of the public in local authority processes contributing to decision making on important issues and activities, as appropriate. |
| **Score** | **70** |
| **Status description:** Guidelines for Participatory Water Resources Management (GPWM) have been developed to ensure public participation. BWDB, LGED, BMDA, DAE, BADC, DPHE etc. are following the guidelines. In addition, for IWRM and irrigation projects, WMGs, WMOs are formed with local people to maintain the project components. BADC’s works is also coincide with GPWM in farm level and practicing a good on-farm water management in farmer’s field country wide.  Under the project named Study on Online Processing and tracking of Water Resources Project Clearance and no objection certificate of Ground Water Abstraction, WARPO took the initiatives for training of district and upazila level officials for ensuring public participation and awareness raising on prepared software and Bangladesh Water Act 2013. | | | | | | | |
| **Way forward:** Though in local level, public is more involved to the plans, projects etc., and their participation can be increased. | | | | | | | |
| **c. Participation of vulnerable groups** in water resources planning and management.[[25]](#footnote-26) | | Participation of vulnerable groups **not explicitly addressed** in laws, policies, or plans. | Vulnerable groups **partially addressed,** but no explicit procedures in place.[[26]](#footnote-27) | **Some procedures in place**, but limited budget and human capacity for implementation. | Procedures in place, with **moderate participation** of vulnerable groups (moderate budget and human capacity). | **Regular participation** of vulnerable groups (sufficient budget and human capacity, and participation is monitored). | **Meaningful[[27]](#footnote-28) and regular participation** of vulnerable groups, as appropriate. |
| **Score** | **60** |
| **Status description**: The vulnerable groups are directly not involve in water resources planning and management. However, before project formulation, the vulnerable groups are addressed in the feasibility studies. In addition, there is a requirement for donor funded project to include vulnerable groups. Recently in every project, vulnerable group and ethnic community is directly involved. | | | | | | | |
| **Way forward:** The vulnerable groups are participating in the planning and management phase. However, the funding can be increased to ensure all vulnerable groups participation. | | | | | | | |
| **d. Gender included in laws/plans or similar** within water resources management.**[[28]](#footnote-29)** | | Gender considerations **not explicitly included** in national/ subnational laws/plans or similar. | Gender considerations **partially included** in laws/plans or similar. | Gender considerations **included** (but limited implementation, budget or monitoring)**.** | Gender **objectives[[29]](#footnote-30) partly achieved** (activities partially monitored and funded). | Gender objectives **mostly achieved** (activities adequately monitored and funded). | Gender objectives **consistently achieved** and effectively address gender issues (activities and outcomes reviewed and revised). |
| **Score** | **70** |
| **Status description**: The national water policy 1999; coastal Zone Policy 2005; National Women Development Policy 2011 carefully considered the issues of gender in water sector with significant importance. There are several Gender forum, Gender strategy action plan is working proficiently. The water management committee formation also required one third women members. | | | | | | | |
| **Way forward:** most of the management instruments have included gender. Their involvement can be increased. | | | | | | | |
| **e**. **Organizational framework for transboundary water management**.[[30]](#footnote-31) | | **No** organizational framework(s). | Organizational framework(s) **being developed**. | Organizational framework(s) **established**. | Organizational framework(s)’mandate is **partly fulfilled**. | Organizational framework(s)’mandate is **mostly fulfilled**. | Organizational framework(s)’ mandate is **fully fulfilled**. |
| Score | **40** |
| **Status description:** Joint Rivers Commission (JRC) was established in 1972. The organization successfully conducted the Ganges Water Sharing Treaty and working for the preparation of Framework Agreements for the water sharing of other transboundary rivers. Joint Working Group of Bangladesh, Bhutan, India and Nepal is also formed for dealing with transboundary water management and hydropower of the Ganges-Brahmaputra-Meghna Basin. Initiatives has been taken to sign Teesta Treaty including other trans-boundary river. | | | | | | | |
| **Way forward:** Bangladesh have organizational framework. However, the involvement of international specialist can be introduced. | | | | | | | |
| **f. Sub-national**[[31]](#footnote-32) **authorities** for leading IWRM implementation.[[32]](#footnote-33) | | **No** dedicated sub-national authorities for water resources management. | Authorities **exist**, with clear mandate to lead water resources management. | Authorities have clear mandate to lead IWRM implementation, and the capacity[[33]](#footnote-34)to effectively lead IWRM plan **formulation**. | Authorities have the capacity to effectively lead IWRM plan **implementation**. | Authorities have the capacity to effectively lead periodic monitoring and **evaluation** of the IWRM plan(s). | Sub-national authorities have the capacity to effectively lead periodic IWRM plan **revision**. |
| **Score** | **60** |
| **Status description:** Bangladesh is Unitary governmental system. However, BWDB, WARPO, LGED, DoF, DoFL, DPHE, BADC, BMDA, DAE has District level offices to perform project work and to lead IWRM implementation. Char Development and Settlement Project (CDSP) is a project of BWDB as an example regarding this. | | | | | | | |
| **Way forward:** The authorities have sub-national arrangements to implement IWRM. There are training institutes at the sub-national levels as well. More trainings can be introduced. | | | | | | | |
| **Average ‘Institutions and Participation’ score** | | | **60** |  | | | |

# Management instruments

This section includes the tools that enable decision-makers and users to make rational and informed choices between alternative actions. It includes management programs, monitoring water resources and the pressures on them, knowledge sharing and capacity development. Many of the questions in this section relate to other SDG 6 targets and indicators (see 6.5.1 [monitoring guide](http://iwrmdataportal.unepdhi.org/)), and coordination between different SDG reporting processes is encouraged where feasible.

**Terminology used in the questions:**

* **Limited, Adequate, Very good, Excellent:** Are terms used describe the status, coverage and effectiveness of the management instruments assessed in this section. Respondents should apply their own judgement based on the ‘best-practice’ descriptions of management instruments in the glossary, the section introduction, and through footnotes. For example, ‘adequate’ may imply that the basic minimum criteria for that particular management instrument are met. Please provide qualifying information to the question score in the ‘Status description’ cell immediately below each question.
* **Management instruments:** Can also be referred to as management tools and techniques, which include regulations, financial incentives, monitoring, plans/programs (e.g. for development, use and protection of water resources), as well as those specified in footnotes on questions and thresholds below.
* **Monitoring:** collecting, updating, and sharing timely, consistent and comparable water-related data and information, relevant for science and policy. Effective monitoring requires ongoing commitment and financing from government. Resources required include appropriate technical capacity such as laboratories, portable devices, online water use control and data acquisition systems. May include a combination of physical data collection, remote sensing, and modelling for filling data gaps.
* **Short-term / Long-term:**In the context of management instruments, short-term includes ad-hoc activities and projects, generally not implemented as part of an overarching program with long-term goals. Long-term refers to activities that are undertaken as part of an ongoing program that has more long-term goals/aims and implementation strategy.

**Please take note of all footnotes as they contain important information and clarification of terms used in the questions and thresholds**.

Enter your score, **in increments of 10**, from 0-100, or “n/a” (not applicable), in the yellow cell immediately below each question. Enter free text in the “Status description” and “Way forward” fields below each question as advised in the Introduction in Part 1. This will help achieve agreement among different stakeholders in the country, as well as help monitor progress over time. Suggestions for the type of information that may be useful are provided. You may also provide further information you think is relevant, or links to further documentation.

| **3. Management Instruments** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Degree of implementation (0 – 100)** | | | | | | | |
|  | | **Very low (0)** | **Low (20)** | | **Medium-low (40)** | | **Medium-high (60)** | **High (80)** | **Very high (100)** |
| **3.1 What is the status of management instruments to support IWRM implementation at the national level?** | | | | | | | | | |
| **a. National monitoring of water availability**[[34]](#footnote-35) (includes surface and/or groundwater, as relevant to the country). | | **No** national monitoring systems in place. | Monitoring systems established for a **limited** number of **short-term/**ad-hoc projects or similar. | | **Long-term** national monitoring is carried out but with **limited** coverage and limited use by stakeholders. | | **Long-term** national monitoring is carried out with **adequate** coverage but limited use by stakeholders. | Long-term national monitoring is carried out with **very good** coverage and adequate use by stakeholders. | Long-term national monitoring is carried out with **excellent** coverage and excellent use by stakeholders. |
| **Score** | **90** |
| **Status description:** Water (both ground and surface) Resources availability assessment is being performed by Water Resources Planning Organization (WARPO). As per Bangladesh Water Act 2013, depending on availability of water resources, water scarce areas will be identified. BWDB is mandated to measure the surface and groundwater quantity assessment. In addition, WARPO, WASA, DoE, BADC, DPHE, BMDA also monitors the groundwater. Besides these BADC is also monitoring GW level, saline water intrusion and developing and updating GW zoning map and publishing report fortnightly, quarterly, monthly and yearly. Local Government Engineering Department (LGED) also performed similar assessment on project basis. In addition, BWDB is monitoring the surface water, groundwater all over Bangladesh. | | | | | | | | | |
| **Way forward:** Bangladesh have very good coverage for water availability. Long term monitoring and stakeholder use can be made better. | | | | | | | | | |
| b. **Sustainable and efficient water use management[[35]](#footnote-36)** from the national level, (includes surface and/or groundwater, as relevant to the country). | | **No** management instruments being implemented. | Use of management instruments is **limited** and only through **short-term/**ad-hoc projects or similar. | | **Some** management instruments implemented on a more **long-term** basis, but with **limited** coverage across different water users and the country. | | Management instruments are implemented on a **long-term** basis, with **adequate** coverage across different water users and the country. | Management instruments are implemented on a long-term basis, with **very good** coverage across different water users and the country, and are **effective**. | Management instruments are implemented on a long-term basis, with **excellent** coverage across different water users and the country, and are **highly effective**. |
| **Score** | **60** |
| **Status description:** The instruments like National Water Policy, National Irrigation Policy, Bangladesh Water Act, Bangladesh Water Rules, Groundwater Irrigation water management act encourages enhancement surface water utilization for irrigation and other water uses. In addition, for increasing water retaining capacity the rivers and wetlands are brought under dredging activities. Under the ongoing study of WARPO named Developing Operational Shadow Prices for Water to support Policy and Investment Decision Making Process and Research on Sediment Distribution and Management in South West Region of Bangladesh, WARPO will able to develop sustainable and efficient water use management guidelines and tools for Bangladesh. | | | | | | | | | |
| **Way forward:** Thought the management instrument is good and long-term, effective and excellent coverage is required. | | | | | | | | | |
| **c. Pollution control**[[36]](#footnote-37)from the national level. | | **No** management instruments being implemented. | Use of management instruments is **limited** and only through **short-term/**ad-hoc projects or similar. | | **Some** management instruments implemented on a more **long-term** basis, but with **limited** coverage across sectors and the country. | | Management instruments are implemented on a **long-term** basis, with **adequate** coverage across sectors and the country. | Management instruments are implemented on a long-term basis, with **very good** coverage across sectors and the country, and are **effective**. | Management instruments are implemented on a long-term basis, with **excellent** coverage across sectors and the country, and are **highly effective**. |
| **Score** | **50** |
| **Status description:** Water quality is a big concern in NWPo and NWMP. Specific program on pollution control i.e. EA 001 National Pollution Control Plan, EA 002 National Clean-up of existing Industrial Pollution and EA 003 National Water Quality Monitoring have been identified in NWMP. Department of Environment, Public Health Engineering department, City Corporation, BWDB and other relevant organizations have undertaken different programs for water pollution control. WARPO archived the water quality data in National Water Resources Database (NWRD). As per requirements of SDG and to combat the water pollution from industrial pollutant WARPO prepared the Industrial Water Use Policy, 2019 and approved by the Ministry of Water Resources. As per Bangladesh Water Act 2013, for controlling water pollution, Environmental Conservation Act 1995 will be applicable. | | | | | | | | | |
| **Way forward:** The management instrument is quite good in Bangladesh which needs to be enforced for all. | | | | | | | | | |
| **d. Management of water-related ecosystems**[[37]](#footnote-38)from the national level. | | **No** management instruments being implemented. | Use of management instruments is **limited** and only through **short-term/**ad-hoc projects or similar. | | **Some** management instruments implemented on a more **long-term** basis, but with **limited** coverage across different ecosystem types and the country. | | Management instruments are implemented on a **long-term** basis, with **adequate** coverage across different ecosystem types and the country. Environmental Water Requirements (EWR) analyzed in some cases. | Management instruments are implemented on a long-term basis, with **very good** coverage across different ecosystem types and the country, and are **effective**. EWR analyzed for most of country. | Management instruments are implemented on a long-term basis, with **excellent** coverage across different ecosystem types and the country, and are **highly effective**. EWR analyzed for whole country. |
| **Score** | **60** |
| **Status description:** Issues for managing water related ecosystem adequately addressed in NWPo and NWMP. NWMP Cluster Environment and Aquatic Resources identified programs like EA 007 Improved Water Management in the Haor Basin, EA 008 Environmentally Critical Areas and Integrated Wetland Management, EA 009 Improved Water Management and Salinity Control in the Sundarbans etc. programs identified for implementation by relevant agencies. Department of Environment is enacting Bangladesh Environment Conservation Act, Ecologically Critical Area Management Rules for the management of water related ecosystem. BWDB in conformity with the National Water Policy, Water Act is managing the water related ecosystem as well. The submergible embankment in the Northeast part of the country is a very good example in this regard. In 2017, the GoB has established the “Blue Economy Cell’ with the mandate to coordinate Blue Economy, harness the resources and reduce the pollution across sectoral ministries where MOWR is one of the parties. WARPO took the initiatives to develop Climate Smart Integrated Coastal Resources Database and already organized a workshop on Blue Economy with the relevant stakeholders on 15th March 2020 at WARPO conference room, Chaired by Secretary, Ministry of Water Resources. In addition, DoE can declare ECA, Forest Department can declare protected area and DoF can declare fish breeding area i.e. The government also restricts Hilsha fishing at March-April and October during the spawning period of Hilsha. | | | | | | | | | |
| **Way forward:** The management instrument is quite good in Bangladesh which needs to be enforced for all. | | | | | | | | | |
| **e. Management instruments to reduce impacts of water-related disasters[[38]](#footnote-39)**from the national level. | | **No** management instruments being implemented. | Use of management instruments is **limited** and only through **short-term/**ad-hoc projects or similar. | | **Some** management instruments implemented on a more **long-term** basis, but with **limited** coverage of at-risk areas. | | Management instruments are implemented on a **long-term** basis, with **adequate** coverage of at-risk areas. | Management instruments are implemented on a long-term basis, with **very good** coverage of at-risk areas, and are **effective**. | Management instruments are implemented on a long-term basis, with **excellent** coverage of at-risk areas, and are **highly effective**. |
| **Score** | **90** |
| **Status description:** The main management instrument is Standing Orders on Disaster (SOD) which has been updated in 2019. This covers the process of impact reduction of water related disasters. In addition, the embankment system developed by BWDB is safeguarding about 70 % of the country from flood ravages. These embankment systems cover different ecological zones as well. The coastal embankment of BWDB is a good example which protects about 30% of the country from the cyclone and cyclonic surges, tidal flooding. The flood forecasting and warning centre of BWDB is proving flood warning in Bangladesh. LGED, DDM, and other relevant organizations are also proving support by building cyclone and flood shelters, conducting operation and rescuing victims. In this regard, a national level committee is working actively. Initiatives have been taken of basin wide River Management considering ecosystem. The Rubber Dam and Hydraulic Elevated Dam (HED) constructed by BADC is also contributing minutely regarding these issue. | | | | | | | | | |
| **Way forward:** The coverage of Management Instrument in this issue needs to be expanded. | | | | | | | | | |
| **3.2 What is the status of management instruments to support IWRM implementation at other levels?** | | | | | | | | | |
| **a. Basin management instruments**.[[39]](#footnote-40) | | **No** basin level management instruments being implemented. | Use of basin level management instruments is **limited** and only through **short-term/**ad-hoc projects. | | **Some** basin level management instruments implemented on a more **long-term** basis, but with **limited** geographic and stakeholder coverage. | | Basin level management instruments implemented on a more **long-term** basis, with **adequate** geographic and stakeholder coverage. | Basin level management instruments implemented on a more long-term basis, with **effective** outcomes and **very good** geographic and stakeholder coverage. | Basin level management instruments implemented on a more long-term basis, with **highly effective** outcomes and **excellent** geographic and stakeholder coverage. |
| **Score** | **40** |
| **Status description:** National Water Management Plan, 2004; Haor Master Plan, 2013; Bangladesh Delta Plan, 2018; has been developed considering basins. So, the instruments are in place. | | | | | | | | | |
| **Way forward:** Basin Management instruments needs to be implemented. | | | | | | | | | |
| **b. Aquifer management instruments**.[[40]](#footnote-41) | | **No** aquifer level management instruments being implemented. | Use of aquifer level management instruments is **limited** and only through **short-term/**ad-hoc projects. | | **Some** aquifer level management instruments implemented on a more **long-term** basis, but with **limited** geographic and stakeholder coverage. | | Aquifer level management instruments implemented on a more **long-term** basis, with **adequate** geographic and stakeholder coverage. | Aquifer level management instruments implemented on a more **long-term** basis, with **effective** outcomes and **very good** geographic and stakeholder coverage. | Aquifer level management instruments implemented on a more **long-term** basis, with **highly effective** outcomes and **excellent** geographic and stakeholder coverage. |
| **Score** | **40** |
| **Status description:** Groundwater table data is collected by BWDB, BADC, DPHE etc. which are used for planning of the water management projects. As per Bangladesh Water Act 2013, section 19, Fixing the lowest safe yield level of aquifer and restriction on abstracting ground water will be in place after the implementation of the act. BADC is doing groundwater zoning since 2005. In addition, Managed Aquifer Recharge (MAR) has been started in this regard. | | | | | | | | | |
| **Way forward:** Long term management instrument is required. | | | | | | | | | |
| **c. Data and information sharing within countries** at all levels.**[[41]](#footnote-42)** | | **No** data and information sharing. | **Limited** data and information sharing on an **ad-hoc** basis. | | Data and information sharing arrangements **exist** on a more **long-term** basis between major data providers and users. | | Data and information sharing arrangements **implemented** on a more **long-term** basis**,** with **adequate** coverage across sectors and the country. | Data and information sharing arrangements implemented on a more **long-term** basis**,** with **very good** coverage across sectors and the country. | All relevant data and information are online and freely accessible to all. |
| **Score** | **80** |
| **Status description:** Different hydrological, meteorological, sediment, projects, policy, plan are shared among the relevant agencies. The National Water Resources Database of WARPO archives the data and shares among stakeholders. The database is updated in every five years. In addition to this, there is ICRD, haor database, Natural Resources Database of CEGIS. BADC also collects ground water level and quality data and publish the data in printed format every year. | | | | | | | | | |
| **Way forward:** Data sharing can be increased by opening the data for all of Bangladeshi nationals. | | | | | | | | | |
| **d. Transboundary data and information sharing between countries.** | | **No** data and information sharing. | **Limited** data and information sharing on an **ad-hoc** or informal basis. | | Data and information sharing arrangements **exist**, but sharing is **limited.** | | Data and information sharing arrangements **implemented adequately.** | Data and information sharing arrangements **implemented effectively.[[42]](#footnote-43)** | All relevant data and information are online and accessible between countries. |
| **Score** | **40** |
| **Status description:** Ganges Water Sharing Treaty, 1996; Arrangement between Bangladesh and India for sharing the flood related data of transboundary rivers, MoU between Bangladesh and China for Hydrological Data Sharing 2008 (renewed on 2014), Joint Working Group of Bangladesh, Bhutan, India and Nepal.  Data and information sharing arrangements between China, India, Bangladesh and Nepal exist but sharing is limited to hydro-morphological and meteorological data. | | | | | | | | | |
| **Way forward:** Transboundary data sharing agreements need to be increased. | | | | | | | | | |
| **Average ‘Management Instruments’ score** | | | | **61** | |  | | | |

# Financing

This section concerns the adequacy of the finance available for water resources development and management from various sources.

Finance for investment and recurrent costs can come from many sources, the most common being central government budget allocations to relevant ministries and other authorities. Finance from [Official Development Assistance (ODA)](https://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm) specifically for water resources should be considered part of the government budget. Note that the level of coordination between ODA and national budgets is tracked by the ‘means of implementation’ SDG indicator 6.a.1: “Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan”, as part of reporting on Target 6.a: “By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies”.

“Various sources” include fees and tariffs levied on water users, polluter fees or grants from philanthropic or similar organisations. In-kind support should not be included as it is not easily measurable but can be mentioned in the ‘Status description’ field.

**Investments should cover all aspects of water resources development and management but exclude any related to drinking water supply, sanitation and hygiene services** as they are covered in other monitoring processes.

**Please take note of all footnotes as they contain important information and clarification of terms used in the questions and thresholds**.

Enter your score, **in increments of 10**, from 0-100, or “n/a” (not applicable), in the yellow cell immediately below each question. Enter free text in the “Status description” and “Way forward” fields below each question as advised in the Introduction in Part 1. This will help achieve agreement among different stakeholders in the country, as well as help monitor progress over time. Suggestions for the type of information that may be useful are provided. You may also provide further information you think is relevant, or links to further documentation.

| **4. Financing** | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **Degree of implementation (0 – 100)** | | | | | | | | |
|  | | | **Very low (0)** | | **Low (20)** | **Medium-low (40)** | | **Medium-high (60)** | **High (80)** | | **Very high (100)** |
| **4.1 What is the status of financing for water resources development and management at the national level?** | | | | | | | | | | | |
| **a. National budget**[[43]](#footnote-44) for water resources **infrastructure**[[44]](#footnote-45)(investment and recurrent costs). | | | **No budget** allocated in national investment plans. | | **Some budget** allocated but only partly covers planned investments. | **Sufficient budget** allocated for planned investments but insufficient funds disbursed or made available**.** | | Sufficient budget allocated and **funds disbursed for most** planned programs or projects. | Sufficient funds disbursed for investment and recurrent costs, and **being utilized in all** planned projects. | | Budget **fully utilized** for investment and recurrent costs, post-project evaluation carried out, budgets reviewed and revised. |
| **Score** | **80** | |
| **Status description:** The annual development budget is adequate for planned projects. But the recurrent budget is not enough or sometimes not available. | | | | | | | | | | | |
| **Way forward:** The recurrent budget is increasing over the years. But it needs to be increased and make available all the time. | | | | | | | | | | | |
| **b. National budget** for **IWRM elements**[[45]](#footnote-46) (investments and recurrent costs). | | | **No budget** allocations made for investments and recurrent costs of the IWRM elements. | | **Allocations** made for **some** of the elements and implementation at an early stage. | Allocations made for **at least half** of the elements but insufficient for others. | | Allocations for **most** of the elements and some implementation under way. | Allocations include **all** elements and implementation regularly carried out (investments and recurrent costs). | | Planned budget allocations for all elements of the IWRM approach **fully utilized**, budgets reviewed and revised. |
| **Score** | **70** | |
| **Status description:** The annual development budget is adequate for planned IWRM projects. But the recurrent budget is not enough or sometimes not available and not well monitored. However, BADC, LGED, BMDA also collects revenue and use the money for operation and maintenance. | | | | | | | | | | | |
| **Way forward:** The recurrent budget is increasing over the years. But it needs to be increased and make available all the time. | | | | | | | | | | | |
| **4.2 What is the status of financing for water resources development and management at other levels?** | | | | | | | | | | | |
| **a. Sub-national or basin budgets** for water resources **infrastructure[[46]](#footnote-47)** (investment and recurrent costs). | | **No budget** allocated in sub-national or basin investment plans. | | | **Some budget** allocated but only partly covers planned investments. | **Sufficient budget** allocated for planned investments but insufficient funds disbursed or made available. | | Sufficient budget allocated and **funds disbursed for most** planned programs or projects. | Sufficient funds disbursed**,** for investment and recurrent costs, and **being utilized in all** planned projects. | Budget **fully utilized**, for investment and recurrent costs, post-project evaluation carried out, budgets reviewed and revised. | |
| **Score** | **50** |
| **Status description:** Still there is no basin wise projects and budgets. But some feasibility study for basin wise project is ongoing. | | | | | | | | | | | |
| **Way forward:** The recurrent budget is increasing over the years. But it needs to be increased and make available all the time. | | | | | | | | | | | |
| **b. Revenues** raised for IWRM elements.[[47]](#footnote-48) | | **No revenues** raised for IWRM elements. | | | **Processes in place** to raise revenue but **not yet implemented**. | **Some revenue raised,** but generally not used for IWRM activities. | | Revenues raised cover **some** IWRM activities. | Revenues raised cover **most** IWRM activities. | Revenues raised **fully cover** costs of IWRM activities. | |
| **Score** | **40** |
| **Status description:** BWDB collects irrigation service charges. But the revenue earning is very nominal. The local level water management organizations (WMOs) occasionally participated in the operation and management of the project. Similarly BADC also collects irrigation charges and participation fees for developing an irrigation system nominally. | | | | | | | | | | | |
| **Way forward:** Revenue collection needs to be formalized and collected. Shadow water pricing probably be a good technique which needs to be enforced. | | | | | | | | | | | |
| **c. Financing for transboundary cooperation.**[[48]](#footnote-49) | | | **No specific funding** allocated from the Member State (MS) budgets nor from other regular sources. | | MS **agreement** on country share of contributions **in place** and in-kind support for the cooperation organization/ arrangement. | **Funding less than 50%** of that expected as contributions and by regulation. | | Funding **less than 75%** of that expected as contributions and by regulation. | Funding **more than 75%** of that expected as contributions and by regulation. | | **Full funding** of that expected as contributions and by regulation. |
| **Score** | **30** | |
| **Status description:** Joint Rivers Commission receives budget for monitoring the Ganges water sharing treaty. But there is no budget for transboundary cooperation projects or its development. | | | | | | | | | | | |
| **Way forward:** Funding need to be increased. | | | | | | | | | | | |
| **d. Sub-national or basin budgets** for **IWRM elements**[[49]](#footnote-50) (investment and recurrent costs). | | | **No budget** allocations at sub-national or basin level for investments and recurrent costs of IWRM elements. | | **Allocations** made for **some** of the elements and implementation at an early stage. | Allocations made for **at least half** of the elements but insufficient for others. | | Allocations for **most** of the elements and some implementation under way. | Allocations include **all** elements and implementation regularly carried out (investments and recurrent costs). | | Planned budget allocations for all elements of the IWRM approach **fully utilised**, budgets reviewed and revised. |
| **Score** | **30** | |
| **Status description:** Water sector projects prepared by the respective departments following the NWMP, which considers the eight hydrological regions under the whole Bangladesh. Therefore when those projects approved and allocate budget, local or sub national levels fund allocation is there. So Sub-national or basin budgets for IWRM elements is in place in different ways. However still there is no direct basin wise IWRM projects and budgets. But a lot of feasibility study for basin wise project is ongoing. | | | | | | | | | | | |
| **Way forward:** The recurrent budget is increasing over the years. But it needs to be increased and make available all the time. | | | | | | | | | | | |
| **Average ‘Financing’ score** | | | | **50** | | |  | | | | |

# Indicator 6.5.1 score

### How to calculate the indicator 6.5.1score

Please complete the table below as follows:

1. Calculate the average score of each of the four sections by averaging all question scores in each section, rounded to the nearest whole number.

*Example: Section average of 41.5 should be rounded to 42. Section average of 70.2 should be rounded to 70.*If ‘not applicable’ is selected for any question, this should not be included in the indicator calculations, and therefore will not affect the average score. However, questions with a score of ‘0’ (zero) should be included.

1. Calculate the average of the four section scores (whole numbers) to give the overall score for indicator 6.5.1, rounded to the nearest whole number.

*Example: Calculating final IWRM score from four section scores: (81+ 63 + 47 + 58)/4 = 62.25. Final 6.5.1 score (rounded to a whole number) = 62.*

|  |  |
| --- | --- |
| **Section** | **Average Scores** (all values rounded to nearest whole number) |
| Section 1 Enabling environment | 59 |
| Section 2 Institutions and participation | 60 |
| Section 3 Management instruments | 61 |
| Section 4 Financing | 50 |
| **Indicator 6.5.1 score**  **= Degree of IWRM implementation (0-100)\*** | **58** |

\* Use rounded section average scores (to the nearest whole number), to calculate the indicator score, and round this to the nearest whole number.

**Interpretation of the score**

The score indicates the ‘degree of implementation of integrated water resources management’, on a scale of 0 to 100, with 0 signifying ‘very low’ implementation, and 100 signifying ‘very high’implementation.However, the true value of the survey to countries lies within the scores, ‘status description’ and ‘way forward’ for each question, as this helps to identify which actions need to be taken to move towards a greater degree of implementation of IWRM. See the monitoring guide for further information on interpretation of scores and target setting.

# Annexes:

## Annex A: Glossary

* **Authorities:** could beministry or ministries, or other organizations/institutions/departments/agencies/bodies with a mandate and funding from government.
* **Basins:**Includes rivers, lakes and aquifers, unless otherwise specified. For surface water, the term is interchangeable with ‘catchments’ and ‘watersheds’.
* **Federal countries:** Refers to countries made up of federated states, provinces, territories or similar terms.
* **IWRM:** Integrated Water Resources Management (IWRM) is a process that promotes the coordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. IWRM is not an end in itself but a means of achieving three key strategic objectives:
  + efficiency to use water resources in the best way possible;
  + equity in the allocation of water across social and economic groups;
  + environmental sustainability, to protect the water resource base, as well as associated ecosystems.
* **National (level):**Refers to the highest level of administration in a country.
* **Sub-national / state (level):** refers to levels of administration other than national. For federal countries, these are likely to be provinces or states. Non-federal countries may still have sub-national jurisdictions with some responsibility for water resources management, e.g. regions, counties, departments.
* **Programs:** Nation-wide plans of action with long-term objectives, for example to strengthen monitoring, knowledge sharing and capacity development, with details on what work is to be done, by whom, when, and what means or resources will be used**.**
* **Transboundary:** Refers to surface and groundwater basins that cross one or more national borders (see Annex B).
* **Stakeholders:** In this survey, stakeholders are the main groups important for water resources management, development and use.Examples of stakeholders in each group are given in footnotes as they appear in the survey.
* **Water Resources Management**is the activity of planning, developing, distributing and managing the optimum use of water resources. Ideally, water resource management planning considers all the competing demands for water and seeks to allocate water on an equitable basis to satisfy all uses and demands. An integrated approach (see IWRM) is needed to ensure water resources management is not isolated within sector silos resulting to inefficiencies, conflicts and unsustainable resource use.

## Annex B: Transboundary level

The transboundary questions for indicator 6.5.1 focus on the degree of implementation of IWRM at the transboundary level, as relevant to implementation of IWRM ‘at all levels’, as specified in target 6.5. Countries sharing basins of transboundary waters (rivers, lakes or aquifers) should answer the questionson transboundary issues. This information is complemented by indicator 6.5.2 ‘Proportion of transboundary basin area with an operational arrangement for water cooperation’.

To enable tracking of progress over time and for transparency, in the table below please list the transboundary (or ‘international’) basins or aquifers that are included in this survey. The 6.5.1 baseline reporting may be used as a starting point. Only the most important transboundary basins or aquifers that are regarded as significant, in terms of economic, social or environmental value to the country (or neighbouring countries), need to be included in this survey. It is up to countries to decide which ones these are. Where feasible, basins/aquifers listed in this table, and the scores given, should be cross-referenced with tables and scores in the 6.5.2 reporting template ([www.sdg6monitoring.org/indicators/target-65/indicators652/](http://www.sdg6monitoring.org/indicators/target-65/indicators652/)), and the focal point for 6.5.2 should be consulted in this process. In the absence of 6.5.2 data or national databases, global databases on transboundary river basins (<http://twap-rivers.org/indicators/>), and transboundary aquifers (<https://www.un-igrac.org/ggis/explore-all-transboundary-groundwaters>), may be referred to. If you include a national (sub-basin) as part of a larger transboundary basin, please ensure to also include the name of the larger basin. When answering transboundary questions, the majority of the basins below must meet the criteria described in each threshold to achieve the score for that threshold.

The columns on the right of the table are optional though recommended. Filling them out would: provide countries with valuable information and a quick diagnostic tool for the status in each basin/aquifer; increase the transparency of the transboundary level responses in this survey for stakeholders both within and between countries; help countries reach consensus on scores for the transboundary questions; and provide a valuable cross-reference for indicator 6.5.2. For each basin/aquifer, a score should be given for each of the four transboundary questions in the survey, following the guidance and thresholds in the survey questions. To supplement this data, you are encouraged to provide a summary of the situation for the transboundary basins/aquifers in the ‘Status description’ and ‘Way forward’ fieldsto transboundary questions within Part 2 of this survey, to the extent feasible.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **OPTIONAL THOUGH RECOMMENDED\*** | | | |
|  | **Important transboundary basins** | **Arrangements (1.2c)** | **Institutions (2.2e)** | **Data sharing (3.2d)** | **Financing (4.2c)** |
| 1. | Ganges Basin |  |  |  |  |
| 2. | Brahmaputra Basin |  |  |  |  |
| 3. | Meghna Basin |  |  |  |  |
|  | Please add/delete rows as needed |  |  |  |  |
|  | **Important transboundary aquifers** |  |  |  |  |
| 1. |  |  |  |  |  |
| 2. |  |  |  |  |  |
| 3. |  |  |  |  |  |
|  | Please add/delete rows as needed |  |  |  |  |

\* These columnsmay be useful to countries in determining the approximate status for each transboundary basin/aquifer, and thereby be useful in discussions on the respective question scores in Part 2 of this survey instrument.

## Annex C: Barriers, enablers and next steps for furthering IWRM implementation

This sectionis not used in calculating indicator 6.5.1, butis designed to be useful for countries to identify the main challenges and next steps to further IWRM implementation. It builds on the free text fields for each question – “Status description” and “Way forward” – to identify the key issues.

The third question belowaims to improve transparency by documenting the main differences in opinion between stakeholders.You may amend the structure to make it more useful to the planning process in the national context. For each question, you may consider aspects under each of the four IWRM dimensions in the survey, or you may identify aspects/issues that cut-across questions and IWRM dimensions. Some issues not addressed by the questions may also be brought up here.

1. What are the main challenges/barriers to progress of IWRM implementation in the country?

Answer: See section 6.3 of Stakeholder Report

1. What are the main next steps to overcome challenges and further IWRM implementation?

Answer: See section 6.3 of Stakeholder Report

1. What were the main points of difference in stakeholder opinion in answering the survey questions?

The main points of differences in the consultation was to assign marks to the questions as different organizations has different levels of status regarding the questions.

1. Additional comments

## Annex D: Priority water resource challenges

Please indicate the challenge level for each of the water resource issues below. This information will not affect the overall indicator score.

This checklist may be useful to countries in stakeholder discussions and planning. Over time, it can also help countries to evaluate whether the implementation of IWRM can help to reduce the challenge level relating to different water resources issues. The information will also help to develop regional and global oversight of key water resources challenges, and track progress of how challenge levels may change over time.

Note that ‘challenge level’ in this case refers to the level of difficulty associated with addressing each issue. For example, if effective and financed systems are in place for providing water for domestic use, then this may be assigned a ‘low’ challenge level, even though this issue would likely be classified as high priority/importance in most countries. ‘Low’, ‘Medium’ and ‘High’ are intentionally broad and intuitive categories.

Comments (optional):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Water resource challenges** | **Level of difficulty associated with addressing the challenge** | | | |
| **Low** | **Medium** | **High** | **Not relevant** |
| **Water uses** | | | | |
| Water for agriculture | ☐ | ☐ | ☐ | ☐ |
| Water for domestic use | ☐ | ☐ | ☐ | ☐ |
| Water for industry | ☐ | ☐ | ☐ | ☐ |
| Water for energy | ☐ | ☐ | ☐ | ☐ |
| Water for ecosystems/environment | ☐ | ☐ | ☐ | ☐ |
| Water for growing cities | ☐ | ☐ | ☐ | ☐ |
| **Threats to the resource** | | | | |
| Water scarcity / over-abstraction (surface) | ☐ | ☐ | ☐ | ☐ |
| Water scarcity / over-abstraction (groundwater) | ☐ | ☐ | ☐ | ☐ |
| Water quality / pollution (surface) | ☐ | ☐ | ☐ | ☐ |
| Water quality / pollution (groundwater) | ☐ | ☐ | ☐ | ☐ |
| Water-related ecosystem degradation | ☐ | ☐ | ☐ | ☐ |
| Water-related ecosystem loss | ☐ | ☐ | ☐ | ☐ |
| **Threats to people and economic activity** | | | | |
| Floods | ☐ | ☐ | ☐ | ☐ |
| Droughts | ☐ | ☐ | ☐ | ☐ |
| Coastal vulnerability | ☐ | ☐ | ☐ | ☐ |
| Conflicts over water resources | ☐ | ☐ | ☐ | ☐ |

## Annex E:6.5.1 country reporting process form

A common query received after the baseline data collection period was on the reporting process and which stakeholders were involved in reporting.

To improve transparency and increase confidence in results, you are invited to provide a brief overview of the reporting process. e.g. main actors involved;meetings/workshops held;other means of gathering inputs from stakeholders; and finalisation/approval processes. Also note the main challenges/strengths of the process.Use as much space as needed.

|  |  |
| --- | --- |
| Focal Point affiliation | Ministry of Water Resources |
| ***Brief process overview*:** Stakeholder workshops were carried out in two rounds, one held on the 21 July and the other on 25 July 2020. Acknowledging the prevailing pandemic predicament, the workshops have been organized through the Zoom, an online meeting platform. Discussions were held in the first round regarding the content and concept of the questionnaires under different sections of SDG 6.5.1 indicator as well as the process of scoring. The probable score of individual sub-indicators was described with justifications or explanation for better understanding of the stakeholders. Taking lessons from round one, the stakeholders moved into the second round where they were then provided with the baseline scores of 2017, upon which they gave their scoring. The average scores have then been calculated for the four sections as well as the SDG 6.5.1 average for Bangladesh following the guideline by UNEP. After the preparation of the draft, it has been shared with the MoWR, the key stakeholder. A consultation meeting has been done with the MoWR in this regard. Using their comments and suggestions, the report has been updated and circulated through the participants. Then, a consultation meeting for validation has been done with the key participants on 13 September 2020. Hence, by compiling all the suggestions and comments the report has been finalized.  **Main actors involved:** The stakeholders have been selected carefully by considering the multi-stakeholders agencies relevant with the key implementation of IWRM in the country which include (i) Ministries and agencies, directly working in water sector e.g. MoWR, BWDB, WARPO, JRC, DBHWD, DPHE and (ii) indirect and other water-related cross-cutting organizations along with relevant NGOs. Participants from Educational Institutions, non-government organizations and water user associations working in different aspect of water resources have also been selected. [Note: Please see section 1.4 and Annex 1 of the Status Report for further information] | |

| **Stakeholder groups** | **Level of engagement** (mark with ‘X’) | | | **Additional information** (e.g. which stakeholder organisations were involved) |
| --- | --- | --- | --- | --- |
| **Low** (given opportunity to contribute) | **Medium** (some input) | **High** (discussion/ negotiation) |
| National water agencies |  |  | X |  |
| Other public sector agencies |  |  | X |  |
| Sub-national water agencies |  | X |  |  |
| Basin/Aquifer agencies |  |  | X |  |
| Water User Associations |  |  |  |  |
| Civil society |  |  |  |  |
| Private sector |  |  | X |  |
| Vulnerable groups |  |  |  |  |
| Gender expertise |  |  | X |  |
| Research/academia |  |  | X |  |
| Transboundary expertise |  |  | X |  |
| Other SDG focal points |  |  |  | *(e.g. FPs from other indicators)* |
| *Please add rows if required* |  |  |  |  |

1. Monitoring of 6.5.1 is being done as part of the UN-Water initiative on integrated monitoring of SDG 6.Support is provided in collaboration with UN-Water members and partners. For a list of questions that relate to other SDG indicators (mainly in section 3), please see the monitoring guide. [↑](#footnote-ref-2)
2. For examples of good practices of policies, laws and plans, please see case studies under ‘enabling environment’ in the Global Water Partnership (GWP) [IWRM ToolBox](https://www.gwp.org/en/learn/iwrm-toolbox/About_IWRM_ToolBox/). [↑](#footnote-ref-3)
3. Sub-national includes jurisdictions not at national level, such as: states, provinces, prefectures, counties, councils, regions, or departments. In cases where there are no explicit sub-national policies, please answer this question by considering how national policies are being implemented at sub-national levels. Responses should consider the highest, non-national level(s) as appropriate to the country. In the status description, please explain which level(s) are included in the response. [↑](#footnote-ref-4)
4. At the basin/aquifer level, please include only the most important river basins, lake basins and aquifers for water supply or other reasons. This question only refers to these basins/aquifers. These basins/aquifers are likely to cross administrative borders, including state/provincial borders for federal countries. The basins may also cross national borders, but this question refers to management of the portions of basins within each country. Question 1.2c refers specifically to transboundary arrangements for basins/aquifers shared by countries. [↑](#footnote-ref-5)
5. For ‘transboundary’ definition and guidance on how to fill out all transboundary level questions, see Annexes A and B. All transboundary level questions should reflect the situation in most of the ‘most important’ transboundary basins/aquifers, as listed in Annex B. An ‘arrangement’ should be a formal commitment, and may be referred to as a bilateral or multilateral agreement, treaty, convention, protocol, joint declaration, memorandum of understanding, or other arrangement between riparian countries on the management of a transboundary basin/aquifer. Refers to international basins/aquifers only. Arrangements may be interstate, intergovernmental, inter-ministerial, interagency or between regional authorities. They may also be entered into by sub-national entities. [↑](#footnote-ref-6)
6. Sub-national includes jurisdictions not at national level, such as: states, provinces, prefectures, counties, councils, regions, or departments. In cases where there are no explicit sub-national regulations, please answer this question by considering how national regulations are being implemented at sub-national levels. Responses should consider the highest, non-national level(s) as appropriate to the country. In the status description, please explain which level(s) are included in the response. [↑](#footnote-ref-7)
7. This question has replaced question 1.2d from the baseline survey instrument, which was for federal countries only. [↑](#footnote-ref-8)
8. E.g. Dublin Principle Nr. 3 (1992): “Women play a central part in the provision, management and safeguarding of water”. “[the] role of women … has seldom been reflected in institutional arrangements for the … management of water resources. Acceptance and implementation of this principle requires positive policies to address women’s specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them.” [↑](#footnote-ref-9)
9. E.g. SDG target 5.5 “Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.” [↑](#footnote-ref-10)
10. E.g. SDG target 17.18 “By 2020, … increase … the availability of … data disaggregated by … gender, … and other characteristics relevant in national contexts.” [↑](#footnote-ref-11)
11. ‘Government authorities’ could be a ministry or ministries, or other organizations/institutions/agencies/bodies with a mandate and funding from government. [↑](#footnote-ref-12)
12. ‘Capacity’ in this context is that the responsible authorities should be adapted to the complexity of water challenges to be met and have the required knowledge and technical skills, including planning, rule-making, project management, finance, budgeting, data collection and monitoring, risk/conflict management and evaluation. Beyond having the technical capacity, authorities should also have the financial capacity to actually be leading the implementation of these activities. [↑](#footnote-ref-13)
13. Relates to coordination between the government authorities responsible for water management and those responsible for other sectors (such as agriculture, energy, climate, environment etc.) that are dependent on water, or impact on water. Coordination between groundwater and surface water development/management should also be optimised. The relevant sectors should be considered according to their importance for the country. [↑](#footnote-ref-14)
14. ‘The public’ includes all interested parties who may be affected by any water resources issue or intervention. They include organizations, institutions, academia, civil society and individuals. They do not include government organizations. The private sector is addressed separately in the next question. [↑](#footnote-ref-15)
15. Mechanisms can include policies, laws, strategies, plans, or other formal operational procedures for public participation. [↑](#footnote-ref-16)
16. Private sector includes for-profit businesses and groups. It does not include government or civil society. While this question is mainly focused at the national level, please respond at the level that is most relevant in the country context. Please explain this, including differences between implementation at different levels, in the ‘Status description’ field. [↑](#footnote-ref-17)
17. Mechanisms can include policies, laws, strategies, plans, or other formal operational procedures for private sector participation. [↑](#footnote-ref-18)
18. IWRM capacity development: refers to the enhancement of skills, instruments, resources and incentives for people and institutions at all levels, to improve IWRM implementation. Capacity needs assessments are essential for effective and cost-effective capacity development. Capacity development programs should consider gender balance and disadvantaged/minority groups in terms of participation and awareness. Capacity development is relevant for many groups, including: local and central government, water professionals in all areas - both public and private water organisations, civil society, and in regulatory organisations. In this instance, capacity development may also include primary, secondary and tertiary education, and academic research concerning IWRM. [↑](#footnote-ref-19)
19. At the basin/aquifer level, please include only the most important river basins, lake basins and aquifers for water supply or for other reasons. This question only refers to these basins/aquifers. These basins/aquifers likely cross-administrative borders, including state/provincial borders for federal countries. The basins may also cross national borders, but this question refers to management of the portions of basins within each country. Question 2.2e refers specifically to transboundary management of basins/aquifers shared by countries. [↑](#footnote-ref-20)
20. Could be organization, committee, inter-ministerial mechanism or other means of collaboration for managing water resources at the basin level. [↑](#footnote-ref-21)
21. For the definition of ‘capacity’ in this context, see footnote 12. Beyond having the capacity, authorities must also actually be leading the implementation of these activities. [↑](#footnote-ref-22)
22. ‘The public’ includes all interested parties who may be affected by any water resources issue or intervention. They include organizations, institutions, academia, civil society and individuals. They do not include government organizations. The private sector is dealt with separately in question 2.1d. [↑](#footnote-ref-23)
23. Examples of ‘local level’ include municipal level (e.g. cities, towns and villages), community level, basin/tributary/aquifer/delta level, and water user associations. [↑](#footnote-ref-24)
24. Mechanisms can include policies, laws, strategies, plans, or other formal operational procedures for public participation. [↑](#footnote-ref-25)
25. Vulnerable groups: groups of people that face economic, political, or social exclusion or marginalisation. They can include, but are not limited to: indigenous groups, ethnic minorities, migrants (refugees, internally displaced people, asylum seekers), remote communities, subsistence farmers, people living in poverty, people living in slums and informal settlements. Also referred to as ‘marginalised’ or ‘disadvantaged’ groups. While women are often included in definitions of ‘vulnerable groups’, in this survey gender issues are addressed separately in question 2.2d. The score given for this question should reflect the situation for the majority of the vulnerable groups. This question has been added since the baseline to capture an element of stakeholder participation which is important in the context of ‘leave no-one behind’ – one of the key principles of Agenda 2030. [↑](#footnote-ref-26)
26. ‘Procedures’ can include operational processes to, for example, raise awareness, reduce language barriers, and facilitate interaction with specific vulnerable groups. [↑](#footnote-ref-27)
27. ’Meaningful’ implies voices of vulnerable groups are heard, contribute to decision-making, and influence outcomes. It follows the UN Statement of Common Understanding on Human Rights-Based Approaches to Development Cooperation which provides for “Participation and Inclusion: … all peoples are entitled to active, free and meaningful participation in, contribution to, and enjoyment of civil, economic, social, cultural and political development in which human rights and fundamental freedoms can be realized.” [↑](#footnote-ref-28)
28. See gender discussion at beginning of section 2. Gender-responsive mechanisms can include laws, policies, plans, strategies or other frameworks or procedures aimed at achieving gender objectives related to women’s participation, voice and influence. Gender-responsive mechanisms may originate within the water sector or at a higher level, but if they are primarily addressed at a higher level, then there should be evidence of gender mainstreaming within the water sector to achieve scores in this question. In the baseline survey, national, sub-national, and transboundary levels were addressed in three separate questions. These questions have been merged into a single question, allowing countries to answer the question at the level which is most relevant in the national context. The situation at different levels can be explained in the ‘Status description’ cell, as appropriate. [↑](#footnote-ref-29)
29. Gender objectives ultimately refer to equal participation and influence in water resources management at all levels. Ways of monitoring this include (please identify any of these or similar in the ‘Status description’ field): 1) Presence of Gender Focal Point responsible for gender policy and gender concerns in authorities that deal with water resources; 2) Gender parity in decision-making processes at all levels (e.g. in meetings or board members/committee members); 3) Presence of gender-specific objectives and commitments in strategies, plans and laws related water policy; 4) Presence and role of local women’s groups/organizations receiving technical and/or financial support from government/non-government organizations involved in water resources management activities; 5) Budget allocation, and procedures for collection and analysis of sex-disaggregated data of local populations, when planning for water-related programmes / projects, including infrastructure; 6) Presence of measures for improving gender parity and equity in human resources (HR) policies of authorities. Source: adapted from [UNESCO WWAP Toolkit on Sex-disaggregated Water Data, 2019](http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/display-single-news/news/the_2019_water_gender_toolkit_has_been_launched/). [↑](#footnote-ref-30)
30. An organizational framework can include a joint body, mechanism, authority, committee, commission or other institutional arrangement. Refers to international basins/aquifers. [↑](#footnote-ref-31)
31. Sub-national can include, but not limited to: provincial, state, county, local government areas, council. In this case, sub-national should not include basin/aquifer levels as this is dealt with in question 2.2a. Answer this question for the highest sub-national level(s) that are relevant in the country, and specify what these are. [↑](#footnote-ref-32)
32. This question has replaced question 2.2f from the baseline survey, which was for federal countries only. This is in recognition of the fact that many countries have sub-national authorities for water resources management, even if they are not federal countries. [↑](#footnote-ref-33)
33. For the definition of ‘capacity’ in this context, see footnote 12. Beyond having the capacity, authorities must also actually be leading the implementation of these activities. [↑](#footnote-ref-34)
34. See definition of monitoring in Terminology. [↑](#footnote-ref-35)
35. Management instruments include demand management measures (e.g. technical measures, financial incentives, education and awareness raising to reduce water use and/or improve water-use efficiency, conservation, recycling and re-use), monitoring water use (including the ability to disaggregate by sector), mechanisms for allocating water between sectors (including environmental considerations). [↑](#footnote-ref-36)
36. Includes regulations, water quality guidelines, water quality monitoring, economic tools (e.g. taxes and fees), water quality trading programs, education, consideration of point and non-point (e.g. agricultural) pollution sources, construction and operation of wastewater treatment plants, watershed management. [↑](#footnote-ref-37)
37. Water-related ecosystems include rivers, lakes and aquifers, as well as wetlands, forests and mountains. Management of these systems includes tools such as management plans, the assessment of Environmental Water Requirements (EWR), and protection of areas and species. Monitoring includes measuring extent and quality of the ecosystems over time. [↑](#footnote-ref-38)
38. ‘Management instruments’ can cover: understanding disaster risk; strengthening disaster risk governance; investing in disaster risk reduction; and enhancing disaster preparedness. ‘Impacts’ include social impacts (such as deaths, missing persons, and number of people affected) and economic impacts (such as economic losses in relation to GDP). ‘Water-related disasters’ include disasters that can be classified under the following: Hydrological (flood, landslide, wave action); Meteorological (convective storm, extratropical storm, extreme temperature, fog, tropical cyclone); and Climatological (drought, glacial lake outburst, and wildfire). [↑](#footnote-ref-39)
39. Basin and aquifer management: involves managing water at the appropriate hydrological scale, using the surface water basin or aquifer as the unit of management. This may involve basin and aquifer development, use and protection plans. It should also promote multi-level cooperation, and address potential conflict among users, stakeholders and levels of government. To achieve ‘Very high (100)’ basin and aquifer management scores, surface and groundwater management should be integrated. [↑](#footnote-ref-40)
40. See previous footnote on basin management instruments, which also applies to aquifers. [↑](#footnote-ref-41)
41. Includes more formal data and information sharing arrangements between users, as well as accessibility for the general public, where appropriate. [↑](#footnote-ref-42)
42. E.g. institutional and technical mechanisms in place that allow for exchanging data as agreed upon in agreements between riparians (e.g. regional database or information exchange platform with a river basin organization including technical requirements for data submission, institutionalized mechanisms for QA and for analysing the data, etc.). [↑](#footnote-ref-43)
43. Allocations of funding for water resources may be included in several budget categories or in different investment documents. Respondents are thus encouraged to examine different sources for this information. When assessing the allocations respondents should take account of funds from government budgets and any co-funding (loans or grants) from other sources such as banks or donors. [↑](#footnote-ref-44)
44. Infrastructure includes ‘hard’ structures such as dams, canals, pumping stations, flood control, treatment works etc., as well as ‘soft’ infrastructure and environmental measures such as catchment management, sustainable drainage systems etc. **For this survey do not include infrastructure for drinking water supply or sanitation services.** Budgets should cover initial investments and recurrent costs of operation and maintenance. [↑](#footnote-ref-45)
45. ‘IWRM elements’ refers to all the activities described in sections 1, 2 and 3 of this survey that require funding, e.g. policy, law making and planning, institutional strengthening, coordination, stakeholder participation, capacity building, and management instruments such as research and studies, gender and environmental assessments, data collection, monitoring etc. [↑](#footnote-ref-46)
46. Infrastructure includes ‘hard’ structures such as dams, canals, pumping stations, flood control, treatment works etc., as well as ‘soft’ infrastructure and environmental measures such as catchment management, sustainable drainage systems etc. **For this survey do not include infrastructure for drinking water supply or sanitation services.** Budgets should cover initial investments and recurrent costs of operation and maintenance. [↑](#footnote-ref-47)
47. For ‘IWRM elements’, see above footnote. **Level**: revenues are likely to be raised from users at the local, basin, or aquifer levels, though may also be raised at other sub-national or national levels (please indicate which level(s) in the status description). **Revenue raising** can occur through public authorities or private sector, e.g. through fees, charges, levies, taxes and ‘blended financing’ approaches. E.g. dedicated charges/levies on water users (including household level *if* revenues are spent on IWRM elements); abstraction & bulk water charges; discharge fees; environmental fees such as pollution charges, Payment for Ecosystem Services (PES) schemes; and the sale of secondary products and services. [↑](#footnote-ref-48)
48. In this question “Member States (MS)” refers to riparian countries that are parties to the arrangement. “Contributions” refers to the annual share of funds agreed from MS national budgets to support the agreed TB cooperation arrangement. Regular funds obtained from for example, water user fees (e.g. hydropower charges) and polluter-pays fees based on existing regulation are also considered as sustainable funding. As variable and unsustainable, donor support should not be considered in the scoring, but may be referred to in the ‘Status description’ and ‘Way forward’ fields. [↑](#footnote-ref-49)
49. ‘IWRM elements’ refers to all the activities described in sections 1, 2 and 3 of this survey that require funding, e.g. policy, law making and planning, institutional strengthening, coordination, stakeholder participation, capacity building, and management instruments such as research and studies, gender and environmental assessments, data collection, monitoring etc. This question has been added since the baseline survey, acknowledging the importance of funding being available at more ‘operational’ levels. [↑](#footnote-ref-50)