



SDG 6.5.1 and Transboundary Water

Fany Wedahuditama
Regional Coordinator
Global Water Partnership Southeast Asia

Sustainable Development Goal (SDG) 6

Ensure availability and sustainable management of water and sanitation for all

Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.



Indicator 6.5.1: Degree of integrated water resources management (IWRM) implementation

Indicator 6.5.2: Proportion of transboundary basin area with an operational arrangement for water cooperation

The United Nations Environment Programme (UNEP) is the custodian agency for indicator 6.5.1

Note:

- All 4 questions regarding TB management from 6.5.1 provide information that complements 6.5.2
- 6.5.1 and 6.5.2 used to inform one another

SDG indicator 6.5.1 reporting process

Assessing the degree of IWRM implementation in country

UN Environment Programme (UNEP)
invites countries to undertake data
collection on SDG 6.5.1



Each country
assigns a National
SDG 6.5.1
Focal Point (FP)

Stakeholders

discuss survey results with FP
and agree on scores (e.g. in a
workshop)

National FP
coordinates
multi-stakeholder
consultation process



Final SDG 6.5.1 national report

on status of IWRM
implementation in the
country



SDG 6.5.1 Help Desk provides
support to the FP and
undertakes quality assurance
on the draft survey

Stakeholders

use the data to prioritise key activities to improve
implementation of IWRM



UNEP

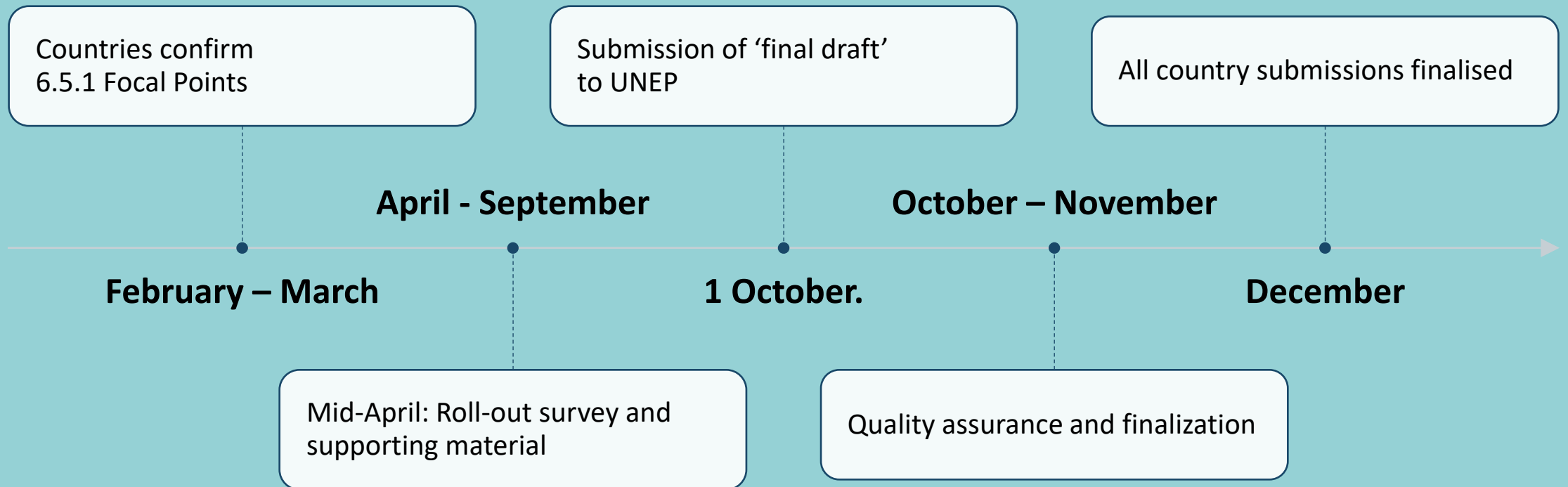
produces
global analyses
and reports
and shares
these on the
IWRM Data
Portal



UN Statistics Division (UNSD)
receives national results
from UNEP



Timeline for reporting 2023



*Submission to UN Statistics Division in early 2024

See Monitoring Guide section 6

SDG Indicator 6.5.1 Survey Overview

Assessing the degree of IWRM implementation in country



50
1972-2022



33 questions
(scored 0-100)

Question scores in each dimension averaged to give 4 dimension scores

4 IWRM dimension averages

4 dimension scores averaged to give overall indicator score

1 final SDG 6.5.1 score

National score (0-100) representing very low to very high degree of IWRM implementation

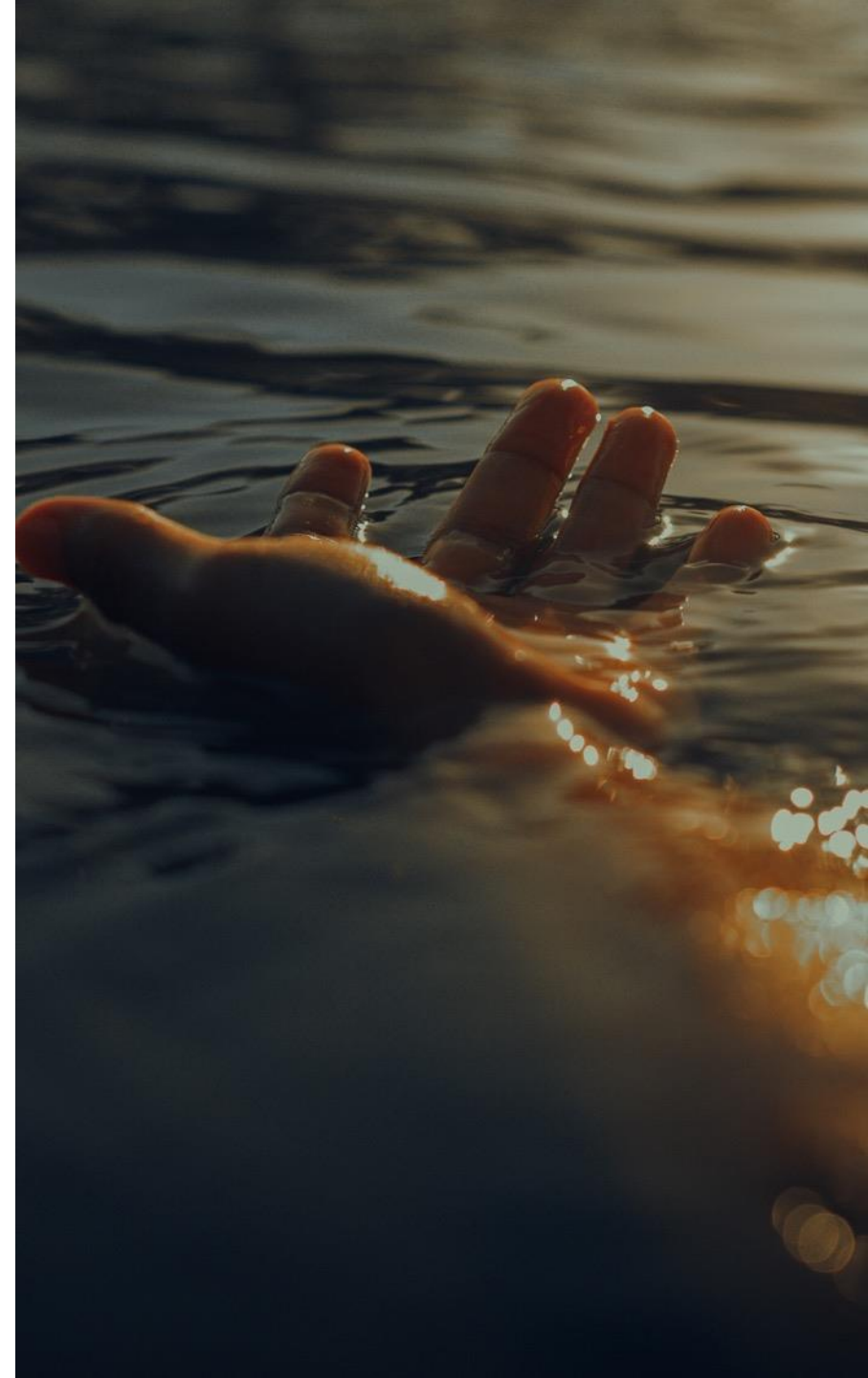


SDG indicator 6.5.1: Implementing IWRM

2023 monitoring and reporting overview

SDG 6 IWRM Support Programme

www.gwp.org/en/sdg6support/



SDG 6 IWRM Support Programme

Assists governments and other stakeholders in

STAGE 1 Identifying Challenges



Bring together stakeholders
to understand the status of water resources
management in the country

STAGE 2 Developing Action Plans



Define areas of opportunity
to turn them into country-led investment projects
that improve water resources management

STAGE 3 Implementing Solutions

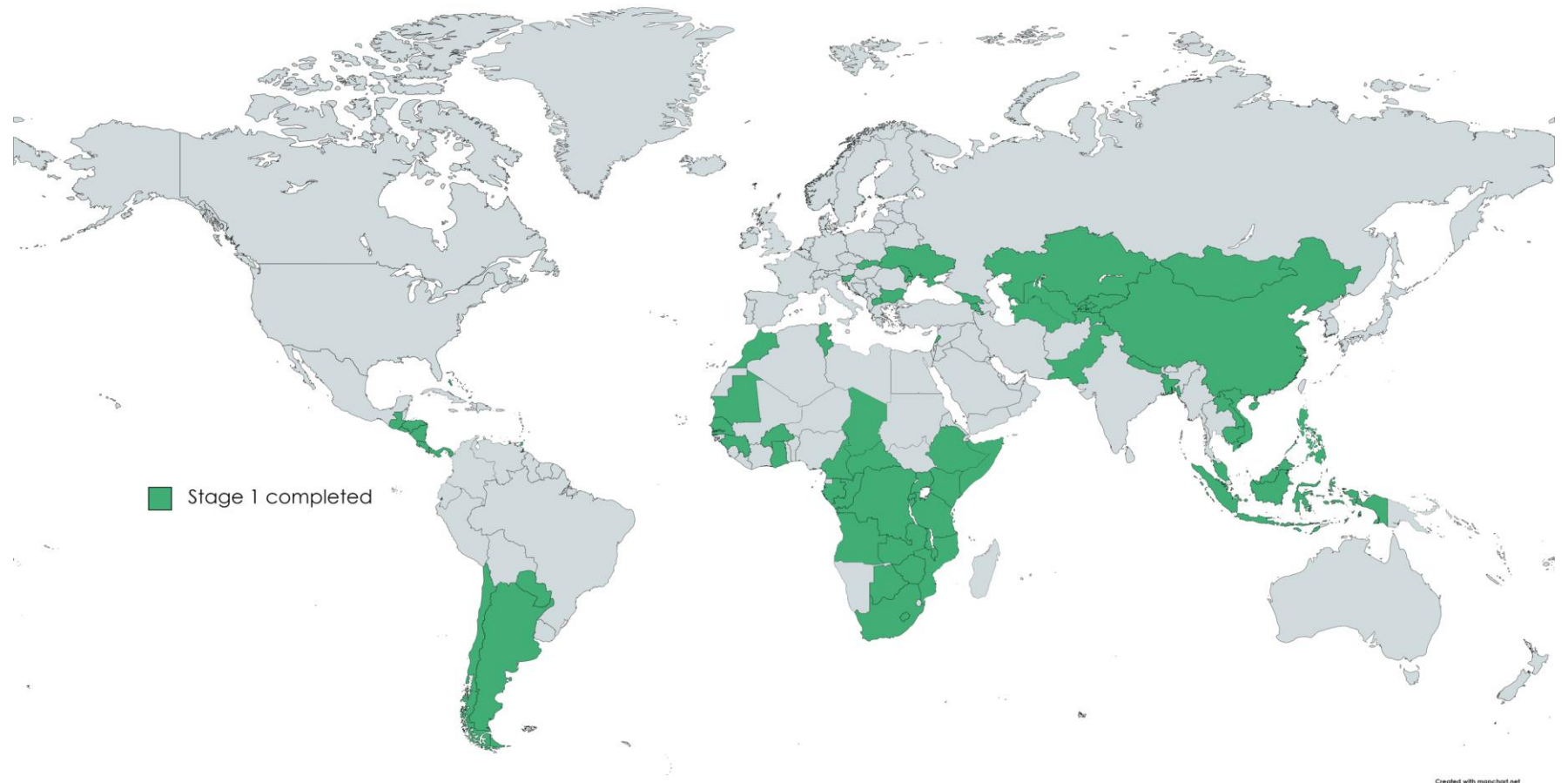


Implement Priority Actions
to ensure measurable progress on SDG 6.5.1 and
other SDG targets, feeding back into the
reporting process (stage 1)



Stage 1: strengthening stakeholder consultation in 6.5.1 reporting

- >70 countries supported in 2017 & 2020.
- >3,000 stakeholders engaged



Regional learning exchanges

Objectives:

- Share lessons from consultation process between focal points
- Identify common challenges and opportunities to advance IWRM implementation at regional level
(with the possibility of leading to the production of regional reports, after national reporting)

Assistance available: SDG 6 IWRM Support Programme:

- Facilitation support, technical guidance (through global teams, GWP Regional Water Partnerships, Country Water Partnerships)
- Use of online tools including communities of practice
- No financial support available



Stage 2: Formulating responses



Define areas of opportunity
to turn them into country-led investment projects
that improve water resources management

- Government-led multi-stakeholder process to formulate and prioritise responses to IWRM challenges.
- Develop an IWRM Action Plan (or similar)
- Only countries that have received Stage 1 support are eligible for Stage 2 from 2024 onwards.

<https://www.gwp.org/en/sdg6support/consultations/where-we-need-to-go/stage-2-activities/>

Stage 3: Implementing solutions



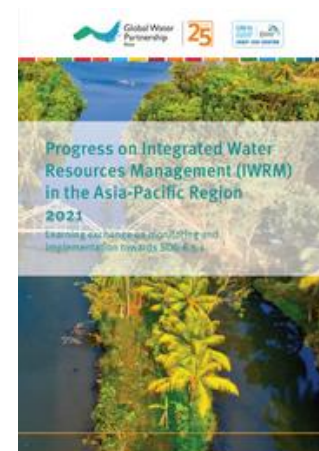
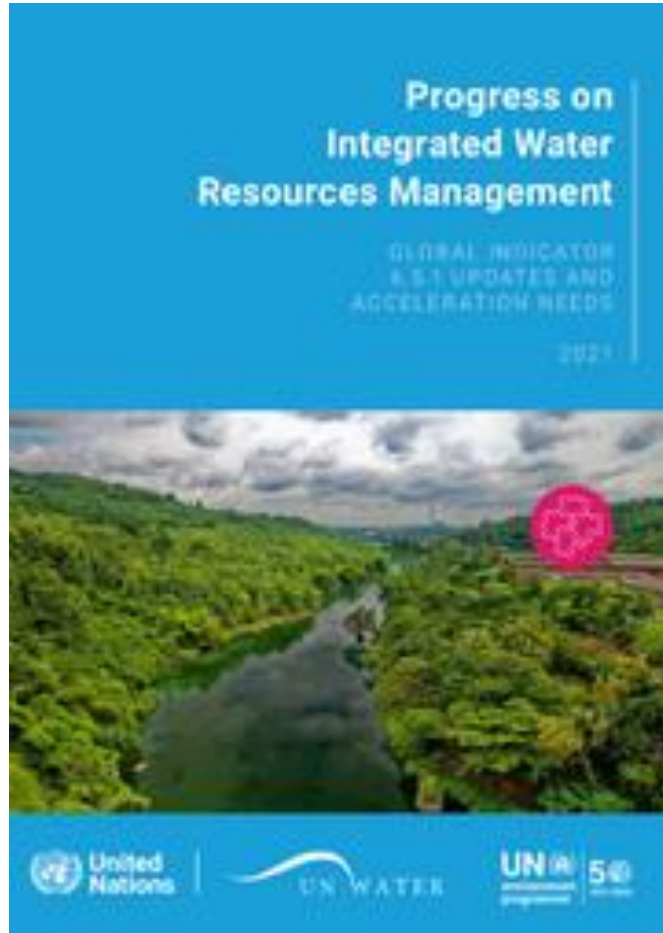
Implement Priority Actions
to ensure measurable progress on SDG 6.5.1 and
other SDG targets, feeding back into the
reporting process (stage 1)

Assist governments to implement the IWRM Action Plans:

- Build new / strengthen existing multi-stakeholder partnerships
- Identify financing opportunities and prepare countries to access finance
- Gaining access to technical assistance and best practices from other countries

<https://www.gwp.org/en/sdg6support/consultations/getting-there/stage-3-activities/>

Global and Regional Reports



Transboundary in the SDG 6.5.1 questionnaire

Transboundary in the questionnaire: Each of the four section has two sub-sections covering the “National” and “Other” levels, which includes transboundary. All transboundary level questions reflect the situation in the ‘most important’ transboundary basins/aquifers.

- **1. Enabling Environment:** Transboundary agreements (1.2c)
- **2. Institutions and Participation:** Organizational frameworks (2.2e)
- **3. Management Instruments:** Data sharing (3.2c)
- **4. Financing:** Financing (4.2c)

Differences between 2017 (baseline) and 2020 survey questionnaire related to transboundary aspects: The baseline questionnaire included a separate question on gender in transboundary water management, which was merged in the 2020 survey into one overall gender question

Reporting on SDG 6.5.1 transboundary questions in 2020: Of the 153 countries that share waters with their neighbours, 142 reported on these aspects through indicator 6.5.1.

Section 1: Enabling environment

Status of policies, laws and plans to support IWRM

1.2c: Arrangements for transboundary water management

- 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.

		Very low (0)	Low (20)	Medium-low (40)	Medium-high (60)	High (80)	Very high (100)
1.2c	Arrangements for transboundary water management	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.

Table 3 Progress in establishing an enabling environment for IWRM in 16 facilitated countries

Facilitated countries	Score based on elements in Enabling Environment						
	1.1 National level			1.2 Other levels			
	a. Water resource policy	b. Water resource law	c. IWRM plan	a. Subnational water resource policy	b. Basin/aquifer management plans	c. Transboundary arrangements	d. Subnational water resources regulations
Kyrgyzstan	40	50	20	10	20	30	20
Nepal	40	30	20	0	20	60	20
Uzbekistan	60	30	30	40	30	70	30
Georgia	70	30	50	n/a	20	40	n/a
Tajikistan	60	50	50	40	50	60	30
Mongolia	60	70	50	50	50	50	50
Bangladesh	80	70	70	60	50	30	50
Viet Nam	70	70	50	60	50	60	60
Pakistan	60	60	70	80	50	60	50
Cambodia	70	80	60	50	50	70	50
Turkmenistan	60	60	60	60	60	80	60
Philippines	70	80	70	50	60	n/a	50
Lao People's Democratic Republic	50	80	70	70	60	80	40
Indonesia	70	70	70	60	70	70	60
Malaysia	70	80	60	80	60	90	90
China	90	90	80	80	80	80	80

n/a = not applicable

Very low (0-10)
 Low (20-30)
 Medium-low (40-50)
 Medium-high (60-70)
 High (80-90)
 Very high (100)

- **Fifteen out of sixteen countries** mentioned that the arrangement for transboundary water management has been **started and implemented** (score 30 and above) (for question 1.2 c in Table 3).
- China has signed agreements for transboundary water management of the most important basins with neighbouring countries such as Russia, Mongolia, Kazakhstan, and India as well as the Mekong River Commission.
- Kyrgyzstan mentioned that the transboundary arrangement with Kazakhstan on Chu and Talas River, and with Uzbekistan on Orto-Tokoy reservoir has been established to solve transboundary issue.
- Four countries pointed out **several major challenges, gaps and needs** related to **weak, inconsistent, or partial implementation of transboundary agreements and arrangements**. The challenge of transboundary policy was also identified as an impact on the **lack of funds or inadequate financing for strengthening the institutions and for stakeholders' engagement**.
- Few countries also mentioned the need to **update previous agreements and arrangements** given current and **emerging scenarios**. This includes specific needs such as: provisions on groundwater aquifers and environmental flows effective mechanisms for transboundary cooperation among upstream and downstream countries and additional major international rivers and lakes.
- Uzbekistan mentioned the need for **strengthening the regional or subregional legal framework** for the use of water, and a stable and effective mechanism for regional water and energy cooperation.
- The importance of **building and maintaining trust between riparian states** was also highlighted.

Section 2: Institutions and participation

Status of institutions for IWRM implementation

2.2e: Organisational framework for transboundary water management

- An organizational framework can include a joint body, mechanism, authority, committee, commission or other institutional arrangement. Refers to international basins/aquifers.

		Very low (0)	Low (20)	Medium-low (40)	Medium-high (60)	High (80)	Very high (100)
2.2e	Organizational framework for transboundary water management for most important basins / aquifers	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.

Table 4 Progress in establishing Institutions and Participation for IWRM in 16 facilitated countries



GWP facilitated countries	Score based on elements in Institutions & Participation										
	2.1 National level					2.2 Other levels					
	a. Government authorities leading IWRM	b. Government cross-sectoral coordination	c. Public Participation	d. Private Sector Participation	e. IWRM capacity development	a. IWRM basin/aquifer organisations	b. Public Participation	c. Vulnerable groups participation	d. Gender inclusion in laws/plans	e. Transboundary organisations	f. Subnational authorities to lead IWRM
Kyrgyzstan	40	40	40	10	30	20	50	20	30	40	10
Tajikistan	60	50	40	40	50	50	30	10	30	60	50
Mongolia	60	40	40	40	50	50	40	40	40	50	50
Viet Nam	50	40	50	50	60	40	50	30	40	50	50
Turkmenistan	60	40	20	80	50	80	10	10	20	80	80
Nepal	20	80	80	80	40	20	60	60	80	40	0
Uzbekistan	60	60	50	40	60	60	60	40	40	70	40
Georgia	50	80	80	80	60	0	80	40	80	40	n/a
Bangladesh	70	60	80	50	70	30	70	60	70	40	60
Pakistan	60	60	60	60	50	60	60	60	50	60	80
Lao People's Democratic Republic	60	70	50	70	60	60	60	40	70	70	60
Philippines	60	70	60	90	50	60	70	50	60	n/a	50
Cambodia	60	80	70	80	50	50	60	50	70	80	50
Malaysia	60	80	80	60	40	40	80	40	80	90	60
Indonesia	70	70	70	70	60	60	70	60	70	60	70
China	80	80	70	60	80	80	70	70	80	80	80

All 15 countries with transboundary arrangements mentioned the organisational framework for transboundary arrangements has been established and implemented (score 40 and above, question 2.2.e, Table 4).

Some countries mentioned specifically the issue and recommendation for organisational capacity in transboundary water management, as follows:

- **Malaysia:** Established task forces established in certain shared basins and aquifers provides an **opportunity for the states to upscale existing arrangements and develop new arrangements.**
- **Uzbekistan:** In 2018-2019, the Executive Committee of IFAS (the International Fund for Saving the Aral Sea) began work on improving the organisational structure and legal framework for regional cooperation, **necessary to intensify the promotion of an agreement between all countries of the Central Asia region** to ensure their practical implementation.

Status of Implementation

- Very high (91 to 100)
- High (71 to 90)
- Medium-high (51 to 70)
- Medium-low (31 to 50)
- Low (11 to 30)
- Very low (0 to 10)
- No data
- Not applicable

n/a = not applicable
 Very low (0-10) Low (20-30)
 Medium-low (40-50) Medium-high (60-70) High (80-90) Very high (100)

Table 5 Transboundary organisation mentioned by 16 facilitated countries (UNEP-DHI, 2021)

Name of country	Name of organisation	Transboundary arrangement
Bangladesh	Joint River Commission (1972)	Ganges Water Sharing Treaty (water sharing)
Bangladesh, Bhutan, India and Nepal	Joint Working Group	Ganges-Brahmaputra-Meghna Basin: Teesta Treaty and others (transboundary water management and hydropower)
Malaysia and Thailand	Joint Committee and Joint Steering Committee	Sg. Golok Malaysia-Thailand (management of shared basin)
Kyrgyzstan and Kazakhstan	Commission of the Kyrgyz Republic and the Republic of Kazakhstan (2000)	River Chu and Talas (water management facilities and shared water supply)
Kyrgyzstan and Uzbekistan	Commission on the interstate use of Orto-Tokoy	Orto -Tokoy (Kasansay reservoir) – technical safety of reservoir
Cambodia, Lao PDR, Thailand and China	Mekong River Commission (MRC) consist of 3 bodies: Council, Joint Committee and Secretariat	Mekong River Basin (facilitate cooperation between countries and as knowledge hub on water resources management that helps to inform the decision-making process based on scientific evidence)
Nepal and India	<ul style="list-style-type: none"> Joint Standing Technical Committee (JSTC) Joint Committee on Inundation and Flood Management (JCIFM) 	Sharing water and developing a multipurpose project on a border river
Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan	Interstate Commission for Water Coordination of Central Asia (ICWC), with 5 executive bodies: BWO "Amudarya", BWO "Syrdarya", SIC, Secretariat and CMC.	Aral Sea basin (to make binding decisions on current and future issues of interstate water allocation and water use)
Turkmenistan and Afghanistan	Joint commission (meeting twice a year)	Murgab river

Section 3: Management instruments

Data and information sharing

3.2d: Transboundary data and information sharing between countries

- 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.).

		Very low (0)	Low (20)	Medium-low (40)	Medium-high (60)	High (80)	Very high (100)
3.2d	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.	All relevant data and information are online and accessible between countries.

Table 6 Progress in establishing Management Instruments for IWRM in 16 facilitated countries



Facilitated countries	Score based on elements in Management Instruments								
	3.1 National level					3.2 Other levels			
	a. water availability monitoring	b. Sustainable water use	c. Pollution control	d. Ecosystems management	e. Disasters risk reduction	a. Basin management	b. Aquifer management	c. In-country data sharing	d. Transboundary data sharing
Nepal	50	30	20	40	40	20	20	60	40
Georgia	50	60	40	50	50	0	0	80	20
Kyrgyzstan	30	60	60	60	40	20	40	40	40
Mongolia	50	50	40	30	40	50	40	50	40
Viet Nam	60	50	40	40	60	40	40	30	40
Tajikistan	50	60	40	40	50	50	50	40	50
Pakistan	60	50	20	30	70	60	40	60	50
Cambodia	70	70	70	70	70	40	20	60	50
Malaysia	60	50	60	60	60	60	40	70	60
Uzbekistan	70	60	50	60	70	60	60	60	50
The Philippines	50	70	70	50	90	50	50	50	n/a
Bangladesh	90	60	50	60	90	40	40	80	40
Turkmenistan	70	50	50	60	60	60	60	80	80
Indonesia	60	70	60	60	70	70	60	60	60
Lao People's Democratic Republic	70	60	80	80	60	70	30	80	60
China	80	80	80	80	90	80	80	70	70

Five countries mentioned that data and information sharing agreements between transboundary countries have been implemented adequately (score 60 and above, score 3.2.d, Table 6):

- Malaysia mentioned that data sharing between countries was available for specific transboundary basins, such as the Sungai Golok Basin, as shown in the Malaysia-Thailand Collaboration Project.
- Bangladesh mentioned that data and information sharing arrangements between China, India, Bangladesh, and Nepal exists but sharing is limited to hydro-morphological and meteorological data.
- Kyrgyzstan mentioned that Chu-Talas Water Management Commission shared information and data through website in English and Russian, which allows the sharing of knowledge regarding the Commission’s activity and legal documents.
- Lao PDR mentioned that data and information sharing between Mekong countries was based on the National Sustainable Statistical Development Strategic Plan 2016-2025 with a vision to 2030 and it is carried out through Statistical Data and Metadata Exchange (SDMX).
- Cambodia mentioned that the Ministry of Water Resources and Meteorology (MOWRAM) had the mandate to provide data and information on hydrometeorology, floods, and droughts to the public and the Mekong River Commission.

n/a = not applicable

Very low (0-10)

Low (20-30)

Medium-low (40-50)

Medium-high (60-70)

High (80-90)

Very high (100)

Section 4: Financing

Status of financing for water resources development and management

4.2c: Financing for transboundary cooperation

- 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.

		Very low (0)	Low (20)	Medium-low (40)	Medium-high (60)	High (80)	Very high (100)
4.2c	Financing for transboundary cooperation	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 organisation/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.

Table 7 Progress in establishing Financing for IWRM in 16 facilitated countries (UNEP-DHI, 2021)



GWP Facilitated Countries	Score based on elements in financing					
	4.1 National level		4.2 Subnational			
	a. Water resources infrastructure budget at national	b. water management budget at national	a. Water resources infrastructure budget at subnational	b. Revenue raising for IWRM at subnational	c. Transboundary financing	d. IWRM basin budget at subnational
Kyrgyzstan	20	20	20	30	30	20
Nepal	40	40	20	40	n/a	20
Georgia	40	40	40	20	n/a	40
Mongolia	40	30	40	40	40	30
Uzbekistan	50	30	40	30	50	20
The Philippines	30	40	20	60	n/a	40
Tajikistan	50	50	30	40	40	40
Bangladesh	80	70	50	40	30	30
Cambodia	70	60	50	50	40	40
Malaysia	70	60	70	40	n/a	20
Pakistan	60	60	60	60	20	60
Viet Nam	60	40	60	40	100	40
Lao People's Democratic Republic	40	60	30	80	100	40
Indonesia	80	70	70	70	60	60
Turkmenistan	80	70	80	70	100	80
China	90	80	80	80	80	80

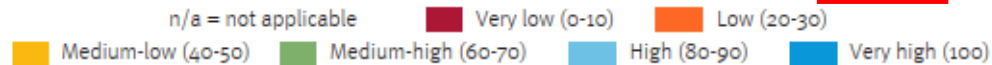
Six countries⁴⁹ mentioned that financing for transboundary cooperation within the countries as limited (score 40 and below, question 4.2.c, table 7). Bangladesh, Vietnam, and Uzbekistan reported constraints and areas needing improvement that are related to:

- Inadequate budget for transboundary cooperation projects and their development.
- Need for enhanced transboundary cooperation among upstream and downstream countries, an essential matter since they are reliant on international rivers with more than 60 percent of Vietnam’s total average yearly surface water discharge generated outside the country.
- Necessity to create a regional financial structure of the Fund (e.g., a special Investment Bank for the Aral Sea Basin) for IFAS to fully function.

On the other hand, Turkmenistan and Lao PDR rated this at the highest tier. The two countries that cited positive progress on financing for transboundary management:

- Lao PDR mentioned the cooperation fee of transboundary rivers at the national level, and that especially Mekong and Lancang-Mekong cooperation is running very well.
- Turkmenistan mentioned the actual contribution of Turkmenistan is 100 percent as stated in the agreements on the share of financing of the riparian countries of joint bodies, projects and activities on the transboundary rivers Amu Darya and Tejen (Gerirud).

n/a = not applicable



Key transboundary findings from 6.5.1

Success factors for transboundary cooperation (primarily drawn from country free text reporting)

- **Regional frameworks:** regional frameworks such as the Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC), the Regional Water Resources Policy (WARWP) of the Economic Community of West African States (ECOWAS) and the European Water Framework Directive (WFD) give members a common commitment, which **ensures that transboundary neighbours within the framework agreements are exchanging lessons learned and working towards the same goals.**
- **National processes and priorities** such as IWRM plans, information systems and financing can enhance the potential for, and contribute to, transboundary cooperation, since **national capacity in these areas can be drawn upon in transboundary water management.**
- **Integrated national and transboundary basin/aquifer management:** activities to enhance capacity for management of transboundary basins and aquifers naturally support national-level capacity development, and vice versa.
- **Data- and information-sharing:** Establish data- and information-sharing agreements between riparian States, as a minimum level of transboundary collaboration, which can be a basis for broader cooperation. A third-party neutral broker may be helpful to facilitate data- and information-sharing; organize joint visits (e.g. joint water-quality monitoring visits); develop joint data- and information-sharing platforms, with agreed protocols for data-sharing; and collaborate on flood warning and forecasting initiatives.

Key transboundary findings from 6.5.1

Success factors for transboundary cooperation (cont'd)

- **International conventions:** the Convention on the Protection and Use of Transboundary Watercourse and International Lakes (Water Convention) and the United Nations Convention on the Law of Non-navigational Uses of International Watercourses can **provide a platform for exchanging experiences and a basis for negotiating further arrangements.**
- **Aquifers:** incorporating transboundary groundwater into transboundary surface-water arrangements, and establishing groundwater working groups in surface-water institutional arrangements, offers a “quick win” in terms of triggering a holistic approach to water management.
- **Donor or third-party facilitated activities** can provide much needed impetus to accelerate cooperation. Activities include projects involving technical studies; joint visits; development of monitoring frameworks; drafting of letters of intent or memoranda of understanding (MoUs).
- **Financing:** Create political awareness about the need for **stable long-term financing of transboundary water management arrangements**, and the tangible benefits of such cooperation across a range of SDGs; ensure there is a legal body that can attract and manage finances, supported by a clear and transparent legal framework and mandate.

Taking SDG 6.5 forward

- Maintain alignment between efforts to advance 6.5.1 and to advance 6.5.2
- Coordination between levels is important
 - Integration between levels is key to ensuring resources flow to where they are most needed and can be most effective.
 - Regional dialogue on SDG 6.5.2: with UNECE and UNESO (More expected)

a water secure world

THANK YOU