

## Reporting on the global SDG indicator 6.5.2

### EXPLANATORY NOTE<sup>1</sup>

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#### A. Background

In 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), including SDG 6 to ensure availability and sustainable management of water and sanitation for all.

To review progress towards the SDGs, United Nations Member States, through the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs), developed in late 2015 and early 2016, a global indicator framework, which was subsequently adopted by the United Nations Statistical Commission in March 2016.

Target 6.5 calls for countries to implement integrated water resources management at all levels, including through transboundary cooperation, as appropriate. To measure progress on transboundary cooperation in accordance to target 6.5, indicator 6.5.2 was adopted. The indicator is defined as the “*percentage of transboundary basin<sup>2</sup> area with an operational arrangement for transboundary cooperation*”.

For SDG 6, UN-Water has been coordinating the technical input to the IAEG-SDGs on the relevant indicators and the methodologies for their measurement. UNECE and UNESCO have led the development of the step-by-step methodology to calculate indicator 6.5.2. For each indicator, the IAEG-SDGs has proposed custodian agencies at the global level. Given their mandate on transboundary water issues, UNECE and UNESCO have been proposed as custodian agencies for indicator 6.5.2. Recognizing the importance of integration across SDG 6, the relevant custodian agencies for this goal are collaborating under the Integrated Monitoring of Water and Sanitation Related SDG Targets (GEMI), operating under the UN-Water umbrella.<sup>3</sup>

Reporting through the present template will help to gather information on the progress on transboundary cooperation under Sustainable Development Goal (SDG) 6, target 6.5 in accordance with global indicator 6.5.2. It will also contribute to the UN-Water SDG 6 Integrated Monitoring initiative GEMI.

#### B. Content of the template

In order to collect complete information, simplify the task of reporting and streamline the compilation of information received by countries, the template is shaped as a questionnaire to be filled out.

The template is divided into four parts:

- Section I - Calculation of SDG indicator 6.5.2
- Section II - Information on each transboundary basin or group of basins
- Section III - General information on transboundary water management at the national level
- Section IV - Final questions

While Section I of the template has been prepared by UNECE and UNESCO in the framework of the UN-Water’s indicators development activities in support of the Inter-Agency Expert Group on

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<sup>1</sup>This is an unofficial translation. To view the original document in English, please visit [www.sdg6monitoring.org/news?category=Resources](http://www.sdg6monitoring.org/news?category=Resources). For any questions or feedback, please contact [francesca.bernardini@unece.org](mailto:francesca.bernardini@unece.org) or [a.makarigakis@unesco.org](mailto:a.makarigakis@unesco.org)

<sup>2</sup>**Transboundary basins** are basins of transboundary waters, that is, of any surface waters (notably rivers, lakes) or groundwater/aquifers which mark, cross or are located on boundaries between by two or more States.

<sup>3</sup>For more information, see <http://www.unwater.org/gemi/en/>.

SDGs (IAEG-SDGs), Sections II to IV are based on a questionnaire developed by Member States in the framework of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), serviced by UNECE, to monitor progress on transboundary cooperation and implementation of the Convention.<sup>4</sup>

Questions can be either “closed”, Yes /No, with appropriate boxes to tick; “open”, requiring further information to be supplied, indicated by the words in square brackets [fill in]; or a combination of both.

Depending on the country situation, it will not always be necessary to fill in extra information where space is provided for this. Please answer open questions very briefly, and in less than 200 words, using bullet points as appropriate. The reporting country can make reference to the reporting under other multilateral environmental agreements to which the country is a Party.

### **C. Who should report and how?**

All countries having transboundary basins in their territory are invited to report.

All reporting countries are kindly invited, when possible, to fill all sections of the template, as they allow outlining a complete picture of the situation concerning transboundary water cooperation. The overall template can be useful to track progress more closely beyond the indicator value and better describe the current baseline. This is valuable also because inevitably the indicator is based on a number of criteria defining minimum thresholds and the information in Sections II to IV can allow tracking progress towards the different criteria.

Section II will need to be completed for each transboundary basin, (i.e. basin of rivers and lakes or aquifers which mark, cross or are located on boundaries between by two or more States)(please just copy the template for these questions and fill out again for each additional transboundary basin). Countries may coordinate responses with other States with which they share transboundary basins or even prepare a joint report for shared basins.

### **D. Use of the reported information**

Reporting has primarily a national importance and usefulness to inform decision-making at the national and transboundary level.

At the global level, data collected through this reporting will be elaborated to define the global baseline for the status of transboundary cooperation in accordance to indicator 6.5.2. Results, including synthesis reports, will be submitted to the High Level Political Forum in July 2018 which will focus, among others, on the in depth review of SDG 6.

A discussion on the advancement of transboundary cooperation worldwide considering the results of the reporting exercise will also take place in the framework of the eight session of the Meeting of the Parties to the Water Convention, to be held at the end of 2018.

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<sup>4</sup>The Water Convention aims to protect and ensure the quantity, quality and sustainable use of transboundary water resources by facilitating cooperation. Originally negotiated as a regional instrument for the UNECE region, the Convention turned into a universally available legal framework for transboundary water cooperation, following an amendment procedure. As of 1st March 2016, all United Nations Member States can accede to the Convention (for more information, see <http://www.unece.org/env/water/>).

**E. Deadline for reporting**

Countries are invited to submit their filled in template by **15 May 2017** to the United Nations Economic Commission for Europe (UNECE) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Addresses:

United Nations Economic Commission for Europe (UNECE) Palais des Nations 1211 Geneva 10 Switzerland	United Nations Educational, Scientific and Cultural Organization (UNESCO) 7 Place de Fontenoy Paris 75015 France
E-mails : <a href="mailto:transboundary_water_cooperation_reporting@unece.org">transboundary_water_cooperation_reporting@unece.org</a>	<a href="mailto:transboundary_water_cooperation_reporting@unesco.org">transboundary_water_cooperation_reporting@unesco.org</a>

## Reporting on the global SDG indicator 6.5.2

### TEMPLATE

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Country name: [Pakistan]

#### Section I. Calculation of SDG indicator 6.5.2

##### a. Methodology

This section allows for the calculation of the Sustainable Development Goal global indicator 6.5.2, which is defined as *the proportion of transboundary basins are a with an operational arrangement for water cooperation*. The information gathered in Section II, will help in completing this section. The Step-by-step monitoring methodology for SDG indicator 6.5.2<sup>5</sup>, developed by UNECE and UNESCO in the framework of UN Water, can be referred to for details on the necessary data, the definitions and the calculation.

The value of the indicator at the national level is derived by **adding up the surface area in a country of those transboundary surface water catchments and transboundary aquifers (i.e. ‘transboundary’ basins’) that are covered by an operational arrangement and dividing the obtained area by the aggregate total area in a country of all transboundary basins (both catchments and aquifers)**.

**Transboundary basins** are basins of transboundary waters, that is, of any surface waters (notably rivers, lakes) or groundwaters which mark, cross or are located on boundaries between by two or more States. For the purpose of the calculation of this indicator, for a transboundary river or lake, the basin area is determined by the extent of its catchment. For groundwater, the area to be considered is the extent of the aquifer.

An “**arrangement for water cooperation**” is a bilateral or multilateral treaty, convention, agreement or other formal arrangement among riparian countries that provides a framework for cooperation on transboundary water management.

For an arrangement to be considered “**operational**” all the following criteria needs to be fulfilled:

- There is a joint body, joint mechanism or commission (e.g. a river basin organization) for transboundary cooperation,
- There are regular (at least once per year) formal communications between riparian countries in form of meetings (either at the political or technical level);
- There is a joint or coordinated water management plan(s), or joint objectives have been set, and
- There is a regular (at least once per year) exchange of data and information.

##### b. Calculation of indicator 6.5.2

Please list in the tables below the transboundary basins (rivers and lakes and aquifers) in your country’s territory and provide the following information for each of them:

- the country/ies with which the basin is shared;
- the surface area of these basins (the catchment of rivers or lakes and the aquifer in the case of groundwater) within the territory of your country (in km<sup>2</sup>);
- the surface area of these basins within the territory of your country which is covered by a cooperation arrangement that is operational according to the above criteria (please consider the replies to the questions in Section II, in particular questions 1, 2, 3, 4 and 6).

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<sup>5</sup> Available at <http://www.unwater.org/publications/publications-detail/en/c/428764/>.

In case an operational arrangement is in place only for a sub-basin or portion of a basin, please list this sub-basin just after the transboundary basin it is part of. In case there is an operational arrangement for the whole basin, do not list sub-basins in the table below.

**Transboundary basin (river or lake) [please add rows as needed]**

Name of the transboundary basin / sub-basin	Countries shared with	Surface area of the basin / sub-basin (in km <sup>2</sup> ) within the territory of the country	Surface area of the basin / sub-basin (in km <sup>2</sup> ) covered by an operational arrangement within the territory of the country
Indus River Basin	1. China, 2. India, 3. Afghanistan	Basin Area 1,120,000 km <sup>2</sup> Pakistan 5,20,000 km* (40%)	Pakistan 4,32,545 km <sup>2</sup>
Kabul River Basin/ Sub basin of the Indus River	Afghanistan	Basin Area 94,315 km <sup>2</sup> Pakistan 42,604 km <sup>2</sup> (45.15%)	-
Gomal River Basin	Afghanistan	Basin Area 40,232 km <sup>2</sup> Pakistan 28,726 km <sup>2</sup> (71.4%)	-
Kurram River Basin	Afghanistan	Basin Area 25,471 km <sup>2</sup> Pakistan 16,131 km <sup>2</sup> (63.3%)	-
Pashin Lora River Basin	Afghanistan	Basin Area 23,770 km <sup>2</sup> Pakistan 19,069 km <sup>2</sup> (80.22%)	-
Abdul Wahab River Basin	Afghanistan	Basin Area 2871 km <sup>2</sup> Pakistan 1695 km <sup>2</sup> (59%)	-
Ghori River Basin	Afghanistan	Basin Area 437 km <sup>2</sup> Pakistan 140 km <sup>2</sup> (32 %)	-
Kundar River Basin	Afghanistan	Basin Area 9,962 km <sup>2</sup> Pakistan 3,059 km <sup>2</sup> (30.7 %)	-
Kand River Basin	Afghanistan	Basin Area 3,382 km <sup>2</sup> Pakistan 2,040 km <sup>2</sup>	-

\*This also includes the Indus Basin area in Azad Jammu & Kashmir and Gilgit Baltistan.

		(60.32%)	
Kadnai River Basin	Afghanistan	Basin Area 9,274 km <sup>2</sup>	-
		Pakistan 4,005 km <sup>2</sup> (43.19%)	
<b>Total surface area of transboundary basins / sub-basins of rivers and lakes covered by operational arrangements within the territory of the country ( in km<sup>2</sup>)</b> [A](do not double count sub-basins)			4,32,545 km <sup>2</sup>
<b>Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km<sup>2</sup>)</b> [B] (do not double count sub-basins)		6,37,469 km <sup>2</sup>	

#### Transboundary aquifers [please add rows as needed]

Name of the transboundary aquifer	Countries shared with	Surface area (in km <sup>2</sup> ) <sup>6</sup> within the territory of the country	Surface area (in km <sup>2</sup> ) covered by an operational arrangement within the territory of the country
Indus Plain Aquifer	India	2,80,996 km <sup>2</sup>	-
<b>Total surface area of transboundary aquifers covered by operational arrangements within the territory of the country (in km<sup>2</sup>)</b> [C]			-
<b>Total surface area of transboundary aquifers within the territory of the country (in km<sup>2</sup>)</b> [D]		2,80,996 km <sup>2</sup>	-

#### Indicator value for the country

$$((A+C)/(B+D)) \times 100\% = ((4,32,545 + 0) / (6,37,469 + 2,80,996)) \times 100 = 47\%$$

<sup>6</sup>For a transboundary aquifer, the extent is derived from the aquifer system delineation which is commonly done relying on information of the subsurface (notably the extent of geological formations). As a general rule, the delineation of aquifer systems is based on the delineation of the extent of the hydraulically connected water-bearing geological formations. Aquifer systems are three-dimensional objects and the aquifer area taken into account is the projection on the land surface of the system. Ideally, when different aquifer systems not hydraulically connected are vertically superposed, the different relevant projected areas are to be considered separately, unless the different aquifer systems are managed conjunctively.

**Additional information**

If the respondent has comments that clarify assumptions or interpretations made for the calculation, or the level of certainty of the spatial information, please write them here:

**Spatial information**

If a map (or maps) of the transboundary surface water catchments and transboundary aquifers (i.e. 'transboundary basins') is available, please attach them. Ideally, shape files of the basin and aquifer delineations that can be viewed in Geographical Information Systems should be sent.

River Name	Total Catchment Area km <sup>2</sup>	Catchment Area in Pakistan km <sup>2</sup>	Catchment Area Outside Pakistan km <sup>2</sup>	Shares With	Comments
Kabul	94,490	39,258	55,232	Afghanistan	Part of Indus Basin
Kurrum	25,739	16,182	9,557	Afghanistan	Part of Indus Basin
Gomal	40,210	31,583	8,627	Afghanistan	Part of Indus Basin
Arghastan (Tributary of Hilmand River)	76,517	5,209	71,308	Afghanistan	Part of Hilmand Basin
Hamun-i-Lora	74,784	28,168	46,616	Afghanistan	Independent Closed Basin
Hamun-i-Mashkel/Rakshan	120,968	83,996	36,972	Iran	Independent Closed Basin
Shela Hamun	-	44,240	-	Iran	Independent Closed Basin
Dasht River	30,776	24,391	6,385	Iran	Drains in Arabian Sea directly
Bahu Kalat	13,667	304	13,363	Iran	Drains in Arabian Sea directly
Indus River	863,647	514,131	349,516	China,India,Afghanistan,Nepal	Excluding Pangong TSO
Tarim	-	2105	-	China	-
Aral Sea	-	93	-	Afghanistan,China,Kazakhstan, Kyrgyzstan,Tajikistan,Turkmeni stan,Uzbekistan	-



## Section II. Information on each transboundary basin or group of basins

Please complete this second section for each transboundary basin (river, lake or aquifer) or for group of basins covered by the same agreement or arrangement and where conditions are similar. It might also be convenient to group basins or sub-basins for which your country's share is very small.<sup>6</sup> In some instances, you may provide information on both a basin and one or more of its sub-basins, for example, where you have agreements<sup>7</sup> on both the basin and its sub-basin. You may coordinate your responses with other States with which your country shares the basin or aquifer or even prepare a joint report for shared basins. General information on transboundary water management at the national level should be provided in Section III and not repeated here.

Please reproduce the whole Section II with its questions for each transboundary basin, river, lake or aquifer, or group of basins for which you will provide a reply.

**Name of the transboundary basin, river, lake or aquifer, or group thereof, list of the riparian States, and country's share of the basin: [fill in]**

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin?

One or more agreements or arrangements exist and are in force

Agreement or arrangement developed but not in force

Agreement or arrangement developed, but not in force for all riparians

*Please insert the name of the agreement or agreements or arrangements:[fill in]*

**(Indus Waters Treaty 1960)**

Agreement or arrangement is under development

No agreement

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<sup>6</sup> In principle. Section II should be submitted for every transboundary basin, river, lake or aquifer, in the country, but States may decide to group basins in which their share is small or leave out basins in which their share is very minor, e.g., below 1 per cent.

<sup>7</sup> In Section II, "agreement" covers all kinds of treaties, conventions and agreements ensuring cooperation in the field of transboundary waters. Section II can also be completed for other types of arrangements, such as memorandums of understanding.

If there is no agreement or arrangement or it is not in force, please explain briefly why not and provide information on any plans to address the situation: [fill in]

(There are no agreements with China and Afghanistan. No dispute on water sharing arose with these countries to date. Pakistan has been interacting with Afghanistan to reach an agreement on water sharing. The efforts have not been successful so far due to Afghanistan's troubled conditions but are continuing.

The upper most part of the Indus basin lies in China having an area of 88,000 km<sup>2</sup>. From the Chinese territory the Indus traverses through India with elevations ranging from 4700 to 2450 meters. In the topographical/climatological setting the need of the agreement is not felt with China).

If there is no agreement or arrangement and no joint body for the transboundary basin, river, lake or aquifer then jump to question 4; if there is no agreement, but a joint body then go to question 3.

Questions 2 and 3 to be completed for each bilateral or multilateral agreement or arrangement in force in the transboundary basin (river, lake or aquifer) or group of basins or sub-basins

2. (a) Does this agreement or arrangement specify the basin area subject to cooperation?

Yes  No

If yes, does it cover the entire basin, or group of basins, and all riparian States?

Yes No

If not, what does it cover? [fill in]

(Covers only the Eastern Rivers, (Ravi, Beas and Sutlej) and the Western Rivers, (Chenab, Jhelum and Indus).

Or, if the agreement or arrangement relates to a sub-basin, does it cover the entire sub-basin?

Yes No

Which States (including your own) are bound by the agreement or arrangement? *(Please list)*: [fill in]

**(Pakistan and India).**

(b) Are aquifers (or groundwater bodies) covered by the agreement/arrangement?

Yes                      No ✓

(c) What is the sectoral scope of the agreement or arrangement?

All water uses

A single water use or sector

Several water uses or sectors

*If one or several water uses or sectors, please list (check as appropriate)*

**Water uses or sectors**

Industry

Agriculture

Transport (e.g., navigation)

Households

Energy: hydropower

Tourism

Nature protection

Other *(please list)*: [fill in]

(d) What topics or subjects of cooperation are included in the agreement or arrangement?

**Procedural and institutional issue**

Dispute and conflict prevention and resolution

Institutional cooperation (joint bodies)

Consultation on planned measures

Mutual Assistance

**Topics of cooperation**

- Joint vision and management objectives
- Joint significant water management issues
- Navigation
- Environmental protection (ecosystem)
- Water quality
- Water quantity or allocation
- Cooperation in addressing floods
- Cooperation in addressing droughts
- Climate change adaptation

**Monitoring and exchange**

- Joint assessments
- Data collection and exchange
- Joint monitoring
- Maintenance of joint pollution inventories
- Elaboration of joint water quality objectives
- Common early warning and alarm procedures
- Exchange of experience between riparian States
- Exchange of information on planned measures

**Joint planning and management**

- Development of joint regulations on specific topics
- Development of international or joint river, lake or aquifer basin management or action plans
- Management of shared infrastructure
- Development of shared infrastructure
- Other (*please list*): [fill in]

(e) What are the main difficulties and challenges that your country faces with the agreement or arrangement and its implementation, if any (*please describe, if applicable*): [fill in]

**(Lack of Indian Cooperation in implementing the Treaty design criteria for run-of-river hydroelectric plants and plants incorporated in storage works, lack of willingness to share part of flood data, obstruction/resistances in Pakistan access to the forums of Court of Arbitration and Neutral Expert for difference/dispute resolution)**

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [fill in]

**(The Permanent Indus Commission has been successful in holding the meetings at regular intervals and exchange of data between the two countries. Some cases, for instance, Salal Hydroelectric Plant (HEP) Baglihar HEP and Kishenganga HEP, etc, have been resolved under the Treaty arrangement, initially India was willing to modify its designs of the projects on which Pakistan had objections subsequently Indian attitude became inflexible. Initially India was not blocking Pakistan's access to Treaty's dispute resolution mechanism but now it is using its influence and putting obstacles in Pakistan's access to this process.)**

(g) Please attach a copy of the agreement or arrangement or provide the web address of the document (please attach document or insert web address, if applicable): [fill in]

**(Available at the World Bank Website; <http://www.worldbank.org>).**

3. Is your country a member of an operational joint body or joint bodies for this agreement/arrangement?

Yes  No

If no, why not? (please explain): [fill in]

**Where there is a joint body (or bodies)**

(a) If there is a joint body, which kind of joint body (please tick one)?

Plenipotentiaries

Bilateral commission

Basin or similar commission

Other (please describe): [fill in]

(b) Does the joint body cover the entire transboundary basin or sub-basin, river, lake or aquifer, or group of basins, and all riparian States?

Yes                      No✓

(c) Which States (including your own) are member of the joint body?  
(please list) [fill in]

**(Pakistan and India).**

(d) Does the joint body have any of the following features (please tick the ones applicable)?

A secretariat

If the secretariat is a permanent one, is it a joint secretariat or does each country host its own secretariat? (Please describe): [fill in]

**(Under the Treaty both the countries are required to appoint a Commissioner who would be the representatives of their respective governments for all matters related to implementation of the Treaty and both Commissioners together form the Permanent Indus Commission (PIC)).**

**There is no joint Secretariat of PIC; each Commissioner has his own office and staff located in his own country, for assisting him in implementation of the Treaty).**

A subsidiary body or bodies

Please list (e.g. working groups on specific topics): [fill in]

Other features (please list): [fill in]

(e) What are the tasks and activities of this joint body?<sup>8</sup>

Identification of pollution sources

Data collection and exchange

Joint monitoring

Maintenance of joint pollution inventories

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<sup>8</sup> This may include tasks according to the agreement or tasks added by the joint body, or its subsidiaries. Both tasks which joint bodies coordinate and tasks which they implement should be included.

Setting emission limits	<input type="checkbox"/>
Elaboration of joint water quality objectives	<input type="checkbox"/>
Management and prevention of flood or drought risks	<input type="checkbox"/>
Preparedness for extreme events, e.g., common early warning and alarm procedures	<input checked="" type="checkbox"/>
Water allocation and/or flow regulation	<input checked="" type="checkbox"/>
Policy development	<input type="checkbox"/>
Control of implementation	<input type="checkbox"/>
Exchange of experience between riparian States	<input type="checkbox"/>
Exchange of information on existing and planned uses of water and related installations	<input checked="" type="checkbox"/>
Settling of differences and conflicts	<input checked="" type="checkbox"/>
Consultations on planned measures	<input type="checkbox"/>
Exchange of information on best available technology	<input type="checkbox"/>
Participation in transboundary EIA	<input type="checkbox"/>
Development of river, lake or aquifer basin management or action plans	<input type="checkbox"/>
Management of shared infrastructure	<input type="checkbox"/>
Addressing hydromorphological alterations	<input type="checkbox"/>
Climate change adaptation	<input checked="" type="checkbox"/>
Joint communication strategy	<input type="checkbox"/>
Basin-wide or joint public participation and consultation of, for example, basin management plans	<input type="checkbox"/>
Joint resources to support transboundary cooperation	<input type="checkbox"/>
Capacity-building	<input type="checkbox"/>
Any other tasks ( <i>please list</i> ): [fill in]	

(f) What are the main difficulties and challenges that your country faces with the operation of the joint body, if any?

Governance issues	<input type="checkbox"/>
<i>Please describe, if any:</i> [fill in]	
Unexpected planning delays	<input type="checkbox"/>
<i>Please describe, if any:</i> [fill in]	
Lack of resources	<input type="checkbox"/>

Please describe, if true: [fill in]

Lack of mechanism for implementing measures

Please describe, if true: [fill in]

Lack of effective measures

Please describe, if true: [fill in]

Unexpected extreme events

Please describe, if any: [fill in]

Lack of information and reliable forecasts

Please describe, if any: [fill in]

**(Pakistan has been requesting the information regarding inflows to the reservoirs and their water levels of the reservoirs on the Eastern and the Western Rivers but despite clear Treaty provisions putting India under obligation to supply such data, India has not been supplying the data since year 2001).**

Others (please list and describe, as appropriate): [fill in]

**(India is an upper riparian and general attitude is to avoid the implementation of design criteria for the hydropower plants it is constructing on the Western Rivers. According to the Treaty India is under obligation to design these plants according to the Treaty specified design criteria.**

**In order to slow down the implementation of the Treaty India avoids frequent meetings of the Commission despite Pakistan's requests and causes extended delays in implementing the tours of inspections).**

(g) If not all riparian states are members of the joint body how does the body cooperate with them?

No cooperation

They have observer status



Other (please describe): [fill in]

**(Under the Treaty the joint body, Permanent Indus Commission, is not mandated to interact with other riparian states, but both the countries on their own can interact with the other riparian states. Pakistan has taken up the matter of cooperation on trans-boundary matter with Afghanistan).**

(h) Does the joint body or its subsidiary bodies meet regularly?

Yes  No

If yes, how frequently does it meet? [fill in]

***(Generally once or twice in a year)***

(i) What are the main achievements with regards to the joint body? [fill in]

**( The Commission meetings affords opportunities of discussions on the issues/questions requiring resolution. This is the first step of dispute resolution mechanism. The tours of inspections afford direct knowledge of the site conditions of various works planned or under construction. In case the Commission is unable to resolve the questions/issues then either Commissioner is entitled to take the matter first to the two Governments and subsequently to a Neutral Expert or Court of Arbitration. Thus the Commission is part of the processes that either achieves resolution within the Commission or outside it).**

(j) Are representatives of international organizations invited to the meeting of the joint body (or bodies) as observers?

Yes No

(k) Did the joint body ever invite a coastal State to cooperate?

Yes No

If yes, please give details. If no, why not? [fill in]

**(The Treaty specifies the rights and obligations of the Parties for the use of waters of the Eastern and Western Rivers. The joint objective is that use of waters should be made in a manner that conforms with the Treaty provisions).**

4. Is there a joint or coordinated management plan (such as an action plan or a common strategy) or have joint objectives been set specifically on the transboundary waters subject to cooperation?

Yes  No

If yes, please provide further details: [fill in]

**(There is no joint action plan or common strategy for implementation of the Treaty, though we can say that the Treaty specifies the objectives which require the Parties to carry out use of waters in a manner that conforms to the Treaty provisions. Another important objective is that if questions/differences /disputes arise between the Parties these are to be resolved according to the dispute resolution mechanism of the Treaty which involves by discussing these in the meetings of the Commission or by discussions at the Government level and through one of the two forums specified by the Treaty i.e. Neutral Expert or Court of Arbitration).**

5. How is the transboundary basin, river, lake or aquifer protected, including the protection of ecosystems, in the context of sustainable and rational water use?

Afforestation

Restoration of ecosystems

Environmental flow norms

Groundwater measures (e.g. protection zones)

Other measures

**(surface flows are protected by law)**

6. (a) Does your country exchange information and data with other riparian States in the basin?

Yes  No

- (b) If yes, on what subjects are information and data exchanged?
- |  |                                     |
|--|-------------------------------------|
| Environmental conditions   | <input type="checkbox"/>            |
| Research activities and application of best available techniques                       | <input type="checkbox"/>            |
| Emission monitoring data   | <input type="checkbox"/>            |
| Planned measures taken to prevent, control or reduce transboundary impacts             | <input type="checkbox"/>            |
| Point source pollution sources   | <input type="checkbox"/>            |
| Diffuse pollution sources  | <input type="checkbox"/>            |
| Existing hydromorphological alterations (dams, etc.)                                   | <input checked="" type="checkbox"/> |
| Discharges   | <input checked="" type="checkbox"/> |
| Water abstractions   | <input checked="" type="checkbox"/> |
| Future planned measures with transboundary impacts, such as infrastructure development |                                     |
| Other subjects ( <i>please list</i> ): [fill in]                                       |                                     |

- (c) Is there a shared database or information platform?

Yes  No

- (d) Is the database publicly available?

Yes  No

*if yes, please provide the web address:* [fill in]

**(Data is shared on demand)**

- (e) What are the main difficulties and challenges to data exchange, if applicable? (*please describe*): [fill in]

**(Will, transparency and inaccuracies in data are the main issues).**

- (f) What are the main benefits of data exchange on the transboundary waters subject to cooperation? (*please describe*): [fill in]

**(It is useful in implementation of the Treaty and in Dispute**

**Resolution).**

7. Do the riparian States carry out joint monitoring in the transboundary basin, river lake or aquifer?

**Yes**    **No**✓

(a) If yes, what does the joint monitoring cover?

	Covered?	Hydrological	Ecological	Chemical
Border surface waters	-	-	-	-
Surface waters in the entire basin	-	-	-	-
Surface waters on the main watercourse	-	-	-	-
Connected aquifers (or groundwaters)	-	-	-	-
Unconnected aquifers (or groundwaters)	-	-	-	-

(b) If joint monitoring is carried out, how is this done?

- National monitoring stations connected through a network or common stations
- Joint and agreed methodologies
- Joint sampling
- Common monitoring network
- Common agreed parameters

(c) Please describe the main achievements regarding joint monitoring, if any [fill in]

(d) Please describe any difficulties experienced with joint monitoring: [fill in]

8. Do the riparian States carry out joint assessment of the transboundary basin, river, lake or aquifer?

Yes No✓

*If yes, please provide the date of the last or only assessment, the frequency and scope (e.g. surface waters or groundwaters only, pollution sources, etc.) of the assessment:*  
[fill in]

9. Have the riparian States agreed to use joint water quality standards?

Yes No✓

*If yes, is the basis an international or regional standard (please specify which) or has it been adapted from the national standards of the riparian States?*  
[fill in]

10. What are the measures implemented to prevent or limit the transboundary impact of accidental pollution?

Notification and communication

Coordinated or joint alarm system for accidental water pollution

Others (please list): [fill in]

No measures

*If not, why not? What difficulties does your country face in putting in place such measures?* [fill in]

**(Not covered under Indus Waters Treaty 1960 Pakistan is downstream riparian and such information is required to be supplied by India the upper riparian. However, the Indian attitude towards supply of information is not forthcoming and as there is no direct mention of accidental pollution in the Treaty, it is not expected of India to supply such information though India is under obligation to provide such information under Helsinki Convention 1992).**

11. What are the measures implemented to prevent or limit the transboundary impact of extreme weather events?

Notification and communication

Coordinated or joint alarm system for floods

Coordinated or joint alarm system for droughts

Joint climate change adaptation strategy

Joint disaster risk reduction strategy

Other (*please list*): [fill in]

No measures

*If not, why not? What difficulties does your country face in putting in place such measures?:* [fill in]

12. Are procedures in place for mutual assistance in case of a critical situation?

Yes  No

*If yes, please provide a brief summary:* [fill in]

**(In case of flood information India and Pakistan have signed an agreement under the Treaty under which India provides real time flood information to Pakistan for the agreed points on the Eastern and the Western Rivers for low, medium and high floods with increasing frequency of supply of information, with increase of flood intensity).**

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, river, lake or aquifer?

Yes  No

*If yes, how? (please tick all applicable) (Please note: if your country is a Party to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), you may refer to your country's report under that Convention):*

Stakeholders have observer status in a joint body

*If yes, please specify the stakeholders for each joint body:* [fill in]

Availability of information to the public

Consultation on planned measures or river basin management plans<sup>9</sup>

Public involvement

Other (*please specify*): [fill in]

**Please remember to complete Section II for each of the transboundary basins (rivers, lakes or aquifers). Please also remember to attach copies of agreements, if any.**

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<sup>9</sup> Or, where applicable, aquifer management plans.

### III. General information on transboundary water management at the national level

In this first section, you are requested to provide general information on transboundary water management at the national level. Information on specific transboundary basins, rivers, lakes or aquifers and agreements should be presented in section II and not repeated here.

1. (a) Does your country's national legislation refer to measures to prevent, control and reduce any transboundary impact?

Yes                      No ✓

*If yes, list the main national legislation: [fill in]*

- (b) Do your country's national policies, action plans and strategies refer to measures to prevent, control and reduce any transboundary impact?

Yes ✓                      No

*If yes, list the main national policies, action plans and strategies: [fill in]*

**Pakistan Vision 2025, National Flood Protection Plan-IV, Pakistan Environmental Protection Act 1997**

- (c) Does your country's legislation provide for the following principles?

Precautionary principle	Yes ✓	No
Polluter pays principle	Yes ✓	No
Sustainable development	Yes ✓	No

- (d) Does your country have a national licensing or permitting system for wastewater discharges and other point source pollution (*e.g., in industry, mining, energy, municipal, wastewater management or other sectors*)?

Yes ✓                      No



If yes, for which sectors? (please list): [fill in]

**(Industry, municipal, wastewater management, energy, mining).**

If not, please explain why not (giving the most important reasons) or provide information if there are plans to introduce a licensing or permitting system: [fill in]

If your country has a licensing system, does the system provide for setting emission limits based on best available technology?

Yes ✓      No

(e) Are the authorized discharges monitored and controlled?

Yes ✓      No

If yes, how? (Please tick the ones applicable):

Monitoring of discharges	<input checked="" type="checkbox"/>
Monitoring of physical and chemical impacts on water	<input checked="" type="checkbox"/>
Monitoring of ecological impacts on water	<input checked="" type="checkbox"/>
Conditions on permits	<input checked="" type="checkbox"/>
Inspectorate	<input checked="" type="checkbox"/>
Other means (please list): [fill in]	

If your country does not have a discharge monitoring system, please explain why not or provide information if there are plans to introduce a discharge monitoring system: [fill in]

(f) What are the main measures which your country takes to reduce diffuse sources of water pollution on transboundary waters (e.g., from agriculture, transport, forestry or aquaculture)? The measures listed below relate to agriculture, but other sectors may be more significant. Please be sure to include these under "others":

**(For most of the Indus Basin Pakistan is the lower riparian and it is the duty of the upper riparian to take measures to protect downstream riparian. For Chitral River**

*(sub basin of Kabul River basin) and Pishin Lora Pakistan is the upper riparian but these are sparsely populated and there is negligible sources of pollution to these streams).*

**Legislative measures**

Norm for uses of fertilizers

Norms for uses of manure

Bans on or norms for use of pesticides

Others (*please list*): [fill in]

**Economic and financial measures**

Monetary incentives

Environmental taxes (such as fertilizer taxes)

Others (*please list*): [fill in]

**Agricultural extension services**

**Technical measures**

*Source control measures*

Crop rotation

Tillage control

Winter cover crops

Others (*please list*): [fill in]

*Other measures*

Buffer/filter strips

Wetland reconstruction

Sedimentation traps

Chemical measures

Others (*please list*): [fill in]

**Other types of measures**

*If yes, please list*: [fill in]

(g) What are the main measures which your country takes to enhance water efficiency?

Please tick as appropriate (not all might be relevant)

- |   |                                     |
|---|-------------------------------------|
| A regulatory system regarding water abstraction | <input checked="" type="checkbox"/> |
| Monitoring and control of abstractions          | <input checked="" type="checkbox"/> |
| Water rights are clearly defined                | <input checked="" type="checkbox"/> |
| Water allocation priorities are listed          | <input checked="" type="checkbox"/> |
| Water-saving technologies                       | <input checked="" type="checkbox"/> |
| Advanced irrigation techniques                  | <input checked="" type="checkbox"/> |
| Demand management activities                    | <input checked="" type="checkbox"/> |
| Other means (please list)                       | <input type="checkbox"/>            |

(h) Does your country apply the ecosystems protection?

Yes  No

If yes, please describe how: [fill in]

**(Through relevant rules, policies, regulations which have been framed for the purpose).**

(i) Does your country take specific measures to prevent the pollution of groundwaters?

Yes  No

If yes, please list the most important measures: [fill in]

**(Implementation of rain water harvesting and implementation of protection measures of surface water from pollutants, part of which is recharged to the groundwater. Measurements of various pollutants like Arsenic, Sulphur, and other chemicals, etc).**

2. Does your country require transboundary environmental impact assessment (EIA)?

Yes  No

Does your country have procedures for transboundary EIA?

Yes                      No ✓

*If yes, please make reference to the legislative basis (please insert the name and section of the relevant laws). [fill in]*

3. Does your country have transboundary agreements or arrangements for the protection and/or management of transboundary waters (i.e., surface waters or aquifers), whether bilateral, multilateral and/or at the basin level?

Yes ✓                      No

*If yes, list the bilateral, multilateral and basin agreements (listing for each of the countries concerned): [fill in]*

**(Indus Waters Treaty 1960)**

#### Section IV. Final questions

1. What are the main challenges your country faces in cooperating on transboundary waters? *(Please describe)* [fill in]

2.

**(Lack of Indian Cooperation in implementing the Treaty; In general Pakistan is the lower riparian, the major upper riparians, are India and Afghanistan. Pakistan needs cooperation from India and Afghanistan on transboundary matters. Regarding the hydropower plants on the Western Rivers India is trying to avoid the Treaty specified design criteria which under the Treaty, India is under obligation to comply with. Similarly, India obstructs the provisions of information of the projects on the planning stage. Delays in convening of the meetings of the Commission and implementing tours of inspection is another feature. Overall India has a feet dragging approach towards honouring her obligations under the Treaty).**

**(Recently Afghanistan has agreed to engage and it is hoped that Pakistan and Afghanistan would be able to reach an understanding/agreement/arrangement on transboundary sharing of waters).**

2. What have been the main achievements in cooperation on transboundary

waters? What were the keys to achieving that success? *(Please describe concrete examples):* [fill in]

**(Some resolutions for which willingness to cooperate and make adjustments for incorporating the other Parties point of view was the key).**

3. Please include any additional information on the process of preparing the report (e.g., whether there was an exchange or consultation within the joint body or with riparian countries), in particular which institutions have been consulted *(please describe):*[fill in]

**In country consultations amongst various institutions took place in answering the questions. The institution include, MOW&P PCIW, WAPDA, IRSA.**

1. Ministry of Water and Power (MoW&P)
2. Office of Pakistan Commissioner for Indus Waters (PCIW)
3. Water and Power Development Authority (WAPDA)
4. Indus River System Authority (IRSA)

**(Under Indus Waters Treaty 1960, through the Permanent Indus Commission)**

4. If you have any other comments please add them here *(insert comments):* [fill in]

5. Name and contact details of the person(s) who filled out the questionnaire *(please insert):* [fill in]

<b>Sr No.</b>	<b>Names</b>	<b>Departments</b>	<b>Contact No.</b>
1	Mirza Asif Baig	Pakistan Commissioner for Indus Waters	+92-042-99212788
2	Mr. Shahid Hameed	Additional Chief Engineer Dams WAPDA	+92-042-9903701

3	Mr. Attiya-e-Dastgir	Senior Ecologist Environmental Cell WAPDA	+92-042-9920242
4	Mr. Usman-e-Ghani	Joint Commissioner for Indus Waters	+92-042- 99212786
5	Syed Muhammad Mehtar Ali Shah	Joint Secretary Ministry of Water Resources	+92-051-9244875
6	Dr. Talat Qazi	Deputy Engineering Advisor (Civil), Federal Flood Commission	+92-051-9244625

Date: [fill in]

Signature: [fill in]

Thank you very much for taking the time to complete this report.