GUIDE TO REPORTING UNDER THE WATER CONVENTION AND AS A CONTRIBUTION TO SDG INDICATOR 6.5.2

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# Introduction

## Why reporting on transboundary water cooperation?

Reporting under the Sustainable Development Goal (SDG) indicator 6.5.2 and under the Convention for the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) first took place in 2017. Following a review of the initial reporting exercise, it was decided at the 8th Session of the Meeting of the Parties to the Water Convention (Decision VIII/1, ECE 2018), that subsequent reporting exercises would take place every three years. Additionally, it was considered that – based on feedback from countries sharing transboundary waters –a guide to reporting could assist countries in completing the reporting template, while at the same time improve the overall quality and comparability of national reports.

The decision to develop a guide to reporting reflects a strong commitment to use reporting as a means by which to systematically review, and more effectively enhance, the implementation of the Convention at multiple levels:

* At national and transboundary levels, reporting:
	+ allows countries to identify specific basin needs, and in turn, helps determine how best to mobilise resources to support implementation activities, such as through capacity building and technical assistance;
* provides a means by which to assess any strategies and approaches to transboundary water cooperation at the national level.
* where a broad spectrum of national experts is involved in the reporting exercise, reporting can help develop a collective understanding of any transboundary water challenges and opportunities faced by a country, and, by systematically reviewing the current state of play, help mobilise the necessary actors into action.
* Given that the Water Convention is now open to all UN Member States, reporting can also offer a means by which countries can assess the extent to which their current progress on transboundary water cooperation is consistent with the provisions of the Water Convention; and therefore their “readiness” to become Party to the Convention. In turn, countries can use the reporting outcomes to compare their practices with the experiences of the Parties to the Convention, and therefore identify and tailor best practices to their particular needs.
* At the Convention level**,** reporting can:
	+ identify emerging implementation issues and difficulties across multiple transboundary waters, and allow countries to effectively and collectively respond to any challenges.
	+ offer a collective repository of lessons learned and good practices; and
	+ help keep the public informed of measures taken to implement the Convention and, through the synthesising and dissemination of results, increase the political attention to transboundary water cooperation both at national and international levels.

While reporting aims to monitor transboundary water cooperation, it is important to recognise at the outset that reporting takes place at the national level. Countries are therefore asked to provide their perspective, which is particularly important, when considering questions both related to the level of implementation of arrangements and the performance of joint bodies (Section II of the reporting template); as well as the questions related to national measures that have been put in place to support the implementation of any transboundary arrangements (Section III of the reporting template). Countries sharing a particular river, lake or aquifer may choose to coordinate their responses (see comments below), but ultimately, they may also have different views on progress towards transboundary water cooperation.

## Why the need for a guide?

The primary aim of this guide is to enhance the quality of national reports, which in turn should strengthen their usefulness in informing decision-/ policy-making processes related to transboundary water cooperation at national, basin or aquifer, regional and global levels. More specifically, the guide explains how the reporting template might be completed, clarifies key terminology, and provides practical examples of how certain questions might be answered. In addition, the guide offers guidance on how to organise the reporting process and how to utilise the reporting in order to maximise its impact. The guide is therefore designed to be a practical document for government experts that have the responsibility for conducting the reporting process and completing the template.

## Process of developing the guide

In seeking to maximise its usefulness, the guide was developed through an inter-governmental drafting group that brought together around 30 experts from Africa, Central Asia, Europe, Middle East, North and South America, and South-east Asia. Two meetings of the drafting group took place in Geneva in May and September 2019. During its first meeting, the drafting group reviewed an outline of the guide prepared by the Water Convention Secretariat. The Secretariat then developed a full draft of the Guide, which included individual inputs from members of the drafting group. This draft was circulated to countries sharing transboundary waters and other experts for comment. At the second meeting of the drafting group in September 2019, the drafting group reviewed the comments received on the initial draft. The text of the guide was subsequently revised by the end of September, and reviewed by the Water Convention’s Integrated Water Resources Management (IWRM) Working Group in October 2019, before the final version was published in December 2019. The process of developing the guide therefore reflects an open inter-governmental process where a wide range of viewpoints from both Parties and non-Parties informed the final output.

## Rationale for layout of the guide

The guide closely follows the structure of the reporting template. However, prior to covering the content of the reporting template, chapters two and three below consider the process of reporting and how to make the most out of the reporting process in order to advance transboundary water cooperation.

Chapter four then follows the template for reporting sections II to IV of the template and provides specific guidance on completing the questions contained therein. This is achieved by including an annotated version of the template that uses a numbering system in order to link the relevant paragraph of the guidance.

Where considered appropriate, guidance is offered on three key aspects of the guide: firstly, definitions are provided for certain key terms; secondly, suggestions on how countries might approach answering certain questions is provided; and thirdly, examples are given, which are drawn from the experiences of countries during the first reporting exercise. **It should be stressed at the outset that the guide merely offers guidance to countries – ultimately, countries must themselves decide how best to reflect their situation.**

## How does reporting under the Water Convention relate to SDG reporting, and SDG indicator 6.5.1 and 6.5.2 in particular?

As part of the SDG framework, the General Assembly adopted SDG 6 which seeks to ensure availability and sustainable management of water and sanitation for all by 2030 (UN, 2017). In order to monitor progress towards SDG 6, a set of eight targets and 11 indicators were developed (UN, 2017). These targets and indicators are monitored through UN-Water’s Integrated Monitoring Initiative, which brings together the United Nations organisations that are formally mandated to compile country data on the SDG 6 global indicators (UN-Water, 2019). Key objectives of the Integrated Monitoring Initiative are to develop methodologies and tools to monitor SDG 6 global indicators; to raise awareness at the national and global levels of SDG6 monitoring; to enhance technical and institutional capacity for monitoring; and to compile country data and report on global progress towards SDG 6 (UN-Water, 2019).

The most salient SDG 6 target in terms of transboundary water cooperation is target 6.5, which has the aim to implement IWRM at all levels, including through transboundary cooperation as appropriate, by 2030. SDG target 6.5 is monitored via two indicators: SDG indicator 6.5.1, which measures the degree of IWRM implementation (0-100); and SDG indicator 6.5.2, which measures the proportion of transboundary basin area with an operational arrangement for water cooperation. UN Environment were designated as custodian agency for SDG indicator 6.5.1, and ECE and UNESCO were designated as co-custodian agencies for the indicator 6.5.2.

The introduction of reporting under the Water Convention coincided with the adoption of the SDGs and their targets and indicators. In order to maximise synergies between reporting under SDG indicator 6.5.2 and the Water Convention, ECE and UNESCO therefore sought to co-ordinate both reporting processes. From a practical standpoint this meant that the reporting template for SDG indicator 6.5.2, and the reporting template under the Water Convention, were aligned through the use of the same reporting template. The figure below illustrates how that alignment was done, with section I focused on gathering data in order to calculate the SDG indicator 6.5.2 value; section II to III focused on the aspects of reporting most relevant to implementing the Water Convention; and section IV summarising the national situation and providing background information on the reporting process, e.g. who was responsible for completing the reporting template.

Section I Calculation of SDG indicator 6.5.2

*Calculation of SDG indicator 6.5.2 value for a)* ***transboundary rivers and lake basins*** *(table 1); and b)* ***transboundary aquifers*** *(table 2).*

*Countries can elaborate on transboundary river, lake and aquifers, and their operational arrangements, in section II*

Section II Transboundary basin and aquifer arrangements

*Questions to be completed for each agreement or arrangement covering a particular river or lake basin, or aquifer system, as well as sub-basins, parts of a basin or groups of basins where appropriate*

*Consider replies to question 1, 2, 3, 4 and 6 to verify the rivers, lakes and aquifers covered by operational arrangements based on “operationality criteria” in SDG indicator 6.5.2 methodology*

Section III National Water Management

*Policy-focused summary and questions on how template was completed*

*Questions relate to governance arrangements in place at the national level that concern transboundary waters*

Section IV Final Questions

In completing the full reporting template, i.e., section I on the calculation of SDG indicator 6.5.2 and sections II-IV), Parties to the Water Convention have the benefit that they can use one reporting template to report both on SDG indicator 6.5.2, and on progress in implementing the Water Convention. Other countries sharing transboundary waters can also benefit from completing the full reporting template as many of the questions contained in sections II-IV, and the terminology used, help to substantiate the calculation of SDG indicator 6.5.2. Additional questions also help to provide a fuller picture of progress on transboundary water cooperation within a country than can be ascertained from the calculation of the SDG indicator 6.5.2 alone, i.e.., Section I. **Therefore, completing the full template allows countries to capture a wider range of cooperative efforts than can be captured by the SDG indicator 6.5.2 methodology.**

Given the complementarity between these two reporting exercises, this guide has been developed in co-ordination with materials that support the completion of SDG indicator 6.5.2, and in particular the *SDG indicator reporting: step-by-step methodology (revised version “2020”)* (REF). Common definitions and explanations of key terminology contained in this guide and the step-by-step methodology are aligned to assist countries in completing both the SDG indicator 6.5.2 (section I), and sections II-IV below.

Within the framework of UN-Water’s Integrated Monitoring Initiative, reporting on 6.5.2 has also been co-ordinated with other SDG indicators, and 6.5.1 in particular. SDG 6.5.1 measures the implementation of IWRM at all levels, including transboundary. In relation to transboundary, countries are asked to report on the degree of IWRM implementation in their most important rivers, lakes and aquifers, including their arrangements for transboundary water management, any organisational frameworks that are in place, the degree to which data and information is exchanged, the level of financing for transboundary cooperation, and gender. Reporting on 6.5.1 and 6.5.2, while complementary, offers a fuller picture of IWRM implementation at both national and transboundary levels.

# Organising the reporting process

Experience during the first reporting exercise offers some guidance as to how the reporting might be organised, although much will depend on the particular country context. In some instance, a more basic reporting process might be justified due to, for example, the level of centralised knowledge and the number of transboundary waters shared, whereas a more detailed process may be warranted where data and information needs to be gathered from different national ministerial departments and/or sub-national entities.

Some general points to consider when organising the reporting process are provided below:

* **Designate a national focal point** (person or organisation) that has overall responsibility for co-ordinating the reporting exercise. The national focal point, such as the Ministry of Water, National Statistical Agency and/or the agency responsible for overseeing the entire SDG process, may vary depending on the country context.
* **Identify stakeholders** **that should be involved in the reporting exercise**, and consider possible sources of information. Section IV of the reporting template provides an indicative list of the types of institutions that may be consulted during the reporting exercise, which might include the ministry or authority responsible for water, the environment agency, a basin authority or authorities, local or provincial government, the national geological survey, non-water specific ministries (foreign affairs, finance, forestry, agriculture and/or energy), national statistical agency, civil society organisations, water user associations and the private sector.

**Organising the national reporting exercise in the Republic of Belarus**

In the Republic of Belarus, the Ministry of Natural Resources and Environmental Protection acted as the co-ordinator of the reporting exercise. The process of filling the reporting template was then carried out by sending the reporting template (or parts thereof) to the national organisations or agencies with responsibility for the relevant activities set out in the questionnaire. Where necessary, the Ministry of Natural Resources and Environmental Protection held informal consultations with these organisations or agencies to complete the reporting exercise.

**Organising the national reporting exercise in Chad**

Chad established a committee for reporting. Firstly, the committee was to identify the relevant ministries and other organisations that could assist with the reporting exercise. These ministries and other organisations included the Ministry of Water (Directorate for Water Resources and Directorate for Water Supply); Basin Organisations (Lake Chad Basin Commission, Niger Basin Authority, Nubian Sandstone Aquifer Authority); and the Ministry of the Environment (Directorate for Environmental Assessment, Directorate for Waste, Pollution and Nuisance, Directorate for the Conservation and Protection of Biodiversity and Ecosystems, Directorate for Climate Change Adaptation). Secondly, the Committee sent out the reporting template to the aforementioned ministries and other organisations. Members of the Committee then took responsibility for following up with each of the ministries and other organisations. The relevant parts of the template were either completed by ministries or other organisations, or the members of the Committee took responsibility for completing the responses in consultation with the ministries or other organisations. Thirdly, the completed template was finalised and reviewed by the Committee. If answers were missing or if any clarifications were needed the Committee followed up with the relevant ministry or other organisation. Finally, the Committee reviewed the report before submitting it.

* **Develop an indicative timeline for completion of the reporting exercise**. Reporting takes place every three years, with the deadline for submitting national reports set as 30 June. It is important that this deadline is respected because any late submissions compromises the ability of the Secretariat to fully analyse the national reports in advance of the relevant session of the Meeting of the Parties. The timeline below highlights key milestones that might be followed by countries to ensure a timely submission of their reports.
* **Where possible, engage with neighbouring countries sharing transboundary waters, joint bodies and regional organisations.** As noted early, in certain circumstances States may have differing opinion over the level implementation within a particular basin or aquifer. However, the quality of reporting can be improved by providing the opportunity for countries to compare their responses and, if appropriate, formulate for a common response. As the case of Hungary below illustrates, bilateral or basin institutions may provide a valuable forum by which to discuss the reporting exercise and identify and potential to co-ordinate national responses. In addition, regional organisations with a mandate related to transboundary water cooperation may be able to support the reporting process (see for example the experience of African Ministers Council on Water (AMCOW) and United Nations Economic and Social Commission for Western Asia (ESCWA), p. 9 below).

**How Hungary co-ordinated its national reporting exercise with other Danube riparian countries**

For section II of the reporting template, Hungary’s report was structured into one part relating to the Danube Basin, which encompassed the 1994 Convention on Co-operation for the Protection and Sustainable Use of the River Danube and the International Commission for the Protection of the Danube River; and seven additional parts that covered each transboundary commission that Hungary has with its riparian neighbours. These existing bilateral transboundary commissions were used to consult with neighbouring countries within the aim of harmonising the responses to section II of the reporting template. Colleagues responsible for reporting in neighbouring countries were contacted through the secretaries of the bilateral commissions and discussions on reporting took place either during regular commission meetings or by email. As there were some differences concerning the understanding of the questions, the national responses to each question were not identical. In some cases, however, Hungary’s original response was revised as a result of the discussions with its neighbours. The exercise was therefore helpful in understanding where similarities and differences existed between the countries on a particular transboundary water issue.

**Making a distinction between reporting for the first time and updating a previously submitted report**. Where a previous report has been submitted, the reporting exercise might be used as a means by which to enhance the existing submission. Countries might focus on addressing any gaps in the previous reports, or providing more detail responses to open questions. In addition, **where two or more countries sharing the same transboundary water(s) have submitted previous reports, they might use any subsequent reporting exercise as an opportunity to, where appropriate, harmonise their responses.**

**How to engage with ECE and UNESCO during the reporting process**

As noted above, ECE and UNESCO, through UN-Water’s Integrated Monitoring Initiative, have a mandate to support reporting under SDG indicator 6.5.2 and Water Convention. In supporting reporting, ECE and UNESCO, together with other partners, provide technical support, such as the organisation of regional and global workshops, that are designed to assist countries throughout the reporting exercise. ECE and UNESCO are also able to support countries with specific questions that they may have during the reporting exercise

Any queries related to the reporting process can be sent to:

* ECE - **transboundary\_water\_cooperation\_reporting@un.org**
* UNESCO - **transboundary\_water\_cooperation\_reporting@unesco.org**

Additional materials related to SDG indicator 6.5.2 are available at the following webpages:

* [www.sdg6monitoring.org/indicators/target-65/indicators652/](http://www.sdg6monitoring.org/indicators/target-65/indicators652/)
* **www.unece.org/water/transboundary\_water\_cooperation\_reporting.html**
* [**http://ihp-wins.unesco.org/documents/332**](http://ihp-wins.unesco.org/documents/332)**.**

# How to make the most out of reporting to advance transboundary cooperation

Reporting on transboundary water cooperation, especially for countries that share multiple transboundary waters with several neighbouring countries, can take a significant effort. It is therefore important that countries make the most of the reporting process and the benefits of reporting (see section 1.1 above) are maximised.

Opportunities to make the most out of reporting to advance transboundary water cooperation may manifest themselves at multiple levels:

* **At the national level**
	+ The process of reporting offers countries the opportunity to systematically review both their national and transboundary governance arrangements. The methodology of the reporting template means that a review not only identifies any gaps in the existing laws, policies and institutions related to transboundary water cooperation; but also, the challenges and successes in implementing those governance arrangements.
	+ If reporting is done in a consultative manner that engages a broad constituency of stakeholders it can have the benefit of helping those stakeholders develop a common understanding of existing challenges and opportunities related to transboundary water cooperation.
	+ The results from the reporting process offer important insights into how a country might advance national strategies for transboundary water cooperation. Countries might therefore consider synthesising the results of the reporting exercise into country factsheets that can be used to help inform national dialogues and decision-making process related to transboundary water cooperation (see for example SDG indicator 6.5.1 countries factsheets, at http://iwrmdataportal.unepdhi.org/iwrmmonitoring.html). In addition, an action plan might be developed in order to agree on priority areas that might be progressed prior the next reporting exercise.
* **At the transboundary level**
	+ Where the reporting process is co-ordinated with neighbouring countries, the benefits of consultation amongst stakeholders at the national level can also spread to the transboundary level. Countries can, for example, utilise the reporting process to reach a common understanding of progress in advancing transboundary water cooperation within a particular river, lake or aquifer system; or between two countries sharing several transboundary waters. As illustrated in the case of the Hungary, reporting might therefore be tabled at a meeting of any joint bodies for transboundary water cooperation. Additionally, meetings of joint bodies might provide an opportunity to, firstly, discuss the results of the reporting exercise; secondly, reach an agreement on key challenges and opportunities for advancing transboundary water cooperation; and thirdly, develop and monitor the implementation of an action plan by which to advance transboundary water cooperation.
* **At regional and global levels:**
	+ The outcomes of national reporting can inform policy dialogues at regional and global levels. For example, data and information gathered via reporting can inform activities under the Water Convention, including the Convention’s three yearly programmes of work (see ECE, 2019), and the activities of its working groups and other bodies, such as the Implementation Committee. To support the uptake of the results from the reporting exercise, the Water Convention Secretariat prepares a synthesis report based on the national reports (ECE, 2018a).
	+ Also at the global level, and within the SDG framework, the data and information gathered from national reports can inform the High-level Political Forum on Sustainable Development, the UN’s annual report on progress towards the SDGs (UN, 2018), and UN Water’s SDG 6 Synthesis Report on Water and Sanitation (UN-Water, 2018). In addition, the custodian agencies present the results of the reporting exercise in a report dedicated to SDG indicator 6.5.2 (ECE, UNESCO & UN-Water, 2018).
	+ Results from the reporting exercise can be used by regional organisations in order to inform their own reporting exercises or in order to facilitate dialogue on transboundary water cooperation at the regional level. For instance, AMCOW has introduced a harmonised process for monitoring and reporting on water and sanitation targets across several international agreements and regional commitments (AMCOW, 2019). Another example is how ESCWA has used the SDG indicator 6.5.2 reporting exercise to assess how to advance transboundary water cooperation within the Arab region (ESCWA, 2018).

**Tips on completing the reporting template**

The sections below offer guidance on completing specific questions and sections of the reporting template. A number of more generic tips for completing the template are provided here:

* **When answering open questions ensure that the responses are succinct whilst at the same time offering a “meaningful story”.**
* **Where appropriate provide links to further background information, such as the webpages of projects and programmes, river basin organisations, maps of transboundary waters, and the text of the agreements and other arrangements.**
* **Consider sharing drafts of the reporting template with ECE and UNESCO for feedback prior to formal submission.**
* **Plan carefully and in advance so as to ensure that reports are submitted by the June deadline.**
* **Check for inconsistencies in responses, particularly in relation to the SDG indicator 6.5.2 criteria for operationality and the detailed responses in section II, particular on questions 1 and 2 (basins and arrangements), 3 (joint bodies), 4 (objectives, strategies and plans), and 6 (data exchange).**

* + **Make sure to report on *all* transboundary rivers, lakes and aquifers even where an agreement or other arrangement and/or a joint body has not yet been established.**
	+ **There are no prizes for coming first! Reporting is a collective exercise designed to gain a *shared* understanding of progress in transboundary water cooperation and identify areas that might need support. Countries therefore do not benefit from either under- or over-estimating current progress in implementing cooperative arrangements.**

# Guidance on template for reporting under the Water Convention and SDG indicator 6.5.2 (Sections II to IV)

This chapter follows the template for reporting sections II to IV of the template and provides specific guidance on completing the questions contained therein. This is achieved by including an annotated version of the template that uses a numbering system in order to link the relevant paragraph of the guidance.

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| **SECTION II** [1]Does your country have transboundary agreements or arrangements for the protection and/or management of transboundary waters (i.e., rivers, lakes or groundwater), whether bilateral or multilateral? [2]Yes [ ] /No [ ] *If yes, list the bilateral and multilateral agreements or arrangements (listing for each of the countries concerned):* [fill in] [3] |

1. For guidance on completing section I, see *revised* *step-by-step methodology* (REF).
2. **What is a ‘transboundary agreement or arrangement for the protection and/or management of transboundary waters”?**

**Agreements and arrangements are formal commitments entered into by Parties in written form:** the term “agreement” refers to formal agreements falling under the scope of application of the 1969 Vienna Convention on the Law of Treaties, which the Parties intend to be governed by international law and are in written form (see ECE, 2013, para. 240). The *Guide to Implementing the Water Convention* goes on to state that, “the words “other arrangements” refers to less formal types of agreements as well as other forms of cooperation and mutual understandings”; and that, “other arrangements in no way are to be regarded as non-committal instruments” (ECE, 2013, para. 240).

**Agreements and arrangements can be called by many different names:** A key consideration in determining whether or not an instrument constitutes an “agreement or arrangement” is whether it constitutes a formal commitment, in written form, between the Parties. Less relevant is the name given to the instrument, which might include, convention, treaty, protocol, memorandum of understanding, joint declaration, exchange of letters or minutes (see ECE, UNESCO & UN-Water, p. 44).

**“Agreement or arrangements” may encompass, “cases in which provisions on transboundary water cooperation are part of a wider agreement on environmental protection or an agreement on economic cooperation”** (ECE, 2013, para. 240). For example, in 1998 Ecuador and Peru adopted the Agreement on Border Integration, Development and Neighbourhood, which while broad in nature seeks to harmonise policies for the sustainable use of ecosystems in the common border and ensure for the rational use of shared resources.

**Agreements or arrangements may be interim:** agreement or arrangements that are in force for a fixed period of time might be included. See for example the *2002 Tripartite Interim Agreement between Mozambique, South Africa and Swaziland on the Protection and Sustainable Utilisation of the Water Resources of the Incomati and Maputo Watercourse*, which “shall remain in force until 2010 or until superseded for the relevant watercourse by comprehensive water agreements on the Incomati and Maputo watercourses” (Art. 18(2)).

**Agreements or arrangement may be entered into by sub-national entities:** in limited circumstances authority to enter into agreements or arrangements may be delegated to sub-national entities. For example, the Parties to the 2002 *Agreement on the River Scheldt* are Belgium, France the Netherlands, as well as the Walloon, Flemish and Brussels-Capital regions in Belgium. Similarly, the 2007 *Arrangement on the Protection and Recharge of the Franco-Swiss Genevois Aquifer* was concluded between the Republic and Canton of Geneva in Switzerland, and the Communities of Annemasse, the Genevois Communes and the commune of Viry in France.

**Global and regional agreements related to transboundary water cooperation should not be listed in section II:** Global and regional agreements related to transboundary water cooperation - such as the Water Convention, the *Convention on the Law of the Non-navigational Uses of International Watercourses* (1997 Watercourses Convention), the 2000 *Revised Protocol on Shared Watercourses in the Southern African Development Community* (2000 Revised SADC Protocol), and the EU Water Framework Directive, would not constitute “agreements or arrangements for the protection and/or management of transboundary” as they are general in nature, and their effective implementation relies upon countries establishing specific agreements or arrangements at the basin, sub-basin or bilateral level.

1. When listing bilateral and multilateral agreements or arrangements, please include the official title of the agreement or arrangement; and the date when the agreement or arrangement was adopted, and where different the date of entry into force. See for example:

Agreement between the Federal Republic of Nigeria and the Republic of Niger concerning the equitable sharing in the development, conservation and use of their common water resources, 18 July 1990

Agreement on the Establishment of the Zambezi Watercourse Commission, 13 July 2004 (entered into force 19 June 2011).

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| **II. Questions for each transboundary basin, sub-basin, part of a basin, or group of basins (river,**  **lake or aquifer)**Please complete this second section for each transboundary basin **(**riveror lake basin, or aquifer**)**, sub-basin, part of a basin or agroup of basins covered by the same agreement or arrangement where conditions are similar1. In some instances, you may provide information on both a basin and one or more of its sub-basins or parts thereof, for example, where you have agreements2 or arrangements on both the basin and its sub-basin. You may coordinate your responses with other States with which your country shares transboundary waters, or even prepare a joint report. General information on transboundary water management at the national level should be provided in section III and not repeated here.Please reproduce this whole section with its questions for each transboundary basin, sub-basin, part of a basin or group of basins for which you will provide a reply. [4]**Name of the transboundary basin, sub-basin, part of a basin or group of basins: [fill in]** [5 6]List of the riparian States: [fill in]**In the case of an aquifer, what is the nature of the aquifer and its relation with the river or lake basin:** [7]Unconfined aquifer connected to the river or lake [ ] Unconfined aquifer with no or limited relation with surface water [ ] Deep confined aquifer [ ] Other [ ] Please describe: [fill in]No information [ ] **Percentage of your country’s territory within the basin, sub-basin, part of a basin or group of basins**: [fill in] [8]\_\_\_\_\_\_\_\_\_\_\_\_\_1 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.2 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. |

1. Section II has been structured in a way that seeks to capture the different scenarios faced by countries when reporting on their agreements and/or arrangements related to transboundary waters. It is critical that countries report in a way that allows for meaningful analysis across transboundary waters, which requires that the national report clearly sets out the basin, sub-basin, part of a basin or group of basins that a particular agreement or arrangement applies to. The figure below illustrates the different scenarios that the template attempts to captures, and offers guidance on how countries might structure Section II of their report.



While ultimately countries must decide how best to present their own situation, a series of suggestions based on different scenarios are provided below:

* **Scenario A:** complete section II once for the basin arrangement (questions 1 & 2); any basin-wide joint body or mechanism established thereunder (question 3), and progress concerning the agreement’s implementation (questions 4-13).
* **Scenario B:** complete section II for the basin arrangement (questions 1 & 2); any basin-wide joint body or mechanism established thereunder (question 3), and progress concerning the agreement’s implementation (questions 4-13); then complete section II again for any arrangement(s) covering a sub-basin or sub-basins, and/or part(s) of the basin.
* **Scenario C:** complete section II for the basin arrangement (questions 1 & 2); any basin-wide joint body or mechanism established thereunder (question 3), and progress towards the agreement’s implementation (questions 4-13); then complete section II again for any arrangement(s) covering a sub-basin or sub-basins, and/or part(s) of the basin. *Where two or more arrangements exist on the same sub-basin, e.g. a country has entered into separate bilateral arrangements with two other countries that share a sub-basin, then questions 1, 2 & 3 should be answered for each sub-basin arrangement, then questions 4-13 should be answered only once, ie., for the sub-basin as a whole.*
* **Scenario D:** for the basin(s) where no basin-wide arrangement is in place, only the first part of section II should be completed, ie., before question 1, and where appropriate, questions 4-13, e.g. any data exchange (question 6) taking place without a formal arrangement. Then complete section II again for any arrangements in place for sub-basin(s) or part(s) of a basin. *Nb.* w*here an arrangement covers part of several basins, e.g. a border arrangement between two countries, only one version of section II might be completed for that arrangement.*
* **Scenario E:** complete section II for each basin. Where the arrangement is the same for some or all basins, the responses to questions 1, 2 (arrangement) & 3 (joint body or mechanism) can be repeated for each of the basins whereas questions 4-13 (implementation) may differ for each basin (see Finland example below). Then complete section II again for any arrangements in place for sub-basin(s) or part(s) of a basin. *Nb.* w*here an arrangement covers part of several basins, e.g. a border arrangement between two countries, only one version of section II might be completed for that arrangement.*
* **Scenario F:** questions 1-13 of section II should be completed for the basin(s) where an arrangement is in place. For the basin(s) where no arrangement is in place, only the first part of section II should be completed, i.e.., before question 1, and where appropriate, questions 4-13, e.g. any data exchange (question 6) taking place without a formal arrangement. Then complete section II again for any arrangements in place for sub-basin(s) or part(s) of a basin. *Nb.* w*here an arrangement covers part of several basins, e.g. a border arrangement between two countries, only one version of section II might be completed for that arrangement.*
* **Scenario G:** for basins where no arrangement(s) is/are in place, only the first part of section II should be completed, i.e.., before question 1, and where appropriate, questions 4-13, e.g. any data exchange (question 6), taking place out with any formal arrangements.
* **Scenario H:** complete section II for each basin. Where the arrangement is the same for some or all basins, the responses to questions 1, 2 (arrangement) & 3 (joint body or mechanism) can be repeated for each of the basins whereas questions 4-13 (implementation) may differ for each basin (see Finland example below).
* **Scenario I:** complete section II for each basin. Where the arrangement is the same for some or all basins, the responses to questions 1, 2 (arrangement) & 3 (joint body or mechanism) can be repeated for each of the basins whereas questions 4-13 (implementation) may differ for each basin. Then complete section II again for any arrangements in place for sub-basin(s) or part(s) of a basin. Where two or more arrangements exist for the same sub-basin, e.g. a country has entered into separate bilateral arrangements with two other countries that share a sub-basin, then questions 1, 2 & 3 should be answered for each sub-basin arrangement, then questions 4-13 should be answered only once, i.e., for the sub-basin as a whole. *Nb.* w*here an arrangement covers part of several basins, e.g. a border arrangement between two countries, only one version of section II might be completed for that arrangement.*
* **Scenario J:** questions 1-13 of section II should be completed for the basin(s) where an arrangement is in place. For the basin(s) where no arrangement is in place, only the first part of section II should be completed, i.e., before question 1, and where appropriate, questions 4-13, e.g. any data exchange (question 6) taking place out with a formal arrangement. Then complete section II again for any arrangements in place for sub-basin(s) or part(s) of a basin. *Nb.* w*here an arrangement covers part of several basins, e.g. a border arrangement between two countries, only one version of section II might be completed for that arrangement.*

**Finland’s experience in organizing reporting under Section II**

Finland shares water with all its neighbours: Sweden, Norway and Russia. Finland has bilateral agreements with all these countries.

The agreement between Finland and Sweden entered into force in 2010 replacing the previous agreement from 1971. The agreement covers the entire basin of the River Torne/Tornionjoki with all its tributaries. The River Torne is the only transboundary river between Finland and Sweden.

The largest river basins that Finland shares with Norway are the catchment areas of the Teno/Tana, Näätämö/Neiden and Paatsjoki/ Pasvik rivers. Finland and Norway concluded an Agreement on the Frontier Water Commission in 1980.

Finland and the Russian Federation share a land border of approximately 1300 km. Several hundreds of rivers cross the border between Finland and Russia. Many of them are small and close to natural state. Nineteen of the larger of these river basins are included in the cooperation between both countries. Out of the 19 basins only six have major human impacts on both sides of the border. The largest transboundary watercourses are those of the Vuoksi and Paatsjoki/Pasvik rivers. The Agreement Concerning Frontier Watercourses was signed by Finland and the Soviet Union in 1964 and entered into force a year later. The Agreement covers all rivers crossing the border. It was adopted by the Russian Federation after the dissolution of the Soviet Union in early 1990s.

In the first reporting exercise, Finland reported all major rivers separately in Section II. As the aforementioned bilateral agreements cover all rivers the responses to questions 1-3 in section II were the same for each major river. However, the anthropogenic pressures are individual: in some hydropower and municipal waste water are key issues, while in other it is agricultural runoff. These facts made it necessary to make a separate report (questions 4-13), as grouping rivers would fail to fully capture the individual characteristics that are evident in each river.

1. Where appropriate, and to allow for cross-country comparison, countries are encouraged to consult the UNEP-GEF *Transboundary Water Assessment Programme* for a list of transboundary rivers, lakes and aquifers that their country shares:
	* For rivers **-** [http://twap-rivers.org/indicators](http://twap-rivers.org/indicators/)
	* For lakes - https://www.ilec.or.jp/en/activities/twap
	* For aquifers - <http://twapviewer.un-igrac.org>
2. **What is a “basin”, “sub-basin” or “part of a basin”?**
* **A “basin”,** for the purposes of reporting, can refer to a river basin, a lake basin or an aquifer system. A “basin”, as stated in the *Guide to Implementing the Water Convention*, can be defined as, “the entire catchment area of a surface water body [river or lake] or a recharge area of the aquifer”, which would encompass, “the area receiving the waters from rain or snow melt, which drain downhill (on the surface or below the surface of the ground in the unsaturated or saturated zones) into a surface water body or which infiltrate through the subsoil (i.e., the unsaturated zone) into an aquifer” (ECE, 2013, para. 74).
* **A “sub-basin”** constitutes a subset of a river or lake basin, and usually refers to an area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes to a particular point in a watercourse, such as a lake or a river confluence (see *Directive 2000/60/EC of the European Parliament and the Council establishing a Framework for Community Action in the Field of Water Policy* (EU Water Framework Directive), Art. 2).
* “**Part of a basin**” refers to an area of a basin that is a sub-set of a basin but may not necessarily fully align to a sub-basin. For instance, a country may report on part of a basin where they have entered into a bilateral agreement that covers transboundary waters at the border area between two countries, such as the *Agreement between the Czech Republic and the Federal Republic of Germany in the field of water management at border waters*.
1. **How to determine the nature of an aquifer and its relation with a river or lake basin?** In Section II, countries may choose to report on any transboundary aquifers individually. In these cases, the reporting template asks countries to state whether the aquifer is, i) unconfined and connected to a river or lake; ii) unconfined with no or limited relation to surface water; iii) deep confined; or iv) another type of aquifer.
* An “u**nconfined aquifer connected to a river or lake”** – an “**unconfined aquifer”** can be described as, “an aquifer whose upper water surface (water table) is at atmospheric pressure and thus is able to rise and fall” (USGS, 2019). Where such an aquifer is hydrologically connected to a river or lake it can be termed “**an unconfined aquifer connected to a river or lake**”. Three scenarios might be envisaged to make such an aquifer transboundary, namely i) both the underlying aquifer and river or lake may intersect a sovereign border; ii) the aquifer may intersect a sovereign border and be connected to a river or lake situated exclusively within the territory of one country; or iii) the aquifer may be situated exclusively within the territory of one country but connected to a river or lake that intersects a sovereign border (Eckstein & Eckstein, 2005).
* An “**unconfined aquifer with no or limited relation to surface water”** - as noted above unconfined aquifers must have some relationship with the surface of the ground. Where such an aquifer intersects a sovereign border and is recharged only through, for example rainfall or snowmelt rather than surface water flows, it might be considered as an unconfined aquifer with no or limited relation to surface.
* A **“deep confined aquifer”** can be described as an aquifer that has impermeable layers both above and below it, which confine it from the earth’s surface or other rocks ([USGS,](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/602589/Confined-and-unconfined-aquifers.pdf) 2019). Where such an aquifer insects a sovereign border it can be considered transboundary (Eckstein & Eckstein, 2005).
* “**Other” types of aquifers** might include a “semi-confined aquifer”, that can be described as an aquifer, “partially overlain by a rock formation which has low permeability, through which water can pass only slowly to recharge the aquifer” (Park, 2012).

**Brazil’s experience when reporting on transboundary aquifers**

In the first reporting exercise Brazil reported eleven transboundary aquifers: Amazon Aquifer System (Brazil, Bolivia, Colombia, Ecuador, Peru and Venezuela); Aquidauana-Aquidabán Aquifer System (Brazil and Paraguay); Boa Vista Aquifer System (Brazil and Guyana); Caiuá/Bauru-Acaray Aquifer System (Brazil and Paraguay); the Chuy Aquifer System (Brazil and Uruguay); Costeiro Aquifer System (Brazil and French Guyana); Grupo Roraima Aquifer System (Brazil, Guyana and Venezuela); Guarani Aquifer System (Brazil, Argentina, Uruguay and Paraguay); Pantanal Aquifer System (Brazil, Bolivia and Paraguay); Permo Carbonífero Aquifer System (Brazil and Uruguay); Serra Geral Aquifer System (Brazil, Argentina, Uruguay and Paraguay).

The Guarani Aquifer system is one of the most extensively studied transboundary aquifers in Brazil. A series of relevant data and information has been obtained, not only from national studies, but also from a general aquifer study supported by the GEF, containing consensus information among the four countries that share the aquifer. These studies show that the Guarani aquifer system, although smaller than the total area of the Rio de la Plata river basin, falls slightly outside the river basin. Additionally, in the area of the Guarani Aquifer system, there are two other major transboundary aquifers (the Serra Geral and the Caiuá/Bauru-Acaray) – however, any potential connections between the aquifers are difficult to ascertain. Brazil’s experience illustrates that, where data is available, any special characteristics of an aquifer – such as their relation with a river basin area or the area of another aquifer system should be highlighted (see guidance below).

1. **Percentage of your country’s territory within the basin, sub-basin, or part of a basin** should be calculated on the bases of [basin area in country] / [total basin area in all riparian or aquifer countries]. **For groups of basins**, a figure should be provided for each basin. **Where the area of two or more transboundary aquifersoverlap, this should be noted.**

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| 1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) [9] on this basin, sub-basin, part of a basin or group of basins?One or more agreements or arrangements exist and are in force [10] [ ] Agreement or arrangement developed but not in force [11] [ ] Agreement or arrangement developed, but not in force for all riparians [12] [ ] *Please insert the name of the agreement****(****s****)*** *or arrangement****(****s****)***[fill in] [13]Agreement or arrangement is under development [14] [ ] No agreement or arrangement [ ] *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]**If there is no agreement or arrangement and no joint body or mechanism for the transboundary basin, sub-basin, part of a basin or group of basins then jump to question 4; if there is no agreement or arrangement, but a joint body or mechanism then go to question 3.** [15] |

1. For guidance on what constitutes an “agreement” or “arrangement” see note **[2]** above.
2. **How to determine if an agreement or arrangement is “in force”?** Entry into force is an important landmark for an agreement or arrangement because, while prior to its entry into force, the Parties may only be obliged not to act at variance with the agreement or arrangement, upon entry into force they are legally bound to take the necessary steps to implement it. The 1969 Vienna Convention on the Law of Treaties provides that, “a treaty enters into force in such manner and upon such date as it may provide or as the negotiating States may agree” (Art. 24). Ultimately, it is therefore up to the Parties to decide when an agreement or arrangement enters into force, and this is usually provided for within the instrument itself.

Usually, **any details related to entry into force are found in the last or final provisions within the agreement or arrangement itself.** The Agreement on Cooperation for the Sustainable Development of the Mekong River Basin (1995 Mekong Agreement), for example, states that, “this agreement shall… enter into force among all Parties … on the date of signature by the appointed plenipotentiaries” (Art. 36(A)). The 2010 Nile Cooperative Framework Agreement, provides that, “the present Framework shall enter into force on the sixtieth day following the date of the deposit of the sixth instrument of ratification or accession with the African Union” (Art. 42).

**If no details are contained within the agreement or arrangement related to entry into force, then there is an assumption that entry into force occurs when States demonstrate their consent to be bound by it.** This consent might be evidenced by, for example, a country transposing the agreement or arrangement into their national legislation through **ratification, accession, adherence or approval (see below).**

**Making the distinction between Ratification, Acceptance and Approval, Accession, and Signature**

* **Ratification –** the act whereby a State indicates its consent to be bound by a treaty. For bilateral treaties, this may be achieved by exchange instruments of ratification; whereas for multilateral treaties a depository usually takes on the role of collecting all ratifications. The ratification procedure allows States a certain period of time after the adoption of an agreement or arrangement for them to fulfil any requirements at the national level on order to give domestic effective to the agreement or arrangement.
* **Acceptance or approval –** instruments of “acceptance” or “approval” of a treaty express the consent of a State to be bound by a treaty. In the practice of certain States, acceptance or approval is used instead of ratification, when at the national level, constitutional law does not require a treaty be ratified by the head of State.
* **Accession –** the act whereby a State accepts to become a Party to an agreement or arrangement that has already been negotiated and signed by other States. Accession usually occurs after an agreement or arrangement has entered into force.
* **Signature –** in certain circumstances signature from a governmental official with the requisite authority may suffice to commit a State to an agreement or arrangement. However, in other circumstances, a signature alone may not suffice, as consent to be bound may be contingent on ratification, acceptance or approval, or accession. Usually, the provisions of an agreement or arrangement will set out the significance of signature.

**For further information see UN Treaty Collection, *Glossary of terms relating to Treaty Actions*,** [**https://treaties.un.org/Pages/Overview.aspx?path=overview/glossary/page1\_en.xml**](https://treaties.un.org/Pages/Overview.aspx?path=overview/glossary/page1_en.xml)**.**

1. **An agreement or arrangement developed but not in force** might be one that six out of eight riparian countries have negotiated and adopted, but all countries must ratify it before it enters into force.
2. **An agreement or arrangement developed, but not in force for all riparians** might be an agreement that requires four out of six riparian countries to ratify it before it enters into force. If only four countries have so far ratified such an agreement, it would not be in force for *all* Riparian States.
3. **For guidance on how to list agreements and arrangement see note [2] above.**
4. **An agreement or arrangement under development** might include one that is being negotiated and has not been **adopted** by the relevant Parties. “**Adoption**” is, “the formal act by which the form and content of a proposed treaty text are established” (UN Treaty Collection, 2019). An agreement or arrangement may be adopted at an international meeting of the relevant Parties, usually through a majority vote or by consensus.
5. **In what situation might no agreement or arrangement exist, but a joint body or mechanism is in place?** Generally, a joint body or mechanism is established pursuant to an agreement or arrangement (for a definition of “joint body or mechanism”, see note ‎[28] below). However, in limited circumstances a joint body or mechanism may exist in absence of an agreement or arrangement. For example, El Salvador noted in their first national report that a binational commission has been established with Guatemala to discuss transboundary water issues, but so far, the two countries have not been able to conclude any agreement concerning their shared river basins and aquifer systems. Along similar lines, Mexico identified 13 transboundary river basins with the US which, while falling within the scope of the US-Mexico International Boundary and Water Commission, are not subject to a specific treaty. The only river basins covered by a bilateral agreement between the US and Mexico are the Colorado, Grande and Tijuana River Basins (see *Treaty and Protocol on Utilisation of Waters of the Colorado and Tijuana Rivers and of the Rio Grande between the United States and Mexico*, 3 February 1944).

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| **Questions 2 and 3 to be completed for each bilateral or multilateral agreement or arrangement in force in the transboundary basin, sub-basin, part of a basin or group of basins.**2. (a) Does this agreement or arrangement specify the area subject to cooperation? [16]Yes [ ] /No [ ] If yes, does it cover the entire basin or group of basins and all riparian States? [17 18 19]Yes [ ] /No [ ] Additional explanations?[fill in] [20]Or, if the agreement or arrangement relates to a sub-basin, does it cover the entire sub-basin? [21]Yes [ ] /No [ ] Additional explanations?[fill in]Which States (including your own) are bound by the agreement or arrangement? *(Please list)*: [fill in] |

1. **How to determine the area subject to cooperation within an agreement or arrangement.** Article 9(1) of the Water Convention requires Riparian Parties to enter into agreements or other arrangement, and to specify in those instruments, “the catchment area, or part(s) thereof, subject to cooperation”. Agreements or arrangements may cover an entire basin, a sub-basin, multiple basins and/or sub-basins, or part of the basin (see note **[4]** above). In some instances, determining the area that is subject to cooperation might be relatively straightforward. The 1998 *Convention on the Protection of the Rhine*, for example, clearly stipulates that it applies to, “(a) the Rhine; (b) Groundwater interacting with the Rhine; (c) Aquatic and terrestrial ecosystems which interact or could again interact with the Rhine; (d) the Rhine catchment area, insofar as its pollution by noxious substances adversely affects the Rhine; (e) the Rhine catchment area, insofar as it is of importance for flood prevention and protection along the Rhine (Art. 2). In other instance, more general language might be used. For example, the 2001 *Agreement between Kazakhstan and China on Cooperation and the Use and Protection of Transboundary Rivers*, simply makes references to “transboundary rivers”, which are defined as, “all rivers and river flows that cross state borders or are located along the border between the Republic of Kazakhstan and the People’s Republic of China (Art. 1). While the example of the 2001 China-Kazakhstan Agreement is less specific than the 1998 Rhine Convention, both instruments can be said to specify the area subject to cooperation.
2. **How to determine if an agreement or arrangement covers “the entire basin or group of basins and all riparian States”?** In some instances, as can be seen in the case above of the Rhine Convention, an agreement or arrangement may clearly state that it covers an entire basin. Similarly, the 1998 *Convention on the co-operation for the protection and the sustainable use of the waters of the Luso-Spanish river basins,* stipulates that, “the Convention shall apply to the river basins of the Minho, Lima, Douro, Tagus and Guadiana” (Art. 1; a definition of “river basin” is also provided for in the Convention).

**What if an agreement or arrangement does not explicitly state whether or not it covers an entire basin or group of basins**? The text of the agreement or arrangement may provide some guidance. For example, the 1997 Watercourses Convention, uses the term “watercourse” rather than “basin”. “Watercourse” is defined in the Watercourses Convention as meaning, “a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus” (Art. 2(a)). While this might be seen as a narrower definition to the term “river basin”, Art. 1(1) of the Watercourses Convention stipulates that it, “applies to uses of international watercourses and their waters for purposes other than navigation and to measures related to the uses of those watercourses and their waters”. Art. 1(1) is therefore widely interpreted as expanding the scope of the Watercourses Convention to cover the entire basin (REF; McCaffrey, 2007, p. 37; Rieu-Clarke, Moynihan & Magsig, 2012, pp. 66-69; Tanzi & Arcari, 2001, p. 59). Ultimately, this will require determining the intention of the Parties when entering into the agreement or arrangement. **While guidance is provided here, it is up to the country reporting to interpret their agreement or arrangement**.

1. **What if different provisions of an agreement or arrangement cover different parts of the basin?** In some instances, an agreement or arrangement may contain provisions that relate to certain parts of a basin, e.g. provisions relating to river flow regulation or allocation; whereas other provisions may be broader in scope, e.g. provisions related to ecosystem protection. In responding to question 2 it is not necessary to provide a detailed account of the scope of these different provisions, but rather, as suggested in note 18 above, determine *the overall purpose* of the agreement or arrangement.
2. An agreement or arrangement might cover all riparian States, but not all States may be party to the agreement. For example, the text of the 1995 Mekong Agreement provides that the agreement covers, “all fields of sustainable development, utilisation, management and conservation of the water and related resources of the Mekong River Basin” (Art. 1). However, not all riparian States are party to the Mekong Agreement – only Cambodia, Laos, Myanmar and Thailand. In such a case, it might be concluded that the Mekong Agreement *does* cover the entire basin and all riparian States, whilst at the same time, “additional explanation” might be provided in the space below, i.e., that China and Myanmar are not Parties to the 1995 Mekong Agreement; and only the Parties to the Agreement would be listed in the subsequent question.
3. Where the scope of an agreement or arrangement is not explicitly stated, some explanation as to how the text was interpreted to cover the entire (sub-) basin or not might be included here.
4. As explained in note 18 above, it may be necessary to interpret whether or not an agreement or arrangement covers the entire sub-basin.

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| (b) If the agreement or arrangement relates to a river or lake basin or sub-basin, does it also cover aquifers? [22]Yes [ ] /No [ ] If yes, please list the aquifers covered by the agreement or arrangement: [fill in] [23] |

1. In some instances, an agreement or arrangement relating to a river or lake basin or sub-basin may explicitly state that it covers both surface water and groundwater. For instance, the *2000 Agreement on the Establishment of the Zambezi Watercourse Commission* applies to the “Zambezi Watercourse” (Art. 2), which is defined as, “the system of surface and ground waters of the Zambezi constituting by virtue of their physical relationship a unitary whole flowing normally into a common terminus, the Indian Ocean (Art. 1). The Zambezi Agreement follows a similar approach to both the 2000 Revised SADC Protocol and the 1997 Watercourses Convention by including connected groundwater in the definition of a watercourse. The 1992 Water Convention uses the term “transboundary waters”, which is defined as, “any surface or ground waters which mark, cross or are located on boundaries between two or more States”. Groundwater are therefore covered within the definition of “transboundary waters”, which as opposed to the term “watercourse”, seeks to encompass groundwater both connected and unconnected to the surface water of rivers and lakes (ECE, 2013, p. 14). While, as noted in note 18 above, **interpreting whether an agreement covers aquifers or not will ultimately rest on the reporting country,** there might be a presumption that any agreements or arrangements using the terms watercourse or transboundary waters, cover aquifers that are connected to a river or lake basin or sub-basin.
2. For guidance on listing aquifers see note ‎[5].

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| (c) What is the sectoral scope of the agreement or arrangement? [24]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 and other energy types [ ] Fisheries [ ] Tourism [ ] Nature protection [ ] Other (*please list*): [fill in] |

1. Some agreements or arrangements may explicitly state the uses and sectors that they aim to cover. In other instances, the uses and sectors covered by an agreement or arrangement may be implied from its purpose. For instance, the 2012 *Treaty between the Government of the Republic of Moldova and the Cabinet Ministers of Ukraine on Cooperation in the Field of Protection and Sustainable Development of the Dniester River Basin* (Dniester Treaty), stipulates that, “the present Treaty shall apply to uses of waters of the Dniester River basin for purpose other than navigation and to measure of protection, preservation and management of water and other natural resources and ecosystems of the Dniester River basin related to those uses” (Art. 2). Most uses and sectors, except navigation, would therefore appear to be covered by the Dniester Treaty.

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| (d) What topics or subjects of cooperation are included in the agreement or arrangement?**Procedural and institutional issues**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 [ ] Human health [ ] 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 [25] [ ] 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 basinmanagement or action plans [ ] Management of shared infrastructure [ ] Development of shared infrastructure [ ] Other (*please list*): [fill in] [26] |

1. **Monitoring** can be understood as, “a process of repetitive measurements, for defined purposes, of one or more elements of the environment according to pre-arranged schedules in space and time, using comparable methodologies for environmental sensing and data collection” ([ECE, 2005, p. 6](https://www.unece.org/fileadmin/DAM/env/water/documents/tbilisi%20report_final.pdf)). For monitoring to be considered to be “**joint monitoring**” a certain level of co-ordination between the riparian or aquifer countries must be in place. The *Guide to Implementing the Water Convention*, observes that, “on the basis of internationally agreed procedures sampling, analysis and assessment of data can be, if not agreed otherwise, carried out on the national level” (ECE, 2013, para. 279). While data and information may therefore be gathered by individual countries via national monitoring networks, a comparable methodology for data gathering must be in place at the transboundary level.
2. For example, does the agreement or arrangement account for gender considerations.

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| (e) What are the main difficulties and challenges that your country faces with the agreement or arrangement and its implementation, if any? Aligning implementation of agreement or arrangement with national laws, policies and programmes [ ] Aligning implementation of agreement or arrangement withregional laws, policies and programmes [ ] Lack of financial resources [ ] Insufficient human capacity [ ] Insufficient technical capacity [ ] Tense diplomatic relations [ ] Non-participation of certain riparian countries in the agreement [ ] No significant difficulties [ ] Other (*please describe*): [fill in](f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [fill in] [27](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] |

1. This open question allows countries to highlight a broad range of achievements that might have resulted from the implementation of an agreement or arrangement, as well as the keys to achieving success. Examples of achievements may range from establishing a forum for addressing mutual concerns, developing a shared vision for the basin, the joint planning or development of the basin, or improvements in the social, political, economic and environmental conditions within the basin, and the benefits thereof. Keys to success might include political will, good neighbourly relations, regional integration or a strong institutional framework.

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| 3. Is your country a member of any joint body or mechanism for this agreement ~~/~~ or arrangement? [28] Yes [ ] /No [ ]  *If no, why not? (please explain):* [fill in]**Where there is a joint body or mechanism**(a) If there is a joint body or mechanism, which kind of joint body or mechanism (*please tick one*)? [29]Plenipotentiaries [30] [ ] Bilateral commission [31] [ ] Basin or similar commission [32] [ ] Expert group meeting or meeting of national focal points [33] [ ] Other (*please describe*): [fill in](b) Does the joint body or mechanism cover the entire transboundary basin**,** sub-basin, part of a basin or group of basins? [34] Yes [ ] /No [ ] (c) Which States (including your own) are members of the joint body or mechanism? *(Please list)*: [fill in] (d) Are there any riparian States that are not members of the joint body or mechanism? (please list): [fill in] [35] |

1. A ‘**joint body or mechanism’** can be defined as ‘any bilateral or multilateral commission or other appropriate institutional arrangements for cooperation between the Riparian Parties’ (Article 1(5), Water Convention). The *Guide to Implementing the Water Convention* (ECE, 2013, paras. 258-260) highlights several common features of such a joint body or mechanism, namely i) a permanent body meeting at reasonably regular intervals; ii) composed of representatives of the riparian States, headed usually by officials, authorised for that purpose by governments; iii) usually comprised of a decision-making body, an executive body, and iv) usually having a secretariat; and v) sometimes supplemented by subsidiary bodies, such as working or expert groups, monitoring units, data and processing units, a network of national offices, a consultative group of donors, an information centre, a training centre and/or observers.
2. While likely to have the aforementioned features in common, a ‘joint body or mechanism’ may be called by a variety of names, including ‘plenipotentiaries’, ‘basin or bilateral commission’, ‘expert group meeting’, ‘meeting of national focal points’, ‘joint water authority’, ‘committee’, or ‘working group’.
3. “Plenipotentiaries for transboundary waters”, can be described as, “an official coming from a water management, environmental protection or other relevant national authority, appointed by a national government to facilitate and coordinate the implementation of a transboundary water agreement on behalf of a riparian States” (ECE, 2013, para. 260).
4. A “bilateral commission” may encompass the common features of a joint body or mechanism as described in note 29. In contrast to a “basin or similar commission”, a bilateral commission will only be made up of two neighbouring States, and it is likely to cover all or several transboundary waters shared between those countries. A bilateral commission is likely to have a more detailed institutional structure than plenipotentiaries.
5. A “basin or similar commission”, may follow a similar institutional structure to a “bilateral commission”, but a key distinction is that a basin or similar commission is established for a specific basin and all countries within that basin may be members – whereas a bilateral commission has only two country members.
6. An “expert group meeting” or a “meeting of focal points” is likely to be similar to plenipotentiaries, but may follow a less formalised structure and schedule of meetings.
7. The geographical scope of a joint body or mechanism can usually be found within the agreement or arrangement in which it is established, and is likely to align to the geographical scope of the agreement or arrangement itself (see notes ‎[16] and ‎[17] above; see also ECE, 2018b, p. 18).
8. As explained in note 20, an agreement or arrangement may cover the entire basin but not all riparian or aquifer States may be members of it. Question 3(d) seeks to capture this eventuality by providing the opportunity to list any country that is not party to a joint body or mechanism.

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| (e) If not all riparian States are members of the joint body or mechanism how does the joint body or mechanism cooperate with them?No cooperation [ ] They have observer status [36] **[ ]** Other (*please describe*): [fill in](f) Does the joint body or mechanism have any of the following features (*please tick the ones applicable*)?A secretariat [37] [ ] *If the secretariat is a permanent one, is it a joint secretariat ordoes each country host its own secretariat? (Please describe):* [fill in]A subsidiary body or bodies [38] [ ]  *Please list (e.g., working groups on specific topics):* [fill in]Other features (*please list*): [fill in] [39 40] |

1. While a country may not be a full member of a joint body or mechanism, they may participate in its meetings and activities as observers. For example, while not being members of the International Commission for the Protection of the Rhine, Austria, Italy, Liechtenstein and the Wallonia Region of Belgium are given observer status within the Rhine Commission because they share parts of the Rhine river basin. Basin-wide activities are implemented through a Co-ordination Committee of members and non-members of the Rhine Commission.
2. **A “secretariat”** plays a range of primarily administrative functions within a joint body or mechanism. While multilateral joint bodies or mechanisms generally establish a joint secretariat, bilateral arrangements may allocate the functions of the secretariat between the two countries involved, i.e., each country hosts its own secretariat. In other situations, the establishment of a secretariat may not be deemed necessary (see Saruchera & Lautze, 2016).
3. A joint body or mechanism may establish subsidiary bodies in order to support the implementation of its activities. These subsidiary bodies – often called a working group, technical committee, task force or team – cover a wide array of topics, including flood management, hydrogeology and groundwater, water quality, navigational, ecosystem and biodiversity conservation, pollution prevention, accidental pollution, communication, finance, legal matters and data management (see ECE, UNESCO & UN-Water, 2018, p. 46).

**Examples of subsidiary bodies under the Zambezi Water Commission (ZAMCOM)**

ZAMCOM’s goal is to assist the Riparian States achieve regional cooperation and integration through sharing treasured benefits from the water resources of the Zambezi river basin.

ZAMCOM has a political wing, the **Council of Ministers** (members are ministers from riparian states with a portfolio of water resources), and an administrative wing (the **secretariat (ZAMSEC)** with a staff of eight personnel). The other subsidiary bodies (ZAMTEC, JPSC, ZAMSCHO, BASC AND NASCs) are formed with technical personnel from Riparian States and meet as often as required for specific task/ projects.

The **Zambezi Technical Committee** (ZAMTEC) is a body of commissioners and water experts from the Riparian States. Each Riparian State will have a representative of Commissioner and two water experts. This committee has a chairperson and executive secretary and reports directly to the Council of Ministers.

The **technical working groups** are task specific. **Project Implementation Units** are formed specifically to execute a project and the team is a composite of technical subject experts from Riparian States that work on the project(s). Similarly, if there is a specific issue that needs the attention of all Member States, a Working Group is formed from subject experts from Riparian States to work on the task. For both the Project implementation unit and working group, the coordinator is from the secretariat.

**National Stakeholders’ Coordination Committees** (NASCs) are established in each of the eight countries that share the Zambezi River Basin. Every Riparian State has a NASC focal point. NASCs are stakeholder platforms that ensure that there is effective engagement of key stakeholders in the Riparian States for the Zambezi Basin. Representation on NASCs is drawn from major relevant stakeholder institutions and bodies in each Riparian State including government, non-governmental organisations, academia, civil society, traditional leadership and other groups.

The **Basin-wide Stakeholders Coordination Committee** (BASC) is a body for coordinating and harmonising basin-wide stakeholder involvement and participation. The BASC is made up of NASC focal points and regional partners active in the basin. BASC provides a platform to discuss matters of interests in the management and development of water and related resources in the basin and to share knowledge and experiences, and provides general advice and inputs that contribute to ZAMCOM programmes and processes.

1. For example, how are gender considerations accounted for in any decision-making processes.
2. Where available, an organigram of the joint body or mechanism may be included.

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| (g) What are the tasks and activities of this joint body or mechanism?3 [41] Identification of pollution sources [ ] Data collection and exchange [ ] Joint monitoring [42] [ ] Maintenance of joint pollution inventories [ ] Setting emission limits [ ] Elaboration of joint water quality objectives [ ] Management and prevention of flood or drought risks [ ] Preparedness for extreme events, e.g., common early warningand alarm procedures [ ] Surveillance and early warning of water related disease [ ] Water allocation and/or flow regulation [ ] Policy development [ ] Control of implementation [ ] Exchange of experience between riparian States [ ] Exchange of information on existing and planneduses of water and related installations [ ] Settling of differences and conflicts [ ] Consultations on planned measures [ ] Exchange of information on best available technology [ ] Participation in transboundary EIA [ ] Development of river, lake or aquifer basin management oraction plans [ ] Management of shared infrastructure [ ] Addressing hydromorphological alterations [ ] Climate change adaptation [ ] Joint communication strategy [ ] Basin-wide or joint public participation and consultation of,for example, basin management plans [ ] Joint resources to support transboundary cooperation [ ] Capacity-building [ ] Any other tasks (*please list*): [fill in]\_\_\_\_\_\_\_\_\_\_\_\_\_3 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. |

1. Tasks and activities of a joint body or mechanism may include those stated in the agreement itself or those that have been added by the joint body, or its subsidiary bodies. Envisaged tasks and activities of joints bodies or mechanisms are provided for under Article 9(2) of the Water Convention, and further explained in the ECE, *Guide to Implementing the Water Convention* and *Principles for Effective Joint Bodies for Transboundary Water Cooperation* (ECE, 2013, paras 261-263; ECE, 2018b). Both tasks and activities which joint bodies coordinate and tasks which they implement should be included; as well as tasks and activities that are basin-wide or only implemented in part of the basin. Where only implemented in part of the basin further explanation might be provided at the end of the question, i.e., under “[fill in]”.
2. For a definition of “joint monitoring” see note ‎[25] above.

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| (h) What are the main difficulties and challenges that your country faces with the operation of the joint body or mechanism, if any?Governance issues [43] [ ] *Please describe, if any:* [fill in]Unexpected planning delays [ ] *Please describe, if any:* [fill in]Lack of resources [ ] *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]Others (*please list and describe, as appropriate*): [fill in] (i) Does the joint body or mechanism, or its subsidiary bodies meet regularly?  Yes [ ] /No[ ]  If yes, how frequently does it meet? More than once per year [ ] Once per year [ ] Less than once per year [ ] (j) What are the main achievements with regards to the joint body ormechanism? [fill in] [44](k) Did the joint body or mechanism ever invite a non-riparian coastal State to cooperate? [45] Yes [ ] /No [ ] *If yes, please give details. If no, why not, e.g. are the relevant coastal States also riparian States and therefore already members of the joint body or mechanism?* [fill in] |

1. “Governance issues” in relation to a joint body or mechanism relates to the manner in which decision are made, in terms of, for example, legitimacy, i.e., equitable representation in decision-making (see also question 13 below), accountability and transparency.
2. Achievements might, for example, cover the development of joint products, the establishment of joint processes or working structures, or the creation of trust and mutual understanding.
3. The Water Convention provides that, “in cases where a coastal State, being Party to this Convention, is directly and significantly affected by transboundary impact, the Riparian Parties can, if they all so agree, invite that coastal State to be involved in an appropriate manner in the activities of multilateral joint bodies established by Parties riparian to such transboundary waters” (Art. 9(3); see also ECE, 2013, p.17-18). This provision of the Water Convention recognises that coastal States that are not part of a transboundary basin or sub-basin, and therefore not members of a joint body or mechanism for that basin or sub-basin, may still be affected by activities taking place in the basin through, for example, land-based marine pollution. In such instances, coastal States might therefore be invited to participate in the work of a joint body or mechanism. However, **this question only applies to non-riparian coastal States and should therefore not be ticked if the coastal State also has territory within the basin or sub-basin itself (see the Danube-Black Sea example below for further details).**

**Hungary’s cooperation with Black Sea countries via the International Commission for the Protection of the Danube River Basin (ICPDR)**

Hungary as a landlocked country has no direct contact with sea. However, through the Danube River, Hungary also has a link related to the pollution of the Black Sea. The ICPDR elaborated a cooperation agreement with the Black Sea Commission to minimise or prevent pollution from the Danube River Basin to the Black Sea, especially by nutrients. ICPDR also acted as a forum whereby Riparian States of the Danube and Black Sea States could collectively take steps to protect the Black Sea. Riparian countries have adopted more stringent measures related to nutrient removal from waste water. This activity is in line with the EU Marine Framework Directive, which also requires landlocked countries to coordinate their activities to prevent sea pollution.

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| 4. Have joint objectives, a common strategy, a joint or coordinated management plan or action plan been agreed for the basin, sub-basin, part of a basin or group of basins? [46] Yes [ ] /No[ ]  *If yes, please provide further details:* [fill in] [47] |

1. For States that have an agreement or arrangement, as well as a joint body or mechanism, in place this question seeks to determine whether the States in question have cemented their cooperation through subsequent activities. **The joint objectives, strategy or plans should therefore *not be* contained within the agreement or arrangement itself, but adopted after the agreement or arrangement is in force through, for example, a decision of a joint body or mechanism.**

A range of post-agreement or arrangement instruments may be included here. For example, the Water Convention, obliges riparian Parties to, “develop harmonised *policies, programmes and strategies* covering the relevant catchment areas, or parts thereof”, which should aim to prevent, control and reduce transboundary impact and protect the ecosystems of those transboundary waters” (Art. 2(6)). In addition, the Convention requires its Parties to set water quality *objectives* and *criteria* for the purposes of preventing, controlling and reducing transboundary impact (Art. 3(3)). Other instruments, such as a joint vision, declaration or principles, might be refereed to. These instruments may cover a variety of topics, including gender mainstreaming, basin management, climate change adaptation, environmental protection, flood risk management, hydropower, navigation, sedimentation management, sustainable development, and early warning and alarm systems.

**For States that do not have an agreement or arrangement in place, any other cooperative efforts between the countries, such as the development of a joint vision, might be included here.**

1. Further details might include the scope of any objectives, plan or strategy; whether they are joint or co-ordinated; when and how the instrument was adopted, e.g., decision of a joint body; the timeframe; any review mechanisms; how it is implemented; and how progress is assessed. Where multiple objectives, strategies or plans have been adopted, the key overarching ones might be referred to, such as a joint or co-ordinated basin-wide management plan (see example below).

**The Sava River Basin Management Plan**

The Framework Agreement on the Sava River Basin defines two main goals of cooperation in the field of water management: i) the establishment of sustainable water management; and ii) the undertaking of measures to prevent or limit hazards, and reduce and eliminate adverse consequences, including those from floods, ice hazards, droughts and incidents involving substances hazardous to water.

FASRB also obliges the Parties (Bosnia and Herzegovina, Croatia, Serbia and Slovenia) to cooperate on the basis of, and in accordance with, the EU Water Framework Directive, and to develop joint or co-ordinated management plans for the Sava River Basin – a sub-basin of the Danube River Basin.

Pursuant to these obligations, a joint Sava River Basin Management Plan (RBMP) was developed and accepted by the Parties in 2014. The first milestone of the Sava RBMP was the Sava River Basin Analysis Report that was the culmination of a comprehensive analysis of the Sava River Basin, including the characterisation of transboundary surface and groundwater bodies, the identification of their significant anthropogenic pressures/ impacts, as well as aspects related to water quantity, water use, flood management and navigation. As a follow-up, the International Sava River Basin Commission identified Significant Water Management Issues (SWMIs). Finally, a Programme of Measures was developed to respond to all significant pressures and to achieve the agreed management objectives and work towards the basin-wide vision for the Sava River.

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| 5. How is the transboundary basin,sub-basin, part of a basins or group of basinsprotected, including the protection of ecosystems, in the context of sustainable and rational water use? [48]Regulation of urbanization, deforestation, and sand andgravel extraction. [ ] Environmental flow norms, including consideration of levels andseasonality [49] [ ] Water quality protection, e.g. nitrates, pesticides, faecal coliforms,heavy metals [ ] Water-related species and habitats protection [ ] Other measures (*please describe*): [fill in] |

1. This question seeks to ascertain whether measures have been adopted concerning the protection of ecosystems at the transboundary level - measures adopted at the national level are considered in the next section (see for example, section III, question 1(h)). The question also seeks to identify basin or sub-basin *specific* arrangements that are in place for the protection of ecosystems, such as programmes that have been implemented by a joint body or mechanism. More general arrangements for the protection of conservation areas and/or habitats and species, such as Natura 2000 sites ([European](http://ec.europa.eu/environment/nature/natura2000/index_en.htm) Commission, 2019), should not be included here.

The protection of ecosystems is reflected in the Water Convention, which calls upon its Parties to take all appropriate measures, “to ensure conservation and, where necessary, restoration of ecosystems” (Art. 2(2)(d)), and ensure that, “sustainable water-resources management, including the application of the ecosystems approach, is promoted” (Art. 3(1)(i)); see also ECE, 2013, pp. 26-27). Along similar lines, the Watercourses Convention, obliges watercourse States to, “individually and, where appropriate, jointly, protect and preserve the ecosystems of international watercourses” (Art. 20); and SDG target 6.6 calls for the protection and restoration of water-related ecosystems by 2020 (UN-Water, 2019).

1. “**Environmental flows”** can be defined as, “the water regime provided within a river, wetland or coastal zone to maintain ecosystems and their benefits where there are competing water uses and where flows are regulated” (Dyson, Bergkamp & Scanlon, 2003, p. 3). Such flows should consider seasonable variability within the water regime, as well as extreme periods, e.g. floods and droughts.

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| 6. (a) Does your country regularly exchange information and data with other riparian States in the basin, sub-basin, part of a basin or group of basins? [50 51 52] Yes [ ] /No [ ] (b) If yes, how often: [53]More than once per year [ ] Once per year [ ] Less than once per year [ ] (c) Please describe how information is exchanged (e.g. in connection with meetings of joint bodies): [fill in] [54](d) If yes, on what subjects are information and data exchanged?Environmental conditions [ ] Research activities and application of best available techniques [ ] Emission monitoring data [ ] Planned measures taken to prevent, control or reducetransboundary impacts [ ] Point source pollution sources [ ] Diffuse pollution sources [ ] Existing hydromorphological alterations (dams, etc.) [ ] Flows or water levels (including groundwater levels) [ ] Water abstractions [ ] Climatological information **[ ]** Future planned measures with transboundary impacts, such asinfrastructure development [ ] Other subjects (*please list*): [fill in] Other comments, e.g. spatial coverage of data and information exchange: [fill in](e) Is there a shared database or information platform? Yes [ ] /No [ ] (f) Is the database publicly available? Yes [ ] /No [ ]  *If yes, please provide the web address:* [fill in](g) What are the main difficulties and challenges to data exchange, if applicable? Frequency of exchanges [ ] Timing of exchanges [ ] Comparability of data and information [ ] Limited spatial coverage [ ] Inadequate resources (technical and/or financial) [ ] Other (*please describe*): [fill in]Additional comments: [fill in](h) What are the main benefits of data exchange on the basin, sub-basin, part of a basin or group of basins? (*please describe*): [fill in] |

1. While this questionis not prescriptive on the type of data and information that should be exchanged some guidance on the type of data and information that might be exchanged can be found in the provisions of the Water Convention, the Watercourses Convention and the ILC Draft Articles on Transboundary Aquifers. The Water Convention obliges Riparian Parties to, “exchange reasonably available data, inter alia, on: (a) Environmental conditions of transboundary waters; (b) Experience gained in the application and operation of best available technology and results of research and development; (c) Emission and monitoring data; (d) Measures taken and planned to be taken to prevent, control and reduce transboundary impact; (e) Permits or regulations for waste-water discharges issues by the competent authority or appropriate body” (Art. 13(1); see also ECE, 2013, pp. 82-84)**.** Similarly, the Watercourses Convention, provides that, “Watercourse States shall on a regular basis exchange available data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydrogeological and ecological nature and related to the water quality as well as related forecasts”; and the ILC Draft Articles on Transboundary Aquifers provides that, aquifer States shall, “exchange readily available data and information on the condition of their transboundary aquifers or aquifer systems, in particular of a geological, hydrogeological, hydrological, meteorological and ecological nature and related to the hydrochemistry of the aquifers or aquifer systems, as well as related forecasts” (Art. 8(1)).
2. Question 6(a) seeks to capture data and information that is regularly exchanged rather than one-off exchanges that relate, for example, to a planned project.
3. Responses to Question 6(a) should be considered alongside the other questions related to data and information exchange, including the criteria for operationality (section I, *revised* *step-by-step methodology*); the topics of cooperation included in an agreement (Section II, question 2(d)); the task and activities of a joint body (Section II, question 3(g)); and the main challenges in advancing transboundary water cooperation (section IV, question 1). A key distinction between these questions is that while, questions 2(d) and 3(g) of Section II ask whether data and information exchange is provided for in an agreement or arrangement, or the tasks and activities of a joint body or mechanism, this question asks whether data and information is *actually* exchanged within the basin, sub-basin or part of basin irrespective of whether or not an agreement or arrangement is in place, or a joint body or mechanism has been established.
4. Different types of data and information may be exchanged at different intervals. When responding to this question, the most frequent rate of data and information exchange should be considered.
5. Data and information might be exchanged through uploads to a common web-based information system and might be instantaneous, or take place through the meetings of joint bodies or mechanisms (see examples of data and information by Ghana and Ivory Coast below).

**Experience of data and information exchange between Ghana and Volta Basin States**

The Volta River Basin is shared between Ghana, Benin, Burkina Faso, Ivory Coast, Mali and Togo, and jointly managed through the Volta Basin Authority (VBA). Over 80 per cent of the basin is within Burkina Faso and Ghana. Data sharing between Ghana and the other riparian States takes three forms.

Firstly, Ghana and Burkina Faso have established a seasonal data sharing initiative to minimise the impacts from flooding. In August 2007, a 50-year flood event occurred in Ghana which was aggravated by the opening of the Bagre Dam floodgates in Burkina Faso. Floods have occurred every year except 2011, 2013 and 2017. The Joint Technical Committee on Integrated Water Resources Management (JTC-IWRM), set up in 2005, agreed after the 2007 floods to exchange information. Accordingly, Société Nationale d'électricité du Burkina Faso (SONABEL) transmits daily information on water levels of the Bagre and Kompienga dams in the rainy season every year. This goes to key water, disaster management, and local government institutions in Ghana.

Secondly, Ghana requests for or provides specific data to other Riparian States for specific purposes. For instance, Ghana requested and received daily stream flow discharges from Burkina Faso for flood hazard assessment and to develop the White Volta Flood Early Warning System.

Thirdly, Ghana submits hydrological data to the VBA upon demand, to feed into the Regional Hydrological Database and operate the Volta Basin Information System. This was initiated in 2012 through the Volta-HYCOS programme.

**Ivory Coast’s experiences in data and information exchange on transboundary waters**

Ivory Coast shares eight transboundary rivers: Niger, Volta, Comoé, Bia, Tanoé, Sassandra, Cavalla and Nuon. River Basin Organisations (RBOs) are in place for the following:

* The Niger River Basin: the Niger River Basin Authority, established in 1980 after succeeding the Niger River Basin Commission, includes nine Riparian States (Burkina Faso, Benin, Cameroon, Ivory Coast, Guinea, Mali, Niger, Nigeria and Chad).
* The Volta River Basin: the Volta Basin Authority, established in 2008, includes six States (Benin, Burkina Faso, Ivory Coast, Mali, Ghana and Togo).

An RBO is also being developed for the Comoé, Bia and Tanoé River Basins – the Comoé-Bia-Tanoé Basin Authority (ABCBT). A programme of activities has been approved by the Council of Ministers and the Authority will be formally established once a Conference of the Heads of State and Government takes place. No RBO currently exists for the Sassandra, Cavalla and Nuon Rivers.

For the river basins where no RBOs exists, data and information are exchanged through the respective Ministries of Foreign Affairs. Usually, experts and diplomats from the countries in question arrange *ad hoc* meetings in order to address a particular issue.

Where RBOs are in place, data and information are mainly exchanged via the RBO. IT platforms for data collection are available at the level of each State member of the RBO. Data on climate, hydrology, socio-economics, etc., are provided by each country as an input to the RBO database. RBOs disseminate hydrological, environmental, meteorological and socio-economic information among Member States. For instances, SATH-NBA is a “satellite-based water monitoring and flow forecasting system for the Niger River Basin”, which makes data available for experts in real time. Information concerning the level of surface waters (floods and droughts) originated from this processed date is transmitted to the States.

At the RBO level, information exchange also occurs through the management bodies, such as the Conference of the Heads of States and Governments (normally held biannually), the Council of Ministries (normally held annually), and the Technical Committee of Experts. Another form of data and information exchange takes place at the regional level – through the Economic Community of West African States (ECOWAS). ECOWAS’s Water Resources Co-ordination Centre collects annual data on water resources, drinking water, hygiene and sanitation and makes this available to Member States and the general public through its “WASSMO” database.

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| 7. Do the riparian States carry out joint monitoring in the transboundary basin, sub-basin, part of a basin or group of basins? [55 56 57] Yes [ ] /No [ ] (a) If yes, what does the joint monitoring cover?

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|  | *Hydrological* | *Ecological* | *Chemical* |
| Border surface waters | [ ]  | [ ]  | [ ]  |
| Surface waters in the entire basin | [ ]  | [ ]  | [ ]  |
| Surface waters on the main watercourse | [ ]  | [ ]  | [ ]  |
| Surface waters in part of the basinplease describe [fill in] | [ ]  | [ ]  | [ ]  |
| Transboundary aquifer(s) (connected or unconnected) [58] | [ ]  | [ ]  | [ ]  |
| Aquifer(s) in the territory of one riparian connected to a transboundary river or lake [59] | [ ]  | [ ]  | [ ]  |

(b) If joint monitoring is carried out, how is this done?National monitoring stations connected through a networkor common stations [ ] *Please describe:* [fill in]Joint and agreed methodologies [ ] *Please describe:* [fill in]Joint sampling [ ] *Please describe:* [fill in]Common monitoring network [ ] *Please describe:* [fill in]Common agreed parameters [ ] *Please describe:* [fill in] (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, sub-basin, part of a basin or group of basins? [60] 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****,*** *and assessment methodology applied*: [fill in] |

1. For a definition of “joint monitoring” see note ‎[28] above.
2. The Water Convention provides that, “Riparian Parties shall establish and implement joint programmes for monitoring the conditions of transboundary waters, including floods and ice drifts, as well as transboundary impact” (Art. 11). The *Guide to Implementing the Water Convention* identifies several basic elements of a joint monitoring programme, including a) the objectives or needs to be achieved in terms of policy relevant information to be obtained; b) the identification of monitoring sites; c) the selection of determinants for surface water, groundwater, suspended solids and sediments; d) sampling frequency; and sampling and analytical methods (ECE, 2013, pp. 80-82).
3. While other questions ask whether joint monitoring is provided for in an agreement or arrangement (section II, question 2(d)), or within the tasks and activities of a joint body or mechanism (Section II, question 3(g)), this question asks whether joint monitoring *actually* takes place with the basin(s), sub-basin or part of a basin irrespective of whether or not an agreement or arrangement is in place, or a joint body or mechanism has been established.
4. For an explanation of different types of aquifers, see note ‎[7]
5. For an explanation of different types of aquifers, see note ‎[7].
6. The Water Convention provides that, “the Riparian Parties shall, at regular intervals, carry out joint or coordinated assessments of the conditions of transboundary waters and the effectiveness of measures taken for the prevention, control and reduction of transboundary impact” (Art. 11(3)). Joint monitoring is a critical pre-requisite for carrying out such assessments and in the identification of the magnitude of any water-related problems (UNECE, 2006, p. 1). In turn, “assessments” aim to consider, “the current state of water quantity and quality and their variability in space and time, including appraisals of the hydrological, morphological, physiochemical, chemical, biological and/or microbiological conditions in relation to reference conditions, human health effects and/or the existing or planned uses of waters” (UNECE, 2006, p. 3)

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| 9. Have the riparian States agreed to use joint water quality standards? [61 62] Yes [ ] /No [ ]  *If yes, what standards have been applied, e.g. international or regional standards (please specify which), or have national standards of the riparian States been applied?* [fill in] |

1. For water quality standards to be considered “joint”, the riparian States should agree to implement the same, or at least comparable, water quality standards.
2. This question can be seen as an extension of section II, question 2(d), and question 3(g), which ask if water quality, and the elaboration of water quality objectives, is a topic of cooperation within an agreement or arrangement and/or a task of a joint body or mechanism. There should therefore be a consistency in the responses to these questions. For example, riparian States may have agreed to use joint water quality standards within the text of an agreement or arrangement itself.

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| 10. What are the measures implemented to prevent or limit the transboundary impact of accidental pollution? [63]Notification and communication [ ] Coordinated or joint early warningor alarm system for accidentalwater pollution [ ] Other (*please list*): [fill in] [64]No measures [ ]  *If not, why not? What difficulties does your country face in putting in place such measures?:* [fill in] |

1. The Water Convention requires its Parties to take all appropriate measures to ensure that, “the risk of accidental pollution is minimised” (Art. 3(1)(l); see UNECE, 2013, p. 57). Along similar lines, the Watercourses Convention, requires Watercourse States to notify potentially affected States and competent international organisations of any emergency originating within its territory as a result of *inter alia* human conduct; and to develop joint contingency plans for responding to such emergencies (Art. 28).
2. Other measures might include joint contingency plans and any arrangements with international organisations.

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| 11. What are the measures implemented to prevent or limit the transboundary impact of extreme weather events and climate change? [65]Notification and communication [ ] Coordinated or joint alarm system for floods [ ] Coordinated or joint alarm system for droughts [66] [ ] Joint climate change adaptation strategy [67] [ ] Joint disaster risk reduction strategy [ ] Other (*please list*): [fill in] [68]No measures [ ] *If not, why not? What difficulties does your country face in puttingin place such measures?:* [fill in] |

1. Extreme weather events and impacts of climate change might include flood or ice conditions, water-borne diseases, siltation, erosion, salt-water intrusion, drought or desertification (see Art. 27, Watercourses Convention).
2. A co-ordinated or joint alarm system for droughts might include basin States defining a common “drought of record” for the basin, i.e., the worst drought since the States began gathering flood-related data.
3. Key elements of a climate change adaptation strategy, including examples, can be found in *Guidance on Water and Adaptation to Climate Change* (ECE, 2009).
4. Other measures might include joint monitoring of low water levels.

**Joint Finnish-Russian Action Programme on the Utilisation of Frontier Waters on Risk Management in Case of Adverse Hydrological Conditions in the Vuoksi River Basin District**

The Joint Finnish-Russian Commission on the Utilisation of Frontier Waters (the Commission) has developed a Risk Management Plan in Case of Adverse Hydrological Conditions in the Vuoksi River Basin District (Vuoksi Risk Management Plan) with the aim of mitigating the impacts of climate change. The main tasks of the Vuoksi Risk Management Plan are: i) the acquisition of the reliable hydrological data and enhancing the accuracy of hydrological forecasts; ii) the specification of areas potentially impacted by floods and drought, and the use of such information in the guidance of urban and rural planning and construction; iii) the drawing up of flood maps; iv) the preparation of a joint assessment method for damage due to floods and droughts; v) the improvement of data and information exchange; and vi) the development of discharge practice under an agreed “Discharge Rule” – whereby discharges are carried out in a way that the total damage in the river basin to both Parties is minimised.

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| 12. Are procedures in place for mutual assistance in case of a critical situation? [69 70 71 72] Yes [ ] /No [ ]  *If yes, please provide a brief summary:* [fill in] [73] |

1. The Water Convention provides that, “if a critical situation should arise, the Riparian Parties shall provide mutual assistance upon request”; and “the Riparian Parties shall elaborate and agree upon procedures for mutual assistance addressing, *inter alia*, the following issues: a) the direction, control, coordination and supervision of assistance; b) local facilities and services to be rendered by the Party requesting assistance, including, where necessary, the facilitation of border-crossing formalities; c) arrangements for holding harmless, indemnifying and /or compensating the assisting Party and/or its personnel, as well as for transit through territories of third Parties, where necessary; d) methods for reimbursing assistance services” (Art. 15; see also ECE, 2013, pp. 90-92).
2. The forum that procedures take may vary. Riparian Parties may include procedures for mutual assistance within, i) a section of an agreement or arrangement on water cooperation; ii) as a self-standing agreement on mutual assistance, iii) as a protocol or regulation to an existing agreement or a general agreement on civil protection; and/or iv) within the agreed tasks of a joint body or mechanism (seeECE, 2013, para. 323).
3. “**Mutual assistance”** can be defined as, water management related activities that are conducted by one country by the request of another country, either for free or for payment, including technical and human measures (e.g. sand bags for flood protection, providing technical equipment, the pumping of water and ice breaking).
4. A “**critical situation**” can be defined as a water management related emergency causing danger or risk that threatens human life and/or material loss or damage (e.g. flood, drought, accidental pollution, ice block formation, etc).
5. Where procedures are only in place at the sub-basin level or within part of the basin, this should be stated in the summary.

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| 13. Are the public or relevant stakeholders involved in transboundary water management in the basin, sub-basin, part of a basin or group of basins? [74 75] Yes [ ] /No [ ] *If yes, how? (please tick all applicable)* Stakeholders have observer status in a joint body or mechanism [ ] Stakeholders have an advisory role in the joint body [ ] Stakeholders have a decision-making role in the joint body [ ] *If yes,* *please specify the stakeholders for the joint body or mechanism:* [fill in]Intergovernmental organizations [ ] Private sectors organizations or associations [ ] Water user groups or associations [ ] Academic or research institutions [ ] Other non-governmental organizations [ ] General public [ ]  Other (please specify): [fill in]Availability of information to the public [76] [ ] Consultation on planned measures or river basinmanagement plans4 [77] [ ] Public involvement [ ]  Other (*please specify*): [fill in] [78]\_\_\_\_\_\_\_\_\_\_\_\_\_4 Or, where applicable, aquifer management plans. |

1. The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) defines “the Public” as, “one or more natural or legal persons, and, in accordance with national legislation or practice, their associations, organisations or groups” (Art. 2(4)). The Convention goes on to define, “public concerned”, which can be considered synonymous as the term “stakeholders” as being, the public affected or likely to affected by, or having an interest in, the environmental decision-making” (Art. 2(5)).
2. **What does “involvement” cover?** Question 13, through the tick box options, highlights the main ways in which the public or relevant stakeholders may be involved in transboundary water management. The *Implementation Guide* for the Aarhus Convention observes that, “the level of involvement of the public in a particular process depends on a number of factors, including the expected outcomes, its scope, who or how many will be affected, whether the result settles matters on a national, region or local level, and so on”. The Guide goes on to explain that, “those who are most affected by the outcome of the decision-making or policymaking should have a greater chance to influence the outcome” (ECE, 2014b, 119; see also pp. 57-58).
3. The Water Convention obliges Riparian Parties to, “ensure that information on the conditions of transboundary waters, measures taken or planned to be taken to prevent, control and reduce transboundary impact, and the effectiveness of those measures, is made available to the public” (Art. 16; see also ECE, 2013, pp. 93-97).
4. See also the example of the Mekong River below.
5. For example, how are gender considerations taken into account when considering participation of the public and relevant stakeholders in decision-making.

**Procedures for Prior Notification, Prior Consultation and Agreement and stakeholder participation in the Mekong River Basin**

Procedures for Prior Notification, Prior Consultation and Agreement (PNPCA) were developed by the Parties to the 1995 Mekong Agreement (Cambodia, Lao PDR, Thailand and Vietnam). “Prior notification” requires a country proposing a project to notify the details of the project to the Parties before it commences the proposed use; “prior consultation” involves a six-month process of technical evaluation and formal consultations where notified Member States have an opportunity to assess any potential transboundary impact on ecosystems and livelihoods, and to recommend measures to address those issues before water is used; and “specific agreement” requires a thorough negotiation to achieve a consensus on terms and conditions of the proposed project among all Members States prior to the proposed use of the water.

During the prior consultation procedure, which applies to intra-basin uses during the dry season and inter-basin uses in the wet season, public consultations are held in order to hear any concerns and views of the public and interested parties. These consultations are conducted by the Mekong River Commission (MRC) secretariat and the National Mekong Committees of each member country – the governmental body that coordinates the MRC’s work at a national level.

For more information see: <http://www.mrcmekong.org/topics/pnpca-prior-consultation/>.

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| **Please remember to complete section II for each of the transboundary basins, sub-basin, part of a basin or group of basins. Please also remember to attach copies of agreements or arrangements, if any.** |
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| **SECTION III**III. Water management at the national levelIn this section, you are requested to provide general information on water management at the national level as it relates to transboundary waters. Information on specific transboundary basins, sub-basins, part of basins and groups of basins, should be presented in section II and not repeated here. 1. (a) Does your country’s national legislation, policies, action plans and strategiesrefer to measures to prevent, control and reduce any transboundary impact? [79 80] Yes [ ] /No [ ] *If yes, please briefly describe the main national laws, policies, action plans and strategies* [fill in] [81 82 83](b) Does your country’s legislation provide for the following principles? [84]Precautionary principle Yes [ ] /No [ ] Polluter pays principle Yes [ ] /No [ ] Sustainable development Yes [ ] /No [ ] User pays principle Yes [ ] /No [ ] If yes, please briefly describe how these principles are implemented at the national level: [fill in] [85] |

1. The Water Convention stipulates that its Parties take “all appropriate measures” to prevent, control and reduce any transboundary impact (Art. 2(1); see also ECE, 2013, pp. 19-21) - many of these measures must be adopted at the national level. Laws, policies, action plans and strategies are therefore fundamental to ensuring that an effective system is in place at the national level in order to meet any commitments contained in international agreements or arrangements for transboundary waters.
2. Question 1(a) should be answered “yes”, where there is an explicit reference to transboundary waters or impacts within the national laws, policies, action plans and strategies of a country.
3. The brief description should highlight the main national laws, policies, action plans and strategies that explicitly refer to transboundary impact. National laws may make reference to transboundary waters in a number of ways, including: i) providing a mandate to government agencies or bodies to negotiate agreements and arrangements on transboundary waters; ii) empowering institutions to formulate policy and guidance related to transboundary waters; iii) providing the main principles of transboundary water sharing that are adhered to by a country; and iv) incorporating international commitments related to transboundary waters into a county’s planning and decision-making process related to, for example, water abstraction licenses or concessions and wastewater discharge permits (see Burchi, 2016, pp. 43-44). For examples of national legislation explicitly addressing transboundary waters, see Part VII, Zambia Water Resources Management Act, 2011; Article 7, Bangladesh Water Act, 2013; Law of Kyrgyz Republic on Interstate Use of Water Objects, Water Resources and Water Management Constructions, 2001; and Part 6, Namibia Water Resources Act, 2013.
4. In federal States such as Argentina, Belgium, Brazil, India and the United States, there may be national and/or state or provincial and municipal laws, policies, action plans and strategies related to water. In such circumstances, any differences concerning transboundary waters in the laws, policies, action plans and strategies at the federal and provincial or state level should be explained.
5. Where they differ, the main laws, policies, actions plans and strategies related to groundwater and surface water management should be described separately.
6. The response to question 1(b) should consider whether the precautionary principle, polluter pays principle, sustainable development and user pays principles are incorporated into national laws, policies, actions plans and strategies related to transboundary water management, rather than, for example, more general laws relating to environmental protection or sustainable development.
7. The description should focus on how the principles are incorporated into national laws, policies, actions plans and strategies related to transboundary water management.

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| (c) 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)? [86] Yes [ ] /No [ ]  *If yes, for which sectors?* Industry [ ] Mining [ ] Energy [ ] Municipal [ ] Livestock raising [ ] Aquaculture [ ] Other (please list): [fill in]*Please briefly describe the licensing or permitting system, indicating whether the system provides for setting emission limits based on best available technology?* [87]*If yes, for which sectors? (please list):* [fill in]*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] |

1. The Water Convention obliges the Parties to develop, adopt and implement national measures in order to ensure that, “transboundary waters are protected against pollution from point sources through the prior licensing of waste-water discharges by the competent national authorities” (Art. 3(1)(b)). See also *Guidelines on Licensing Waste-water Discharges from point Sources into Transboundary Waters* (ECE, 1996).
2. “**Best available technology”,** as defined in Annex I of the Water Convention, means, “the latest stage of development of processes, facilities or methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste. In determining whether a set of processes, facilities and methods or operation constitute the best available technology in general or individual cases, special consideration is given to: a) comparable processes, facilities or methods of operation which have recently been successfully tried out; b) technological advances and changes in scientific knowledge and understanding; c) the economic feasibility of such technology; d) time limits for installation in both new and existing plants; e) the nature and volume of the discharges and effluents concerned; f) low and non-waste technology”. Annex I also notes that, “what is “best available technology” for a particular process will change with time in the light of technological advances, economic and social forces, as well as in light of changes in scientific knowledge and understanding”. See also *Guide to Implementing the Water Convention* (ECE, 2013, pp. 41-45).

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| (d) Are the authorized discharges monitored and controlled? [88] Yes [ ] /No [ ] *If yes, how?* (*Please tick the ones applicable*):Monitoring of discharges [ ] Monitoring of physical and chemical impacts on water [ ] Monitoring of ecological impacts on water [ ] Conditions on permits [ ] Inspectorate [ ] Other means (*please list*): [fill in] [89]*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] |

1. Discharges are authorised when a competent authority provides a water user with a permit or license, which will set out the conditions and limits of that water use and its impacts. These permissible waste-water discharges should be monitored and controlled through a programme that considers the volume of waste water produced per time unit, the composition of waste-water, discharge patterns, and the characteristics of the receiving bodies ([ECE](http://www.unece.org/fileadmin/DAM/env/water/documents/licensingwwguidelines.pdf), 1996, p. 35).
2. For example, self-monitoring, by license or permit holders, may be part of a monitoring system for point sources of pollution ([ECE,](http://www.unece.org/fileadmin/DAM/env/water/documents/licensingwwguidelines.pdf) 1996, p. 35).

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| (e) 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”: [90] **Legislative measures**Norm for uses of fertilizers [ ] Norms for uses of manure [ ] Permitting system [ ] Bans on or norms for use of pesticides [ ] Others (please list): [fill in] **Economic and financial measures**Monetary incentives [91] [ ] Environmental taxes (such as fertilizer taxes) [ ] Others (*please list*): [fill in]**Agricultural extension services** [92] [ ]  **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](f) What are the main measures which your country takes to enhance water resources allocation and use efficiency? *Please tick as appropriate (not all might be relevant)*A regulatory system regarding water abstraction [ ] Monitoring and control of abstractions [ ] Water rights are defined [93] [ ] Water allocation priorities are listed [ ] Water-saving technologies [ ] Advanced irrigation techniques [ ] Demand management activities [ ] Other means (please list) [ ] (g) Does your country apply the ecosystems approach? [94 95] Yes [ ] /No [ ]  *If yes, please describe how:* [fill in] [96](h) Does your country take specific measures to prevent the pollution of groundwaters? [97] Yes [ ] /No [ ]  *If yes, please briefly describe the most important measures:* [fill in] |

1. Diffuse pollution may come from a range of other sources, including urban land, forestry, atmospheric deposition or rural dwellings.
2. For example, rebates for lowering pollution levels or subsidies for moving to best environmental practices.
3. Extension services are usually an administrative division of government that work with farmers to facilitate programmes and projects for change, such as improved pollution control, reduction and prevention practices.
4. “**Water rights”,** in a broad sense, encompasses, “a variety of rights to access and use water, including those created by common law, and by administrative licensing regimes” (Hendry, 2014, p. 38).
5. The **“ecosystems approach”** is defined as, “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way” (Decision V/6, Biodiversity Convention, 2000).
6. Question 1(g) seeks to determine if an ecosystem approach is imbedded within any national law and policy framework for water resources management.
7. Where available, the relevant parts of a national law and policy framework for water resources management in support of the ecosystems approach should be described here.
8. The Water Convention obliges its Parties to take “additional specific measures”, to prevent the pollution of groundwaters (Art. 3(1)(k)). See also ECE, *Model Provisions on Transboundary Groundwaters,* which obliges Parties to, “take appropriate measures to prevent, control and reduce the pollution of transboundary groundwaters”, which include “a) the establishment of protection zones, in particular in the most vulnerable/ critical parts of the recharge area of groundwaters, especially of groundwaters used or intended to be used for the provision of drinking water; b) the adoption of measures to prevent or limit the release of pollutants into groundwaters, such as negative influences on groundwater from point sources; c) the regulation of land uses, including intensive agricultural practices, to combat pollution of groundwater from nitrates and plant protection agents; d) the definition of groundwater water objectives and the adoption of groundwater quality criteria” (Provision 5 and commentary, ECE, 2014a, pp 9-12). See also the EU Groundwater Directive (2006/118/EC), which requires Member States to set groundwater quality standards, and measures to prevent or limit inputs of pollutants into groundwater; and 2008 ILC Draft Articles on Transboundary Aquifers (with commentaries), Art. 12, ILC, 2008.

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| 2. Do your national laws require transboundary environmental impact assessment (EIA)? [98 99] Yes [ ] /No [ ] *If yes, please briefly describe the legislative basis****,*** *and any related implementing procedures.* [fill in] [100]*If not, do other measures provide for transboundary EIA?* [fill in] [101] |

1. The Water Convention obliges Parties to apply EIA and other means of assessment when preventing, controlling and reducing transboundary impact (Art 3(1)(h)); and lists the participation in the implementation of EIAs relating to transboundary waters as a task of any joint body or mechanism (Art. 9(2)(j)). Parties to the Convention on Environmental Impact Assessment in a Transboundary Context (ESPOO Convention), are also obliged to undertake an EIA in case of planned activities likely to have a transboundary impact, and in so doing, establish a framework for the participation in the process of any potentially affected Parties before a final decision on the project is made (see ECE, 2013, pp. 53-55). In the *Pulp Mills on the River Uruguay Case,* the International Court of Justice has also observed that as part of customary international law, an EIA constitutes a pre-requisite to reaching a decision on any plan that is liable to cause significant harm to another State (ICJ, 2010, para. 119).
2. While most countries have EIA legislation in place, question 2 asks more specifically whether national legislation is in place that requires a *transboundary* EIA.
3. The description of the legislative basis should highlight the key elements of an EIA process that applies to projects that may have a transboundary impact. Where in place, countries may also wish to highlight a Strategic Environmental Assessment (SEA) framework that applies to transboundary waters – as opposed to EIAs that relate to specific projects, SEAs relate to the preparation of plans and programmes and can therefore capture cumulative impacts (See ECE, 2013*,* paras 199-200).
4. “Other measures” might include those contained in bilateral or multilateral agreements.

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| IV. Final questions [102]1. What are the main challenges your country faces in cooperating on transboundary waters? Differences between national administrative and legal frameworks [ ] Lack of relevant data and information [ ] Difficulties in data and information exchange [ ] Sectoral fragmentation at the national level [ ] Language barrier [ ] Resource constraints [ ] Environmental pressures, e.g. extreme events [ ] Sovereignty concerns [ ]  Please list other challenges and/or provide further details: [fill in]2. What have been the main achievements incooperating on transboundary waters? Improved water management [ ] Enhanced regional integration, i.e. beyond water [ ] Adoption of cooperative arrangements [ ] Adoption of joint plans and programmes [ ] Long-lasting and sustained cooperation [ ] Financial support for joint activities [ ] Stronger political will for transboundary water cooperation [ ] Better knowledge and understanding [ ] Dispute avoidance [ ] Stakeholder engagement **[ ]** Please list other achievements, keys to achieving success, and/or provide concrete examples: [fill in] [103] |

1. Questions 1 and 2 offer the opportunity to summarise the responses in the reporting template, and to highlight, from a national perspective, the key challenges and opportunities in advancing transboundary water cooperation. While response to specific questions in sections I-III may be technical, Section IV should be completed in a way that is accessible to policy- /decision-makers.
2. Concrete examples might be those that show specific improvements as a result of transboundary water cooperation, such as improved water quality, or the sharing of benefits.

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| 3. Please indicate which institutions were consulted during the completion of the questionnaire Joint body or mechanism [ ] Other riparian or aquifer countries [ ] National water management authority [ ] Environment agency/ authority [ ] Basin authority (national) [ ] Local or provincial government [ ] Geological survey (national) [ ] Non-water specific ministries, e.g. foreign affairs, finance,forestry and energy [ ] Civil society organizations [ ] Water user associations [ ] Private sector [ ]  Other (please list): [fill in] Please briefly describe the process by which the questionnaire was completed: [fill in]4. If you have any other comments please add them here (*insert comments*): [fill in] [104]5. Name and contact details of the person(s) who filled out the questionnaire (*please insert*): [fill in] Date: [fill in] Signature: [fill in] |

1. Respondents may describe the process by which the template was completed here, such as the organisation of a national workshop and/or the establishment of a cross-governmental drafting committee.

This question also offers the opportunity to provide any further explanation to any of the responses given in the previous sections, or to highlight any other aspects of transboundary water cooperation that may not have been already captured.

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