PROGRESS ON TRANSBOUNDARY WATER COOPERATION UNDER THE WATER CONVENTION

Second report on implementation of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes

2017-2020
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United Nations
Geneva, 2021
FOREWORD

I am pleased to share with you the second report on the implementation of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), hosted by the United Nations Economic Commission for Europe (UNECE). The report focuses on progress in the implementation of the Convention in the period 2017–2020 and builds on the national reports submitted by all the Parties to the Convention in the framework of the second reporting exercise on Sustainable Development Goal indicator 6.5.2 and under the Convention.

For the first time, the geographical scope of the report covers the implementation of the Water Convention by its new Parties beyond the UNECE region, namely in sub-Saharan Africa. This demonstrates progress in transforming the Water Convention into a global legal instrument and institutional platform for transboundary water issues. It also shows the increased relevance of the Convention for supporting Member States in their efforts to achieve the Sustainable Development Goals and to implement their climate change commitments, including those in the Paris Agreement under the United Nations Framework Convention on Climate Change.

The report points out that strengthened water governance, peace, better water quality and conservation, and protection of ecosystems are among the concrete benefits of cooperation in the framework of the Water Convention. With the globalization of the Convention, these benefits are accessible to all countries interested in improving the management of their transboundary waters.

The report also clearly shows that the Water Convention is a dynamic instrument of cooperation. Its Parties continuously make efforts to improve their cooperation and extend it to new topics, to identify and implement innovative solutions, and to assist each other through the exchange of experience and good practices. Many new agreements, action plans and strategies developed for transboundary basins, as well as the work of the basin commissions and other joint bodies described in the report, illustrate what can be achieved through cooperation on the basis of the legal and institutional framework provided by the Convention.

The practical value of the second report lies in the identification of hotspots, gaps and problematic areas in the implementation of the Convention and the recommendations to Parties and international partners on possible actions to improve integrated water resources management and transboundary cooperation. Although the present report is first and foremost addressed to Parties, I see it as an important tool for countries that are considering accession to the Water Convention and for other interested stakeholders. It provides a very useful insight into the application of the provisions of the Convention by its Parties.

I hope that the present report will inspire action to improve transboundary water cooperation on the basis of the Water Convention, in particular the negotiation and adoption of agreements and arrangements and the establishment of joint bodies and joint activities to adapt to climate change, build resilience to disasters and protect and restore ecosystems in transboundary basins.

Olga Algayerova
Under-Secretary-General of the United Nations
Executive Secretary of the United Nations Economic Commission for Europe
PREFACE

The second progress report under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) was prepared by the Convention secretariat in line with decision VIII/1 of the Meeting of the Parties to the Convention. In that decision, the Parties requested the secretariat to prepare regular reports, based on the national reports received, for future sessions of the Meeting of the Parties on the implementation of the Convention.

The present report was prepared as part of activities dedicated to reporting on Sustainable Development Goal indicator 6.5.2 and under the Convention, under programme area 6 of the programme of work for 2019–2021 under the Convention. However, the report will support implementation of all areas of the programme of work, by shedding light on problematic areas and encouraging Parties, individually and collectively, to strengthen implementation of the Convention and improve transboundary water cooperation.

The second progress report provides an analysis of the national reports submitted by Parties to the Convention based on a common reporting template, and therefore closely mirrors the template structure. Following an introduction, providing the context for the second reporting exercise and its results, the responses of Parties to the main parts of the reporting template are reviewed. These are analysed in the chapters on transboundary water management at the national level, agreements and arrangements for transboundary waters, joint bodies for transboundary water cooperation and activities related to the implementation of transboundary water cooperation. A chapter on selected basins takes an in-depth look at the same aspects at the basin level. In the concluding chapter, achievements in the period 2017–2020 are highlighted and detailed recommendations are provided.

The analysis presented in the second report is primarily based on the answers provided by the Parties in the reporting template, and the use of other sources is both limited and secondary to those responses.

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The Implementation Committee under the Water Convention reviewed the findings of the report at its thirteenth meeting on 20 and 21 May 2021.

Finally, the secretariat expresses its utmost gratitude to Germany, the Netherlands, Norway, Sweden and Switzerland and the UN-Water Integrated Monitoring Initiative for SDG 6 for the financial support provided for the second reporting exercise on SDG indicator 6.5.2 and/or under the Convention.
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EXPLANATORY NOTE

The reporting mechanism under the Water Convention envisages that countries complete national reports on the status of transboundary cooperation in relation to shared rivers, lakes and aquifers. While providing a national perspective is critical to the effectiveness of the reporting mechanism, it poses certain challenges in the presentation of data.

A major challenge in the presentation of data, particularly in chapters 3 to 5, which focus on transboundary basins, concerns instances where two or more Parties provide different answers in relation to the same basin in sections I and II of the reporting template. To avoid privileging the answer by one Party over the answer by another Party, the second progress report presents all responses that relate to a particular transboundary river, lake or aquifer. This unconsolidated analysis is provided in the sections entitled “What have the countries reported?”.

However, a drawback to an unconsolidated approach is that there are multiple answers concerning the same transboundary waters. For example, 15 countries\(^1\) responded to the same questions concerning the status of transboundary water cooperation in the Danube River basin. As a consequence, the data presented in the progress report reflects to a greater extent the situation in transboundary waters shared by a higher number of countries. In addition, presenting the data in such a way means that any discrepancies in answers to the same question are not addressed.

To tackle the challenge of duplication and differing responses, chapters 3 to 5 provide additional analysis that takes the transboundary basin as the primary unit of analysis. This analysis is based on 144 transboundary river and lake basins and 77 river and lake sub-basins that were explicitly reported by at least one Party. Such a consolidated analysis is, however, limited to transboundary rivers and lakes; it was not possible to complete such an analysis for transboundary aquifers.

An additional challenge encountered in data analysis for the second report was how to capture information for those transboundary basins that were not described by Parties in section II of their reports, usually because of the absence of cooperation in those basins. Analysis of section I of the reports enabled the secretariat to partially fill in this gap, therefore increasing the accuracy of the overall picture presented in the report.

Another limitation concerns the fact that transboundary basins reported by countries are treated on an equal footing in the data analysis, irrespective of their size. For example, the replies for 49 transboundary river basins reported by Norway are each given the same weight as one reply provided by Kazakhstan for the Aral Sea basin.

Since some additional transboundary waters were reported by Parties in the second reporting exercise under the Convention, as compared with the pilot reporting exercise, and since additional countries participated in the second reporting exercise, the quantitative results of the two reporting rounds are not directly comparable. Nevertheless, comparisons can be made at the level of individual Parties and sometimes basins. In addition, chapter 7 specifically focuses on achievements and challenges with regard to implementation of the Convention in the period 2017–2020.

Finally, with regard to the nomenclature of water bodies, owing to the difficulties presented in using special characters in databases containing the names of rivers, lakes and seas, and to make the names more easily searchable, special characters have been omitted in the names of all water bodies in the

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\(^1\) These include 14 countries which are Parties to the Convention on Cooperation for the Protection and Sustainable Use of the Danube River and Poland.
present document. These characters have been replaced by the letter which they most closely resemble in the Latin alphabet (for example, the Näätämö becomes the Naatamo), and do not follow any other rules of transliteration.

References in the publication to Parties with a capital “P”, indicate that countries are Parties to the Water Convention.
EXECUTIVE SUMMARY

The Water Convention requires Parties to prevent, control and reduce transboundary impact, to use transboundary waters in a reasonable and equitable way and to ensure the sustainable management of transboundary waters through cooperation. Parties bordering the same transboundary waters have to cooperate by entering into specific agreements, establishing joint bodies, holding consultations, carrying out joint monitoring and assessment, exchanging data and information, and pursuing other forms of cooperation in accordance with the Convention.

The second progress report provides a review of progress made in the implementation of the Water Convention by synthesizing the outcomes of the second reporting round, in which all Parties to the Convention submitted national reports. It covers the period 2017–2020 – a crucial phase in the evolution of the Convention, in which the membership was enlarged through the accession of several countries from outside the United Nations Economic Commission for Europe region and, increasingly, others started their national processes towards accession, exploring the obligations under the Convention and preparing for their implementation.

The dynamic character of cooperation under the Convention is a leitmotif of this report. Parties continuously make efforts to improve their cooperation by concluding new or additional agreements or arrangements and by adopting and implementing new strategies, programmes or action plans at the basin, sub-basin and bilateral levels. The conclusion of at least 10 new agreements or arrangements by Parties in the period 2017–2020, and the entry into force of another 4, demonstrate the Parties’ strong commitment to continuous and effective cooperation.

Overall, most of the 144 transboundary river and lake basins reported on by the Parties in the second reporting exercise are covered by agreements or arrangements in force, either wholly or partly. The average value of indicator 6.5.2 for Parties to the Water Convention is 80.38%, which is higher than the global average of 58.01%. This shows significant results have been achieved in implementing the key obligation of the Water Convention – to cooperate by entering into specific agreements – with 186 specific agreements reported by Parties in the second reporting exercise. Nevertheless, there are at least 16 river and lake basins and 15 river and lake sub-basins which are not covered by any agreement or arrangement, either wholly or partly.

Where agreements and arrangements for transboundary waters are in place, in most cases participating countries take part in a joint body established to facilitate implementation of an agreement or arrangement, with the most common type being a bilateral commission. Only in 14 instances of cooperation in river and lake basins did Parties report that there was no joint body for a particular agreement or arrangement. Joint bodies serve as platforms for continuous dialogue and day-to-day transboundary water cooperation, enabling implementation of other obligations under the Convention.

Despite these overall positive trends, a lack of financial resources and insufficient human capacity are the main challenges Parties face in the implementation of transboundary agreements, whereas a lack of resources and governance issues stand out as the main challenges and difficulties faced by joint bodies. Some Parties face difficulties in the negotiation and adoption of agreements and arrangements for transboundary waters and, simultaneously, the establishment of joint bodies. This is identified as a particular challenge in basins where other riparian countries are not Party to the Convention.

Parties reported on a wide variety of action plans, declarations, guidance documents and strategies developed or approved at the at basin, sub-basin and bilateral level. These documents demonstrate a
systemic effort to implement agreements and arrangements by jointly agreeing on more specific strategies, measures or activities with regard to the various topics of transboundary water cooperation – from flood protection to adaptation to climate change.

Looking beyond the core obligation of Parties bordering the same transboundary waters to cooperate by entering into specific agreements and establishing joint bodies, it appears that many Parties make significant efforts to implement the other substantive and procedural obligations of the Convention. Nevertheless, they face a number of challenges in the implementation of some of these other obligations, in particular with regard to joint water quality objectives, the maintenance of joint pollution inventories, the setting of emission limits based on best available technology, the establishment of early warning and alarm systems, especially for accidental water pollution, and mutual assistance. There is also a need to enhance understanding and implementation of the requirements to protect the marine environment influenced by transboundary waters, to strengthen cooperation on transboundary aquifers and the conjunctive use of surface waters and groundwaters, and to facilitate cooperation in the areas of human health, adaptation to climate change and disaster risk reduction in transboundary basins.

The second reporting exercise reveals that transboundary water management is well reflected at the national level through the adoption of laws and policies related to the prevention, control and reduction of transboundary impacts, the regulation and monitoring of both point and diffuse pollution, and the adoption of environmental impact assessment laws and procedures. At the same time, relevant Parties should explore taking additional measures to enhance water use efficiency and to reduce pollution of transboundary waters from diffuse sources.

Parties to the Convention can learn a lot from each other through the exchange of experience and good practices. By presenting in more detail the approaches to transboundary cooperation in the Danube, Drin and Ural/Zhayik River basins and the Bug River sub-basin, and the bilateral cooperation of Latvia and Lithuania on transboundary groundwater, the second progress report aims to inspire such exchanges.

The report concludes with a series of recommendations addressed to the Parties, aimed at assisting them to identify ways to strengthen implementation of the provisions of the Convention and improve understanding of its requirements, including by using the institutional platform of the Convention and the programme of work. It also includes recommendations to partner organizations with a view to increasing their support to implementation of the Convention and transboundary water cooperation.
INTRODUCTION

The regular reporting mechanism under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), introduced by the Meeting of the Parties in 2015, has become an important asset in supporting the implementation of the Convention. The first and second reporting exercises under the Convention, respectively held in 2017/18 and 2020/21, demonstrate the numerous benefits of reporting, namely by having contributed to improved transboundary water cooperation, enhanced political focus on cooperation, exchange of experiences and identification of gaps in implementation.

For Parties to the Convention, the reporting under the Convention is combined with reporting on Sustainable Development Goal (SDG) indicator 6.5.2 in order to increase synergies between the two processes and to avoid duplication of efforts. Parties use the same template to submit information for the purposes of reporting under the Convention and under indicator 6.5.2. Based on the outcomes of the pilot reporting exercise carried out in 2017/18, the reporting template was clarified and subsequently adopted at the eighth session of the Meeting of the Parties for future reporting exercises. All Parties to the Convention used the revised template in the 2020/21 round to submit their national reports.

The second progress report offers a synthesis of all the national reports submitted by Parties to the Convention during the second reporting exercise. It aims to provide an overall picture of the implementation of the Convention, assist Parties in strengthening their implementation activities, support acceding countries in their accession processes, encourage stronger support for transboundary water cooperation and implementation of the Convention from technical and financial partners, and raise awareness about the challenges and benefits of transboundary water cooperation among various stakeholders.

The second progress report closely follows the structure of the first progress report issued in 2018. Chapter 1 presents the process of the second reporting exercise, its major features and limitations. The report further considers transboundary water management at the national level (chapter 2), transboundary agreements and arrangements (chapter 3), joint bodies for transboundary water cooperation (chapter 4) and activities related to the implementation of agreements and arrangements (chapter 5). Additionally, it highlights the experience of selected basins in establishing and gradually advancing transboundary water cooperation (chapter 6). Main achievements and challenges faced by countries in implementing the Water Convention and transboundary water cooperation in the period 2017–2020 are also presented, together with recommendations to Parties to the Convention and partner organizations (chapter 7).

Chapters 2 to 5 adopt a similar structure. Firstly, a section outlines the relevant provisions of the Water Convention. Secondly, a section highlights the relevant questions of the template and the

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2 ECE/Misc.WAT/49/Add.2, decision VII/2.
3 Indicator 6.5.2 tracks the proportion of transboundary basin area within a country covered by an operational arrangement for water cooperation.
4 ECE/Misc.WAT/2016/2, paras. 22, 24 and 26 (a).
5 In the second reporting exercise, 129 countries, including all States Parties to the Convention, submitted their reports on indicator 6.5.2 out of the 153 countries invited to report. More information about the second reporting exercise on indicator 6.5.2 and under the Convention is available at https://unece.org/environmental-policy/water/transboundary_water_cooperation_reporting.
6 ECE/Misc.WAT/2018/5, decision VIII/1.
responses provided by the Parties. This section includes the total number of responses for the particular questions, meaning that there might be an overlap in responses where two or more Parties have reported on the same agreement or arrangement. The final section seeks to address this overlap by analysing the reported responses at a basin level and ascertaining any gaps in implementation.

For ease of reference, the figures in chapters three to five are colour coded as follows: data based on all responses to a particular question (grey background); data based on responses for all agreements or arrangements in force (green background); data based on responses for all joint bodies in place (blue background); and data based on a consolidated analysis at the basin level (purple background). Figures with a consolidated analysis at the basin level (figures 13, 20, 29, 30, 33, 34 and 37) present consolidated analysis for 146 units, where most units are river and lake basins, and few are river and lake sub-basins. A sub-basin was counted as a unit only when not reported at basin level. For example, the Selenge River sub-basin was counted as a unit since the Yenisey River basin was not reported.

As in the first progress report, each chapter of the second report includes text boxes, most of them entitled “insights from practice”. These boxes highlight some of the examples of practices mentioned by the Parties when completing their national reports. More detailed information is provided in the completed templates themselves. The intention of the boxes is therefore simply to highlight some of these examples rather than to comprehensively describe the relevant practice.

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8 For further information, see the explanatory note on the presentation of data from the national reports.
CHAPTER 1 OVERVIEW OF THE SECOND REPORTING EXERCISE

Key messages
- All Parties to the Convention have submitted reports in the second reporting round on SDG indicator 6.5.2 and under the Convention.
- For the first time, the reporting process under the Convention included new Parties to the Convention from outside the pan-European region, namely Chad and Senegal.9
- Despite the challenges related to the coronavirus disease (COVID-19) pandemic, the timeliness of the submission of reports in the second exercise improved as compared with the first round.
- Many more Parties have engaged in consultations on the content of their reports with other riparian countries and within joint bodies in the second reporting round, which is a real achievement.
- Although the coordination of responses has improved for transboundary rivers and lakes, this was not the case for transboundary aquifers, where a stronger effort is required to coordinate the responses and present more detailed and improved data in the next reporting rounds.

1.1 Rate and timeliness of reporting

In accordance with decision VIII/1, adopted in 2018 at the eighth session of the Meeting of the Parties to the Water Convention, the second reporting exercise took place in 2020/21. Since the reporting under the Convention and the reporting on SDG indicator 6.5.2 are aligned to increase synergies between the processes and avoid duplication of efforts, Parties to the Convention were invited to report on the implementation of the Convention using the same reporting template as for reporting on SDG indicator 6.5.2.

Invitations to report, both under the Water Convention and on SDG indicator 6.5.2, were disseminated in February 2020. Parties were given a deadline of 30 June 2020 by which to submit their reports. By 30 June 2020, 23 reports (including unsigned reports (drafts)) had been submitted by Parties, and by 28 February 2021 a further 19 reports had been submitted (figure 1 and annex I).

Figure 1: Timeliness of the reception of the initial reports (unsigned reports (drafts) included)

- Reports received by 30 June 2020
- Reports received between 1 July 2020 and 30 September 2020
- Reports received between 1 October 2020 and 28 February 2021

9 Ghana and Guinea-Bissau deposited their instruments of accession to the Water Convention on 22 June 2020 and 14 June 2021, respectively. The Convention entered into force for Ghana on 20 September 2020 and for Guinea-Bissau on 12 September 2021. In both cases, this was after the deadline for the submission of reports by Parties. The reports of these two countries are therefore not covered by this second progress report. The reports submitted by these two countries as part of the second reporting round on indicator 6.5.2 are analysed in the publication, *Progress on Transboundary Water Cooperation: Global Status of SDG indicator 6.5.2 and Acceleration Needs 2021* (ECE/MP.WAT/65, forthcoming).
By 28 February 2021, all 42 Parties\textsuperscript{10} to the Convention had submitted their reports. For the first time, Chad and Senegal – Parties to the Convention from outside the pan-European region – participated in the reporting process under the Convention.

The response rate of 100\% in the second reporting exercise represents an improvement from the pilot reporting exercise in 2017/18 (with 95\%, or 38 out of 40 Parties reporting) and demonstrates the unanimous support for the reporting mechanism among Parties. Such an improvement is even more impressive in the context of the COVID-19 pandemic in 2020/21, which undoubtedly affected the operation of national administrations, complicating the internal and transboundary consultations in the process of the preparation of national reports.

There has also been a considerable improvement in the timeliness of the submission of reports in the second reporting exercise as compared with the pilot reporting exercise: in 2017, only 39\% of reports were submitted by the deadline, whereas in 2020, 55\% of reports were submitted on time. Nevertheless, the fact that a significant number of reports were submitted after the prescribed deadline posed a challenge, as many reports required clarifications and a complete analysis of the reports could not commence until all finalized and signed reports had been submitted. This has delayed data analysis and made it difficult to use the results of reporting in the development of the programme of work under the Water Convention for the following triennium period.

1.2 Coverage of transboundary waters

In annex II to the report, basins identified in the \textit{Second Assessment of Transboundary Rivers, Lakes and Groundwaters} (2011) are compared with those listed in the national reports. Annex II also looks at the coverage of basins shared by the new Parties to the Convention, such as Chad and Senegal, and provides a comparison with basins identified under the Transboundary Waters Assessment Programme (TWAP).\textsuperscript{11}

In the United Nations Economic Commission for Europe (UNECE) region,\textsuperscript{12} a total of 139 river and lake basins (compared with 73 river and lake basins in the pilot reporting exercise) and 77 river and lake sub-basins (compared with 79 river and lake sub-basins in the pilot reporting exercise) are listed in the national reports submitted by Parties in the second reporting exercise.\textsuperscript{13} Additionally, five river and lake basins (and no river and lake sub-basins) in sub-Saharan Africa are listed in the national reports submitted by Chad and Senegal.

Several Parties have significantly increased or decreased the total reported surface areas of their transboundary river, lake or aquifer basins in the second reporting exercise as compared with the first, mostly as a result of methodological clarifications or improved data availability. Significant (more than 20\%) increases for river and lake basins were found in the reports of Norway and Sweden and for aquifers – in the reports of Montenegro, the Republic of Moldova, Slovakia and Slovenia.

\textsuperscript{10} As of 31 July 2021, there are 45 Parties to the Water Convention (44 countries and the European Union). While Ghana and Guinea-Bissau submitted their reports for the SDG 6.5.2 reporting exercise, they are not covered by this second progress report. The European Union is a Party to the Convention, but was not invited to report.

\textsuperscript{11} http://twap-rivers.org/

\textsuperscript{12} While UNECE has “Europe” in its title, its 56 member States span the continents of North America, Europe and Asia (including the countries of Central Asia).

\textsuperscript{13} A basin or sub-basin is counted as “listed” if it is listed in at least one national report. There are some overlaps in reported areas, i.e., some reported sub-basins belong to reported basins.
Significant (more than 20%) decreases for river and lake basins were observed in the reports of Croatia, Kazakhstan\textsuperscript{14} and Montenegro.

There has been good progress in clarifying the data on transboundary aquifers, as many more transboundary aquifers were reported by the Parties in the second reporting exercise. For example, the Republic of Moldova provided information on two transboundary aquifers in the pilot reporting exercise, while in the second reporting exercise the country was able to provide information on seven. Also, some Parties that did not report on transboundary aquifers in the first exercise were able to do so in the second exercise (Belarus, North Macedonia, Switzerland, Ukraine and Uzbekistan). This reflects progress in obtaining a better knowledge of transboundary aquifers. However, in many cases Parties reported on the same transboundary aquifer using different names: out of the 361 aquifers and groundwater bodies reported by Parties, 330 were reported only by one riparian country.

1.3 Coordination of responses

A major challenge for the pilot reporting exercise in 2017/18 related to situations in which two or more riparian Parties reported on the same agreement or arrangement for the same transboundary river, lake or aquifer, but provided different answers. In the second reporting exercise, in 2020/21, countries were strongly encouraged to coordinate their responses on transboundary waters they share. Many Parties have consequently engaged in consultations on the content of their reports with other riparian countries and within joint bodies.

According to their second reports, 16 Parties\textsuperscript{15} (as compared with 7 in the first reporting round) consulted other riparian countries during the completion of the reports, 17 Parties\textsuperscript{16} (as compared with 3 in the first reporting round) consulted a relevant joint body or mechanism and 13 Parties consulted both other riparian countries and a relevant joint body. The most significant efforts to coordinate the replies were undertaken in the Danube and the Rhine basins.

Overall, coordination of responses improved to a greater extent for transboundary rivers and lakes.\textsuperscript{17} For transboundary aquifers, as noted above, a particular challenge was that Parties sharing transboundary aquifers used different names for the same aquifers, which significantly complicated the analysis process. Stronger efforts to streamline the use of identical names and coordinate replies for transboundary aquifers will be needed in future reporting cycles.

1.4 Stakeholder consultations

\textsuperscript{14} Kazakhstan indicated that it decreased the total reported surface area for its transboundary river and lake basins as a result of the revision of data in line with the step-by-step monitoring methodology for SDG indicator 6.5.2 (version 2020).

\textsuperscript{15} Austria, Bosnia and Herzegovina, Czechia, Finland, Germany, Hungary, Liechtenstein, North Macedonia, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Sweden and Ukraine. In addition, although the information was not included in its national report, Romania informed the secretariat that it had consulted Serbia during its preparation.

\textsuperscript{16} Austria, Belarus, Bosnia and Herzegovina, Estonia, Finland, Hungary, Kazakhstan, Netherlands, Norway, Poland, Portugal, Romania, Senegal, Serbia, Slovakia, Slovenia and Sweden.

\textsuperscript{17} Due to a larger number of reported transboundary basins in the second reporting round, it has not been possible to analyse the percentage of differing answers provided to the same question for the same agreement or arrangement for all transboundary basins. Such an analysis was prepared only for selected basins analysed in sections 6.1–6.4 of the present report. The analysis shows that, on average, the percentage of differing answers for basins or sub-basins shared by two countries only is between 20% to 30% and that for basins or sub-basins shared by more than two countries it is usually higher, sometimes reaching 50% to 60%.
Even though the COVID-19 pandemic has impacted on the process of consultations in the preparation of national reports, many Parties consulted a wide range of stakeholders on transboundary water issues, in addition to consulting other riparian countries or joint bodies. An overview of responses related to the types of institutions consulted during the second reporting exercise is provided in figure 2.

**Figure 2: Type of institutions consulted to prepare the report – based on responses to section IV, question 3**

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Number of Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint body or mechanism</td>
<td>17</td>
</tr>
<tr>
<td>Other riparian or aquifer countries</td>
<td>16</td>
</tr>
<tr>
<td>National water management authority</td>
<td>30</td>
</tr>
<tr>
<td>Environment agency/authority</td>
<td>23</td>
</tr>
<tr>
<td>Basin authority (national)</td>
<td>20</td>
</tr>
<tr>
<td>Local or provincial government</td>
<td>2</td>
</tr>
<tr>
<td>National geological survey</td>
<td>13</td>
</tr>
<tr>
<td>Non-water-specific ministries</td>
<td>8</td>
</tr>
<tr>
<td>Civil society organizations</td>
<td>0</td>
</tr>
<tr>
<td>Water user associations</td>
<td>2</td>
</tr>
<tr>
<td>Private sector</td>
<td>1</td>
</tr>
</tbody>
</table>

In the second reporting round, Parties made stronger efforts to consult other institutions beyond the national water management authorities in the preparation of their reports. Some Parties mention the organization of dedicated meetings or the establishment of working groups to prepare or advise on the national report.

Very few Parties indicated that they consulted non-State actors in preparing their second reports: two Parties consulted water user associations and one Party consulted with the private sector. No Party reported consultations with civil society organizations. While the low level of such involvement can partially be explained by reduced opportunities for consultations with non-State actors connected with the COVID-19 pandemic, it also points to a potential area for improvement for the following reporting rounds, since multi-stakeholder processes could advance the discussion on and support implementation of the Convention.18

Women participated in the completion of a national report template in more than half of the cases (52%, or for 22 reports). Only 12 reports (29%) were signed by a female governmental representative.

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18 For reference, most countries undertook comprehensive multi-stakeholder processes to prepare their second national reports on SDG indicator 6.5.1 (“Degree of integrated water resources management implementation (0-100)”. More than 40% of the countries indicated that civil society was involved in the consultation process to prepare national reports on indicator 6.5.1. This helped to increase transparency of the reporting and also to establish an important platform for stakeholders to discuss key barriers to the implementation of integrated water resources management, and the way forward. See UNEP (2021). *Progress on Integrated Water Resources Management. Tracking SDG 6 series: global indicator 6.5.1 updates and acceleration needs* (forthcoming).
**Box 1: Insights from practice: preparation of the report by Poland**

In Poland, the institution responsible for preparation of the report under the Water Convention and SDG indicator 6.5.2 has changed. In the first reporting round, the report was prepared by the Ministry of the Environment, based on the contribution of the National Water Management Authority. In the second round, the Ministry of Maritime Economy and Inland Navigation was initially responsible for development of the report but, due to a restructuring process, the report was eventually submitted by the water policy unit in the department of water management and inland navigation of the Ministry of Infrastructure.

The draft report was developed based on the report from the first round, transboundary water agreements and minutes of the meetings of the transboundary water commissions and their working groups.

The draft report was consulted internally within the Ministry of Maritime Economy and Inland Navigation, and then reviewed by the relevant national institutions – the State water holding “Polish Waters”, the National Geological Institute, the Institute of Meteorology and Water Management, the Institute of Environmental Protection and the General Directorate of Environmental Protection – and the competent ministries – the Ministry of Agriculture and Rural Development, the Ministry of Climate and the Ministry of the Environment.

The report was subsequently coordinated with neighbouring countries: Belarus, Czechia, Germany, Lithuania, Slovakia and Ukraine.

At the final stage, the draft report was submitted for review to UNECE, and after receipt of comments, a signed version was delivered.

**Box 2: Insights from practice: steps to structure the report preparation process in Senegal, Slovenia and Sweden**

<table>
<thead>
<tr>
<th>Senegal</th>
<th>Slovenia</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of the report was coordinated by the Water Resources Managing and Planning Directorate and the national coordination unit for the Organization for the Development of the Senegal River-Organization for the Development of the Gambia River. Steps: - Identifying stakeholders to fill out the questionnaire; - Pre-completion of the questionnaire based on information that had not changed since the previous reporting cycle; - Sharing the questionnaire with stakeholders in order to confirm their responses and gather additional input;</td>
<td>Preparation of the report was coordinated by the Slovenian Water Agency under the Ministry of the Environment and Spatial Planning. Steps: - Draft version of the national reporting questionnaire prepared by experts; - Inter-institutional consultations; - Verification of the revised draft version of the questionnaire; - Harmonization of the questionnaire with neighbouring countries at the bilateral level; - Finalizing and submitting the completed questionnaire.</td>
<td>Preparation of the report was coordinated by the Swedish Agency for Marine and Water Management. Steps: - Completion of the questionnaire by a working group at the Swedish Agency for Marine and Water Management; - Consultative meetings held over Skype with neighbouring countries (Norway and Finland); - Consultations with Administrative boards of counties with transboundary waters on section II; - Consultations with the Finnish-Swedish transboundary river commission on section II.</td>
</tr>
</tbody>
</table>
- Organizing a webinar in order to consult on and validate the report;
- Finalizing and submitting the report.

1.5 Use of the reporting template and guidance material

The second reporting exercise took place on the basis of a reporting template revised in 2018. The template was revised by the secretariat in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) based on comments received following the twelfth meeting of the Working Group on Integrated Water Resources Management (Geneva, 5–6 July 2017) and during the technical meeting on the template for reporting on indicator 6.5.2 and under the Water Convention (Budapest, 16–17 January 2018), as well as from the Implementation Committee of the Water Convention. The revised template, adopted by the Meeting of the Parties at its eighth session (Nur-Sultan, 10–12 October 2018), ensured greater consistency with terminology and provided fewer open questions while allowing for more checkbox responses. No substantial changes were introduced, so as to allow for comparison of results across exercises. Several countries indicated their appreciation of these aspects.

In the second reporting exercise, Parties mentioned that they benefitted from using the step-by-step monitoring methodology for SDG indicator 6.5.2 (version 2020)\(^\text{19}\) and the Guide to Reporting under the Water Convention and as a Contribution to SDG Indicator 6.5.2\(^\text{20}\). The Guide was prepared in 2019 by a drafting group composed of Parties and non-Parties, which met two times. It was issued in January 2020. The Guide provides detailed advice on preparing national reports by explaining the different sections of the template, clarifying key terminologies and giving specific advice to experts responsible for the reporting process on how to complete the various questions and use the reporting template.

Most of the Parties to the Convention (37)\(^\text{21}\) participated in at least one of five webinars on SDG indicator 6.5.2, specifically dedicated to supporting countries preparing national reports for the second reporting exercise. The webinars were organized by UNECE and UNESCO in May and June 2020.

No major difficulties were reported by the Parties in the use of the revised reporting template or guidance materials. However, several Parties indicated that the reporting exercise was time-consuming and that an electronic reporting format could save time and resources. These Parties hoped that in the following reporting rounds they would only need to update existing data and information, and coordinate their responses with other riparian Parties, rather than inputting data and information once again into the template. Many Parties informed the secretariat that they relied on their first report when filling in the template for the second reporting exercise.

CHAPTER 2 TRANSBOUNDARY WATER MANAGEMENT AT THE NATIONAL LEVEL

Key messages


\(^{21}\) Based on data about registered participants.
- Laws and policies related to the prevention, control and reduction of transboundary impact can be found in the domestic systems of nearly all of the reporting Parties.22
- There is a widespread practice of adopting systems at that national level for the licensing, control and monitoring of both point and diffuse pollution.
- Most (37) of Parties are also party to the Convention on Environmental Impact Assessment in a Transboundary Context, and nearly all of the reporting Parties confirm that their national laws require transboundary environmental impact assessment. There is an increasing use of strategic environmental assessment procedures by the Parties.
- While various measures are applied to reduce pollution on transboundary waters from diffuse sources, the use of economic and financial measures and agricultural extension services is not sufficiently widespread.
- There is room for increased use of measures to enhance water use efficiency, especially when it comes to demand management activities.

2.1 Key laws and policies related to transboundary water management

What does the Convention say?

Article 3 (1) of the Water Convention provides that measures of a legal nature should be in place to prevent, control and reduce transboundary impact. Additionally, article 2 (5) provides that, in taking measures, the Parties are to be guided by the precautionary principle, the polluter pays principle and the principle of sustainable development.

What have countries reported?

In terms of laws and policies, nearly all reporting Parties stated that their country’s national legislation refers to measures to prevent, control and reduce transboundary impact (sect. III, question 1 (a), of the template). Most countries reported that their national water law or environmental law is the primary legislation referring to the prevention, control and reduction of transboundary impact.

For some reporting Parties, provisions on transboundary impact are included in the national legislation through the national laws on the ratification of the Convention or the ratification of transboundary water agreements with neighbouring countries. Many reporting Parties state that their national strategies on water or environment constitute the framework for prevention, control and reduction of transboundary impact. The replies to this question also show the clear influence of European Union directives – in particular the Water Framework Directive,23 the Directive on Environmental Quality Standards (sometimes known as the Priority Substances Directive),24 the Groundwater Directive25 and the Floods Directive26 – on the legislation of European Union member States and candidate countries.

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22 The reference to “reporting Parties” in chapters 2 and 7 of this document refers to all Parties to the Convention except the Russian Federation, which submitted its national report but did not reply to the questions in sections III and IV of the reporting template.
All reporting Parties confirmed that their country’s legislation provided for the polluter pays principle, and nearly all reporting Parties confirmed that their country’s legislation provided for the sustainable development principle, the precautionary principle and the user pays principle (sect. III, question 1 (b)). Parties reported that they have incorporated these principles in their national legislation and implement them through permitting and licensing procedures, use of environmental impact assessment mechanisms, tariffs, taxes, fees, and control and monitoring mechanisms.

*What can we learn from the responses?*

The responses to section III, questions 1 (a) and (b), suggest an alignment with the requirements of the Convention that relate to the prevention, control and reduction of transboundary impact, through the adoption of national laws and policies.

However, the responses simply provide a broad overview of the relevant legislation. The quality and extent to which the prevention, control and reduction of any transboundary impact is covered by national law and policy, and the effectiveness of their implementation, is not captured in the responses. Some Parties mention that enforcement of measures to implement these principles represents a challenge.

### 2.2 National systems for licensing, controlling and monitoring pollution

*What does the Convention say?*

Article 3 (1) of the Water Convention sets out a series of measures that Parties must put in place to prevent, control and reduce transboundary impact, including:

- The licensing, monitoring and control of wastewater discharges by competent national authorities.
- The inclusion of wastewater discharge limits in permits based on the best available technology for discharges of hazardous substances.
- The reduction of nutrient inputs from industrial and municipal sources, through measures such as the application of the best available technology.
- The reduction of nutrients and hazardous substances from diffuse sources, especially from agricultural practices, through the use of best environmental practices and other appropriate measures.
- The adoption of a system of environmental impact assessment.
- The promotion of sustainable water resources management, including an ecosystem approach.
- The adoption of additional specific measures to prevent the pollution of groundwaters.

*What have countries reported?*

All reporting Parties confirmed that they have licensing or permitting systems in place for wastewater discharges and other point sources of pollution (sect. III, question 1 (c)). There is a trend towards ensuring that all major sectors are regulated by such systems (figure 3). In addition, some Parties mention that their licensing or permitting systems cover point sources of pollution in agriculture (e.g., slaughterhouses), biomedical waste facilities, gravel extraction and the tourism sector.

*Figure 3: Overview of the sectors covered by the national licensing or permitting system for point sources of pollution – based on responses to section III, question 1 (c)*
It was also evident that in the majority of reporting Parties their licensing or permitting systems provide for setting emission limits based on the best available technology. Still, many Parties have not indicated whether the licensing or permitting system provides for setting emission limits based on best available technology (sect. III, question 1 (c)), suggesting potential difficulties in the application of such technology.

**Box 3: Insights from practice: permitting procedures in Sweden**

The Swedish Environmental Code, which entered into force in 1999, establishes provisions for the protection of all areas of the environment, both on land and in the water. The Environmental Code is a major piece of legislation. It contains 33 chapters comprising almost 500 sections. However, only the fundamental environmental rules are included in the Environmental Code. More detailed provisions are laid down in government ordinances and regulations issued by governmental authorities.

Depending on the size of the activity, the licensing or permitting system varies. The Environmental Code includes general principles that must always be taken into account, such as the precautionary principle, and provisions on environmental impact assessment and the supervision and the authorization of activities. The actual authorization for certain activities and operations is carried out by the municipalities, the county administrative boards and specialized land and environmental courts. For example, the permitting procedures for mining operations take place in the land and environmental courts. Permissions that are granted always specify the terms and precautionary conditions that the permitting organ has found necessary, including emission limits based on the best available technology. This applies to all sectors and activities except for those deemed insignificant in size and impact.

In their responses in sect. III, question 1 (d), all reporting Parties confirmed that any authorized discharges are monitored and controlled (figure 4). Nearly all reporting Parties report they are using permits and perform monitoring of discharges. The vast majority of reporting Parties state that they have inspection mechanisms in place. A significant number of reporting Parties report that they monitor physical and chemical impacts on water, but a lower number monitor ecological impacts. Another means of monitoring and control that was highlighted in some of the responses was the self-monitoring of wastewater discharges by companies and other operators.

**Figure 4: Overview of how authorized discharges are monitored and controlled (art. 3) – based on responses to section III, question 1 (d)**
All reporting Parties have measures in place to reduce diffuse sources of pollution on transboundary waters (sect. III, question 1 (e)). However, as illustrated in figure 5, the types of measures in place differ. Legislative measures appear to be the most common option, while economic and financial measures and agricultural extension services appear not to be widely used.

Figure 5: Main measures to reduce water pollution from diffuse sources (art. 3) – based on responses to section III, question 1 (e)
In relation to groundwaters, only one Party suggested that it did not have any specific measures in place to prevent the pollution of groundwaters (sect. III, question 1 (h)). The most common measures to prevent pollution of groundwaters listed by the Parties include:

- Prohibition or restriction of discharges of wastewater and dangerous substances to groundwater.
- Agricultural requirements to protect groundwater (e.g., prohibition or restriction of the use of fertilizers or pesticides in protected areas and control of the use of manure).
- Establishment of sanitary protection zones around groundwater abstraction points.
- Assigning other protection status to groundwater reserves.
- Requiring permits for groundwater abstraction.
- Setting environmental objectives for groundwater.

**Box 4: Insights from practice: measures to prevent pollution of groundwater in Romania**

Groundwater is considered to be a strategic resource in Romania due to its crucial importance for drinking water supply. National legislation prohibits discharge of wastewaters into groundwaters.

The updated river basin management plans for the period 2016–2021 include measures for implementation of the requirements of the European Union Groundwater Directive, the Nitrates...
The country has adopted measures to prevent pollution with hazardous substances in line with the relevant European Union directives. There is also a dedicated national plan for the protection of groundwaters against pollution and deterioration, adopted in 2009 and amended thereafter to specify measures to prevent the pollution of groundwaters and to monitor their status and trends, as well as for the remediation of groundwater resources at contaminated sites.

What can we learn from the responses?

Responses to section III, questions 1 (c), (d), (e), (f), (g) and (h), indicate a strong level of coherence between the relevant requirements of the Water Convention on the licensing, control and monitoring of pollution (point and diffuse sources) and measures reported by the Parties. Parties have adopted licensing and permitting systems to prevent, control and reduce pollution at the source (art. 3 (1) (a)), and there is a tendency to ensure that all sectors are covered by such systems.

Monitoring of wastewater discharges and their impact appear to be commonplace at the national level. However, the setting of emission limits based on best available technology (art. 3 (1) (c) and (f)) may represent some challenges, as a number of Parties did not provide a reply to the related question.

While there appears to be a concerted practice of adopting systems at that national level for the licensing, control and reduction of pollution, it should be noted that the quality and extent of any national systems for regulating and monitoring pollution, as well as their effectiveness, was not captured through the reporting exercise.

2.3 Laws and procedures for environmental impact assessment

What does the Convention say?

In accordance with article 3 (1) (h) of the Water Convention, Parties are required to put in place measures of assessment, and most notably environmental impact assessment (EIA) procedures. This requirement is also supplemented by article 9 (2) (j), which provides that joint bodies established by Parties under the Convention are to be tasked with participation in the implementation of environmental impact assessments relating to transboundary waters, in accordance with international regulations.

The most pertinent international regulation in this regard is the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention). Pursuant to the Espoo Convention, Parties must assess the environmental impact of certain activities at an early stage of planning and adopt transboundary environmental impact assessment procedures. Only five Parties to the Water

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30 European Union member States are also obliged to follow relevant directives, such as directive 2011/92/EU of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, as amended by directive 2014/52/EU of 16 April 2014.
Convention are not party to the Espoo Convention (Chad, Russian Federation, Senegal, Turkmenistan and Uzbekistan).

**What have countries reported?**

Of the 41 Parties reporting on this question, 39 confirm that transboundary environmental impact assessment is a requirement under national laws. Uzbekistan notes that, while transboundary environmental impact assessment is not required under national legislation, a joint assessment of transboundary impact is required under one of its bilateral agreements.

**What can we learn from the responses?**

The influence of the Espoo Convention is evident in the responses from most Parties of the Water Convention. The responses suggest that transboundary environmental impact assessment is required under national legislation and that the relevant implementing procedures are by and large in place. It can be assumed that environmental impact assessment procedures at the national level are part of the national legislation as well, since a transboundary assessment typically represents a higher-level requirement compared with a national one. The revised template, however, does not allow for conclusions to be drawn on the actual application of environmental impact assessment at either the national or transboundary level.

While not specifically mentioned in the reporting template, many Parties also reported the use of strategic environmental assessment mechanisms. The use of strategic environmental assessment is likely to be higher than reported, however, since 29 States Parties to the Water Convention are also Parties to the Protocol on Strategic Environmental Assessment to the Espoo Convention.31

### 2.4 Measures to enhance water use efficiency

**What does the Convention say?**

The Convention promotes water use efficiency through its focus on recycling, recovery and reuse, as part of the concept of “best environmental practices” (Water Convention, annex II). The Convention requires the application of low and non-waste technology as part of measures that Parties must put in place to prevent, control and reduce transboundary impact (art. 3 (1)).

**What have countries reported?**

All reporting Parties have put in place specific measures to enhance water resources allocation and use efficiency (sect. III, question 1 (f)). As illustrated in figure 6, most common measures to enhance water use efficiency include monitoring and control of water abstractions, a regulatory system for water abstraction and the definition of water rights.

**Figure 6: Main measures to enhance water resources allocation and use efficiency (art. 3 (1)) – based on responses to section III, question 1 (f)**

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31 European Union member States are also obliged to follow directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.
What can we learn from the responses?

There is clear room for improvement in the use of measures to enhance water use efficiency, especially when it comes to demand management activities. This is particularly important in view of climate change and increasing water scarcity. Demand management activities aim to make better use of existing water supplies through a set of incentives, such as pricing or subsidies, as well as awareness-raising and education. While introduction of advanced irrigation techniques is reported by only 26 Parties, it is not relevant for all countries since several Parties do not have irrigated agriculture.

CHAPTER 3 TRANSBOUNDARY AGREEMENTS AND ARRANGEMENTS

Key messages
- Most of the 144 reported transboundary river and lake basins are covered by agreements or arrangements in force, either wholly or partly. However, there are at least 16 river and lake basins and 15 river and lake sub-basins which are not covered by any agreement or arrangement, either wholly or partly.
- Where transboundary river and lake basins are covered by agreements or arrangements, only 105 of 123 river and lake basins and 40 of 60 river and lake sub-basins are wholly covered by agreements or arrangements.
- Out of 360 transboundary aquifers and groundwater bodies reported by Parties, 102 are not covered by any agreement or arrangement, either wholly or partly. This is a clear area for improvement.
- The vast majority (at least 249 out of 256) of transboundary aquifers and groundwater bodies that are wholly or partly covered by agreements or arrangements are covered by agreements or arrangements not specific to the aquifer – i.e., they are covered by agreements or arrangements related to both surface waters and groundwaters.
- Topics of cooperation included within agreements or arrangements are aligned with the key topic areas in the Water Convention, but some areas, such as the elaboration of joint water quality objectives (art. 9 (2) (e)), early warning and alarm systems (art. 14), mutual assistance (art. 15), the maintenance of joint pollution inventories (art. 2 (c)), human health, disaster risk reduction and adaptation to climate change, are less represented.

3.1 The obligation to enter into agreements or arrangements
**What does the Convention say?**

In accordance with article 9 (1) of the Water Convention, riparian Parties must enter into bilateral or multilateral agreements or other arrangements in order to support the implementation of the Convention.

This obligation is only directed at riparian Parties. While entering into agreements or arrangements with non-Parties sharing a particular river, lake or aquifer might support the implementation of the Water Convention, and is therefore encouraged, there is no explicit obligation in the Convention to enter into such agreements or arrangements with non-Parties.\(^{32}\)

**What have countries reported?**

As many as 123 river and lake basins out of 144 river and lake basins reported by Parties are covered by agreements or arrangements,\(^{33}\) either wholly or partly, according to the replies provided in section I, table 1, of the reporting template. In addition, 60 river and lake sub-basins out of the 77 river and lake sub-basins reported by Parties are also wholly or partly covered by agreements or arrangements.

As regards transboundary aquifers, only 256 out of 360 transboundary aquifers and groundwater bodies reported by Parties are covered by agreements or arrangements, either wholly or partly, according to replies in section I, table 2, of the reporting template. However, data on transboundary aquifers include multiple entries for the same aquifer or groundwater body due to the use of different names by riparian countries. This data needs to be treated with caution.

A list of all agreements and arrangements, as well as the transboundary river and lake basins to which they apply, is provided in annex III. The list includes 186 agreements reported by at least one Party in the second reporting exercise. The list shows that agreements and arrangements take diverse forms. It also shows that the same transboundary waters might be subject to multiple agreements and arrangements depending on the particular context and the interests of the Parties concerned. One example is the Rhine River, which is the subject of the Convention on the Protection of the Rhine, sub-basin agreements for the Moselle and Saar Rivers and for Lake Constance, and numerous bilateral arrangements among the neighbouring riparian States of the Rhine.\(^{34}\)

**What can we learn from the responses?**

An important insight from responses to section I, table 1, is that there are at least 16 river and lake basins and 15 river and lake sub-basins that are not covered by any agreement or arrangement, either wholly or partly. In addition, there are 7 river and lake basins and 6 river and lake sub-basins where it was not possible to conclude what part of the basin or sub-basin was covered, and another 5 river and lake basins and 1 river and lake sub-basin where it was not possible to conclude whether an agreement or arrangement exists.

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\(^{32}\) UNECE, *Guide to Implementing the Water Convention* (ECE/MP.WAT/39), para. 239.

\(^{33}\) This includes all agreements and arrangements irrespective of whether they are “operational” in accordance with the criteria in SDG indicator 6.5.2.

\(^{34}\) The Rhine River basin is shared by Austria, Belgium, France, Germany, Italy, Liechtenstein, Luxembourg, the Netherlands and Switzerland.
The 16 river and lake basins without an existing agreement in force include Jandari Lake basin35 and the Adige,36 Alta,37 Astara Chay,38 Banowka,39 Don,40 Elv fra Svartakslyatnet,41 Karpelva,42 Maroni/Marowijne,43 Oiapoque/Oyupock/Oyapock,44 Pregel,45 Prohладная/Swieza,46 Reisa,47 Sandneselva48 and Skibotn49 River basins, as well as the Azov Sea river basins (Mius, Krinka and Sukhoi Elanchyk).50 It should be noted, however, that Jandari Lake basin and the Astara Chay, Maroni/Marowijne, and Oiapoque/Oyupock/Oyapock River basins are shared with non-Parties. It should also be noted that for the Alta, Reisa, Sandneselva and Skibotn River basins, shared by Finland and Norway, the share of the basin area in Finland is very small and due to the absence of human pressures in these areas it was considered unnecessary to conclude agreements governing their use. In the cases of the Hari/Harirud,51 Kura-Araks,52 Murgab,53 Vardar/Axios54 and Vjose/Aoos/Vjosa55 River basins, it was not possible to conclude whether an agreement exists and is in force at basin level, due to contradictory responses from the riparian countries.

The 15 river and lake sub-basins for which no agreement or arrangement existed at the time of submission of national reports include the Adda,56 Aghstev/Akstafa,57 Alazani/Ganyh,58 Arpa,59 Dragovistica,60 Inn,61 Iori/Gabirri,62 Khrami/Ktsia,63 Lepenac,64 Pcinja,65 Plavska Reka,66 Strumica,67

35 Shared by Azerbaijan and Georgia (non-Party).
36 Shared by Italy and Switzerland.
37 Shared by Finland and Norway.
38 Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
39 Shared by Poland and the Russian Federation.
40 Shared by the Russian Federation and Ukraine.
41 Shared by Norway and the Russian Federation.
42 Shared by Norway and the Russian Federation.
43 Shared by France and Suriname (non-Party).
44 Shared by Brazil (non-party).
45 Shared by Poland and the Russian Federation.
46 Shared by Poland and the Russian Federation.
47 Shared by Finland and Norway.
48 Shared by Finland and Norway.
49 Shared by Finland and Norway.
50 Shared by the Russian Federation and Ukraine.
51 Shared by Afghanistan (non-Party), the Islamic Republic of Iran (non-Party) and Turkmenistan.
52 Shared by Armenia (non-Party), Azerbaijan, Georgia (non-Party), the Islamic Republic of Iran (non-Party) and Turkey (non-Party).
53 Shared by Afghanistan (non-Party) and Turkmenistan.
54 Shared by Greece, North Macedonia and Serbia.
55 Shared by Albania and Greece.
56 Shared by Italy and Switzerland.
57 Shared by Armenia (non-Party) and Azerbaijan.
58 Shared by Azerbaijan and Georgia (non-Party).
59 Shared by Armenia (non-Party) and Azerbaijan.
60 Shared by Bulgaria, North Macedonia and Serbia.
61 Shared by Italy and Switzerland.
62 Shared by Afghanistan (non-Party).
63 Shared by Armenia (non-Party), Azerbaijan and Georgia (non-Party).
64 Shared by Kosovo (United Nations administered territory under Security Council resolution 1244 (1999)) and North Macedonia.
65 Shared by North Macedonia and Serbia.
66 Shared by Albania and Kosovo (United Nations administered territory under Security Council resolution 1244 (1999)).
67 Shared by Bulgaria and North Macedonia.
Voghji/Ohchu,\textsuperscript{68} Vorotan/Bargushad\textsuperscript{69} and White Drin\textsuperscript{70} River sub-basins. It should be noted, however, that the Aghstev/Akstafa, Alazani/Ganyh, Arpa, Iori/Gabirri, Khrami/Ktsia, Voghji/Ohchu and Vorotan/Bargushad River sub-basins are shared with non-Parties. In the case of Dojran/Doirani Lake sub-basin,\textsuperscript{71} it was not possible to conclude whether an agreement exists and is in force at basin level, due to contradictory responses from the riparian countries.

With regard to the Torne/Tornionjoki/Tornealven River basin,\textsuperscript{72} an agreement exists and is in force between Finland and Sweden but it does not cover the Norwegian part of the basin, which accounts for less than 2\% of the total basin area and is reported to have no human pressures on water resources.

Another important insight from responses to section I, table 2, is that, in comparison with rivers and lakes, many more transboundary aquifers are not covered by any agreement, either wholly or partly. The number of such aquifers – 102 aquifers and groundwater bodies out of total 360 reported – should be treated with caution, as it most likely includes multiple entries for some aquifers and groundwater bodies due to the use of different names by the riparian countries.

Where Parties reported that no agreements or arrangements were in place for a particular transboundary basin, sub-basin or part(s) thereof, they gave several reasons, including:

- Negotiations to develop an agreement or arrangement were ongoing.
- Countries had embarked on the preliminary process, but could not begin formal negotiations until differing approaches to the scope and content of the agreement or arrangement were resolved.
- An agreement or arrangement was formally in force but cooperation had discontinued.
- An agreement had become ineffective and cooperation had discontinued.
- It had been difficult to initiate an agreement or arrangement due to the political situation.

A further point to note is that, in some instances, countries have chosen not to enter into formal agreements or arrangements because only a small proportion of the transboundary basin is shared. For instance, countries that share less than 2,000 km\(^2\) of the Danube River basin\textsuperscript{73} (Albania, Italy, North Macedonia, Poland and Switzerland) are not contracting Parties to the Convention on Cooperation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention). However, cooperation between the contracting Parties and other Danube countries exists through, for example, the activities of the International Commission for the Protection of the Danube River.

Box 5: Insights from practice: towards stronger transboundary cooperation in the Senegal-Mauritanian Aquifer basin

The Senegal-Mauritanian Aquifer basin is shared by the Gambia, Guinea-Bissau, Mauritania and Senegal. The basin has a surface area of 331,450 km\(^2\) and an estimated population of over 16 million inhabitants. Cooperation is essential because this resource is under pressure due increased demand caused by population growth, rapid urbanization and the development of agriculture for food self-sufficiency.

\textsuperscript{68} Shared by Armenia (non-Party) and Azerbaijan.
\textsuperscript{69} Shared by Armenia (non-Party) and Azerbaijan.
\textsuperscript{70} Shared by Albania and Kosovo (United Nations administered territory under Security Council resolution 1244 (1999)).
\textsuperscript{71} Shared by Greece and North Macedonia.
\textsuperscript{72} Shared by Finland, Norway and Sweden.
\textsuperscript{73} Shared by Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Germany, Hungary, Italy, Montenegro, North Macedonia, Poland, the Republic of Moldova, Romania, the Russian Federation, Slovakia, Slovenia, Switzerland and Ukraine.
This transboundary aquifer is not yet subject to a bilateral or multilateral agreement or arrangement. Nonetheless, riparian States have begun discussions with a view to developing transboundary collaboration. As part of its accession process to the Water Convention, Senegal requested support for a cooperation initiative on the basin.

Consequently, the Regional Working Group for Transboundary Cooperation on the Senegal-Mauritanian Aquifer basin was established in April 2020. It comprises the riparian States as well as the transboundary basin organizations covering the Senegal-Mauritanian Aquifer basin, namely, the Organization for the Development of the Gambia River and the Organization for the Development of the Senegal River. The Working Group provides support and advice to States and transboundary basin organizations to establish transboundary cooperation for a concerted sustainable management of the basin. A vision for transboundary cooperation in the Senegal-Mauritanian Aquifer basin was agreed, which identifies the main operational axis for transboundary cooperation, based on the integrated development of groundwater and surface water resources and capitalizing on more than half a century of experience in the concerted management of the subregion’s major rivers.

The regional dialogue on the Senegal-Mauritanian Aquifer basin is supported by Geneva Water Hub, the International Groundwater Resources Assessment Centre and the Water Convention secretariat hosted by UNECE, with financial support from the Swiss Agency for Development and Cooperation and the European Union.

The experience of Senegal-Mauritanian Aquifer basin cooperation provides an example of how the reporting process can help to identify gaps in cooperation and lead to concrete improvements, such as the negotiation of a joint vision and joint project.

### 3.2 The geographic scope of agreements and arrangements

**What does the Convention say?**

In terms of geographic scope, the Water Convention stipulates that riparian Parties must specify the catchment area, or part(s) thereof, subject to cooperation (art. 9 (1)). The requirement to specify waters which constitute the scope of cooperation is one of the “three musts” in relation to the contents of agreements or arrangements. At the same time, this requirement emphasizes the freedom of riparian Parties to determine the scope of the agreements or arrangements they enter into.74

This requirement is supplemented by article 2 (6), which obliges Parties to cooperate on the basis of equality and reciprocity, in particular through bilateral and multilateral agreements, in order to develop harmonized policies, programmes and strategies covering relevant catchment areas, or parts thereof.

Other important provisions of the Water Convention relating to geographic scope are contained in article 1 (1) and (2), which define “transboundary waters” and “transboundary impact”.

“Transboundary waters” means any surface or ground waters which mark, cross or are located on boundaries between two or more States; wherever transboundary waters flow directly into the sea, these transboundary waters end at a straight line across their respective mouths between points on the low-water line of their banks.

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74 See Guide to Implementing the Water Convention, paras. 243–244.
“Transboundary impact” means any significant adverse effect on the environment resulting from a change in the conditions of transboundary waters caused by a human activity, the physical origin of which is situated wholly or in part within an area under the jurisdiction of a Party, within an area under the jurisdiction of another Party. Such effects on the environment include effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to those factors.

Both definitions are holistic in terms of covering all transboundary waters, including rivers, lakes and aquifers. The holistic nature of the term “transboundary waters” is further explained in the Guide to Implementing the Water Convention, which comments that:

Transboundary waters should not be limited to a water body (e.g. a river, a lake, an aquifer), but should cover the catchment area of the said water body (or in case of an aquifer, whether confined or unconfined, its entire recharge area). The entire catchment area of a surface water body or a recharge area of the aquifer should be understood as 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 the aquifer.75

What have countries reported?

In terms of geographic scope, in the reporting template countries were requested to state whether an agreement or arrangement specifies the area that is subject to cooperation (sect. II, question 2 (a)). Out of a total of 983 responses to this question, 884 (or 90%) confirmed that the agreement or arrangement in question specified the area of cooperation.

In order to better understand the geographic scope of agreements and arrangements, countries were also asked in the reporting template whether an agreement or arrangement covered an entire basin or group of basins and all riparian States concerned (sect. II, question 2 (a)). Out of a total of 883 responses to this question, only 553 (or 63%) indicated that the agreement or arrangement in question covered the entire basin or group of basins and all riparian States. Where an agreement or arrangement related to a sub-basin, such an agreement or arrangement covered the entire sub-basin in only 16% of cases (62 out of 388 responses).

Another question in the template relating to geographic scope asked whether an agreement or arrangement related to a river or lake basin or sub-basin also cover aquifers (sect. II, question 2 (b)). Out of a total of 962 responses to this question, 711 responses (or 74%) indicated that aquifers were covered by the agreement or arrangement in question.

What can we learn from the responses?

While article 9 (1) of the Water Convention requires riparian Parties to stipulate in their agreements or arrangements “the catchment area, or part(s) thereof, subject to cooperation”, the responses show that this is not always done. An analysis of the cases where an agreement or arrangement does not specify the catchment area or part(s) thereof suggests that they relate to bilateral agreements and arrangements that generally use more general terms such as “transboundary waters” or “border waters”. Ambiguity in the reporting template might also have resulted in the different approaches.

75 Para. 74.
taken by countries in their responses to this question, as it was unclear whether question 2 (a) was asking if the agreement or arrangement should explicitly or implicitly specify the area subject to cooperation. To assist countries in formulating their responses to this question the Guide to Reporting under the Water Convention and as a Contribution to SDG Indicator 6.5.2 provides some advice in this respect.  

In terms of the geographic scope of agreements and arrangements, out of 123 reported river and lake basins with agreements, only 105 basins are wholly covered by agreements and 11 are partly covered. Out of 60 reported river and lake sub-basins with agreements, 40 sub-basins are wholly covered by agreements and 14 sub-basins are partly covered. In an additional 7 basins and 6 sub-basins, different responses from riparian countries, or the absence of a response to the relevant question, meant that it was not possible to ascertain whether or not agreements or arrangements covered an entire basin or sub-basin.

Reporting Parties have provided several reasons why agreements or arrangements do not cover entire basins or sub-basins, including a lack of specificity or ambiguity concerning the geographic scope within the agreement or arrangement itself, and a narrow geographic or sectoral focus of the agreement or arrangement. For example, some riparian Parties noted that an agreement or arrangement only covered waters that cross, are located on, or demarcate sovereign borders between them, and that this was the intended scope of cooperation.

It is encouraging that some Parties report gradual extension of the geographic scope of their cooperation over time. For example, Ukraine reported that its bilateral agreements in force formally cover waters that cross or are located on the borders, but in practice cooperation covers the entire area of the respective basins in the territory of the country. Kazakhstan and Kyrgyzstan report that cooperation under the 2000 Agreement between the Government of the Republic of Kazakhstan and the Government of the Kyrgyz Republic on the Use of Water Management Facilities of Intergovernmental Status on the Rivers Chu and Talas, which refers to six water management facilities, has gradually extended to cover, in practice, the entire basins of the Shu/Chu and Talas Rivers.

The conclusion of agreements dedicated to transboundary aquifers appears to be extremely rare. The vast majority of transboundary aquifers and groundwater bodies that are reported to be entirely or partly covered by agreements or arrangements (at least 249 out of 256) are covered by agreements or arrangements not specific to the aquifer but that related to both surface waters and groundwaters, in line with the integrated water resources management approach. An additional four aquifers are covered by both aquifer- or groundwater-specific agreements and, at the same time, also by agreements not specific to the aquifer.

Parties report four aquifer- or groundwater-specific agreements:

- Legal framework for the establishment of the Joint Authority for the Study and Development of the Nubian Sandstone Aquifer System, initially established in 1989 and further developed during the 1990s (reported by Chad).
- 2016 Agreement between the Lithuanian Geological Survey under the Ministry of Environment of Lithuania and the Latvian Environment, Geology and Meteorology Centre on Cooperation on Cross-border Groundwater Monitoring, partly covering the Permian-Upper Devonian Aquifer of the Venta and Lielupe river basin districts (shared by Latvia and Lithuania), the Upper Devonian and Upper-Middle Devonian Aquifer of the Lielupe river basin district (shared by Latvia and Lithuania) and the

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76 pp. 20–21.
Quaternary Aquifer of the Dauguva river basin district (shared by Belarus, Latvia and Lithuania) (reported by Lithuania).
- 2012 Agreement between the Lithuanian Geological Survey under the Ministry of Environment of Lithuania and the Belarusian Scientific and Research Institute for Geological Prospecting on Cooperation in the Field of Geology and Hydrogeology, party covering the Quaternary aquifer of the Dauguva river basin district (shared by Belarus, Latvia and Lithuania) and the Quaternary aquifer of the Nemunas river basin district (shared by Belarus, Lithuania and Poland) (reported by Lithuania).

Even though the number of aquifers not covered by any agreement or arrangement (102 aquifers and groundwater bodies out of total 360 aquifers and groundwater bodies reported) should be treated with caution, these findings call for stronger legal and institutional frameworks for cooperation related to groundwaters. The *Model Provisions on Transboundary Groundwaters*\(^{77}\) can provide useful assistance to Parties in this respect.

### 3.3 The functional scope of agreements and arrangements

#### What does the Convention say?

Article 9 (1) of the Convention provides that agreements or arrangements should be consistent with the basic principles of the Convention, and they must include relevant issues covered by the Convention, as well as any other issues on which the riparian Parties may deem it necessary to cooperate. Article 10 stipulates that riparian Parties must hold consultations at the request of any such Party regarding the issues covered by the provisions of the Convention.

#### What have countries reported?

The functional scope of agreements and arrangements was addressed through two questions in the template: first, relating to the sectoral scope of agreements and arrangements (sect. II, question 2 (c)); and, second, concerning the topics or subjects of cooperation included within agreements and arrangements (sect. II, question 2 (d)).

The large majority of the responses concerning the sectoral scope of agreements and arrangements indicate that agreements and arrangements cover all water uses (figure 7). While the replies also indicate that it is not typical to devote agreements and arrangements to a single water use or sector, it may also be the case that single water use agreements are much more widespread but that countries are less inclined to report such agreements or arrangements, especially when multisectoral agreements are simultaneously in place.

*Figure 7: Sectoral scope of the agreement or arrangement – based on all (non-consolidated) responses to section II, question 2 (c), for all arrangements in force*

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\(^{77}\) ECE/MP.WAT/40.
Among agreements and arrangements that cover one or several water uses or sectors, Parties indicate a rather broad coverage of sectors, with household use and the tourism sector being slightly less represented than the energy, fisheries, industry, nature protection, agriculture, industry and transport sectors (figure 8). Several Parties explicitly indicated water management as an additional sector.

**Figure 8: Water uses or sectors covered by the agreement or arrangement – based on all (non-consolidated) responses to section II, question 2 (c), for all arrangements in force**

The responses also show that a diverse range of topics or subjects of cooperation are reflected in agreements and arrangements. In relation to procedural and institutional mechanisms, nearly all agreements and arrangements include provisions about consultations, and close to three fourths of agreements or arrangements include provisions related to institutional cooperation (joint bodies) and dispute prevention (figure 9). Provisions on mutual assistance are less common.

**Figure 9: Topics or subjects of cooperation included in the agreement or arrangement: procedural and institutional issues – based on all (non-consolidated) responses to section II, question 2 (d), for all arrangements in force**
In terms of the specific areas of cooperation “joint significant water management issues”, “water quantity or allocation”, “water quality” and “environmental protection” are the most commonly cited topics covered in agreements or arrangements, with “human health” and “navigation” being the least cited topics of cooperation (figure 10). The topic of “climate change adaptation” is included in less than half of agreements (44%), and this may be partially explained by the fact that many agreements were concluded a long time ago, when climate change and its effects were not yet on the political agenda.

**Figure 10: Topics or subjects of cooperation included in the agreement or arrangement: topics of cooperation – based on all (non-consolidated) responses to section II, question 2 (d), for all arrangements in force**

Common features of agreements or arrangements related to monitoring and exchange of data and information include exchange of information on planned measures, data collection and exchange, exchange of experience between riparian States, joint monitoring and joint assessments (figure 11). Less cited features of agreements or arrangements include the maintenance of joint pollution inventories, the elaboration of joint water quality objectives and common early warning and alarm procedures.

**Figure 11: Topics or subjects of cooperation included in the agreement or arrangement: monitoring and exchange – based on all (non-consolidated) responses to section II, question 2 (d), for all arrangements in force**
A further area of cooperation represented in the template, but less evident in agreements and arrangements, concerns joint planning and management (figure 12). Slightly over half of reported agreements and arrangements are cited as prescribing the development of joint regulations on specific topics and close to half of reported agreements and arrangements prescribe the development of international or joint basin management or action plans.

Figure 12: Topics or subjects of cooperation included in the agreement or arrangement: joint planning and management – based on all (non-consolidated) responses to section II, question 2 (d), for all arrangements in force

Although the Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2\(^7\) encouraged countries to indicate, as part of “other” topics in question 2 (d), whether the agreement or arrangement considers gender or accounts for the rights of indigenous people, no Party explicitly reported such issues to be among topics of cooperation. Participation of indigenous people in implementation of agreements was mentioned in the reports of Finland, Norway and Sweden.

What can we learn from the responses?

The responses demonstrate that key procedural and institutional issues and matters related to water quality and quantity and monitoring and exchange of data and information are well reflected in existing agreements and arrangements. They show efforts to implement some of the core requirements of the Water Convention, such as the establishment of joint bodies (art. 9 (2)), joint monitoring and assessment (art. 11), exchange of information (art. 13), dispute settlement procedures (art. 22), and consultations (art. 10)).

\(^7\) p. 25.
However, the responses suggest that certain provisions of the Water Convention, such as the maintenance of joint pollution inventories (art. 2 (c)), the elaboration of joint water quality objectives and criteria (art. 9 (2) (e)), the development of common early warning and alarm systems (art. 14) and the provision of mutual assistance (art. 15) are not widely provided for within the text of agreements or arrangements. Provisions on climate change adaptation appear to be limited, despite the increasing impacts of climate change; this represents an area for further improvement, which can also be supported by the climate change activities carried out under the Convention. Provisions on human health are also poorly represented, which may become more crucial in the future, especially taking into account the challenges related to the COVID-19 pandemic. When considered at the basin level (figure 13), a significant percentage of river and lake basins lack agreements or arrangements with provisions related to these topics of cooperation.

Figure 13: Percentage of river and lake basins where certain topics or subjects of cooperation are included in the arrangement – based on consolidated basin-level responses for section II, question 2 (d)

It is difficult to draw any firm conclusions from these findings because the question in the reporting template simply asked what was covered in the agreements and arrangements themselves. It may well be that through the activities in support of the implementation of these agreements and arrangements a broader set of topics of cooperation are supported. This will be considered further in chapters 4 and 5 below.

Box 6: Insights from practice: the interministerial agreement between Turkmenistan and Uzbekistan

The 2017 Agreement between the Ministry of Agriculture and Water Resources of Turkmenistan and the Ministry of Agriculture and Water Resources of Uzbekistan on Cooperation on Water Management Issues prescribes details of cooperation on the basis of earlier agreements between the two States, including the intergovernmental Agreement on Cooperation on Water Management Issues of 1996. It stipulates the following areas of cooperation:

- Management of the water resources of the lower Amu Darya River, in line with decisions on water allocation taken by the Interstate Commission for Water Coordination of Central Asia.

79 Good practices on adaptation to climate change in transboundary basins, and specifically through cooperation in the framework of transboundary water agreements, are highlighted in Water and Climate Change: Adaptation in Transboundary Basins – Lessons Learned and Good Practices (ECE/MP.WAT/45).
- Flood management, provision of information on emergency situations and cooperation in emergency situations.
- Use of drainage waters.
- Joint research on the safety of hydrotechnical facilities and improvement of the quality of irrigated lands.
- Exchange of data and experience on the use of drainage waters and application of best available technologies to ensure the rational use of water.
- Strengthening of the International Fund for Saving the Aral Sea and its organizations.

3.4 What are the main challenges in implementing agreements and arrangements?

In the reporting template (sect. II, question 2 (e)), Parties were asked to indicate the main difficulties and challenges they faced with agreements and arrangements and their implementation. It is encouraging to see that in over half of the responses for all reported agreements and arrangements in force, Parties report to have experienced no significant difficulties in pursuing cooperation. Nevertheless, a lack of financial resources (27%) and insufficient human capacity (24%) are reported as challenges for such cooperation, closely followed by insufficient technical capacity (18%) (figure 14).

Figure 14: Main difficulties and challenges faced with the arrangement and its implementation – based on all (non-consolidated) responses to section II, question 2 (e), for all arrangements in force

Additionally, several Parties mention the challenge of reconciling upstream and downstream perspectives in their cooperation, but admit that they have been able to handle this issue. Also, siloed sectoral approaches are reported to present a difficulty.

In terms of thematic or substantive issues in the implementation of agreements and arrangements that are hard to address, some Parties face difficulties with:

- The delineation of water bodies and classification of the ecological status of transboundary waters when the countries have different standards or methodologies in place.
- The identification, mapping, description and monitoring of transboundary aquifers and groundwater bodies.
- The coordination of monitoring, status assessment and development of measures and plans.
- Finding an agreement on water allocation.
- The alignment of the plans and activities of joint bodies with changing national policies and programmes.

European Union member States additionally mention:
- Difficulties in harmonizing water management regulations between European Union member States and non-member countries.
- Different stages of implementation of the requirements set out in the Water Framework Directive and the Floods Directive and differences in water management institutional set-ups at the national level among countries sharing transboundary waters, which complicates implementation.

Three Parties to the Convention (Azerbaijan, Chad and Ukraine) indicated difficulties in implementing transboundary water cooperation related to security issues.

**Box 7: Insights from practice: efforts of Kazakhstan to overcome difficulties in transboundary water cooperation**

In its national report, Kazakhstan details its efforts to overcome difficulties in pursuing transboundary water cooperation under several intergovernmental agreements. For example, implementation of the Agreement on the Use of Water Management Facilities of Intergovernmental Status on the Rivers Chu and Talas, concluded by Kazakhstan and Kyrgyzstan in 2000, made it clear that a number of articles of the agreement required amendments. In particular, the agreement did not provide for the creation of an executive body of the Chu-Talas Water Management Commission and its secretariat, nor for funding from the Parties’ national budgets for such bodies. The agreement also did not provide for a simplified procedure to enable the passage of personnel and the movement of goods and vehicles and their customs clearance for border crossings. Activities of the Commission revealed the need to expand the list of water management facilities covered by the agreement.

Another example is the bilateral cooperation between Kazakhstan and China. According to Kazakhstan, despite the relatively extensive legal framework for cooperation between the two countries put in place since 1991, the issue of water allocation on the main transboundary rivers remains open. In 2015, a special working group was created to prepare and agree a draft agreement on water allocation on transboundary rivers between the two countries. Negotiations were still under way in 2020.

3.5 What are the main achievements in implementing agreements and arrangements?

In the reporting template (sect. II, question 2 (f)), riparian Parties were asked to report on the main achievements in implementing agreements and arrangements, and the keys to achieving success. While this was an open question, figures 15 and 16 provide an overview of these responses, which have been clustered in order to illustrate the frequency of responses across Parties. Figure 15 clearly illustrates that activities to implement agreements and arrangements have resulted in many benefits, such as improved cooperation between countries, exchange of data and information, better water quality and improved flood management. Figure 16 highlights the importance of both technical and political cooperation and political will, among others, in the successful implementation of agreements and arrangements.

*Figure 15: Main achievements in implementing the arrangement – based on responses to section II, question 2 (f) (open question), for all arrangements in force*
KEY MESSAGES
- Where agreements and arrangements for transboundary waters are in place, in most cases participating countries take part in a joint body established to facilitate their implementation. Only in 14 instances of cooperation in river and lake basins did Parties report that there was no joint body for a particular agreement or arrangement.
- The most common type of joint body is a bilateral commission. Basin commissions are less widespread.
- Many of the tasks and activities set out in article 9 (2) of the Water Convention are reflected in the tasks and activities of joint bodies reported by Parties. However, some tasks and activities, such as the setting of emission limits, maintenance of pollution inventories, and participation in transboundary environmental impact assessment, appear to be less well represented. Furthermore, few joint bodies...
have tasks related to surveillance and early warning of water-related diseases, and less than half are entrusted with basin-wide or joint public participation and consultation and climate change adaptation. - Joint bodies for transboundary water cooperation rarely invite non-riparian coastal States to cooperate. - Although joint bodies offer an effective means to foster long-term cooperation and to implement agreements and arrangements, a lack of resources and governance issues are key challenges faced in their operation. - Even countries with a high level of economic development report a lack of resources, including a lack of financial and human resources and technical capacity, as among the key challenges for the operation of joint bodies.

4.1 The establishment of joint bodies

What does the Convention say?

Article 9 (2) of the Water Convention stipulates that transboundary water agreements and arrangements must provide for the establishment of joint bodies.80 As with the adoption of agreements and arrangements, riparian Parties are therefore obliged to establish joint bodies. At the same time, the Convention is quite flexible as to the types of joint bodies. Pursuant to the Convention, a “joint body” means any bilateral or multilateral commission or other appropriate arrangements for cooperation between the riparian Parties (art. 1 (5)).

What have countries reported?

Section II, question 3, of the reporting template asks countries to report on whether they are a member of a joint body or bodies for the relevant agreement or arrangement. Out of a total of 984 responses, in 859 responses (or 87%) Parties confirmed that they were a member of a joint body.

Where Parties did not participate in a joint body, reasons given included the existence of a joint body between the same countries under a different agreement, ongoing or planned efforts to establish a joint body, or the fact that the reporting Party was not part of the joint body concerned due to its small share in the basin concerned.

Where joint bodies exist, countries were asked to report on the kind of joint body they were members of (sect. II, question 3 (a)). Types of joint bodies include plenipotentiaries, bilateral commissions, basin or similar commissions, expert group meetings or meetings of national focal points, and “other” institutional arrangements. Parties’ replies indicate that bilateral commissions are by far the most common type of joint bodies (figure 17). Basin commissions are less widespread.

Figure 17: Types of joint bodies – based on all (non-consolidated) responses to section II, question 3 (a), for all countries member of a joint body

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80 See also ECE, Principles for Effective Joint Bodies for Transboundary Water Cooperation under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (ECE/MP.WAT/50).
“Other” types of joint bodies reported by Parties include:

- A working group as a self-standing joint body (reported in the cases of bilateral cooperation by Estonia and Uzbekistan).
- National water and environmental authorities (for example, Sweden and Norway report that the Swedish Agency for Marine and Water Management and the Norwegian Environment Agency constitute the joint body for the Norwegian-Swedish strategy for transboundary river basins, in addition to representatives of regional water management authorities in both countries).
- Joint bodies that are not specifically focused on water issues (for example, the joint transboundary cooperation commission reported by France for the Oiapoque/Oyupock/Oyapock River basin shared by Brazil and France).

The reporting template also included a question asking Parties to report on whether the established joint body had a secretariat and subsidiary bodies. Figure 18 provides an overview of these features and the frequency of responses.

Figure 18: Features of joint bodies – based on all (non-consolidated) responses to section II, question 3 (f), for countries member of a joint body

The dynamic nature of joint bodies can be illustrated in the types of subsidiary bodies established, such as task forces and working groups. Reporting Parties listed a wide range of topics addressed by these subsidiary bodies, including floods, water quality, biodiversity, ecosystems, water quantity management, hydraulic engineering, thermal water, hydrogeology or groundwater, strategic planning, accidental water pollution, monitoring, legal issues, information and data management, the Water Framework Directive, economic issues, public participation, navigation, energy, river basin management and nutrients. They emphasized that it was important for a joint body to have an adaptive institutional structure, including the ability to establish subsidiary bodies, such as expert groups or
project groups, as needed. In some cases where a joint body covers several transboundary basins, subsidiary bodies are established for each shared basin or a group of shared basins.

Despite the encouragement in the Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2\(^{81}\) for Parties to provide additional information on how gender considerations are taken into account in decision-making processes within joint bodies, as part of “other features” in section II, question 3 (f), no such information was provided in the reports.

*What can we learn from the responses?*

The responses demonstrate the central role that joint bodies play in the implementation of agreements and arrangements, in accordance with article 9 of the Water Convention.

In 14 instances of cooperation in river and lake basins Parties reported that there was no joint body for a particular agreement or arrangement. In four of these cases (the Kura-Araks,\(^{82}\) Neman/Nemunas\(^{83}\) and Vistula\(^{84}\) River basins, as well as the Aral Sea Basin\(^{85}\)), at least one other joint body has been established within the basin pursuant to another agreement or arrangement. In four other instances (the Hari/Harirud,\(^{86}\) Murgab,\(^{87}\) Vardar/Axios\(^{88}\) and Vijose/Aoos/Vjosa\(^{89}\) River basins), different responses from riparian countries meant that it was not possible to determine if a joint body exists. One should, however, note that the Aral Sea basin and the Hari/Harirud, Kura-Araks and Murgab River basins are shared with non-Parties to the Water Convention. The six basins and sub-basins with no existing joint body are the Jacobs/Grense Jakobselv/Voriema,\(^{90}\) Archabil, Atrek/Atrak, Chendir/Chandor, Kelte-Chinar and Sumbar/Sumber.\(^{91}\) For the five of these basins and sub-basins that are shared by Turkmenistan and the Islamic Republic of Iran (a non-Party to the Water Convention), Turkmenistan reports that no joint body exists, but that meetings are held and the creation of a coordination commission on water management is under consideration.

In the Torne/Tornionjoki/Tornealven\(^{92}\) River basin, the joint body is a bilateral commission of Finland and Sweden. In the Kemi/Kemijoki\(^{93}\) River basin, the joint body is a bilateral commission of Finland and the Russian Federation. Although a riparian of both of these basins, Norway does not participate on the joint bodies associated with them due to its very small share of the basins concerned and the absence of pressures on water resources in Norwegian parts of these basins.

In several instances Parties reported that a joint body exists despite there being no current agreement in force. In the case of the Oiapoque/Ouyopock/Oyapock River basin (shared by Brazil (a non-Party to the Water Convention) and France) and the Maroni/Marowijne River basin (shared by France and

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\(^{81}\) p. 30.
\(^{82}\) Shared by Armenia (non-Party), Azerbaijan, Georgia (non-Party), the Islamic Republic of Iran (non-Party) and Turkey (non-Party).
\(^{83}\) Shared by Belarus, Latvia, Lithuania, Poland and the Russian Federation.
\(^{84}\) Shared by Belarus, Poland, Slovakia and Ukraine.
\(^{85}\) Shared by Afghanistan (non-Party), Kazakhstan, Kyrgyzstan (non-Party), Tajikistan (non-Party), Turkmenistan and Uzbekistan.
\(^{86}\) Shared by Afghanistan (non-Party), the Islamic Republic of Iran (non-Party) and Turkmenistan.
\(^{87}\) Shared by Afghanistan (non-Party) and Turkmenistan.
\(^{88}\) Shared by Greece, North Macedonia and Serbia.
\(^{89}\) Shared by Albania and Greece.
\(^{90}\) Shared by Norway and the Russian Federation.
\(^{91}\) The Archabil, Atrek/Atrak, Chendir/Chandor, Kelte-Chinar and Sumbar/Sumber River basins are shared by Turkmenistan and the Islamic Republic of Iran (non-Party).
\(^{92}\) Shared by Finland, Norway and Sweden.
\(^{93}\) Shared by Finland, Norway and the Russian Federation.
Suriname (a non-Party to the Convention)), France reported the absence of an agreement or arrangement on the relevant basins, but the existence of cooperation in the framework of joint bodies that were not specifically focused on water issues. In some parts of the Danube river basin, there are cases in which cooperation between some neighbouring countries takes place in the framework of the International Commission for the Protection of the Danube River as a joint body, in the absence of a bilateral agreement and a bilateral joint body of those neighbouring countries.

In basins shared by Poland and the Russian Federation, such as the Banowka, Pregel and Prohladnaja/Swieca River basins, Poland specifies that the 1964 Agreement between the Government of the Polish People's Republic and the Government of the Union of Soviet Socialist Republics Concerning the Use of Water Resources in Frontier Waters is formally in force, but is no longer implemented, so meetings of the joint body do not take place.

In basins shared by Ukraine and the Russian Federation, such as the Azov Sea River basins (Mius, Krinka, Sukhoi Elanchyk) and the Dnieper and Don River basins, Ukraine reports that cooperation under the 1992 Agreement between the Government of Ukraine and the Government of the Russian Federation on Joint Management and Protection of Transboundary Water Bodies has been terminated and meetings of the joint body do not take place.

In only a few cases did Parties report that a joint body has been established but does not meet regularly (sect. II, question 3 (i)). These include: the joint transboundary cooperation commission, not specifically focused on water issues, that provides the framework for cooperation on the Oiapoque/Oyupock/Oyapock River basin shared by Brazil and France (as reported by France); the river council, not specifically focused on water issues, that serves as a framework for cooperation in the Maroni/Marowijne River basin shared by France and Suriname (as reported by France); the bilateral commission established under the 1959 agreement between Greece and Yugoslavia and relevant for the Vardar/Axios river and Dojran/Doirani Lake, shared by Greece and North Macedonia (as reported by Greece); and some bilateral joint bodies (Lithuania–Russian Federation; Lithuania–Belarus) relevant for the Neman/Nemunas River basin and several aquifers in the Neman/Nemunas basin (as reported by Lithuania).

In some cases, the COVID-19 pandemic has affected the regularity of meetings of the joint bodies in the period under review. For instance, Albania reported the impact of the COVID-19 pandemic among the main difficulties and challenges that the country faced in the operation of its joint bodies.

4.2 The tasks and activities of joint bodies

*What does the Convention say?*

In addition to stipulating that joint bodies must be in place, article 9 (2) of the Water Convention includes a non-exhaustive list of tasks that joint bodies must carry out, including:

- To collect, compile and evaluate data in order to identify pollution sources likely to cause transboundary impact.
- To elaborate joint monitoring programmes concerning water quality and quantity.
- To establish inventories and exchange information on pollution sources.
- To elaborate emission limits for wastewater and evaluate the effectiveness of control programmes.

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94 Shared by Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Germany, Hungary, Italy, Montenegro, North Macedonia, Poland, the Republic of Moldova, Romania, the Russian Federation, Slovakia, Slovenia, Switzerland and Ukraine.
- To elaborate joint water quality objectives and criteria, and proposals for measures for maintaining and where necessary, improving the existing water quality.
- To develop concerted action programmes for the reduction of pollution loads from both point and diffuse sources.
- To establish warning and alarm procedures.
- To serve as a forum for the exchange of information on existing and planned uses of water and related installations likely to cause transboundary impact.
- To promote cooperation and the exchange of information on the best available technology, as well as encourage cooperation in scientific research programmes.
- To participate in the implementation of environmental impact assessments relating to transboundary waters.

In addition to the tasks set out in article 9, the Water Convention stipulates that joint bodies may serve as the framework for consultations (art. 10), joint monitoring and assessment (art. 11), common research and development (art. 12) and exchange of information (art. 13). They may also be instrumental for the implementation of other requirements under the Convention, for example, on public information (art. 16).

Furthermore, the Convention encourages cooperation between multilateral joint bodies established by riparian Parties with non-riparian coastal States that are Parties to the Convention (art. 9 (3)) and requires cooperation between joint bodies established under the Convention and relevant joint bodies established by coastal States for the protection of marine environment (art. 9 (4)).

**What have countries reported?**

Section II, question 3 (g), of the reporting template asks countries to report on the tasks and activities of any established joint bodies. Figure 19 provides an overview of the responses, highlighting in blue the tasks and activities that are explicitly provided for in article 9 (2) of the Water Convention and in green those which are not.

*Figure 19: Tasks and activities of joint bodies (art. 9 (2)) – based on all (non-consolidated) responses to section II, question 3 (g), for all countries member of a joint body*
In response to the question whether a joint body ever invited a non-riparian coastal State to cooperate (sect. II, question 3 (k)), an overwhelming majority of responses (751 out of 852, or 88%) indicated that they did not cooperate with non-riparian coastal States.

What can we learn from the responses?

Some of the tasks stipulated in article 9 (2) of the Water Convention are more frequently included in the tasks of joint bodies than others. For instance, tasks and activities related to setting emission limits, maintenance of joint pollution inventories and participation in transboundary environmental impact assessment are less well represented. Some other activities, not stipulated in article 9 (2), such as surveillance and early warning of water-related disease, joint communication strategies, management of shared infrastructure, basin-wide or joint public participation and consultation, climate change adaptation and policy development, also do not appear to be widespread.

The consolidated analysis of responses for river and lake basins (figure 20) supports the above conclusions, demonstrating that tasks related to setting emission limits, maintenance of joint pollution inventories and climate change adaptation are among the tasks of joint bodies in only a limited number of basins (10%, 32% and 37%, respectively).

Figure 20: Percentage of river and lake basins where certain tasks and activities of joint bodies are included (art. 9 (2)) – based on consolidated basin level responses for section II, question 3 (g)
The responses to section II, question 3 (g), may in part be explained by the way the question is formulated. While the Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2\(^{95}\) specifies that countries may include tasks and activities of a joint body stated in the agreement itself or those that have been added by the joint body or its subsidiary bodies, it appears that some Parties have replied based on the tasks of a joint body listed in the text of an agreement and others on the actual day-to-day activities carried out.

Although the responses show that joint bodies for transboundary water cooperation established by Parties to the Convention rarely invite non-riparian coastal States to cooperate, it needs to be noted that, here, the Convention refers only to multilateral, rather than bilateral, joint bodies, whereas the reporting template in section II, question 3 (k), does not make such a distinction. Nevertheless, even where there are multilateral joint bodies for transboundary water cooperation established by Parties to the Convention, the practice of inviting non-riparian coastal States to cooperate is not widespread.\(^{96}\)

In the vast majority of cases, Parties that provided a negative reply to question 3 (k) indicated that the relevant coastal States were also riparian States and already members of the joint body or mechanism. It was evident from these replies that the Parties applied a restrictive interpretation of article 9 (3), as they referred to the inclusion of coastal States that were also riparian States for their transboundary waters, whereas article 9 (3) and, respectively, question 3 (k) of the template, refer to cooperation with non-riparian coastal States.

Parties highlighted two cases when multilateral joint bodies for transboundary water cooperation had established cooperation with joint bodies set up by coastal States for the protection of the marine environment, as required by article 9 (4) of the Convention:

- The International Commission for the Protection of the Rhine cooperates with the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) and the OSPAR Commission. It also cooperates with the Convention on the Protection of the Marine Environment of the Baltic Sea Area.
- The International Commission for the Protection of the Danube River cooperates with the other coastal States that are parties to the Convention on the Protection of the Black Sea against Pollution and are involved in activities of the Black Sea Commission. Besides Bulgaria, Romania and Ukraine,

\(^{95}\) p. 31.

\(^{96}\) Chad reported on cooperation with a non-riparian coastal State going beyond water and environment issues: the Lake Chad Basin Commission is reported to closely cooperate with Benin (a coastal State not riparian to Lake Chad), which takes part on the multinational joint task force established to deal with cross-border security issues in the Lake Chad region.
which are members of the International Commission for the Protection of the Danube River, membership in the Black Sea Commission also includes Georgia, the Russian Federation and Turkey. Cooperation is based on the 2001 Memorandum of Understanding between the International Commission for the Protection of the Black Sea (ICPBS) and the International Commission for the Protection of the Danube River (ICPDR) on common strategic goals, and is guided by the 2007 Declaration of the Ministers in Charge of Water Management of the Contracting Parties to the Danube River Protection Convention and the Convention for Protection of the Black Sea against Pollution on the Enhancement of Cooperation.

Overall, the responses to question 3 (k) show the need to enhance the understanding and implementation of the requirements of the Water Convention with regard to protection of the marine environment influenced by transboundary waters, in particular articles 2 (6) and 9 (3) and (4).

4.3 What are the main challenges faced in the operation of joint bodies?

In the reporting template (sect. II, question 3 (h)), countries were asked to report on the main difficulties and challenges faced in the operation of a joint body. Figure 21 provides a summary of all responses provided by each country concerning each joint body.

Figure 21: Main challenges and difficulties faced by joint bodies – based on all (non-consolidated) responses to section II, question 3 (h), by countries that are members of a joint body

A lack of resources, including financial and human resources and technical capacity, clearly stands out as the key challenge. Even some countries with a high level of economic development mention a lack of resources among constraints. For example, Norway noted that the financing of the Finnish-Norwegian Transboundary Water Commission by the two countries does not cover its activities, and the Commission also depends on financial support from the European Union (e.g., Interreg and Kolarctic Cross Border Cooperation (CBC)). Hungary mentions that the national budget is limited, and no separate fund is available for transboundary water cooperation. Estonia praises an Interreg project that has been valuable for the transboundary water cooperation of Estonia and Latvia in the past and reports difficulties in obtaining funding for further work to ensure management of transboundary waterbodies.

Other significant challenges faced by joint bodies include governance issues (see box 8) and a lack of information and reliable forecasts.

Box 8: Examples of governance-related challenges faced by joint bodies
The following examples summarize the replies of individual countries that do not necessarily share joint bodies but that have experienced similar challenges in the joint bodies to which they belong.

**Austria, Germany, Luxembourg, the Netherlands** and **Serbia** cited difficulties in aligning a joint body’s plans and activities with changing national and European Union policies and programmes, agreeing on emerging issues and setting the agenda as among the challenges facing joint bodies.

In **Bosnia and Herzegovina**, owing to the country’s specific constitutional organization and the distribution of the competences between the different levels of administration, representatives of all the respective institutions have to be involved in cooperation activities. It therefore becomes a demanding task to ensure adequate representation on joint bodies and to establish an efficient decision-making process.

**Croatia, Germany** and **Romania** reported that coordination of some upstream/downstream issues was not always easy.

**Estonia** and **Romania** found that cooperation of a European Union member State with a non-member country could be a challenge due to different legal contexts and targets.

**Hungary** reported that the internal reorganization of water management authorities could present a challenge for the implementation of activities by a joint body.

For **Ukraine**, frequent changes in the officially appointed commissioners or plenipotentiaries or the absence of appointed representatives provides a challenge for the activities of joint bodies.

For **Kazakhstan**, it appears important to ensure the involvement of other sectors (e.g., energy, environment and hydrometeorology) and local governments in the work of joint bodies for transboundary water cooperation, in addition to the water management authorities leading such cooperation, to ensure that decisions of joint bodies are accepted and implemented.

### 4.4 What are the main achievements with regard to joint bodies?

In the reporting template (sect. II, question 3 (j)), countries were asked to report on the main achievements relating to joint bodies. While this was an open question, figure 22 provides an overview of responses, clustered in order to illustrate the frequency of responses across Parties.

**Figure 22: Main achievements with regard to the joint body – based on responses to section II, question 3 (j) (open question), for all countries member of a joint body**
The most frequently mentioned achievements related to joint body activities include exchange of data and information, improved emergency response systems, monitoring of agreed measures and developments in joint management, improved joint planning, management or operation, and improved joint environmental protection and monitoring.

These achievements could not have been realized without the platforms for continuous dialogue and day-to-day transboundary water cooperation provided by joint bodies, highlighting the soundness of the approach taken in the Convention, which makes cooperation through joint bodies an obligation of riparian Parties. The results achieved also provide an argument in favour of the provision of assistance for the establishment and operation of joint bodies through the institutional structure of the Convention and by other partners and organizations.

CHAPTER 5 ACTIVITIES RELATED TO THE IMPLEMENTATION OF TRANSBOUNDARY WATER COOPERATION

Key messages
- There is a widespread practice amongst riparian Parties of adopting joint objectives, strategies and plans to support the implementation of agreements and arrangements. The adoption of river basin management plans has progressed in the countries that are bound by or have committed to implementing the European Union Water Framework Directive.
- Measures to protect the ecosystems of transboundary waters are commonly incorporated into national laws and policies and often incorporated into agreements and arrangements for transboundary waters.
- Data and information exchange takes place in the great majority of transboundary river and lake basins, but there are at least 24 river and lake basins where riparian countries appear not to exchange data and information at the basin level.
- There has been a concerted effort to adopt joint monitoring and assessment of transboundary waters; however, it is reported that joint monitoring does not take place in at least 51% of reported river and lake basins.
- Notification and communication are the most common response to limit the transboundary impact of accidental pollution and extreme weather events. Warning or alarm systems for floods are rather common, but warning or alarm systems for accidental pollution are much less widespread.
- Procedures for mutual assistance in critical situations are not in place in at least 93 river and lake basins. This may be a matter of concern, since the capacity for the effective prevention of transboundary impact in critical situations may be insufficient in many Parties to the Convention.
- Joint climate change adaptation and joint disaster risk reduction strategies are still rare in transboundary basins, despite the increase in extreme weather events, such as floods and droughts.
- The involvement of the public and other stakeholders in the activities of joint bodies for transboundary water cooperation by granting observer status or an advisory role is limited.

5.1 Joint objectives, strategies and plans

What does the Convention say?

In accordance with article 2 (6) of the Water Convention, riparian Parties are required to develop harmonized 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, as well as the marine environment. More specifically, the Convention stipulates that Parties must set water quality objectives and criteria for the purposes of preventing, controlling and reducing transboundary impact, which as noted above, is also a specific task of any established joint body (arts. 3 (3) and 9 (2) (e)). In addition, under the Convention, joint bodies are tasked to develop concerted action programmes for the reduction of pollution (art. 9 (2) (f)).

What have countries reported?

In section II, question 4, of the reporting template, countries were asked to report on the existence of joint objectives, a common strategy, a joint or coordinated management plan or an action plan for a given basin, sub-basin, part of a basin or group of basins. As explained in the Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2, Parties were asked to report the joint objectives, strategies or plans not contained within the agreement but adopted after the agreement’s entry into force. Out of a total of 983 responses to this question 942 (or 96%) confirmed that such joint objectives, strategies or plans were in place.

Riparian Parties have reported a wide variety of action plans, declarations, guidance documents, principles and strategies on topics that include climate change adaptation, development, environmental protection, flood risk management, hydropower, navigation, river basin management, sedimentation management, sustainable development, and warning and alarm systems.

What can we learn from the responses?

97 p. 33.
The responses to section II, question 4, suggest that there is a systemic effort by the Parties to implement their agreements and arrangements through plans, strategies, objectives and similar instruments. However, some Parties did not provide details on the agreed joint objectives, strategies and plans and some others referred to very old documents without clarifying their validity. A particular difficulty has been for the Parties to report on joint objectives, strategies and plans in bilateral cooperation. In addition, the responses provided did not allow for any conclusions to be drawn on the actual implementation of joint objectives, strategies and plans.

The replies by European Union member States and candidate countries show extensive efforts to develop river basin management plans pursuant to the Water Framework Directive and flood risk management plans pursuant to the Floods Directive.

**Box 9: Insights from practice: action plan of the International Commission for the Protection of Italian-Swiss Waters from Pollution for the period 2019–2027**

The International Commission for the Protection of Italian-Swiss Waters from Pollution (CIPAIS) supports the implementation of the 1972 Convention between Switzerland and Italy concerning the protection of Italian-Swiss waters from pollution. The first action plan of the international commission was drawn up for the period 2013–2018.

The action plan for the period 2019–2027 looks at the achievements and gaps in cooperation on Italian-Swiss waters and identifies three specific areas of action for which general objectives and specific objectives are defined, namely:

**Action area 1. Lake and tributary streams as aquatic ecosystems**

**General objective:** Protect lake waters and tributaries from pollution, improve the quality of aquatic ecosystems or maintain a good state of naturalness.

**Specific objectives:**
1.1 Improve or maintain the ecological quality of common lakes and waterways.
1.2 Contain the concentration of micropollutants and/or emerging hazardous substances detectable in lake waters and in the various sections of the ecosystem.
1.3 Promote the revitalization (environmental requalification) of compromised coastal stretches.
1.4 Safeguard the continuity of ecological river corridors.

**Action area 2. Lake as a resource**

**General objective:** Promote sustainable use of the lake resource.

**Specific objectives:**
2.1 Promote a quantitative use of water resources and a regulation of lake levels compatible with good ecological quality.
2.2 Guarantee a quality of lake water that allows exploitation for drinking water purposes through the use of simple purification treatments.
2.3 Improve the conditions that allow the use of water resources for bathing, fishing and withdrawals for thermal and industrial use.
2.4 Promote actions that make nautical activities eco-compatible (shipbuilding, public navigation, commercial and sporting).
2.5 Promote the usability of the banks, respecting the natural components.
Action area 3. Knowledge of the lake and its catchment area

General objective: Inform governments and stakeholders about the state of common waters and disseminate knowledge to the general public.

Specific objectives:
3.1 Promote and support cooperation/collaboration between the commission, bodies, associations and stakeholders.
3.2 Promote and support scientific dissemination activities, both to the general public and to professionals.


Box 10: Insights from practice: new programme “Rhine 2040”

The States in the Rhine catchment have been cooperating in the International Commission for the Protection of the Rhine for 70 years. In 2001, participating States adopted the “Rhine 2020” programme. Some achievements in the implementation of the Rhine 2020 programme include better flood management, removal of obstacles for migratory fish and improved water quality and species diversity. Despite considerable success, not all objectives have been fully achieved.

The “Rhine 2040” programme, adopted on 13 February 2020, is intended to reconcile the various uses of the resource with the protection of the ecosystem. It includes new, ambitious targets for different fields of action. The most important objectives are:

- Adapt to climate change: The climate adaptation strategy of the International Commission will be updated by 2025 in order to gain better knowledge and to develop further proposals for adaptation.
- Cope with low water: Joint low-water monitoring will be continued, and joint approaches will be developed in order to be better prepared and to manage low water flow in the future.
- Complete fish passes: Migratory fish will be able to migrate from the North Sea up to the Rhine Falls at Schaffhausen and to colonize their habitats. For this purpose, by 2026, fish passes on the Upper Rhine at the Rhinau, Marekolsheim and Vogelgrün barrages all have to be operational and at least 300 further migration obstacles in the catchment area have to be made passable.
- Contain micropollutants: In order to further improve water quality and to preserve the Rhine as a resource for drinking water production, the discharge of micropollutants (e.g., in the form of pharmaceuticals, x-ray contrast agents and pesticides) into the Rhine and its tributaries is to be reduced by at least 30% by 2040. This target can be increased, if necessary.
- Reactivate further floodplains: By 2040, a further 200 km² of floodplains are to be restored and 100 oxbow lakes are to be connected to the Rhine. In addition, the river bank, which is heavily built-up in many places, is to be made more natural over an additional 400 km.
- Reduce flood risk: By 2040, the flood risk along the Rhine is to be reduced by a further 15% compared with 2020, despite population growth and the associated settlement developments.

The “Rhine 2040” programme follows the overall concepts of the solidarity principle, as well as a sustainable and climate-resilient water management.


Box 11: Insights from practice: master plan for the development and management of the Senegal River
The Organization for the Development of the Senegal River (OMVS), created in 1972, is responsible for developing and implementing policies common to the four member States (Guinea, Mali, Mauritania and Senegal) to promote the economic development and sustainable management of water resources and the environment in the Senegal River basin.

To provide a global shared vision for the sustainable development of the Senegal River, the riparian States developed a master plan for the development and management of waters in consultations with stakeholders between 2009 and 2011. The master plan was adopted in 2011 by the OMVS council of ministers. The update of the master plan is currently ongoing and will be available at the end of 2021.

The master plan for the development and management of the waters of the Senegal River defines the fundamental orientations of development and management activities, guides the mobilization of resources, assesses the impacts on the ecosystems and provides a precise action programme to give a coherent framework for development action, while protecting water resources and the environment. The master plan integrates the objectives of different sectors, such as hydropower, navigation, drinking water and sanitation, transport, rural development, mining and industry. Among other things, the master plan aims at strengthening regional planning capacities and tools; harmonizing policies and legislation; and reducing the risks of conflict related to water resources availability or accessibility, thus contributing to peace and stability in the subregion.

To ensure the sustainable management of water resources and the environment in the basin, the OMVS also builds upon a number of planning and decision-making tools, such as:
- A strategic action plan for the management of priority environmental problems in the Senegal River basin (horizon 2037).
- An assessment of the vulnerability of the Senegal River basin to climate change and the development of a plan for adaptation and strengthening the resilience of the basin, as well as the updating of the water resources management models used by OMVS.

Source: www.omvs.org.

5.2 The protection of transboundary waters and their ecosystems

What does the Convention say?

Pursuant to article 2 (2) (b) of the Water Convention, Parties must take all appropriate measures to ensure that transboundary waters are used with the aim of ecologically sound and rational water management, conservation of water resources and environmental protection. Parties are also obliged to take all appropriate measures to ensure conservation and, where necessary, restoration of ecosystems (art. 2 (2) (d)). Additionally, pursuant to article 3 (1) (i), Parties must develop, adopt, implement and, as far as possible, render compatible relevant legal, administrative, economic, financial and technical measures, in order to ensure, inter alia, that sustainable water resources management, including the application of the ecosystems approach, is promoted.

What have countries reported?

Almost all (39 of 41) Parties responding to question 1 (g) in section III of the reporting template confirmed that they apply the ecosystem approach (art. 3 (1) (i)).

In section II of the template, Parties were asked to specify how transboundary basins are protected in the context of sustainable and rational water use (question 5). Figure 23 provides an overview of the
responses to this question. Protection of water species and habitats and protection of water quality clearly appear to be most common measures in this respect.

**Figure 23: Protection of ecosystems (art. 2 (2) (b)) and (d)) – based on all (non-consolidated) responses to section II, question 5**

Countries were also asked if they had taken any other measures to protect ecosystems. In response to this question, Parties identified the following additional measures: pollution prevention; liming to counter the effects of acidification; activities related to the implementation of the Water Framework Directive; the protection of coastal zones; the restoration of shores; improving river connectivity; removing obstacles to fish migration; reintroduction and protection of fish populations; monitoring of the status of ecosystems; and protected areas legislation.

*What can we learn from the responses?*

The responses in section I of the template suggest that there is a widespread practice of incorporating the ecosystem approach into national laws and policies. The responses in section II support the finding that an ecosystem approach is incorporated into the implementation of agreements and arrangements at the basin and sub-basin level. However, the extent to which key aspects of the ecosystem approach are incorporated into agreements or arrangements is not easy to understand from the responses.

**Box 12: Insights from practice: rehabilitation of the dry bed of the Aral Sea**

Systemic, large-scale efforts are being taken for the rehabilitation of the dry bed of the Aral Sea by planting drought-tolerant crops, mainly saxaul, in the territories of Kazakhstan and Uzbekistan.

The planting of saxaul and desert plant species helps stabilize the moving sands and mitigate the adverse effects of frequent storms carrying salt, sand and dust. The efforts also aim at stabilization of the soils of the dry bed of the Aral Sea.

The so-called Malyi Aral (or “Little Aral”) has been established in Kazakhstan at the outflow of the Syr Darya River as part of rehabilitation efforts.

Significant engineering works are ongoing in Uzbekistan in the Amu Darya River delta for the restoration of aquatic and wetland ecosystems and stabilization of the water regime.

Box 13: Insights from practice: designation of the five-country Mura-Drava-Danube UNESCO transboundary biosphere reserve

In May 2020, the nomination of the Mura-Drava-Danube transboundary biosphere reserve was submitted to UNESCO. The world’s first five-country biosphere reserve is a milestone in the establishment of Europe’s largest protected river landscape.

The area encompasses 930,000 hectares and has a length of over 700 kilometres. The so-called Amazon of Europe begins on the Mura in Styria (Austria) and stretches across four other countries – Slovenia, Hungary, Croatia and Serbia – along the Drava and all the way to the Danube. It is home to Europe’s highest density of breeding white-tailed eagle, as well as endangered species such as the little tern, black stork, otters, beavers and sturgeon. It is also an important resting and feeding place for more than 250,000 migratory birds every year.


Box 14: Insights from practice: protection of ecosystems in the Rhine River basin

Since 2001, almost 600 obstacles to fish migration have been removed from the Rhine and its tributaries. Major achievements include the installation of fish passages on the Upper Rhine at Iffezheim (2000), Gamsbheim (2006), Strasbourg (2016) and Gerstheim (2019) and the partial opening of the Haringvliet sluices near Rotterdam (2018). This work allows migratory fish to once again reach many spawning habitats in the Rhine system. The Atlantic Salmon is a flagship species in this regard.

During the past 20 years, some 140 km² of alluvial areas have been restored and 160 oxbow lakes have been reconnected with the Rhine. In addition, new nature conservation areas have been designated, such as the cross-border wetlands on the Upper Rhine covered by the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention). This has created valuable habitats for water-dependent animals and plants.


5.3 Data and information exchange

What does the Convention say?

The requirement to exchange data and information is reflected in article 6 of the Water Convention, which contains an overarching obligation upon Parties to provide for the widest exchange of information, as early as possible, on issues covered by the provisions of the Convention. Article 6 is supplemented by a specific obligation in article 13 (1) for 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 wastewater discharges issued by the competent authority or appropriate body.

Riparian Parties are also required to exchange information on their national regulations in order to harmonize emission limits (art. 13 (2)).

Pursuant to article 9 (2), joint bodies are afforded an important role in the exchange of data and information between riparian Parties.

What have countries reported?

In order to assess the level of data and information exchange across riparian Parties, in the reporting template countries were asked whether they regularly exchanged data and information with other riparian States within a basin, sub-basin, or part of a basin or group of basins (sect. II, question 6 (a)). Out of a total of 983 responses received, 960 responses (or 98%) confirmed that data and information was regularly exchanged with other riparian States. These numbers, however, refer to responses in section II, where some Parties have not included information on basins not covered by agreements or arrangements in force.

When data and information were regularly exchanged, in the vast majority of cases the exchange took place more than once per year (figure 24). Most Parties specified whether information was exchanged in connection with meetings of joint bodies and their subsidiary bodies or also between the meetings. Many Parties indicated that exchanges were done through electronic means (i.e., by entering information and data into a database and by email) (question 6 (c)). Some Parties also mentioned that information was exchanged on a project basis and that this was not a sustainable practice.

Figure 24: Frequency of exchange of information and data with other riparian States (art. 13) – based on all (non-consolidated) responses to section II, question 6 (a)

In addition to asking whether data and information was exchanged, in the reporting template countries were also asked to report on the subjects on which data and information was exchanged (sect. II, question 6 (d)). Figure 25 provides an overview of the responses to this question.

Figure 25: Subjects upon which information and data are exchanged (art. 13) – based on all (non-consolidated) responses to section II, question 6 (d)
Many reporting Parties also noted that they exchanged data and information related to flood protection measures, legislative, regulatory and strategic documents that were in preparation and the status of implementation of the Water Framework Directive. Some Parties also mentioned that they exchange data and information on accidents with possible transboundary impacts, security concerns in a shared basin, and international health cooperation for the prevention of water-related diseases.

Furthermore, countries were asked whether a shared database or information platform was in place by means of which data and information could be exchanged. Out of a total of 1,014 responses, only 373 (or 37%) indicated that such a database or platform was in place. Of these 373 responses, in 312 cases (or 84%) the database was reported to be publicly available.

Finally, Parties were asked to describe the main difficulties and challenges faced in relation to data exchange (question 6 (g)), as well as the main benefits of data exchange on transboundary waters (question 6 (h)).

The main difficulties identified by Parties are related to the comparability of data and information and inadequate resources (figure 26).

*Figure 26: Main difficulties and challenges to data exchange (art. 13) – based on all (non-consolidated) responses to section II, question 6 (g)*
Among the most common benefits of data exchange on transboundary waters cited by Parties in their reports are a mutual and better understanding of the basin; transparent and collaborative planning and decision-making; improved possibilities for early warning of extreme events and reduction of their adverse effects; better forecasting and modelling of the basin; and more efficient water management and protection at the national and transboundary levels. It was also noted that in certain cases data exchange could allow riparian countries to avoid duplication of efforts.

**What can we learn from the responses?**

The responses suggest that there is a widespread practice of data and information exchange between the Parties – in 101 river and lake basins, Parties confirm that they exchange data and information. However, the responses of countries in section I of the template also reveal that, despite the requirement in article 13 to exchange data and information, there are at least 24 river and lake basins where riparian countries appear not to exchange data and information at the basin level: Jandari Lake basin,98; the Adige,99 Astara Chay,100 Ely fra Svartaksvatnet,101 Karpelva,102 Maroni/Marowijne,103 Oiapoque/Oyupock/Oyapock,104 and Vijose/Aoos/Vjosa105 River basins; a group of 3 basins shared by Poland and the Russian Federation;106 a group of 4 basins shared by Finland and Norway;107 and a group of 9 basins shared by the Islamic Republic of Iran and Turkmenistan.108 However, it should be noted that Jandari Lake basin, and the Astara Chay, Maroni/Marowijne and Oiapoque/Oyupock/Oyapock River basins and the basins shared by the Islamic Republic of Iran and Turkmenistan are shared with non-Parties to the Convention. In 19 additional river and lake basins, differing responses from countries meant that it was not possible to ascertain whether data and information exchange took place.

The responses suggest that exchanges took place across a wide range of subjects, with the most common being data and information on environmental conditions (92% of responses) (figure 25).

As shown by the responses, in 86% of cases Parties report they exchange information on future planned measures with transboundary impacts (figure 25). While there is no question that explicitly asks about the conduct of consultations between riparian Parties under article 14 of the Convention in

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98 Shared by Azerbaijan and Georgia (non-Party).
99 Shared by Italy and Switzerland.
100 Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
101 Shared by Norway and the Russian Federation.
102 Shared by Norway and the Russian Federation.
103 Shared by France and Suriname (non-Party).
104 Shared by Brazil (non-Party) and France.
105 Shared by Albania and Greece.
106 The Banowka, Pregel and Prohladnaja/Swieza River basins.
107 The Alta, Reisa, Skibotn and Sandneselva River basins. The riparian countries report that the Finnish part of these river basins is very small and does not have any human pressures on water resources.
108 The Archabil, Archinyan/Achangan, Atrek/Atrak, Chaacha, Kazgan Chai/Zenginanlou, Kelte-Chinar, Lainsu, Meana/Kara-Tikan and Nafe (Kelat Chai) River basins.
the reporting template, this figure provides indirect evidence that the prerequisites for consultations on planned measures, in the form of exchange of information on planned measures with transboundary impact, exist in the majority of cases.

When analysed by subregion, exchange of data and information among riparians on future planned measures with transboundary impacts appears to be rather widespread for Parties in Eastern Europe, Northern Europe, Southern Europe, Western Europe and sub-Saharan Africa, but rare for Parties in the Caucasus and Central Asia.

A further important finding that was identified by many Parties pertained to the challenges related to the comparability of data and information, despite the requirement in article 11 (4) of the Water Convention for riparian Parties to harmonize rules for the setting up and operation of monitoring programmes, measurement systems, devices, analytical techniques, data processing and evaluation procedures, and methods for the regulation of pollutants discharged. A subregional analysis shows that Parties in Southern Europe face the greatest challenges with regard to the comparability of data and information, whereas for Parties in Northern Europe it was a relatively minor challenge and for Parties in the other subregions it was somewhere in the middle.

A shared database or information platform, which might assist in harmonizing data, appeared to be lacking in many cases.

5.4 Joint monitoring and assessment

What does the Convention say?

In accordance with article 11 (1) of the Water Convention, riparian Parties must establish and implement joint programmes for monitoring the conditions of transboundary waters. This requirement is supplemented by the task placed on joint bodies to elaborate joint monitoring programmes concerning water quality and quantity (art. 9 (2) (b)).

Additionally, pursuant to article 11 (3) of the Convention, riparian Parties must, 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.

What have countries reported?

Countries were asked to report on whether riparian States carry out joint monitoring in the transboundary basin, sub-basin or part of a basin or group of basins in question (sect. II, question 7 (a)). In 62% of all responses to this question (600 out of 972 responses), it was stated that joint monitoring and assessments are carried out.

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109 For the purposes of this report, subregions include the following Parties:
- **Caucasus and Central Asia** – Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan;
- **Eastern Europe** – Belarus, Bulgaria, Czechia, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine;
- **Northern Europe** – Denmark, Estonia, Finland, Latvia, Lithuania, Norway and Sweden;
- **Southern Europe** – Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro, North Macedonia, Portugal, Serbia, Slovenia and Spain;
- **Western Europe** – Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Netherlands and Switzerland;
- **Sub-Saharan Africa** – Chad and Senegal.

110 See also article 4, which provides that Parties must establish programmes for monitoring the conditions of transboundary waters.
monitoring does take place. However, it should be noted that some Parties did not include information on basins not covered by agreements or arrangements in force when responding to questions in section II of the reporting template.

Countries that confirmed the existence of joint monitoring were then asked whether the joint monitoring covered border surface waters, surface waters in the entire basin, surface waters on the main watercourse, surface waters in part of the basin, transboundary aquifers (connected or unconnected), or aquifers in the territory of one riparian hydraulically connected to a transboundary river or lake. Countries were also asked which parameters were monitored (hydrological, ecological or chemical). Figure 27 provides an overview of the responses to this question.

Figure 27: Joint monitoring coverage (art. 11) – based on all (non-consolidated) responses to section II, question 7 (a)

In addition to determining the extent of joint monitoring, countries were asked to report on how joint monitoring was carried out (sect. II, question 7 (b)). Figure 28 provides an overview of the responses to this question.

Figure 28: If joint monitoring is carried out, how is this done? (art. 11 (1)) – based on all (non-consolidated) responses to section II, question 7 (b)
Finally, countries were asked to report on the main achievements and any difficulties they experienced in relation to joint monitoring (sect. II, questions 7 (c) and (d)). Among the main achievements of joint monitoring, the reporting Parties noted gains with regard to the development of long-term trend analysis at the basin or sub-basin level; a shared understanding of trends, pressures and conditions of transboundary waters; early detection of potentially harmful pollutants; the availability of real-time online data; the harmonization of monitoring methods; the creation of a common view on the status of transboundary waters as a basis for joint planning; and the accessibility of information and data series on water status in the context of climate change. Parties also mentioned that joint monitoring allowed for the optimization of monitoring activities and was more objective or neutral. Difficulties identified by the reporting Parties included harmonizing parameters and methodologies; ensuring the comparability of data; the provision of real-time data; a lack of resources; and organizational and coordination difficulties at the national level.

In the reporting template (sect. II, question 8), riparian States were asked whether they carried out joint assessments of the transboundary basin, river, lake or aquifer in question. Out of a total of 974 responses, 824 (or 85%) indicated that joint assessments do take place.

**What can we learn from the responses?**

The responses on joint monitoring and assessment indicate that there has been a concerted effort to implement article 11 of the Water Convention. However, a consolidated analysis of replies about the existence of joint monitoring of transboundary surface waters at the basin level reveals that in a significant number of river and lake basins joint monitoring is not taking place: in fact, at least half of river and lake basins (51%) do not have joint monitoring (figure 29).

*Figure 29: Percentage of river and lake basins where joint monitoring is carried out (art. 11 (1)) – based on consolidated basin level responses to section II, question 7*
According to information provided, joint monitoring does not take place in the Astara Chay,\textsuperscript{111} Banowka,\textsuperscript{112} Gambia,\textsuperscript{113} Geba/Kayanga,\textsuperscript{114} Hari/Harirud,\textsuperscript{115} Jacobs/Grense Jakobselv/Voriema,\textsuperscript{116} Murgab,\textsuperscript{117} Maroni/Marowijne,\textsuperscript{118} Maritsa/Evros/Meric,\textsuperscript{119} Nestos/Mesta,\textsuperscript{120} Oiapoque/Oyapock/Oyapock,\textsuperscript{121} Pregol,\textsuperscript{122} Prohladnaja/Swieza,\textsuperscript{123} Psou,\textsuperscript{124} Shu/Chu,\textsuperscript{125} Talas,\textsuperscript{126} Vardar/Axios,\textsuperscript{127} Vijose/Aoos/Vjosa,\textsuperscript{128} and Wiedau/Vidaa\textsuperscript{129} River basins, Jandari Lake basin,\textsuperscript{130} Lake Prespa basin,\textsuperscript{131} a group of 5 basins shared by Spain and Portugal,\textsuperscript{132} a group of 9 basins shared by the Islamic Republic of Iran and Turkmenistan,\textsuperscript{133} a group of 4 basins shared by Finland and the Russian Federation,\textsuperscript{134} a group of 3 basins shared by Finland and Norway,\textsuperscript{135} and a group of 34 basins shared by Norway and Sweden.\textsuperscript{136} Some of these basins are shared with non-Parties to the Convention.

\textsuperscript{111} Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
\textsuperscript{112} Shared by Poland and the Russian Federation.
\textsuperscript{113} Shared by the Gambia (non-Party), Guinea (non-Party), Guinea-Bissau and Senegal.
\textsuperscript{114} Shared by the Gambia (non-Party), Guinea (non-Party), Guinea-Bissau and Senegal.
\textsuperscript{115} Shared by Afghanistan (non-Party), the Islamic Republic of Iran (non-Party) and Turkmenistan.
\textsuperscript{116} Shared by Norway and the Russian Federation.
\textsuperscript{117} Shared by Afghanistan (non-Party) and Turkmenistan.
\textsuperscript{118} Shared by France and Suriname (non-Party).
\textsuperscript{119} Shared by Bulgaria, Greece and Turkey (non-Party).
\textsuperscript{120} Shared by Bulgaria and Greece.
\textsuperscript{121} Shared by Brazil (non-Party) and France.
\textsuperscript{122} Shared by Poland and the Russian Federation.
\textsuperscript{123} Shared by Poland and the Russian Federation.
\textsuperscript{124} Shared by Georgia (non-Party) and the Russian Federation.
\textsuperscript{125} Shared by Kazakhstan and Kyrgyzstan (non-Party).
\textsuperscript{126} Shared by Kazakhstan and Kyrgyzstan (non-Party).
\textsuperscript{127} Shared by Greece, North Macedonia and Serbia.
\textsuperscript{128} Shared by Albania and Greece.
\textsuperscript{129} Shared by Denmark and Germany.
\textsuperscript{130} Shared by Azerbaijan and Georgia (non-Party).
\textsuperscript{131} Shared by Albania, Greece and North Macedonia.
\textsuperscript{132} The Douro/Duero, Guadiana, Lima/Limia, Minho/Mino and Tagus/Tejo/Tajo River basins.
\textsuperscript{133} The Archabib, Archiyon/Archangan, Atrek/Atrak, Chaacha, Kazgan Chai/Zenginanlou, Kelte-Chinar, Lainsu, Meana/Kara-Tikan and Nafe (Kelat Chai) basins.
\textsuperscript{134} The Kem, Kiteenjoki, Vilajoki/Velikaya and Vienan Kemi basins.
\textsuperscript{135} The Alta, Reisa and Skibotn River basins.
\textsuperscript{136} The Angerman, Berbyelva/Enningdalselva/Enningdalsalven, Bjerka, Byalven, Dalalven, Fagerbakkvassdraget, Glama/GlommaVassdraget, Haldenvassdraget, Hellemovassdraget, Indalsalven, Klaralven/Trysilv, Laksaga, Ljusnan, Lulealven, MalselvVassdraget, Nidelva/Nidelvassdraget, Norselven, Pitealven, Ranavassdraget, Rossaga, Salangselva, Saltalsvassdraget, Signaldalelva, Skelleftealven,
It should be noted that for the Alta, Reisa and Skibotn Rivers, shared by Finland and Norway, the share of basin area in Finland is very small and due to the absence of human pressures in these areas the riparian countries consider it not necessary to conduct joint monitoring. For the Kem River basin, shared by Finland and the Russian Federation, the share of basin area in the Russian Federation is very small and due to the absence of human pressures in these areas the riparian countries consider it not necessary to conduct joint monitoring. Similarly, for the Kiteenjoki, Vilajoki/Veliikaya and Vienan Kemi River basins, also shared by Finland and the Russian Federation, the share of basin area in Finland is very small and due to the absence of human pressures in these areas the riparian countries consider it not necessary to conduct joint monitoring.

In a further 18 river and lake basins and 3 river and lake sub-basins it was not possible to ascertain whether or not joint monitoring took place due to differing responses by reporting countries.

On the positive side, in some cases where no joint monitoring took place, Parties reported that joint assessment was in place. This may in fact mean that, as the riparian countries have already built a high degree of cooperation and trust, they no longer consider it necessary to perform joint monitoring, but do engage in joint assessment of the state of their shared basin.

The responses on the modalities of joint monitoring indicate that border surface waters are the subject of joint monitoring more often than surface waters in the entire basin, and that hydrological and chemical monitoring of transboundary waters is generally more widespread than ecological monitoring (figure 27).

Joint monitoring of the hydrological and chemical parameters for transboundary aquifers appears quite widespread (figure 27). However, this data needs to be treated with caution since it is drawn from responses to section II of the template, where some Parties have not included information on the aquifers not covered by agreements or arrangements in force.

Joint assessment is reported by Parties to take place in 59% of river and lake basins. In at least 25% of river and lake basins, joint assessment does not take place; in a further 16% of river and lake basins different responses to the same question by reporting Parties meant that it was not possible to ascertain whether joint assessment is in place (figure 30).

The Aral Sea basin (shared by Afghanistan (non-Party), Kazakhstan, Kyrgyzstan (non-Party), Tajikistan (non-Party), Turkmenistan and Uzbekistan); the Azov Sea River basins (Mius, Krinka and Sukhoi Elanchyk) (shared by Ukraine and the Russian Federation); the Drin (shared by Albania, Greece, Montenegro, North Macedonia and Kosovo (United Nations administered territory under Security Council resolution 1244 (1999))); the Gauja/Koiva (shared by Estonia and Latvia); the Juustlanjoki/Soskuanjoki (shared by Finland and the Russian Federation); the Kemi/Kemijoki (shared by Finland, Norway and the Russian Federation); the Kura - Araks (shared by Armenia (non-Party), Azerbaijan, Georgia (non-Party), the Islamic Republic of Iran (non-Party) and Turkey (non-Party)); the Neman/Nemunas (shared by Belarus, Latvia, Lithuania, Poland and the Russian Federation); the Ural/Zhayik (shared by Kazakhstan and the Russian Federation); the Struma/Strymonas (shared by Bulgaria, Greece, North Macedonia and Serbia); and eight river basins shared by Finland and the Russian Federation (the Kilpeenjoki/Rokkajoki, the Olanga/Oulanka, the Oulu/Oulujoki, the Peschanaya/Kaltonjoki/Santajoki, the Tervajoki/Polevaya, the Tuloma/Tuulomajoki, the Vaalimaanjoki/Koskelanjoki and the Vilajoki/Veliikaya).

The rivers shared by Bosnia and Herzegovina and Montenegro belonging to the Adriatic Sea basin; the Seversky Donets River sub-basin (shared by the Russian Federation and Ukraine); and the Soca River sub-basin (shared by Italy and Slovenia).
It should also be noted that joint monitoring and assessment is supplemented by monitoring and assessment efforts at the level of the Convention. Two major assessments — in 2007 and 2011 — have provided a comprehensive overview of the status of transboundary waters in the European and Asian regions covered by UNECE.\textsuperscript{139} A set of guidelines on monitoring and assessment has been prepared by the Working Group on Monitoring and Assessment under the Convention.\textsuperscript{140} Furthermore, activities under a dedicated programme area of the programme of work\textsuperscript{141} assist Parties, non-Parties and other stakeholders to initiate or further develop joint or coordinated monitoring and assessment of transboundary waters, covering both water quantity and quality aspects, and ensure exchange of information between riparian countries.

**Box 15: Insights from practice: joint monitoring in the bilateral German-Polish boundary water commission**

The long-term bilateral cooperation of Germany and Poland yields long time series of chemical and biological parameters that enable joint trend analyses and joint conclusions on trends.

Cooperation between the Parties has had a positive impact on water quality, for example the elimination of pollution in the Oder river basin district caused by 2,4-Dichlorophenoxyacetic acid (2,4-D), which is used as an herbicide. Following the identification of the sources of pollution, remedial programmes were implemented. Reduction of pollution was supported through the joint work and research with involvement of Polish and German laboratories.

More details are available at www.wasserblick.net/servlet/is/110115/.

**Box 16: Insights from practice: monitoring of transboundary water bodies in the Narva River basin, including Lake Peipsi/Chudskoe**

Every three years, the joint Estonian-Russian commission, established under the 1997 Agreement between the Government of the Republic of Estonia and the Government of the Russian Federation on

\textsuperscript{139} *Our Waters: Joining Hands Across Borders – First Assessment of Transboundary Rivers, Lakes and Groundwaters and Second Assessment of Transboundary Rivers, Lakes and Groundwaters* (ECE/MP.WAT/33).


\textsuperscript{141} Available at www.unece.org/environment-policy/water/areas-work-convention/programme-work.
Cooperation for the Protection and Sustainable Use of Transboundary Waters, adopts a joint monitoring programme.

The joint monitoring programme for the period 2019–2022 includes four sections, devoted to monitoring of the rivers in the basin, monitoring in the Narva reservoir, monitoring of the waters of Lake Peipsi/Chudskoe and macrophyte monitoring on Lake Peipsi/Chudskoe. Methodologies and parameters are jointly agreed and included in the joint monitoring programme.

In the past, Estonia and the Russian Federation used to do joint sampling across the entire water body. However, with time, the riparian Parties concluded that joint sampling was no longer needed. In recent years, the practice has been for the Parties to take samples at the same time in their parts of the basin and later exchange the data.

Source: website of the Ministry of Environment of Estonia.

5.5 Joint water quality standards

What does the Convention say?

Pursuant to article 3 (3) of the Water Convention, each Party must define, where appropriate, water-quality objectives and adopt water-quality criteria for the purpose of preventing, controlling and reducing transboundary impact. Article 9 (2) (e) goes further by asking joint bodies to elaborate joint water-quality objectives and criteria and, where necessary, to propose relevant measures for maintaining and, where necessary, improving the existing water quality.

What have countries reported?

In the reporting template (sect. II, question 9), riparian Parties were asked whether they agreed to use joint water quality standards. Out of a total of 1,014 responses to this question, 792 responses (or 78%) indicated that joint water quality standards had been agreed. Nevertheless, these results are based on replies in section II, where some Parties have not included information on the basins not covered by agreements or arrangements in force.

If joint water quality standards had been adopted, countries were then asked to state the level of standards used (i.e., international, regional or national standards). Responses to this question suggest that standards were mainly international and, in the vast majority of cases, derived from European Union legislation.

What can we learn from the responses?

Despite the obligation placed on Parties in article 3 (3) of the Convention to develop water quality objectives and criteria, the responses to question 9 suggest that they have not been developed in all basins. This finding aligns with the observations that only 72% of responses indicated that the elaboration of joint water quality standards was a task of the relevant joint body and that only 51% of responses indicated that it was a topic of cooperation covered by the relevant agreement or arrangement.

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142 See also annex III to the Convention, which provides guidance for establishing water quality objectives and criteria.
Joint standards were reported not to be in place within at least 64 river and lake basins reported. However, in the case of the Aral Sea Basin, joint standards were reported to apply at the sub-basin level (the Syr Darya). In addition, it was not possible to ascertain whether or not joint standards were in place for 22 river and lake basins due to different responses from riparian Parties to the same question, or because no response was provided for the question on joint water quality standards.

In 15 river and lake basins, the elaboration of joint water quality standards is provided for within the relevant agreements or arrangements and the tasks of joint bodies, but was reported to not be implemented at the basin level.

5.6 Prevention of accidental pollution, the impact of extreme events and climate change

*What does the Convention say?*

In accordance with the Water Convention, riparian Parties are obliged to take all appropriate measures so that the risk of accidental pollution is minimized (art. 3 (1) (l)). More specifically, riparian Parties must inform each other without delay about any critical situation that may have transboundary impact and set up, where appropriate, and operate coordinated or joint communication, warning and alarm systems (art. 14).

In addition to establishing warning and alarm systems, a further requirement of the Water Convention states that in a critical situation riparian Parties must provide mutual assistance upon request (art. 15). In this regard, procedures for mutual assistance should be developed and agreed upon in advance.

*What have countries reported?*

In the reporting template (sect. II, question 10), countries were asked whether measures had been implemented to prevent or limit the transboundary impact of accidental pollution and, if so, what were the measures in place. Figure 31 provides an overview of the responses, and highlights notification and communication as the most common response. Early warning or alarm systems for accidental water pollution appear to be much less widespread, despite their importance for preventing accidental pollution – and also despite the fact that 36 countries and the European Union are both Parties to the Water Convention and to the Convention on the Transboundary Effects of Industrial Accidents. Other measures mentioned by some Parties include joint field exercises, the preparation of response plans, and measures to implement the relevant European Union directives related to the control of major-accident hazards involving dangerous substances.

*Figure 31: Measures implemented to prevent or limit the transboundary impact of accidental pollution (art. 14) – based on all (non-consolidated) responses for section II, question 10*

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143 Shared by Afghanistan (non-Party), Kazakhstan, Kyrgyzstan (non-Party), Tajikistan (non-Party), Turkmenistan and Uzbekistan.

144 Shared by Kazakhstan, Kyrgyzstan (non-Party), Tajikistan (non-Party) and Uzbekistan.

145 See also the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters of 21 May 2003, which has been signed by 24 countries.
In section II, question 11, of the template countries were asked to report on the measures implemented to prevent or limit the transboundary impact of extreme weather events and climate change. Figure 32 provides a summary of their responses.

**Figure 32: Measures implemented to prevent or limit the transboundary impact of extreme weather events and climate change (art. 14) – based on all (non-consolidated) responses for section II, question 11**

The responses suggest that notification and communication measures and coordinated or joint alarm systems for floods are the most common measures adopted by Parties to prevent or limit the impact of extreme weather events.

Joint climate change adaptation strategies and joint disaster risk reduction strategies are clearly very rare. This outcome is also corroborated by the finding that only 44% of agreements mention climate change adaptation as a topic (sect. II, question 2 (d)) (figure 10), and only 43% of joint bodies have climate change adaptation among their tasks (sect. II, question 3 (g)) (figure 19).

Some Parties also mentioned other measures to prevent or limit the impact of extreme weather events, such as coordinated operation of hydrotechnical facilities.

Finally, in section II, question 12, of the template countries were asked to report on whether procedures were in place for mutual assistance in critical situations. Out of a total of 1,009 responses to this question, in only 507 cases (or 50%) did Parties affirm that such procedures were in place. This is supported by replies to section II, question 2 (d), which indicate that mutual assistance is mentioned as a subject in less than a third of the agreements (figure 13).
In their description of procedures for mutual assistance, where these are available, many Parties indicate that procedures on mutual assistance are rarely included in transboundary water agreements. They are frequently regulated through dedicated bilateral agreements related to cooperation on disasters and emergencies and are implemented by ministries of interior, fire and rescue authorities and local authorities.

What can we learn from the responses?

The analysis of responses to question 10 at the basin level reveals that there are at least 11 river and lake basins where no measures are implemented to prevent or limit the transboundary impact of accidental pollution (figure 33). These include Jandari Lake basin and the Astara Chay, Banowka, Maroni/Marowijne, Oiapoque/Oyupock/Oyapock, Pregel, Prohladnaja/Swieza and Wiedau/Vidaa River basins and a group of three basins shared by Finland and Norway. It should be noted that four of these basins (Jandari Lake basin and the Astara Chay, Maroni/Marowijne and Oiapoque/Oyupock/Oyapock River basins) are shared with non-Parties to the Convention. For the three river basins shared by Finland and Norway, the share of basin area in Finland is very small and, due also to the absence of human pressures in these areas, the riparian countries do not consider it necessary to implement measures to prevent transboundary impact of accidental pollution.

Figure 33: Percentage of river and lake basins where measures are implemented to prevent or limit the transboundary impact of accidental pollution (art. 14) – based on consolidated basin level responses to section II, question 10


147 Shared by Azerbaijan and Georgia (non-Party).
148 Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
149 Shared by Poland and the Russian Federation.
150 Shared by France and Suriname (non-Party).
151 Shared by Brazil (non-Party) and France.
152 Shared by Poland and the Russian Federation.
153 Shared by Poland and the Russian Federation.
154 Shared by Denmark and Germany.
155 The Alta, Reisa and Skibotn River basins.
When analysed by subregion, Parties’ responses regarding the existence of a coordinated early warning or alarm system for accidental water pollution show that such systems are much less common in the Caucasus and Central Asia, Northern Europe and sub-Saharan Africa subregions, better represented in the Southern Europe subregion and relatively widespread in the Eastern and Western Europe subregions.

In relation to extreme weather events, figure 34 provides an overview of the basins where measures are implemented to prevent or limit the transboundary impact of extreme weather events and climate change. It appears that at least 11 basins lack such measures. These include the Astara Chay, Banowka, Prohladnaja/Swieza, Maroni/Marowijne, Oiapoque/Oyupock/Oyapock, Gambia and Geba/Kayanga River basins and a group of three basins shared by Finland and Norway. It should be noted that five of these basins (the Astara Chay, Maroni/Marowijne, Oiapoque/Oyupock/Oyapock, Gambia and Geba/Kayanga) are shared with non-Parties to the Convention. In the case of the three basins shared by Finland and Norway, the share of basin area in Finland is very small.

When analysed by subregion, Parties’ responses on the existence of a coordinated or joint system for floods show that such systems are much less common in the Caucasus and Central Asia and Western Europe subregions than in other subregions.

The lack of legal and institutional frameworks for addressing climate change adaptation appears to be especially problematic due to the increasing impacts of climate change on water resources across Parties, and the fact that transboundary basins are often the most vulnerable.

Figure 34: Percentage of river and lake basins where measures are implemented to prevent or limit the transboundary impact of extreme weather events and climate change (art. 14) – based on consolidated basin level responses for section II, question 11

<table>
<thead>
<tr>
<th>Measure</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notification and communication</td>
<td>69%</td>
<td>16%</td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinated or joint alarm system for floods</td>
<td>54%</td>
<td>30%</td>
<td>16%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinated or joint alarm system for droughts</td>
<td>17%</td>
<td>68%</td>
<td>16%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A joint climate change adaptation strategy</td>
<td>8%</td>
<td>84%</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A joint disaster risk reduction strategy</td>
<td>5%</td>
<td>83%</td>
<td>12%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No measures</td>
<td>8%</td>
<td>87%</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

156 For the division of Parties into subregions see footnote 109 above.
157 Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
158 Shared by Poland and the Russian Federation.
159 Shared by Poland and the Russian Federation.
160 Shared by Poland and the Russian Federation.
161 Shared by France and Suriname (non-Party).
162 Shared by Brazil (non-Party) and France.
163 Shared by the Gambia (non-Party), Guinea (non-Party), Guinea-Bissau and Senegal.
164 Shared by the Gambia (non-Party), Guinea (non-Party), Guinea-Bissau and Senegal.
165 The Alta, Reisa and Skibotn River basins.
166 For the division of Parties into subregions see footnote 109 above.
With regard to mutual assistance in critical situations, Parties report that procedures for mutual assistance are not in place in at least 93 river and lake basins. These include: Jandari Lake basin;\(^{167}\) the Amur,\(^{168}\) Astara Chay,\(^{169}\) Gambia,\(^{170}\) Geba/Kayanga,\(^{171}\) Hari/Harirud,\(^{172}\) Jacobs/Grense Jakobselv/Voriema,\(^{173}\) Levante,\(^{174}\) Murgab,\(^{175}\) Niger,\(^{176}\) Psou,\(^{177}\) Schelde/Scheldt/Escaut,\(^{178}\) Selenge,\(^{179}\) Shu/Chu,\(^{180}\) Talas,\(^{181}\) Ticino,\(^{182}\) Torne/Tornionjoki/Tornealven\(^{183}\) and Vijose/Aoos/Vjosa\(^{184}\) River basins; river basins shared by Bosnia and Herzegovina and Montenegro and belonging to the Adriatic Sea basin; a group of 5 river basins shared by Portugal and Spain;\(^{185}\) a group of 6 river basins shared by Finland and Norway;\(^{186}\) a group of 34 river basins shared by Norway and Sweden;\(^{187}\) a group of 18 river basins shared by Finland, Norway and the Russian Federation;\(^{188}\) a group of 9 river basins shared by Turkmenistan and the Islamic Republic of Iran.\(^{189}\) In an additional 23 river and lake basins it was not possible to conclude whether procedures for mutual assistance existed because of different responses from the riparian Parties to the same question. These findings highlight an area of concern, as the capacity for timely response and effective prevention of transboundary impact in the event of critical situations may be insufficient in many countries.

This analysis suggests that there is a need to strengthen the implementation of the Water Convention in the areas of joint adaptation to climate change, joint disaster risk reduction, accidental water pollution and mutual assistance in case of critical situations.

\(^{167}\) Shared by Azerbaijan and Georgia (non-Party).
\(^{168}\) Shared by China (non-Party), Mongolia (non-Party) and the Russian Federation.
\(^{169}\) Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
\(^{170}\) Shared by the Gambia (non-Party), Guinea (non-Party), Guinea-Bissau and Senegal.
\(^{171}\) Shared by the Gambia (non-Party), Guinea (non-Party), Guinea-Bissau and Senegal.
\(^{172}\) Shared by Afghanistan (non-Party), the Islamic Republic of Iran (non-Party) and Turkmenistan.
\(^{173}\) Shared by Norway and the Russian Federation.
\(^{174}\) Shared by Italy and Slovenia.
\(^{175}\) Shared by Afghanistan (non-Party) and Turkmenistan.
\(^{176}\) Shared by Algeria (non-Party), Benin (non-Party), Burkina Faso (non-Party), Cameroon (non-Party), Chad, Côte d’Ivoire (non-Party), Guinea (non-Party), Mali (non-Party), Niger (non-Party), Nigeria (non-Party) and Sierra Leone (non-Party).
\(^{177}\) Shared by Germany (non-Party) and the Russian Federation.
\(^{178}\) Shared by Belgium, France and the Netherlands.
\(^{179}\) Shared by Mongolia (non-Party) and the Russian Federation.
\(^{180}\) Shared by Kazakhstan and Kyrgyzstan (non-Party).
\(^{181}\) Shared by Kazakhstan and Kyrgyzstan (non-Party).
\(^{182}\) Shared by Italy and Switzerland.
\(^{183}\) Shared by Finland, Norway and Sweden.
\(^{184}\) Shared by Albania and Greece.
\(^{185}\) The Douro/Duero, Guadiana, Lima/Limia, Minho/Mino and Tagus/Tejo/Tajo River basins.
\(^{186}\) The Alta, Munkelva/Uutanjoki, Naatamo/Neiden, Reisa, Skibotn and Tana/Teno River basins. For the Alta, Reisa and Skibotn Rivers, the Finnish share of the basins is very small and it is reported that there are no human pressures on these water resources.
\(^{189}\) The Kemi/Kemijoki and Pasvik/Patssjoki/Paz River basins.
\(^{190}\) The Archabul, Archiyank/Aarchgian, Atrek/Atrak, Chaacha, Kazgan Chai/Zenginanlou, Kelte-Chinar, Lainsu, Meana/Kara-Tikan and Nafta (Kelat Chai) River basins.
5.7 Stakeholder participation in transboundary water management

What does the Convention say?

Stakeholder participation is not directly provided for in the Water Convention, although there is a requirement for riparian Parties to ensure that information on the conditions of transboundary waters and 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). Additionally, 38 States Parties to the Water Convention and the European Union are also Parties to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, which provides more detailed procedural obligations in relation to stakeholder participation.

What have countries reported?

Countries were asked to report on whether the public or relevant stakeholders were involved in transboundary water management (sect. II, question 13). Out of a total of 1,011 responses to this question, in 901 (or 89%) Parties indicated that public or relevant stakeholders were involved in transboundary water management. These figures, however, refer to responses in section II of the template, where some Parties have not included information on the basins not covered by agreements or arrangements in force.

Where countries responded that the public or relevant stakeholders were involved in transboundary water management, they were also asked about the form this participation had taken. Figure 35 provides an overview of the responses to this question.

Figure 35: Type of participation taking place (art. 16) – based on all (non-consolidated) responses to section II, question 13

<table>
<thead>
<tr>
<th>Type of Participation</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholders have observer status in a joint body</td>
<td>49%</td>
<td>51%</td>
<td></td>
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</tr>
<tr>
<td>Stakeholders have an advisory role in a joint body</td>
<td>27%</td>
<td>73%</td>
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</tr>
<tr>
<td>Stakeholders have a decision-making role in a joint body</td>
<td>1%</td>
<td>96%</td>
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<tr>
<td>Availability of information to the public</td>
<td></td>
<td></td>
<td>90%</td>
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<td></td>
<td></td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>Consultation on planned measures</td>
<td></td>
<td></td>
<td>83%</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>17%</td>
</tr>
<tr>
<td>Public involvement</td>
<td></td>
<td></td>
<td>72%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28%</td>
</tr>
</tbody>
</table>

Where stakeholders had any role on a joint body, such as observer status or an advisory or a decision-making role, Parties were additionally asked to specify the type of stakeholders. Figure 36 provides an overview of replies.

Figure 36: Type of stakeholders having a role in a joint body (art. 16) – based on all (non-consolidated) responses to section II, question 13

<table>
<thead>
<tr>
<th>Type of Stakeholders</th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public stakeholders</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Relevant stakeholders</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Other stakeholders</td>
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</tbody>
</table>

62
Additionally, Parties were asked whether any existing shared database or information platform was made publicly available (sect. II, question 6 (f)). Out of a total of 373 responses stating that a shared database was in place, 312 responses (84%) confirmed that the database was publicly available.

Despite an encouragement in the Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2\textsuperscript{191} to provide additional information on how gender mainstreaming is taken into account when considering participation of the public and relevant stakeholders in decision-making as part of “other” aspects in section II, question 13, only one Party (Senegal) provided a relevant example in its report (see box 17).

What can we learn from the responses?

The responses of Parties suggest that the availability of information to the public, participation of the public in consultations on planned measures and public involvement are widespread practices (figure 35). The involvement of the public and other stakeholders in the activities of joint bodies for transboundary water cooperation through an observer status or an advisory role is less frequent.

The general public is less likely to be involved in activities of the joint body or mechanism than organized entities, such as non-governmental organizations, water user associations, academic or research institutions and private sector or intergovernmental organizations. There is also a need for stronger engagement of local stakeholders in activities of joint bodies for transboundary water cooperation, as such participation enhances the quality and acceptance of decisions and contributes to the transparency of decision-making processes.

These findings are corroborated by the responses to section II, question 3 (g), in which joint communication strategies and basin-wide or joint public participation and consultation is reported to be among the tasks of joint bodies in only 28% and 38% of responses, respectively (figure 19).

At the basin level, the findings on stakeholder participation are less positive. Public or stakeholder involvement in transboundary water management was reported to be absent in at least 21 river and

\textsuperscript{191} p. 47.
lake basins: the Jandari Lake basin;\textsuperscript{192} the Astara Chay,\textsuperscript{193} Emil/Emin He,\textsuperscript{194} Hari/Harirud,\textsuperscript{195} Ili/Kunes He,\textsuperscript{196} Kem,\textsuperscript{197} Koutajoki/Kovda,\textsuperscript{198} Maroni/Marowijne,\textsuperscript{199} Murgab,\textsuperscript{200} Oiapoque/Oyupock/Oyapock,\textsuperscript{201} Psou\textsuperscript{202} and Selenge\textsuperscript{203} River basins; and a group of 9 basins shared by the Islamic Republic of Iran and Turkmenistan.\textsuperscript{204} However, of these 21 river and lake basins, 19 are shared with non-Parties to the Water Convention. In 35 additional river and lake basins it was not possible to ascertain whether or not public or stakeholder involvement took place because of different responses from the riparian Parties to the same question.

Figure 37 gives an overview of the type of participation at the basin level. It shows that stakeholders participate in activities of joint bodies for transboundary water cooperation as observers or in advisory or decision-making roles in only a limited number of basins.

Figure 37: Percentage of river and lake basins by type of participation taking place (art. 16) – based on consolidated basin level responses for section II, question 13

When analysed by subregion,\textsuperscript{205} the findings on stakeholder participation raise concerns for Parties in the Caucasus and Central Asia, where in many cases Parties indicated the absence of any form of public participation and stakeholder involvement in transboundary water cooperation. At the same time, they appear most positive for Parties in sub-Saharan Africa, where the most advanced forms of participation (i.e., advisory and decision-making roles for stakeholders on a joint body) were reported to be in place.

Box 17: Insights from practice: participation of stakeholders in the work of the Organization for the Development of the Gambia River

\textsuperscript{192} Shared by Azerbaijan and Georgia (non-Party).
\textsuperscript{193} Shared by Azerbaijan and the Islamic Republic of Iran (non-Party).
\textsuperscript{194} Shared by China (non-Party) and Kazakhstan.
\textsuperscript{195} Shared by Afghanistan (non-Party), the Islamic Republic of Iran (non-Party) and Turkmenistan.
\textsuperscript{196} Shared by China (non-Party) and Kazakhstan.
\textsuperscript{197} Shared by Finland and the Russian Federation.
\textsuperscript{198} Shared by Finland and the Russian Federation.
\textsuperscript{199} Shared by France and Suriname (non-Party).
\textsuperscript{200} Shared by Afghanistan (non-Party) and Turkmenistan.
\textsuperscript{201} Shared by Brazil (non-Party) and France.
\textsuperscript{202} Shared by Georgia (non-Party) and the Russian Federation.
\textsuperscript{203} Shared by Mongolia (non-Party) and the Russian Federation.
\textsuperscript{204} The Archabil, Archinyan/Archangan, Atrek/Atrak, Chaacha, Kazgan Chai/Zenginanlou, Kelte-Chinar, Lainsu, Meana/Kara-Tikan and Nafte (Kelat Chai) River basins.
\textsuperscript{205} For the division of Parties into subregions see footnote 109 above.
The participative and concerted management of basin resources by the riparian States — the Gambia, Guinea, Guinea-Bissau and Senegal — is recognized among the main strengths of the Organization for the Development of the Gambia River. The national and local coordination and monitoring committees are comprised of all stakeholders involved in the basins, and ensure that their voices are taken into account in the development and implementation of measures for subregional integration, economic development, protection of the environment and improvement of the well-being of local populations in the subregion. These committees include, among others, national and local authorities, civil society, rural communities, youth and women’s associations.

**Box 18: Insights from practice: inclusion of indigenous people in Finnish-Norwegian cooperation**

Finnish-Norwegian transboundary water cooperation benefits from the participation of the Sami people. Including indigenous Sami people in the work of the Finnish-Norwegian transboundary water commission as members of the commission enables the commission to take the interests of the local population into account in the implementation of transboundary water agreements. In addition, it secures the ownership of the proposals of the commission among the local population.

**CHAPTER 6 SELECTED BASIN ANALYSIS**

**Key messages**
- There is a lot of positive experience in and a diversity of approaches to transboundary water cooperation among Parties.
- The Drin River basin sets an example for dynamic multi-level cooperation (at the basin and sub-basin level) that has significantly progressed in recent years. Solidification of this cooperation and making it less dependent on donor-funded projects is a task for the years to come.
- In the Bug River sub-basin, there are examples of intensive cooperation at the bilateral level due to the active engagement of water management authorities. Expanding cooperation to the sub-basin level is a potential task for the future.
- Cooperation in the Danube River basin between as many as 14 countries with different backgrounds and levels of economic development delivers outstanding results, especially in basin management planning, joint monitoring and assessment, and emergency preparedness. Addressing irregular cooperation or lack of cooperation at the bilateral level between some countries in the basin remains an area for improvement.
- Cooperation in the Ural/Zhayik River basin provides an example of targeted efforts to conserve and restore a river ecosystem. Important tasks for the future include deepening cooperation on joint monitoring and exchange of information, prevention of the transboundary impacts of accidental pollution and extreme weather events, and strengthening public involvement.
- Cooperation between Latvia and Lithuania on transboundary groundwater is a good example of concluding a specific inter-agency agreement to enhance the monitoring and management of transboundary groundwater. Involving Belarus in the cooperation on the transboundary aquifers in the Daugava River basin could be a potential task for the future.

**6.1 Drin River basin**

The interconnected hydrological system of the Drin River basin comprises the transboundary sub-basins of the Black Drin, the White Drin and the Buna/Bojana (outflow of Skadar/Shkoder Lake in the Adriatic Sea) Rivers, and the sub-basins of Prespa, Ohrid and Skadar/Shkoder Lakes.\(^\text{206}\) Four Parties

\(^{206}\) Second Assessment of Transboundary Rivers, Lakes and Groundwaters, p. 270.
to the Water Convention – Albania, Greece, Montenegro and North Macedonia – and Kosovo²⁰⁷ share the Drin Basin.

How does basin-wide cooperation function?

All four Parties reported that the 2011 Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin – also known as the Drin strategic shared vision – covers the entire Drin River basin, including aquifers, and its sectoral scope covers all sectors.

The main achievements in implementing the Memorandum of Understanding include enhanced regional cooperation, better knowledge of the situation in the basin, improved planning in the basin and a better understanding of possible sources of financial support for joint activities.²⁰⁸ Three of the four Parties agree that the main difficulties and challenges they face with the agreement and its implementation are a lack of financial resources, insufficient human capacity and insufficient technical capacity.

The joint body – the Drin Core Group – meets on a regular basis more than once per year (normally, at least twice a year), but Parties’ replies differ significantly with regard to the tasks and activities of this joint body. The replies also differ with regard to the main challenges that the Parties face in the operation of the Drin Core Group – with one Party reporting no significant difficulties and others indicating a lack of resources, unexpected extreme events and a lack of information and reliable forecasts, among other challenges.

How does bilateral and sub-basin cooperation work?

At the sub-basin level, cooperation is reported to take place on Prespa Lake, Ohrid Lake and the transboundary waters shared by Albania and Montenegro within the extended Drin River basin.

The 2010 Agreement on the Protection and Sustainable Development of the Prespa Park Area entered into force on 29 May 2019. The agreement brings together Albania, Greece, North Macedonia and the European Union and provides for cooperation to ensure the integrated protection of the ecosystem and the sustainable development of the Prespa Park Area, including the development of integrated river basin management plans. The appointment of representatives of the four parties to the joint bodies established by the agreement – the Prespa Park Management Committee (a successor to the Prespa Park Coordination Committee), the Secretariat of the Committee and the Working Group on Water Management – was completed in February 2021. The first Inaugural kick-off Meeting of the High-Level Segment of the Agreement, organized under the initiative of Greece on 29 June 2021, provided political guidance for the Committee and the Working Group to initiate their practical work.

Cooperation between Albania and North Macedonia on Lake Ohrid is based on the 2004 Agreement for the Protection and Sustainable Development of Lake Ohrid and its Watershed. The Lake Ohrid Watershed Committee was originally set up in 2005. The Committee was subsequently re-established and its first meeting took place in January 2020.

²⁰⁸ Implementation of the Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin received strong support from the Global Environment Facility project “Enabling transboundary cooperation and integrated water resources management in the extended Drin River basin”, implemented by the United Nations Development Programme and executed by the Global Water Partnership-Mediterranean in cooperation with UNECE.
In the reporting period, Albania and Montenegro have concluded a new intergovernmental agreement. The 2018 Framework Agreement between the Government of Montenegro and the Council of Ministers of the Republic of Albania on Mutual Relations in the Field of Management of Transboundary Waters replaced an agreement of 2001, to provide a new impetus to cooperation within a bilateral commission, with an emphasis on exchange of information and consultations, monitoring and assessment and implementation of the Water Framework Directive.

*What are the achievements in the period 2017–2020?*

Overall, cooperation among Drin riparians in the framework of the Drin Core Group has further matured in the period 2017–2020. The main achievement reported by all four Parties is the endorsement in April 2020 of the Drin Basin Strategic Action Programme by the five Drin riparians in a virtual meeting. The Global Water Partnership-Mediterranean led the development of the Strategic Action Programme, in the framework of the United Nations Development Programme/Global Environment Facility Drin project and in cooperation with UNECE. Two other decisions taken by the Drin Core Group in 2019 – to develop a river basin management plan and to develop a draft text of an international agreement to enable coordinated and sustainable management of the Drin Basin – pave the way for the solidification of cooperation in the basin.

Another key achievement is the finalization in 2020 of the Lake Ohrid Watershed management plan, developed in the framework of the United Nations Development Programme/Global Environment Facility Drin project and approved by the responsible authorities of Albania and North Macedonia. The plan was presented to the Lake Ohrid Watershed Committee in late 2020.

Both strategic documents rely on a long-term process of transboundary data gathering and analysis, which has significantly improved the knowledge base for the Drin River basin.

In addition, the reports of countries sharing the Drin River basin demonstrate the improvement of the knowledge base on transboundary groundwater in the basin: all four Parties provided more precise information on groundwater in the second reporting round, although only one Party (Albania) completed section II of its report for its transboundary aquifers.

*What are the areas for improvement?*

There is a regular exchange of information and data between the riparians in the basin; however, it takes place primarily in the framework of different projects and on a bilateral scale (Albania and Montenegro). There is no shared database or information platform for the basin. Three Parties report that comparability of data and information and inadequate resources (technical and financial) represent the main difficulties and challenges facing data exchange. Two Parties additionally cite the frequency of exchanges, the timing of exchanges and limited spatial coverage as among major challenges.

The Parties provide different replies with regard to the existence of joint monitoring in the Drin basin: some reported that joint monitoring at the scale of the Drin basin was not in place, while others reported the existence of joint monitoring in a part of the basin (e.g., on Lake Ohrid by Albania and North Macedonia). In the same way, different replies were received regarding the existence of joint assessment in the Drin basin, since some countries considered the transboundary diagnostic analysis

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209 Software for an information management system has been developed in the framework of the Global Environment Facility Drin project, but the riparians still have to take a decision on the frequency of updates and on the kind of data to upload.
undertaken in preparation of the Strategic Action Programme as a joint assessment exercise, whereas others did not.

While some countries reported that measures to prevent or limit the transboundary impact of accidental pollution and of extreme weather events and climate change, as well as procedures for mutual assistance in case of a critical situation, were in place, they do not appear to be available on the basin scale.

*What can other Parties to the Convention learn from the cooperation on the Drin?*

The development of cooperation on the Drin shows steady progress in a rather complex political setting, which joins non-European Union countries, a European Union member State and Kosovo. This progress has been achieved through the gradual introduction of measures to implement specific activities at the technical or expert level, which in turn has enabled greater trust and created an understanding of the benefits of expanding cooperation. Support from the international community, including from the Global Water Partnership-Mediterranean, which acts as the secretariat for the Drin Core Group, and from the Water Convention secretariat, has been crucial in achieving such progress.

### 6.2 Bug River sub-basin

Three Parties to the Convention share the sub-basin of the Bug River: Belarus (25.4%), Poland (47.3%) and Ukraine (27.3%). The 772-km long Bug River has its source in the Lviv Region in Ukraine. The river forms part of the border between Ukraine and Poland, passes along the Polish-Belarusian border, flows within Poland, and empties into the Narew River, a tributary of the Vistula.

*How does sub-basin-wide cooperation function?*

No Party reports cooperation at the level of the Bug River sub-basin.

*How does bilateral cooperation work?*

Cooperation exists at a bilateral level between Belarus and Ukraine and between Poland and Ukraine.

Cooperation between Belarus and Ukraine continues on the basis of 2001 Agreement between the Government of Belarus and the Cabinet of Ministers of Ukraine on Joint Use and Protection of Transboundary Waters. The agreement applies to boundary waters, including both surface and groundwater, and covers several water-use sectors. Belarus and Ukraine concur that the lack of financial resources represents a difficulty for implementation of the agreement. The plenipotentiaries appointed by both Governments constitute the joint body for this agreement. There are four working groups as subsidiary bodies. Meetings of the plenipotentiaries and the working groups take place regularly.

Regular exchange of information on both surface waters and groundwaters is considered by both countries as a key achievement, with Belarus specifically emphasizing the exchange of data on transboundary groundwater. A technical protocol on cooperation in the field of monitoring and exchange of information has been concluded between central government institutions in charge of water resources, and a programme for monitoring, analysis and assessment of transboundary water

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211 Second Assessment of Transboundary Rivers, Lakes and Groundwaters, p. 393.
status is in place. The exchange of information takes place regularly at meetings of working groups and through correspondence. Both countries indicate that no joint database or information platform is available and that comparability of data and information represents the main difficulty. Countries responded differently on the existence of joint assessment, which may be linked to a different understanding of the question. Both States report that measures implemented to prevent or limit the transboundary impact of accidental pollution include notification and a coordinated or joint early warning or alarm system for accidental water pollution, while notification and a coordinated or joint alarm system for floods are key measures implemented to prevent or limit the transboundary impact of extreme weather events and climate change.

Cooperation between Poland and Ukraine continues on the basis of 1996 Agreement between the Government of the Republic of Poland and the Government of the Ukraine on Cooperation in the Field of Water Management on Boundary Waters. The scope of the agreement is confined to boundary waters, but Ukraine reports that in practice cooperation covers a larger area. Both countries agree that the agreement covers groundwater, but Poland reports the cooperation carried out so far has not concerned the formal designation of transboundary aquifers and transboundary groundwater bodies. Both countries report they have encountered no significant difficulties in the implementation of the agreement, although Ukraine notes a lack of financial resources and technical capacity. The main achievements of the bilateral cooperation include the improvement of water quality and the more rational use of water (reported by Poland) and the exchange of experience on water monitoring and water sector reforms (reported by Ukraine).

The bilateral commission of Poland and Ukraine meets regularly and has recently adopted its statutes. The commission has four working groups but no secretariat as a self-standing body. The commission and its working groups have regular meetings. Both countries indicate a lack of resources among impediments to the work of the commission, reporting a lack of regular financing for implementation of measures and investment projects. There is a regular exchange of data and information both by email and during the meetings of working groups and the commission. Countries provide different responses as to the existence of a shared database or information platform, but they concur that data comparability is the main challenge to data exchange. Joint monitoring is carried out, but the countries provide different responses as to the existence of joint assessment, possibly due to a different understanding of the question. Both countries report the existence of a coordinated or joint early warning or alarm system for accidental water pollution and of a coordinated or joint alarm system for floods at the bilateral level.

Additionally, Poland reports that Polish water management institutions on the regional level take steps to strengthen cooperation with relevant regional water resources authorities of neighbouring countries. An example of such cooperation is the Agreement on the Bug River sub-basin between the regional water management authority in Lublin (Poland) and the water resources authority of the Bug and San River in Lviv (Ukraine), signed in 2019, as a continuation of the Agreement on cooperation in the Bug River basin between the regional water management authority in Warsaw (Poland) and the West-Bug basin water resources management authority in Lutsk (Ukraine), signed in 2006. The scope of cooperation covered by such agreements includes data and information exchange, planning and coordination of joint action programmes.

What are the achievements in the period 2017–2020?

The Agreement between the Government of the Republic of Poland and the Government of the Republic of Belarus on Cooperation in the Field of the Protection and Rational Use of Transboundary Waters was signed in Bialowieza on 7 February 2020 and entered into force on 26 November 2020. Establishment of the joint body – a bilateral commission – is among the next steps.
What are the areas for improvement?

Cooperation in the Bug River sub-basin could benefit from the development of trilateral coordination mechanisms at the sub-basin level; the operationalization of bilateral cooperation between Poland and Belarus on the basis of the agreement of 2020; and the involvement of all countries in the work on the protection of the Baltic Sea, in line with the source-to-sea approach.

What can other Parties to the Convention learn from the cooperation in the Bug River sub-basin?

The cooperation in the Bug River sub-basin provides an example of the progressive development of cooperation at the bilateral level for more than two decades due to the active engagement of the water management authorities at various levels. The recent conclusion of the bilateral agreement between Poland and Belarus paves the way for potential discussions on expanding cooperation to the level of the sub-basin.

6.3 Danube River basin

The Danube River Basin is the second largest river basin in Europe, with a total area of 801,463 km². It is the most international river basin in the world, covering the territories of 19 countries. All of these countries are Parties to the Water Convention. Several countries have a very small share of the basin: Albania (less than 0.1%), Italy (less than 0.1%), North Macedonia (less than 0.1%), Poland (less than 0.1%) and Switzerland (less than 0.2%). The remaining 14 countries – Austria (10.0%), Bosnia and Herzegovina (4.6%), Bulgaria (5.9%), Croatia (4.4%), Czechia (2.9%), Germany (7.0%), Hungary (11.6%), Montenegro (0.9%), the Republic of Moldova (1.6%), Romania (29.0%), Serbia (10.2%), Slovakia (5.9%), Slovenia (2.0%) and Ukraine (3.8%) – are Parties to the 1994 Convention on the Cooperation for the Protection and Sustainable Use of the Danube River (Danube River Protection Convention) and have concluded bilateral agreements referring to the waters of the Danube. Some of them have also entered into sub-basin agreements or arrangements, such as for the Sava, Tisza and Prut River basins.

How does basin-wide cooperation function?

Basin-wide cooperation is undertaken in the framework of the Danube River Protection Convention and the International Commission for the Protection of the Danube River (ICPDR) established under it. The Convention and the ICPDR are unanimously reported by the Danube riparians to have provided a platform for joint and focused actions, political decisions, cooperation and exchange of experience, awareness-raising, cooperation across sectors and strengthening of national capacities through international exchange.

The joint efforts coordinated by the ICPDR have resulted in the improved ecological and chemical quality of the water of the Danube. Flood management has also improved. Concrete results of cooperation in the framework of the ICPDR include the adoption of river basin and flood risk management plans covering the entire catchment of the Danube and operation of the TransNational Monitoring Network and the Accident Emergency Warning System. They also include the adoption a Strategy on Adaptation to Climate Change, a joint statement on inland navigation and environmental sustainability in the Danube River basin and guiding principles on sustainable hydropower, as well as the organization of a Joint Danube Survey every three years to improve knowledge of the basin and the annual celebration of “Danube Day” on 29 June. Cooperation with the Black Sea Commission has

212 See www.icpdr.org/main/danube-basin/countries-danube-river-basin.
been pursued to strengthen measures to prevent marine pollution from waters of the Danube. Key to these successes has been good cooperation at the technical and political levels and the subsequent building of trust and mutual understanding among the countries in the basin. In addition, non-European Union Danube riparians have agreed to implement the relevant European Union directives in the Danube basin on a voluntary basis. A permanent joint secretariat and working groups on specific topics greatly assist countries in implementation.

Aligning the plans and activities of the ICPDR with changing national and European Union policies and programmes is mentioned among the challenges for cooperation. Some countries also report difficulties in securing funding at the national level for implementation of planned activities and the participation of the required number of experts in the ICPDR activities. For joint monitoring, organization and the timely implementation of agreed activities are often a challenge due to the large number of institutions involved.

How does sub-basin and bilateral cooperation work?

Sub-basin cooperation

In the Sava sub-basin, the four riparian States with the largest share of the sub-basin — Bosnia and Herzegovina (39.2%), Croatia (26.0%), Serbia (15.5%) and Slovenia (12.0%) —213 are parties to the 2002 Framework Agreement on the Sava River Basin and cooperate in the framework of the International Sava River Basin Commission established under it. Montenegro (7.1% basin share) and Albania (0.2% basin share) are not party to the Framework Agreement. Montenegro and the International Sava River Basin Commission signed a memorandum of understanding in 2013.

The Framework Agreement on the Sava River Basin is complemented by four protocols: on the navigation regime; on flood protection; on the prevention of water pollution caused by navigation; and on sediment management. A protocol on emergency situations is under negotiation. The Policy on the Exchange of Hydrological and Meteorological Data and Information in the Sava River Basin and the Policy on the Exchange and Use of Geographical Information System (GIS) Data and Information related to the Sava (Sava GIS Data Policy) have been put in place to regulate data and information exchange.

The main achievements of sub-basin cooperation are reported to include the conclusion of several protocols to the Framework Agreement, the adoption of the Sava River Basin Management Plan and the Flood Risk Management Plan for the Sava Basin and the development and operationalization of the Sava GIS and Sava hydrographic information system (HIS) web platforms and the joint flood forecasting and warning system. Parties report that the navigation of the Sava has improved, new joint development programmes for navigation and flood protection have been identified, additional financing mechanisms have been catalysed, and there is support for the development of sustainable tourism in the sub-basin.

In the Tisza sub-basin, shared by Hungary (29.4%), Romania (42.6%), Serbia (6.6%), Slovakia (9.7%) and Ukraine (8.1%),214 countries cooperate on the basis of the Memorandum of Understanding on strengthening cooperation for the implementation of the Integrated River Basin Management Plan,215 which supports the sustainable development of the region. No dedicated joint body exists in this sub-basin, so cooperation takes place in the framework of the ICPDR and bilateral agreements. The 2019 Updated Integrated Tisza River Basin Management Plan was prepared in the framework of the JOINTISZA project. An ongoing SAFETISZA project facilitates implementation of flood mitigation measures.

213 Second Assessment of Transboundary Rivers, Lakes and Groundwaters, p. 214.
214 Ibid., p. 199.
In the Prut sub-basin, shared by the Republic of Moldova (28.7%), Romania (39.5%) and Ukraine (31.8%), none of the countries reported any trilateral cooperation efforts. No separate joint body exists in this sub-basin, so cooperation takes place in the framework of the ICPDR and three bilateral agreements. Romania reports that the three countries are developing a flood protection system in the Prut and Siret River sub-basins.

No dedicated agreement or joint body is reported in the Drava and Mura sub-basins, which means that cooperation in these sub-basins takes place in the framework of the ICPDR and bilateral agreements. However, in the context of bilateral cooperation between Austria and Slovenia, Slovenia and Hungary and Slovenia and Croatia on the Mura River, other Mura River riparian States are invited as observers to the sessions of the respective bilateral commissions.

Parties to the Water Convention report the existence of 31 bilateral agreements covering the transboundary waters of the Danube basin. Most of these agreements were concluded after 1990, but some date back to an earlier period. Most bilateral agreements establish joint bodies, such as bilateral commissions, although the plenipotentiaries also appear as a joint body, and in some cases both bilateral commissions and the plenipotentiaries exist as joint institutions for the same agreement. All bilateral joint bodies have subsidiary bodies such as working groups or subcommissions.

Major achievements in bilateral cooperation in the Danube basin are reported to include: a reduced risk of transboundary conflicts; coordination of specific measures (e.g., surface water and groundwater abstractions, wastewater discharges and construction); coordinated monitoring of water quality; coordination of national Water Framework Directive planning and other cooperation in accordance with the requirements of the European Union directives; provision of coordinated input to the ICPDR; and the designation of transboundary groundwater bodies. In most cases of bilateral cooperation, information exchange and monitoring exist for the relevant waters concerned, are organized based on dedicated monitoring programmes or workplans and are broader in scope than the joint monitoring under the ICPDR. In several cases, bilateral cooperation is reported to have resulted in improved flood protection and prevention of accidental water pollution. Limited human and financial resources in general and for joint monitoring in particular are reported as difficulties for some instances of bilateral cooperation.

In some cases, the bilateral cooperation in the Danube basin is reported to be irregular or as producing limited results. In some other cases, bilateral cooperation is absent. There are no bilateral agreements between Bosnia and Herzegovina and Montenegro, Bosnia and Herzegovina and Serbia, Croatia and Serbia, or Montenegro and Serbia. For cooperation between Bulgaria and Serbia, the 1958 Agreement between the Government of Yugoslavia and the Government of the People’s Republic of Bulgaria Concerning Water Management Issues was not reported as a valid agreement by Bulgaria; Serbia reported that the agreement was formally in force, but also that it had not been operational since 1982.

What are the achievements in the period 2017–2020?

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216 Second Assessment of Transboundary Rivers, Lakes and Groundwaters, p. 229.

217 Examples include: 1970 Treaty between the Czechoslovak Socialist Republic and the Republic of Austria on Water Management Issues on Transboundary Waters, governing bilateral cooperation between Austria and Czechia and Austria and Slovakia; 1956 Agreement between the People’s Republic of Hungary and the Republic of Austria about Regulation of the Water Management Issues in the Border Region; two agreements of 1954 between Austria and Yugoslavia on questions of water economy — one relating to the Drava and the other to the frontier sector of the Mura — governing bilateral cooperation between Austria and Slovenia; and the 1976 Agreement between the Government of the Czechoslovak Socialist Republic and the Government of the People’s Republic of Hungary on the Regulation of Water Management Issues on Transboundary Waters, governing bilateral cooperation between Hungary and Slovakia.
Key achievements in the framework of the ICPDR are reported to include the update in 2018 of the basin-wide Strategy on Adaptation to Climate Change and the organization of the fourth Joint Danube Survey in 2019.

On a sub-basin level, selected achievements include:

- The signing in 2020 of the Memorandum of Understanding on cooperation concerning the regular functioning and maintenance of the Flood Forecasting and Warning System in the Sava River Basin by the Parties to the Framework Agreement on the Sava River Basin.
- The signing in 2019 of the third updated Memorandum of Understanding for the implementation of the updated Integrated Management Plan for the Tisza River Basin supporting the sustainable development of the region.
- Designation by five countries (Austria, Croatia, Hungary, Serbia and Slovenia) of the Mura-Drava-Danube UNESCO transboundary biosphere reserve in 2019.

At the bilateral level, two new agreements have been concluded in the basin:

- Agreement between the Government of Romania and the Government of the Republic of Serbia on Cooperation in the Field of Sustainable Management of Transboundary Waters was signed in 2019 and entered into force in 2020. This agreement replaced the agreement of 1955 between Romania and Yugoslavia concerning hydrotechnical issues on hydrotechnical systems and watercourses at the border or crossing the State border. Romania reports that the negotiation of the new agreement took 23 years.

Many other achievements are reported at the bilateral level, including the revision of several technical regulations (on protection against floods and ice drifts produced by watercourses and inland waters; on meteorological and hydrological data exchange; on water quality assessment at border waters; and on the procedures to be followed in case of unavoidable hazardous accidental pollution at border waters) in the framework of bilateral cooperation between Romania and Ukraine.

What are the areas for improvement?

While cooperation in the framework of Danube River Protection Convention and the Framework Agreement on the Sava River Basin covers the entire Danube basin and most of Sava sub-basin, respectively, there are cases of irregular cooperation or lack of cooperation between some countries in these basins at the bilateral level. The conclusion of bilateral agreements is needed between Bosnia and Herzegovina and Montenegro; Bosnia and Herzegovina and Serbia; Croatia and Serbia; Montenegro and Serbia; and Bulgaria and Serbia. It is important that the existence of the basin-wide cooperation in the Danube and Sava does not mask the absence of cooperation on rivers within the Danube basin, which is home to millions of people and sustains the lives of important ecosystems.

What can other Parties to the Convention learn from cooperation on the Danube?

Cooperation in the Danube River basin offers a wealth of experience and good practice for other transboundary basins, in particular in the areas of basin management planning, joint monitoring and
assessment, emergency preparedness, climate change adaptation, awareness-raising and the prevention of marine pollution. The ICPDR is particularly remarkable, as it has provided a successful platform for 14 countries of different levels of economic development to reconcile upstream and downstream perspectives and arrive at commonly agreed measures.

6.4 Ural/Zhayik River basin

Two Parties to the Convention share the Ural/Zhayik River Basin: Kazakhstan (64% of the basin) and the Russian Federation (36% of the basin). The basin spreads over the territories of three regions of Kazakhstan (Aktobe, Atyrau and West Kazakhstan) and three areas of the Russian Federation (the Republic of Bashkortostan and Chelyabinsk and Orenburg Oblasts).

How does basin-wide cooperation function?

Both Parties report on their cooperation in the framework of the 2010 Agreement between the Government of the Russian Federation and the Government of the Republic of Kazakhstan on Joint Use and Protection of Transboundary Water Bodies which replaced an earlier 1992 agreement. The agreement refers to several shared river basins, including the Ural/Zhayik River basin. A bilateral commission under the agreement meets regularly and has six working groups on the river basins covered by the agreement, with one devoted to the Ural/Zhayik River basin.

The agreement of 2010 covers several types of water uses. Both Parties concur that there are no significant difficulties in implementation of the agreement. The Parties regularly approve annual work plans and multi-year monitoring programmes for each of the six transboundary rivers, including the Ural/Zhayik River. Exchange of information takes place at the meetings of the bilateral commission and of its working groups. Parties exchange information on spring discharges, saturation of reservoirs, hydromorphological changes and the outcomes of monitoring. Joint hydrological and chemical monitoring takes place for boundary surface waters. Timely exchange of information and hydrological data during spring floods helps to prevent flooding and emergencies related to accidental pollution. There is no shared database or information platform. While the agreement formally includes groundwaters in the border areas within its scope, both Parties agree that, in practice, cooperation has not so far covered aquifers.

Parties provided different responses as to the existence of joint assessment in their shared basins, including the Ural/Zhayik River basin, which may be related to a different interpretation of the question by the Parties. Parties concur that there are no procedures detailed in the agreements with regard to mutual assistance in critical situations in transboundary basins.

In addition, both Parties reported on the 2016 Agreement between the Government of the Russian Federation and the Government of the Republic of Kazakhstan on the Conservation of the Ecosystem of the Ural Transboundary River Basin which entered into force in 2017. The agreement was concluded to specifically address pollution of the Ural/Zhayik River, where the main pressures are industry (especially in the city of Magnitogorsk and Orenburg Oblast), discharges of municipal wastewaters (in the cities of Uralsk and Atyrau) and pollution from oil extraction sites on the Caspian coast. A bilateral commission on the conservation of the ecosystem of the transboundary Ural River basin has already been formed in accordance with agreement of 2016. Its tasks include to develop coordinated activities to prevent transboundary pollution, to increase forest cover and prevent forest

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218 Second Assessment of Transboundary Rivers, Lakes and Groundwaters, p. 132.
219 Ibid., p. 134.
fires in the basin and to prepare proposals for adaptation of the Ural/Zhayik River ecosystem to climate change.

What are the achievements in the period 2017–2020?

Key achievements include the entry into force in 2017 of the agreement between the two Parties to prevent pollution in the Ural/Zhayik River basin and the establishment of the related bilateral commission. The commission has already held two meetings. The first meeting, in 2018, approved the regulations of the commission and an action plan to improve the status and prevent transboundary pollution of the Ural River for the period 2019–2020. The second meeting, held online in 2020, reviewed the draft programme for cooperation on the conservation and restoration of the ecosystem of the transboundary Ural River basin for the period 2021–2024, which was subsequently signed by the Minister of Ecology, Geology and Natural Resources of Kazakhstan and the Minister of Natural Resources and Environment of the Russian Federation in December 2020.

What are the areas for improvement?

Areas for improvement in the Ural/Zhayik River basin include deepening cooperation on joint monitoring and exchange of information in the basin, implementing measures to prevent or limit the transboundary impact of accidental pollution and of extreme weather events, developing procedures for mutual assistance in critical situations and strengthening the involvement of the public in transboundary water management in the basin. There are also opportunities to develop collaboration on transboundary groundwaters.

What can other Parties to the Convention learn from the cooperation in the Ural/Zhayik River basin?

Cooperation in the Ural/Zhayik River basin presents an example in which Parties with a long record of cooperation on transboundary waters decided to significantly deepen the scope of cooperation on one of their shared basins due to specific pressures (pollution) in that basin. An additional agreement and an additional joint body are seen as a way to increase cooperation in response to the significant challenges faced and the public pressure linked to the pollution of the Ural/Zhayik River.

6.5 Cooperation between Latvia and Lithuania on transboundary groundwater

With regard to transboundary groundwaters, Latvia and Lithuania – both Parties to the Water Convention – share the Permian-Upper Devonian Aquifer of the Venta river basin district and Lielupe river basin district, the Upper Devonian and Upper-Middle Devonian Aquifer of Lielupe river basin district, and the Quaternary Aquifer of Dauguva river basin district. The latter is also shared with Belarus.

How does transboundary cooperation function?

Latvia and Lithuania have several transboundary water agreements concluded at different levels. An inter-agency agreement (2006 Agreement between the Latvian Environment, Geology and Meteorology Agency under the Ministry of Environment of the Republic of Latvia and the Environmental Protection Agency of the Republic of Lithuania on Co-operation in the Field of Monitoring and the Exchange of Information on the Status of Surface Water Bodies in Transboundary River Basin Districts) concerns surface waters. An interministerial agreement – the 2003 Technical Protocol between the Ministry of Environment of the Republic of Latvia and the Ministry of Environment of the Republic of Lithuania on Co-operation in Managing the International River Basin Districts – addresses cooperation in implementation of river basin management in line with the Water
Framework Directive and covers both transboundary surface waters and groundwaters. A third agreement – the 2016 Agreement between the Lithuanian Geological Survey under the Ministry of Environment of Lithuania and the Latvian Environment, Geology and Meteorology Centre on Cooperation on Cross-border Groundwater Monitoring – is explicitly dedicated to groundwater monitoring. These three agreements and the activities thereunder complement each other.

The agreement of 2016 was concluded specifically to develop a common methodology for national groundwater monitoring programmes in transboundary river basin districts in accordance with the reporting requirements under European Union instruments and with the objective of conducting further joint projects.

A joint cross-border groundwater monitoring plan is discussed and prepared annually. The plan includes monitoring stations, preliminary time of sampling and parameters according to the national monitoring programmes of riparian States. Joint sampling is performed annually in agreed monitoring stations named in the joint monitoring plan. The major achievement is that joint sampling and intercalibration of laboratories has ensured comparability of chemical data. Based on joint monitoring results, a common assessment of the chemical status of transboundary groundwater bodies was carried out, and compounds important for water quality were identified and assessed based on common criteria. At the same time, a review of the groundwater monitoring network in transboundary areas has revealed gaps in data coverage, which should be filled for a better and more reliable assessment of all transboundary aquifers. It was recommended that gaps be filled by installing new monitoring stations and performing common groundwater testing for emerging contaminants from the watch list developed under the Water Framework Directive.

Exchange of information takes place by email and during the meetings of a working group. Information is exchanged on environmental conditions, flows or water levels (including groundwater levels) and water abstractions. As a result of the exchange of information, the same main objectives concerning groundwater were set for the Venta and Lielupe River basins in their river basin management plans, which were prepared by each country separately.

The two Parties also concluded an interministerial agreement related to emergency situations (the 2001 Technical Protocol between the Ministry of Environment of the Republic of Lithuania and the Ministry of Environmental Protection and Regional Development of the Republic of Latvia on Exchange of Information on Emergency Ecological Situations). There is also a bilateral agreement between the two countries on cooperation and assistance in the event of disasters, with fire and safety authorities being involved in regular coordination meetings and training exercises.

Cooperation between Lithuania and Belarus on their shared aquifers, including Quaternary aquifers of the Daugava River basin, takes place on the basis of the 2012 Agreement between the Lithuanian Geological Survey under the Ministry of Environment of Lithuania and the Belarusian Scientific and Research Institute for Geological Prospecting on Cooperation in the Field of Geology and Hydrogeology.

What are the achievements in the period 2017–2020?

Based on agreement of 2016, in the period 2018–2019 Latvia and Lithuania implemented a pilot project on cooperation for cross-border groundwater management as part of the European Union “b-solutions” initiative. The project resulted in the identification of transboundary aquifers; the grouping, characterization and assessment of groundwater bodies in transboundary areas; and an assessment of the existing groundwater monitoring system and recommendations for its future development.
What are the areas for improvement?

Creation of a high quality and compatible information system on transboundary aquifers is reported as a necessity by one of the two countries and would be a logical step in strengthening bilateral cooperation in the area of transboundary aquifers. Involving Belarus in cooperation between Latvia and Lithuania on the transboundary aquifers in the Daugava basin, as part of the efforts to establish multilateral cooperation frameworks in the basin, could be another step.

What can other Parties to the Convention learn from cooperation between Latvia and Lithuania on transboundary aquifers?

Activities carried out by Latvia and Lithuania on transboundary aquifers demonstrate that cooperation can be efficient at multiple levels. It also shows that arrangements on a level below governments and ministries (i.e., the agreement of 2016 concluded between the Lithuanian Geological Survey and the Latvian Environment, Geology and Meteorology Centre) can effectively support transboundary water cooperation.

CHAPTER 7 IMPLEMENTATION OF THE WATER CONVENTION IN 2017-2020

Key messages
- The conclusion by Parties to the Convention of at least 10 new agreements or arrangements covering shared waters in the period 2017–2020 demonstrates the dynamism and efficiency of cooperation under the Convention.
- Of the 24 countries, globally, that report that all their transboundary basins are covered by operational cooperation arrangements in accordance with SDG indicator 6.5.2, 19 are Parties to the Water Convention.
- The average value of the indicator 6.5.2 for Parties to the Water Convention is 80.38%, which is higher than the global average of 58.01%.
- The main challenges facing cooperation on transboundary waters include differences between national administrative and legal frameworks and resource constraints, closely followed by difficulties in data and information exchange and a lack of relevant data and information.
- In some transboundary basins, especially those shared with non-Parties, Parties to the Convention face difficulties in the negotiation and adoption of agreements and arrangements and the establishment of joint bodies for transboundary water cooperation.
- In many transboundary basins, Parties encounter difficulties in extending cooperation to cover the entire basin and in establishing or operationalizing cooperation on transboundary aquifers.

7.1 Key achievements in implementing the Convention and transboundary water cooperation in 2017-2020

What have countries reported?

The main achievements in implementing the Convention and cooperating on transboundary waters cited by at least half of the reporting Parties include better knowledge and understanding of issues related to transboundary waters, long-lasting and sustained cooperation, adoption of joint plans and programmes, improved water management, adoption of cooperative arrangements, stronger political will for transboundary water cooperation and stakeholder engagement (figure 38).

Figure 38: Main achievements in cooperating on transboundary waters – based on responses to section IV, question 2
Many Parties emphasize additional benefits in their reports. For example, Switzerland points to improved coordination within the country between different ministries or cantonal entities, as well as enhanced understanding of water management at the basin level and a more forward-looking approach to mitigation and adaption to climate change. Slovenia notes the improvement of cooperation on groundwater in the process of the establishment of a common groundwater body – the Karavanke – with Austria. Romania states that the main achievement in the implementation of the Convention is agreement upon joint rules governing different topics (cooperation on flood protection, meteorological and hydrological data exchange, quality assessment of transboundary waters and joint procedures in case of accidental pollution). Several countries emphasize that the implementation of the Convention has been beneficial in strengthening cooperation between European Union member States and non-member countries.

The conclusion of at least 10 new agreements or arrangements by Parties to the Convention in the period 2017–2020 and the entry into force of another 4 agreements in this period demonstrate the rapidly developing and dynamic cooperation on the basis of the Convention (tables 1 and 2). Although some of these agreements and arrangements are follow-up agreements, which further specify or develop cooperation of riparian countries on the basis of existing transboundary water agreements, they show that even Parties with established cooperation continuously make efforts to improve their cooperation by concluding new or additional agreements and arrangements. In addition, it is remarkable that some of this progress was made during the COVID-19 pandemic.

**Table 1: New agreements and arrangements concluded in the period 2017–2020**

<table>
<thead>
<tr>
<th>Agreement or arrangement</th>
<th>Parties</th>
<th>Date of signature and entry into force (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement between the Ministry of Agriculture and Water Resources of Turkmenistan and the Ministry of Agriculture and Water Resources of Uzbekistan on Cooperation on Water Management Issues</td>
<td>Turkmenistan, Uzbekistan</td>
<td>6 March 2017</td>
</tr>
</tbody>
</table>
Table 2: Earlier agreements and arrangements that entered into force in the period 2017–2020

<table>
<thead>
<tr>
<th>Agreement or arrangement</th>
<th>Parties</th>
<th>Date of entry into force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement on the Protection and Sustainable Development of the Prespa Park Area (signed on 2 February 2010)</td>
<td>Albania, European Union, Greece, North Macedonia</td>
<td>29 May 2019</td>
</tr>
<tr>
<td>Treaty between the Government of the Republic of Moldova and the Cabinet of Ministers of Ukraine on Cooperation in the Field of Protection and Sustainable Development of the Dniester River Basin (signed 29 November 2012)</td>
<td>Republic of Moldova, Ukraine</td>
<td>26 June 2017</td>
</tr>
<tr>
<td>Agreement between Finland and Norway relative to fishing in the Tana River fishing area (signed 30 September 2016)</td>
<td>Finland, Norway</td>
<td>20 May 2017</td>
</tr>
</tbody>
</table>
Many new strategies, programmes and action plans were adopted by Parties to the Convention in the period 2017–2020 at the basin, sub-basin and bilateral levels. This also demonstrates the dynamic character of cooperation and the commitment to continuous and effective cooperation. Examples of multilateral strategies, programmes or action plans approved in the period 2017–2020 include:

- The “Rhine 2040” programme (The Rhine and its Catchment: Sustainably Managed and Climate-resilient), adopted by the ministers in charge of water protection in the Rhine catchment area and a representative of the European Union on 13 February 2020 at the sixteenth Conference of Rhine Ministers.
- The action plan of the International Commission for the Protection of Italian-Swiss Waters from Pollution for the period 2019-2027.
- The Strategic Action Programme for the sustainable management of the extended Drin basin (Albania, Greece, Kosovo, Montenegro and North Macedonia), endorsed on 24 April 2020.
- The Fourth Aral Sea Basin Programme, approved by the decisions of the Executive Board of the International Fund for Saving the Aral Sea dated 23 August 2018 and 29 June 2021.
- The Regional Environmental Protection Plan for Sustainable Development adopted by the Interstate Commission on Sustainable Development under the International Fund for Saving the Aral Sea on 25 October 2019.

Examples of bilateral strategies, programmes or action plans approved in the period 2017–2020 include:

- The joint programme for the monitoring of transboundary water bodies in the Narva River basin, including Lake Peipsi/Chudskoe, for the period 2019–2022 (Estonia and the Russian Federation).
- Programme of monitoring of transboundary water bodies in the Irtysh, Ishim and Tobol River basins for the period 2017-2020 (Kazakhstan and Russian Federation).
- Several updated technical regulations (on protection against floods produced by watercourses and inland waters; meteorological and hydrological data exchange; quality assessment of border waters; and procedures to be followed in cases of unavoidable hazardous accidental pollution on border watercourses) approved in 2019 by plenipotentiaries of Romania and Ukraine.
- The Ferto/Neusiedler Lake development programme of 2018 (Austria and Hungary).

**Box 19: Insights from practice: key achievements in implementation of the Convention from the perspective of Finland**

<table>
<thead>
<tr>
<th>Finland-Russian Federation</th>
<th>Finland-Norway</th>
<th>Finland-Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Development of joint mechanisms for the management of transboundary waters, such as the discharge rule for the River Vuoksi/Lake Saimaa system, which optimizes the flow</td>
<td>✓ Common water quality monitoring and reporting programme for the Tenojoki River. ✓ Common integrated river basin management plans for the Tana/Teno, Naatamo//Neiden and the</td>
<td>✓ Local presence and activities by the transboundary river commission enabled trust between the commission and the stakeholders. ✓ A summary of the joint water management plan, produced in 2016</td>
</tr>
</tbody>
</table>

regulation to minimize damage and other losses (e.g., energy) due to floods and droughts in both countries.

- Flow regulation and potential compensation mechanisms in the cascade of hydropower stations on both sides of the border.
- Availability of common data for hydrological observation, modelling and prediction.
- Joint alarm system for floods and accidental pollution.
- Joint monitoring of water quality with intercalibration of laboratories and joint annual monitoring reports.
- Improved water pollution control, with a significant reduction of pollution, and joint annual pollution control reports.

<table>
<thead>
<tr>
<th>Pasvik/Paatsjoki/Paz Rivers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Common research and planning programmes.</td>
</tr>
<tr>
<td>✓ Construction of the Karasjok and Tanabro municipal wastewater treatment plants in Norway.</td>
</tr>
<tr>
<td>✓ Improved cooperation with Norwegian and Finnish border municipalities.</td>
</tr>
<tr>
<td>✓ Including the regional environmental authority of the Russian Federation as an unofficial observer in the work of the bilateral commission.</td>
</tr>
<tr>
<td>✓ Improved water quality in border rivers.</td>
</tr>
<tr>
<td>✓ Including indigenous Sami people as members of the bilateral commission.</td>
</tr>
</tbody>
</table>

and published in national majority and minority languages simultaneously, helped to raise awareness among stakeholders. An updated version of the joint water management plan is under development.

- Joint planning for flood risk management.
- Joint workplan (action plan) for regional authorities and the joint commission with regard to the next round of river basin management and flood risk management planning.
- Joint waste water treatment plants in Haparanda and Karesuando.
- Sociocultural approach related to the river ecosystem, with social realities and historical considerations included in water management work and fishery management, including dialogue between authorities and stakeholders.

**What can we learn from responses?**

The results communicated by the Parties in the second round of reporting on SDG indicator 6.5.2 and under the Convention prove there are many benefits from cooperation on transboundary waters, and from cooperation in the framework of the Convention. Accession by new countries to the Convention (Chad (2018), Senegal (2018) and Ghana (2020)) in the period 2017–2020 is clear evidence of the recognition of these benefits and of the usefulness of the Convention and its cooperative framework.

The average value of SDG indicator 6.5.2 for Parties to the Water Convention is 80.38% (84.60% for the river and lake basins component, 70.95% for the aquifer component), which is higher than the global average of 58.01% (64.86% for river and lake basins component, 41.80% for aquifers) (figure 39). Of the 24 countries, globally, that report that all their transboundary river, lake and aquifer basins are covered by operational cooperation arrangements, 19 are Parties to the Water Convention.
In the second reporting exercise, the value of SDG indicator 6.5.2 is available for 40 out of 42 Parties, with the river and lake component available for 41 Parties and the aquifer component available for 40 Parties (table 3).
Table 3: Sustainable Development Goal indicator 6.5.2 values for Parties to the Water Convention for 2020

<table>
<thead>
<tr>
<th>Country name</th>
<th>River and lake basins component in %</th>
<th>Aquifer component in %</th>
<th>SDG indicator 6.5.2 value in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>56.01</td>
<td>51.67</td>
<td>54.49</td>
</tr>
<tr>
<td>Austria</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>27.75</td>
<td>3.86</td>
<td>21.73</td>
</tr>
<tr>
<td>Belarus</td>
<td>67.43</td>
<td>67.43</td>
<td>67.43</td>
</tr>
<tr>
<td>Belgium</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>96.14</td>
<td>73.32</td>
<td>92.60</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>100.00</td>
<td>97.59</td>
<td>99.55</td>
</tr>
<tr>
<td>Chad</td>
<td>35.85</td>
<td>53.18</td>
<td>44.42</td>
</tr>
<tr>
<td>Croatia</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Czechia</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Denmark</td>
<td>100.00</td>
<td>N</td>
<td>100.00</td>
</tr>
<tr>
<td>Estonia</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Finland</td>
<td>100.00</td>
<td>N</td>
<td>100.00</td>
</tr>
<tr>
<td>France</td>
<td>56.54</td>
<td>N</td>
<td>56.54</td>
</tr>
<tr>
<td>Germany</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Greece</td>
<td>58.14</td>
<td>1.03</td>
<td>32.76</td>
</tr>
<tr>
<td>Hungary</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Italy</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>100.00</td>
<td>0.00</td>
<td>63.22</td>
</tr>
<tr>
<td>Latvia</td>
<td>100.00</td>
<td>94.52</td>
<td>97.29</td>
</tr>
<tr>
<td>Liechtenstein</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Lithuania</td>
<td>25.69</td>
<td>50.17</td>
<td>34.06</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Montenegro</td>
<td>84.80</td>
<td>20.19</td>
<td>66.68</td>
</tr>
<tr>
<td>Netherlands</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>North Macedonia</td>
<td>13.24</td>
<td>12.22</td>
<td>12.94</td>
</tr>
<tr>
<td>Norway</td>
<td>89.46</td>
<td>88.31</td>
<td>89.45</td>
</tr>
<tr>
<td>Poland</td>
<td>48.08</td>
<td>100.00</td>
<td>55.68</td>
</tr>
<tr>
<td>Portugal</td>
<td>100.00</td>
<td>N</td>
<td>100.00</td>
</tr>
<tr>
<td>Republic of Moldova</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Romania</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>NaN</td>
<td>NaN</td>
<td>NaN</td>
</tr>
<tr>
<td>Senegal</td>
<td>100.00</td>
<td>0.00</td>
<td>35.21</td>
</tr>
<tr>
<td>Serbia</td>
<td>92.51</td>
<td>73.73</td>
<td>89.65</td>
</tr>
<tr>
<td>Slovakia</td>
<td>100.00</td>
<td>21.94</td>
<td>80.92</td>
</tr>
<tr>
<td>Slovenia</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Spain</td>
<td>100.00</td>
<td>N</td>
<td>100.00</td>
</tr>
<tr>
<td>Sweden</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Switzerland</td>
<td>93.50</td>
<td>74.11</td>
<td>90.23</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>66.02</td>
<td>NaN</td>
<td>NaN</td>
</tr>
</tbody>
</table>
Notes: N = Not relevant. N indicates that the figure is not available because the indicator – as defined for the global monitoring – does not apply to the specific circumstances of the country, and therefore is not reported.
NaN = Not available. NaN indicates that the figure is not available because the country response needs clarification or additional information.

There have been a few cases in which the reported values for SDG indicator 6.5.2 have increased or decreased among the Parties to the Convention between the first and second reporting rounds. In a few instances, the difference in the reported indicator value is explained by the conclusion of new agreements and arrangements. In other cases, the value changed due to improved data and knowledge on the surface area of the basin within the territory of the country or due to reporting of additional transboundary basins. The increased inclusion of transboundary aquifers has also influenced the value of the indicator. In one case, a Party interpreted the provisions on the geographic scope of an agreement differently in this reporting round.

7.2 Key challenges in implementing the Convention and transboundary water cooperation and recommendations for action

Challenges for transboundary water cooperation

Parties report that the main challenges to cooperation on transboundary waters include differences between national administrative and legal frameworks and resource constraints, closely followed by difficulties in data and information exchange and a lack of relevant data and information (figure 40).

Of the 21 Parties that report resource constraints to be among the main challenges for their transboundary water cooperation, 11 are European Union member States, which shows that even in countries with a high level of economic development transboundary cooperation may not be sufficiently supported.

Figure 40: Main challenges faced by countries in cooperating on transboundary waters – based on responses to section IV, question 1

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Number of countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differences between national administrative</td>
<td>23</td>
</tr>
<tr>
<td>and legal frameworks</td>
<td></td>
</tr>
<tr>
<td>Lack of relevant data and information</td>
<td>16</td>
</tr>
<tr>
<td>Difficulties in data and information exchange</td>
<td>17</td>
</tr>
<tr>
<td>Sectoral fragmentation at the national level</td>
<td>12</td>
</tr>
<tr>
<td>Language barrier</td>
<td>1</td>
</tr>
<tr>
<td>Resource constraints</td>
<td>21</td>
</tr>
<tr>
<td>Environmental pressures</td>
<td>14</td>
</tr>
<tr>
<td>Sovereignty concerns</td>
<td>4</td>
</tr>
</tbody>
</table>

Sectoral fragmentation at the national level is cited as a challenge by more than a quarter of the Parties, and some Parties specify they have faced an additional challenge in the interplay between transboundary water cooperation and sectoral developments in transboundary basins, in particular with regard to hydropower, agriculture, land-use planning and nature protection.
A third of the Parties indicated environmental pressures were a challenge. Some have provided additional explanations, outlining the difficulties they faced in addressing issues such as water pollution, climate change adaptation, flood and drought management and improvement of river continuity in their transboundary cooperation.

Sovereignty concerns are reported to represent a challenge for only four Parties, which may be evidence of the results achieved through decades of cooperation among Parties and the resulting increased trust and mutual understanding.

Other challenges named by some Parties are basin-wide application of the principles of the Convention in transboundary basins shared with non-Parties, a lack of agreement on inter-State boundaries and security challenges and diplomatic tensions that impact on the possibilities for cooperation in transboundary basins.

Last but not least, in various sections of the report several Parties have mentioned the COVID-19 pandemic as a recent challenge for their transboundary water cooperation efforts.

**Challenges in implementation and application of the Convention**

As shown by the national implementation reports, some Parties to the Convention face difficulties in the negotiation and adoption of agreements and arrangements for transboundary waters and, simultaneously, the establishment of joint bodies for transboundary water cooperation (art. 9). This was identified as particularly challenging in basins where other riparian countries were not Party to the Convention, showing the importance of motivating these neighbouring countries to join. In some transboundary basins shared by European Union member States and States not members of the European Union, Parties reported difficulties in the negotiation and conclusion of agreements.

The transboundary river and lake basins where the negotiation and conclusion of agreements and arrangements for transboundary waters and/or the establishment of joint bodies for transboundary water cooperation are needed include:

- Banowka, Pregel and Prohladnaja/Swieza River basins (shared by Poland and the Russian Federation).
- Don River basin, part of the Dnieper River basin and the Azov Sea River Basins (Mius, Krinka, Sukhoi Elanchyk) (shared by Russian Federation and Ukraine).
- Dragovistica River sub-basin (shared by Bulgaria and Serbia).
- Parts of the Kura-Araks River basin (shared by Armenia (non-Party), Azerbaijan, Georgia (non-Party), the Islamic Republic of Iran (non-Party) and Turkey (non-Party)), in particular:
  - Jandari Lake basin and the Alazani/Ganyh and Iori/Gabirri River sub-basins (shared by Azerbaijan and Georgia (non-Party))

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221 Narew River sub-basin is not included here, as an agreement was signed by Belarus and Poland in early 2020 and entered into force in late 2020; the joint body is still to be established. Strumica River sub-basin is also not included, as an agreement was signed by Bulgaria and North Macedonia in 2019.

222 According to Poland, the 1964 Agreement between the Government of the Polish People's Republic and the Government of the Union of Soviet Socialist Republics Concerning the Use of Water Resources in Frontier Waters is formally in force, but is no longer implemented, and meetings of the joint body do not take place.

223 According to Ukraine, the 1992 Agreement between the Government of Ukraine and the Government of the Russian Federation on Joint Management and Protection of Transboundary Water Bodies has been terminated and meetings of the joint body do not take place.

224 Dragovistica River sub-basin is part of the Struma/Strymonas River basin shared by Bulgaria, Greece, North Macedonia and Serbia.
Aghstev/Akstafa, Arpa, Voghji/Ohchu and Vorotan/Bargushad River sub-basins (shared by Azerbaijan and Armenia (non-Party))
Khrami/Ktsia River sub-basin (shared by Armenia (non-Party), Azerbaijan and Georgia (non-Party)).

Astara Chay River (basin shared by Azerbaijan and the Islamic Republic of Iran (non-Party)).
Archabil, Atrek/Atrak, Sumbar/Sumber, Chendir/Chandor and Kelte-Chinar River basins (shared by the Islamic Republic of Iran (non-Party) and Turkmenistan).
Oiapoque/Oyupock/Oyapock River Basin (shared by Brazil (non-Party) and France).
Maroni/Marowijne River basin (shared by France and Suriname (non-Party)).

Some riparian Parties that have already concluded bilateral agreements with each other should also look at why the following basins and sub-basins are not reported to be covered by those agreements, and consider addressing the issue within their cooperation frameworks:

Adige River basin and the Inn and Adda River sub-basins (shared by Italy and Switzerland).
The Elv fra Svartaks-lvatnet and Karpelva River basins (shared by Norway and the Russian Federation).

The transboundary basins for which it was not possible to conclude whether an agreement exists and is in force and whether a joint body exists, due to contradictory responses from the riparian countries, and where it is important that the riparians have a closer look at existing cooperation frameworks to jointly agree if there is a need for new agreements and the establishment of joint bodies, include:

Vijose/Aoos/Vjosa River basin (shared by Albania and Greece).
Vardar/Axios River basin (shared by Greece, North Macedonia and Serbia).
Dojran/Doirani Lake sub-basin (shared by Greece and North Macedonia).
Hari/Harirud River basin (shared by Afghanistan (non-Party), the Islamic Republic of Iran (non-Party) and Turkmenistan).
Murgab River basin (shared by Afghanistan (non-Party) and Turkmenistan).

While the existence of agreements and joint bodies for transboundary water cooperation could not be established for several transboundary river basins that were not reported by the respective Parties to the Convention in the second reporting round, a closer look at cooperation arrangements in those basins may be needed in order to establish whether any action is necessary. This refers to the following transboundary basins:

Sujfun/Razdolnaya River basin (shared by China (non-Party) and the Russian Federation).
Zeravshan River basin (shared by Tajikistan (non-Party) and Uzbekistan).
Sulak and Tergi/Terek River basins (shared by Georgia (non-Party) and the Russian Federation).
Rezovska/Mutludere River basin (shared by Bulgaria and Turkey (non-Party)).
Ebro (shared by Andorra (non-Party), France and Spain).
Bidasoa (shared by France and Spain).

Cooperation at the basin scale represents a particular challenge in many transboundary basins. While cooperation at the bilateral level compensates for this to a certain extent, cooperation on the basis of a catchment area or basin is fundamental for the implementation of an integrated approach to water management taken by the Convention (art. 2 (6)). Agreements and joint bodies that include all the riparian countries of the transboundary water bodies concerned are still to be established in many basins in South-Eastern Europe, Eastern Europe, the Caucasus and Central Asia.
Entering into agreements or arrangements related to transboundary aquifers and operationalizing cooperation on transboundary aquifers when these are included in the scope of broader transboundary water agreements also represent serious challenges.

Finally, challenges are encountered in the implementation of some other areas of the Convention, in particular provisions on joint water quality objectives (art. 9 (2) (e)), the maintenance of joint pollution inventories (art. 9 (2) (c)), setting emission limits based on best available technology (art. 3 (1) (c) and (f) and (2)), setting up of early warning and alarm systems (art. 14), especially for accidental water pollution, and mutual assistance (art. 15). There is room for an increased use of measures to enhance water use efficiency when it comes to demand management activities and to enhance the application of economic and financial measures and agricultural extension services as measures to reduce pollution on transboundary waters from diffuse sources (art. 3 (1)). There is also a need to enhance the understanding and implementation of the requirements of the Convention with regard to the protection of the marine environment influenced by transboundary waters, in particular articles 2 (6), 9 (3) and 9 (4) of the Convention. Furthermore, existing cooperation agreements often lack provisions on cooperation in the areas of human health, adaptation to climate change and disaster risk reduction in transboundary basins.

While the practices of making information available to the public and holding consultations with stakeholders on planned measures in transboundary basins are relatively widespread, the involvement of the public and other stakeholders in the activities of joint bodies for transboundary water cooperation through an observer status or an advisory role is limited, and few joint bodies have joint communication strategies.

Recommendations for future action under the Convention

Implementation of the Water Convention could be strengthened through the following activities, which could be included in the future programmes of work under the Convention with the aim of supporting Parties and, where applicable, non-Parties:

- Provide assistance to countries in the negotiation and conclusion of agreements in basins and sub-basins not covered by agreements or other arrangements and in the conclusion of bilateral agreements on transboundary water cooperation, combined with the establishment of dedicated joint bodies. Such assistance is already provided under the programme of work as part of programme area 1.3 (supporting the development of agreements and the establishment of joint bodies), but could be oriented to a greater extent to the basins and sub-basins that lack such agreements and joint bodies identified in chapters 3.1 and 4.1 of the present report.
- Where appropriate, provide assistance in the gradual extension of the geographic scope of cooperation in those basins and sub-basins that are not covered entirely by valid agreements or arrangements.
- Assist countries in the operationalization of cooperation on transboundary groundwaters where these are covered by existing agreements and arrangements, in particular through common identification, delineation and characterization of transboundary aquifers and the integrated management of transboundary groundwaters and surface waters.
- Support the conclusion of agreements or arrangements to cover transboundary groundwaters where they are not covered by existing agreements. Such assistance could build on the Model Provisions on Transboundary Groundwaters and the experience gained through activities implemented under the programme of work in several aquifer basins.
• Assist countries in establishing exchange of data and information or in improving exchange of
data and information, with a focus on increasing the regularity of exchange, the scope of the
data and information subject to exchange, and the comparability of data and information.
• Assist countries in establishing joint monitoring and assessment of transboundary waters in
basins and sub-basins where these activities are not carried out. Such assistance could build
on activities already implemented under the programme of work as part of the programme
area 2 (supporting monitoring, assessment and information sharing in transboundary basins),
but could be oriented to a greater extent to the basins and sub-basins identified in chapter 5.4
of the report.
• Assist countries in addressing the lack of resources for transboundary water cooperation,
identified in the report to be a challenge even for some countries with a high level of
economic development. Such assistance could build on activities already implemented under
the programme of work as part of programme area 5 (facilitating financing of transboundary
water cooperation), and needs to be combined with awareness-raising and communication
activities on the benefits of transboundary water cooperation as part of programme area 1.2
(promoting and communicating the benefits of transboundary cooperation).
• Assist countries in the areas of adaptation to climate change and disaster risk reduction in
transboundary basins, to ensure that these topics are integrated in the activities of a greater
number of joint bodies for transboundary water cooperation and to facilitate the development
and implementation of joint climate change adaptation strategies and joint disaster risk
reduction strategies. Such assistance could build on activities already implemented under the
programme of work as part of programme area 4 (adapting to climate change in
transboundary basins) and the experience accumulated in the Global Network of Basins
Working on Climate Change Adaptation.
• Support the implementation of the provisions of the Convention on setting up early warning
and alarm systems, especially for accidental water pollution, and the development of
procedures for mutual assistance in critical situations, where these are not available.
• Assist countries in addressing the issues of human health and surveillance and early warning
of water-related diseases in the framework of agreements and joint bodies for transboundary
water cooperation. Such assistance could envisage activities implemented in cooperation with
the Protocol on Water and Health to the Convention.
• Support increasing public participation in transboundary water management, especially by
sharing good practices with regard to the involvement of the public and other stakeholders,
including local stakeholders, in the activities of joint bodies for transboundary water
cooperation.
• Support implementation of the requirements of the Convention with regard to the protection
of the marine environment influenced by transboundary waters, including through activities to
promote the implementation of the source-to-sea approach, including the organization of a
global workshop on the source-to-sea approach in 2022 foreseen in the next programme of
work under the Convention.

Recommendations for Parties

Parties to the Convention and non-Parties sharing transboundary waters with Parties are encouraged to
review the second progress report, paying special attention to both general (non-basin specific)
findings and findings related to the basins they share. Such a review could help identify ways to
strengthen the implementation and application of the Convention and could also assist countries to
better understand its requirements.
In particular, such a review could inspire riparians to jointly identify areas for further action and approaches to addressing the difficulties they face in implementation, including seeking assistance through the relevant areas in the programme of work. Examples here could include initiating projects to support the development of agreements and the establishment of joint bodies; launching activities on the identification, delineation and joint management of transboundary aquifers; starting joint action on adaptation to climate change and disaster risk reduction in transboundary basins; jointly exploring new sources of financing to address the lack of resources for transboundary water cooperation in specific basins; and elaborating joint communication and stakeholder involvement strategies. Parties could also propose new work areas for future programmes of work, if stronger support is needed for issues that have received less focus in the current work programme (e.g., human health).

Last but not least, Parties may also consider approaching the Implementation Committee under the Water Convention for assistance in implementation and application of the Convention. Among other mechanisms, the Committee is equipped with a unique advisory procedure that enables a Party, or Parties jointly, to request advice from the Committee about their individual or joint efforts to implement or apply the Convention vis-à-vis each other, other Parties and non-Parties. The procedure is facilitative and oriented towards finding effective and sustainable solutions and has already been applied in a successful manner.

In addition, the Implementation Committee is specifically mandated to provide assistance in establishing transboundary water cooperation agreements and arrangements on transboundary waters, to facilitate technical and financial assistance, including information and technology transfer, and capacity-building, and to provide assistance to countries in seeking support from specialized agencies and other competent bodies. The Implementation Committee could therefore be of assistance to Parties in addressing the challenges they face in implementing the Convention identified in the present report.

Recommendations for partners

Partners play an increasingly important role in fostering a stronger awareness about and implementation of the Convention, especially in the light of its globalization. More and more partners promote and apply the tools, good practices and methodologies developed under the Convention across the globe.

The outcomes of the second reporting exercise offer valuable insights to existing and prospective partners of the Convention. Partners can use the second progress report to identify areas where they are best placed to provide assistance, expertise and other support. For example, the outcomes of the second reporting exercise help partners to identify:

- Transboundary basins where assistance is needed to conclude transboundary water agreements, set up joint bodies for transboundary water cooperation, establish data and information exchange, carry out joint monitoring and assessment or develop strategies on adaptation to climate change;


226 For more details, see the report of the Implementation Committee to the Meeting of the Parties (ECE/MP.WAT/2021/5), which contains a summary of an advisory procedure carried out for Montenegro and Albania (chap. II).
• Countries where assistance is needed to strengthen national laws and policies and enhance capacities for transboundary water cooperation and integrated water resources management.

Besides the provision of support for basin- or country-specific activities, partners can contribute to the activities under the Convention (e.g., development of studies and new guidance documents or exchange of experience) in the areas which represent challenges for transboundary water cooperation indicated in the present report. Among others, such areas include: identification, delineation and joint management of transboundary aquifers and the conjunctive management of surface waters and groundwaters; funding and financing of transboundary water cooperation; support for cooperation on human health in transboundary basins; and support for protection of the marine environment influenced by transboundary waters, for example through the application of the source-to-sea approach.

**Recommendations on reporting**

While the timeliness of the submission of national reports by the Parties has improved in the second reporting round, an earlier deadline and timely submission of reports by all Parties in the next reporting rounds would facilitate data analysis and make it possible to use the results of reporting in the development of the programme of work under the Water Convention for the following triennium.

While many Parties have made efforts to coordinate their replies with other riparian States and in the framework of joint bodies for transboundary water cooperation, in the next reporting rounds it would be beneficial for all Parties to enter into a dialogue with their riparian neighbours with a view to developing or improving a shared understanding concerning their transboundary basins and the status of implementation of existing cooperative arrangements.

Coordination of the responses on transboundary aquifers is particularly important, as it would facilitate data analysis with regard to the state of such cooperation and could prompt stronger cooperation on transboundary groundwater.

Dedicated efforts could be applied by the Parties to involve non-State actors in the preparation of their national reports in the following reporting rounds. Such efforts would contribute to the accountability and transparency of governmental activities and could also facilitate the involvement of the public and other stakeholders in water management and transboundary water cooperation.

Parties could also make stronger use of the *Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2* as a methodological tool to facilitate the preparation of reports in the next reporting rounds, especially where there have been changes in national administrations and the focal points responsible for the preparation of national reports. In turn, transfer to an electronic reporting format in the next reporting rounds would facilitate the completion of reports and save time and resources in the preparation of reports and their analysis.

Finally, Parties could make stronger efforts to incorporate a gender perspective in their reporting processes by ensuring the equal participation of women and men in this area of work and by integrating gender-related information and analysis in their reports on the basis of the guidance included in the *Guide to reporting under the Water Convention and as a contribution to SDG indicator 6.5.2*. Further strengthening of the reporting template through dedicated questions could be considered in this respect in the future. The programme of work under the Convention envisages the provision of support to the Parties in carrying out gender mainstreaming in transboundary water cooperation.
ANNEXES

Annex I – Parties that submitted national reports and their date of submission
Annex II – Reported transboundary river and lake basins and sub-basins
Annex III – Reported agreements and arrangements
Annex IV – Reporting template
The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), hosted by the United Nations Economic Commission for Europe (ECE), requires Parties to prevent, control and reduce transboundary impact, use transboundary waters in a reasonable and equitable way and cooperate to ensure their sustainable management. Parties bordering the same transboundary waters have to cooperate by entering into specific agreements and establishing joint bodies. As a framework agreement, the Convention does not replace bilateral and multilateral agreements for specific basins or aquifers; instead, it fosters their establishment and implementation, as well as their further development.

In 2003, the Water Convention was amended to allow accession by countries outside the UNECE region. As of 2016, all United Nations Member States can accede to the Convention. Today, the membership of the Water Convention is steadily growing, reconfirming its role as a legal framework for transboundary water cooperation worldwide and transforming its intergovernmental platform into a major forum for international debate on transboundary cooperation, peace and sustainable development.

Another important step in the evolution of the Water Convention was the decision taken by the Parties in 2015 to introduce a reporting mechanism in order to monitor and assess progress in the implementation of the Convention. The outcomes of the second reporting exercise, which took place in 2020–2021, are presented in this synthesis report. The report details the significant results achieved by the Parties to the Convention in implementing transboundary water cooperation but also identifies gaps and problematic areas in implementation and provides recommendations to Parties and international partners on possible actions to improve integrated water resources management and transboundary cooperation. The report aims to strengthen the understanding of the requirements of the Convention and to contribute to its effective implementation and to improved transboundary water cooperation worldwide.