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Can reporting enhance transboundary water cooperation? Early insights from the Water Convention and the Sustainable Development Goals reporting exercise

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Abstract

A notable milestone in transboundary water cooperation has been the incorporation of reporting both under the Sustainable Development Goals (SDGs) framework and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Much can be gained from reviewing the initial reporting exercise, which took place in 2017 and 2018. The first reporting exercise has demonstrated that, while progress has been made in the last decades, the need to strengthen cooperation over transboundary rivers, lakes and aquifers is clearly evident. Additionally, the experience of the first reporting exercise suggests that, although some adjustments might be made, reporting can play a valuable role in advancing transboundary water cooperation in the years to come.

1 | INTRODUCTION

International law concerning transboundary rivers, lakes and aquifers has experienced significant developments in recent years.¹ Arguably the most significant of these developments has been the entry into force of the Convention on the Law of the Non-navigational Uses of International Watercourses (Watercourses Convention),² and the opening of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes

(Water Convention) to all United Nations (UN) member States – which became effective as of March 2016.³

A further notable milestone has been the incorporation of transboundary water cooperation into the Sustainable Development Goals (SDGs).⁴ Through the 2030 Agenda for Sustainable Development, countries have committed to achieve 17 interrelated goals, which include ensuring the availability and sustainable management of water and sanitation for all by 2030.⁵ What is most significant from a transboundary waters perspective is that the SDGs mark the strongest political commitment at the global level of the importance of transboundary water cooperation. In accordance with SDG target 6.5, countries have collectively called upon each other

¹See, e.g., SC McCaffrey, 'International Water Cooperation in the 21st Century: Recent Developments in the Law of International Watercourses' (2014) 23 *Review of European, Comparative and International Environmental Law* 4; P Wouters, 'International Law of Watercourses: New Dimensions' (2010) 3 *Collected Courses of the Xiamen Academy of International Law* 347.

²Convention on the Law of the Non-navigational Uses of International Watercourses (adopted 21 May 1997, entered into force 17 August 2014) (1997) 36 ILM 700 (Watercourses Convention).

³Convention on the Protection and Use of Transboundary Watercourses and International Lakes (adopted 17 March 1992, entered into force 6 October 1996) 1936 UNTS 269 (Water Convention).

⁴UNGA 'Transforming Our World: The 2030 Agenda for Sustainable Development' UN Doc A/RES 70/1 (25 September 2015).

⁵*Ibid.*

to, 'implement integrated water resources management at all levels, including through transboundary cooperation as appropriate'.⁶

While the aforementioned milestones are significant in themselves, an additional and more 'technical' development is that both the SDGs and the Water Convention have introduced reporting mechanisms. These reporting mechanisms have the simple, but potentially highly effective purpose of systematically reviewing progress both in the adoption and implementation of cooperative arrangements for transboundary waters. With more than 150 countries sharing over 260 transboundary river and lake basins, and over 300 transboundary aquifers, the need to have such arrangements in place is clear. Particularly, given growing pressures on finite water resources, due to *inter alia* climate change, ecosystem degradation and biodiversity loss, unsustainable consumption patterns and population increase, operational arrangements have an important role to play in reconciling competing interests and generating multiple benefits for all riparians – both States and their citizens alike.⁷ It is therefore perhaps surprising that until the advent of reporting under the SDGs and the Water Convention, there was no systematic means by which countries could report on their progress in both the adoption and implementation of their transboundary water arrangements. This raises the question whether the adoption of such a mechanism under the SDGs and Water Convention will indeed have that desired effect, and advance transboundary water cooperation globally? In seeking to respond to that question, the aim of this article is to consider the development of the reporting mechanism under the SDGs and Water Convention, both in terms of their design and initial implementation.

The article first examines the rationale for reporting mechanisms. This is followed by an analysis of the origins of both reporting under the Water Convention and SDG indicator 6.5.2. In light of the first reporting exercise, which took place in 2017–2018, the article then identifies lessons learned from that exercise. Prior to the conclusion, the article examines how the outcomes of the reporting process can support transboundary water cooperation, both in terms of the results of the first reporting exercise and in the longer term. Ultimately, the article concludes by finding that both mechanisms offer great potential to support countries, international organizations and others in advancing transboundary water cooperation in a focused, systematic, collaborative, transparent and effective manner.

2 | WHY REPORT?

The managerial approach to compliance with international regulatory agreements, as advanced by Chayes and Chayes, maintains that traditional rules of State responsibility are not well suited to environmental problems.⁸ The rationale behind this argument is that wrong-

fulness in relation to environmental problems is not easy to detect because responsibility arises after a breach, whereas prevention is the best remedy. Additionally, the norms concerning environmental protection, such as due diligence or equity, are not easy to discern, making it difficult to assess any breach.⁹

Scholars have therefore maintained that compliance with international regulatory agreements is best secured not through traditional enforcement mechanisms, but rather through methods such as reporting, which has the potential to enhance the legitimacy of international regulatory regimes.¹⁰ Brown Weiss and Jacobson, for example, promote 'sunshine methods' as critical to fostering compliance.¹¹ These methods, according to the authors, are intended to bring the behaviour of parties and targeted actors into the open for appropriate scrutiny.¹² Transparency – namely, 'the generation and dissemination of information about the requirements of the regime and the Parties' performance under it' – is therefore seen as an important means by which to foster compliance with international treaty commitments.¹³ Coupled with the recognition of the importance of transparency is the central role of persuasion in international law, which as Koskenniemi maintains is, 'instead of enforcement ... the appropriate cure to the malady of non-compliance'.¹⁴

Reporting is at the heart of any bid to promote transparency in relation to treaty compliance. Brunnée observes that reporting not only enhances transparency but also, 'trust as to Parties' performance, an effect that is reinforced by the publication of reports among Parties or their release to the general public'.¹⁵ Other benefits of reporting include strengthening the understanding of treaty commitments and allowing for the exchange of information, good practices and experiences.¹⁶

The value of reporting, and self-reporting by States in particular, has meant that it has become 'the method of choice in most regimes',¹⁷ with 'most environmental conventions providing for contracting Parties to transmit regularly to the Secretariat information

⁶J Klubbers, 'Compliance Procedures' in D Bodansky, J Brunnée and E Hey (eds), *The Oxford Handbook of International Environmental Law* (Oxford University Press 2007) 995.

⁷T Franck, 'Legitimacy in the International Legal System' (1988) 82 *American Journal of International Law* 705; J Brunnée and SJ Toope, *Legitimacy and Legality in International Law* (Cambridge University Press 2010).

⁸E Brown Weiss and HK Jacobson, *Engaging Countries: Strengthening Compliance with International Environmental Accords* (MIT Press 2000) 543.

⁹ibid.

¹⁰JH Knox, 'A New Approach to Compliance with International Environmental Law: The Submissions Procedure of the NAFTA Environmental Commission' (2001) 28 *Ecology Law Quarterly* 1, 23.

¹¹M Koskenniemi, 'New Institutions and Procedures for Implementation Control and Reaction' in J Werksman (ed), *Greening International Institutions* (Earthscan 1996) 236, 237.

¹²J Brunnée, 'Compliance Control' in G Ulfstein (ed), *Making Treaties Work: Human Rights, Environment and Arms Control* (Cambridge University Press 2007) 373, 374.

¹³UN Economic Commission for Europe (UNECE) 'Draft Analysis on the Needs for Reporting under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes' UN Doc ECE/MRWAT/WG.1/2014/3 (16 April 2014).

¹⁴Chayes and Chayes (n 8) 23.

⁶ibid 18 (emphasis added).

⁷UN-Water, 'Transboundary Waters: Sharing Benefits, Sharing Responsibilities' (2008) 5.

⁸A Chayes and AH Chayes, *The New Sovereignty – Compliance with International Regulatory Agreements* (Harvard University Press 1995) 22–28.

on the measures adopted by them in the implementation of the convention to which they are Parties'.¹⁸

3 | ORIGINS OF REPORTING

3.1 | Water Convention

Reporting under the Water Convention was introduced by a decision taken at the seventh session of the Meeting of the Parties in Budapest in 2015.¹⁹ At the time it was decided to run a pilot reporting exercise in 2016–2017 to test the template or questionnaire used for reporting.²⁰ The deadline for parties to submit their national reports was set for 30 June 2017, which would allow sufficient time to analyse the reports prior to the eighth session of the Meeting of the Parties in October 2018.²¹

The structure of the template for reporting adopted by the parties in 2015 closely mirrored the commitments contained within the Water Convention. The first section asked three questions related to the national laws, policies, plans and strategies in place at the national level that support transboundary water management, including the existence of national licensing and permitting systems, as well as other procedures for monitoring and controlling pollution; procedures for transboundary environmental impact assessment (EIA); and the transboundary agreements or arrangements that the country has entered into at the bilateral, multilateral and basin level.²² This section aligned closely to the Water Convention, which calls upon parties to, 'take all appropriate measures to prevent, control and reduce any transboundary impact'.²³ These questions also align to some of the provisions of the Watercourses Convention, such as the requirements to '*individually* and, where appropriate jointly, prevent, reduce and control the pollution of an international watercourse'.²⁴

The second section of the template requires parties to report on the transboundary rivers, lakes and aquifers that they share and any agreements or arrangements that relate to them.²⁵ Parties are also required to report on the joint bodies that are in place to support the implementation of these agreements or arrangements.²⁶ In addition, parties are required to report on the content of any agreement or arrangement, the tasks and activities of any joint body, and progress in their implementation. In relation to the latter requirement, parties

are therefore asked whether they have established joint or coordinated management plans; implemented measures to protect the ecosystems of their transboundary waters; exchanged data and information; conducted joint monitoring and assessment; established joint water quality standards; implemented measures related to accidental pollution, extreme events and mutual assistance; and involved stakeholders in the management of the river, lake or aquifer in question.²⁷ These questions align closely with part II of the Water Convention, which sets out a series of provisions to be implemented by riparian parties.²⁸ Many of the questions in section II also align well with the provisions of the Watercourses Convention, including those concerning watercourse agreements (Articles 3 and 4); the establishment of joint commissions (Articles 8(2) and 24); the regular exchange of data and information (Article 9); notification and consultation on planned measures (Articles 12–19); the protection and preservation of ecosystems (Article 20); the setting of joint water quality objectives and criteria (Article 21(3)); and the prevention and mitigation of harmful conditions and emergency situations (Articles 27–28).

The third and final section of the reporting template contains questions that allow parties to highlight the key challenges and achievements in implementing the Water Convention, as well as provide information on who has completed the template and how.

3.2 | SDG indicator 6.5.2

Following the adoption of Agenda 2030, the UN Statistical Commission took on the task of developing a series of indicators that could be used to monitor progress towards Sustainable Development and the achievement of the 17 SDGs and 163 associated targets. At its 46th session the UN Statistical Commission discussed a preliminary set of indicators; offered a roadmap for their development; and proposed that the process be coordinated by the Inter-Agency and Expert Group on the Sustainable Development Goals (IAEG-SDG).²⁹ In contrast to the aspirational and consultative open working group responsible for the development of the SDGs, the IAEG in their choice and design of indicators was much more concerned with the cost and feasibility of data gathering.³⁰ The IAEG-SDG introduced criteria that required each indicator to be, 'methodologically sound, measurable, accessible, relevant, timely, [and] internationally comparable'.³¹

While the original set of indicators did not include an indicator on transboundary water cooperation, a proposal from the UN

¹⁸UN Environment Programme (UNEP), 'UNEP Training Manual on International Environmental Law' (UNEP 2006) <<https://wedocs.unep.org/handle/20.500.11822/20599>>.

¹⁹UNECE 'Decision VII/2, Reporting under the Convention' UN Doc ECE/MP.WAT/49/Add.2 (7 July 2016).

²⁰ibid.

²¹ibid.

²²ibid 4–5.

²³Water Convention (n 3) art 2. The type of appropriate measures to be adopted is further elaborated upon in *ibid* art 3.

²⁴Watercourses Convention (n 2) art 22 (emphasis added).

²⁵Decision VII/2 (n 19) 7–14.

²⁶ibid 9–11.

²⁷ibid 9–14.

²⁸Water Convention (n 3) arts 9–16.

²⁹UN Statistical Commission 'Report on the Forty-sixth Session (3–6 March 2015)' UN Doc E/2015/24-E/CN.3/2015/40 (2015) 11–15.

³⁰M Elder and SH Olsen, 'The Design of Environmental Priorities in the SDGs' (2019) 10 Global Policy 70.

³¹UN Statistical Commission, 'Expert Group Meeting on the Indicator Framework for the Post-2015 Development Agenda UNHQ, New York, 25–26 February 2015' <<https://unstats.un.org/unsd/statcom/doc15/BG-EGM-SDG-summary1.pdf>>.

Economic Commission for Europe (UNECE), with the support of several IAEG-SDG members, was submitted to the second IAEG-SDG meeting in Bangkok, 26–28 October 2016. The proposal, which sought to measure the proportion of a transboundary basin area covered by an operational arrangement, was received favourably.³² The indicator was considered ‘a significant increase in the aspiration regarding water management compared to previous international commitments’.³³ Following the outcomes of the second IAEG-SDG meeting, UN-Water, which took responsibility for overall coordination of all water-related SDGs, agreed to develop the methodology in support of an indicator on transboundary water cooperation. This task was delegated to UNECE and UNESCO as co-chairs of the UN-Water Expert Group on Transboundary Waters, with these agencies ultimately becoming ‘custodian agencies’ for the indicator.³⁴ A working group was convened and wider consultations amongst UN-Water and other experts conducted. The methodology was also tested in five pilot countries (Jordan, the Netherlands, Peru, Senegal and Uganda) before a final version was published in January 2017.³⁵

A key challenge in the design of the indicator was to produce something that was meaningful, whilst also being relatively straightforward for countries to calculate. These considerations, as well as the criteria set forth by the IAEG-SDGs (as mentioned above), led UN-Water to develop simple criteria for the indicator. First, transboundary waters were interpreted broadly to include rivers, lakes and aquifers shared between States.³⁶ Second, ‘arrangement’ was defined in a broad sense to encompass any formal arrangements between riparian countries that provide a framework for cooperation on transboundary water management.³⁷ Third, four key considerations determined whether such arrangements might be considered ‘operational’. In line with the requirements under the Water Convention (Article 9) and encouraged under the Watercourses Convention (Articles 8 and 24), for an arrangement to be operational a joint institutional body must be in place and meetings must take place between the parties at least once a year. Also, in line with both global water conventions, countries must exchange data and

information at least once per year for an arrangement to be considered operational.³⁸ Finally, and also in line with both water conventions, for an arrangement to be operational there must be evidence that ‘joint or co-ordinated management plan(s), or joint objectives’ have been made.³⁹

SDG indicator 6.5.2 therefore falls short of measuring the quality or outcome of transboundary water cooperation. Complementary approaches to measuring transboundary water cooperation are available but were considered too complex to apply within the SDG indicator framework.⁴⁰ It should also be noted that SDG indicator 6.5.2 is complemented by indicator 6.5.1, which measures the degree of integrated water resources management implementation within a country, and includes several questions related to the transboundary level.⁴¹ Insights from the initial reporting exercise for 6.5.1 and 6.5.2 have suggested that, especially where the government experts or departments responsible for reporting on both indicators are not the same, opportunities exist to improve coordination at the national level.⁴² Additionally, the results of SDG indicator 6.5.2 can also be analysed together with more outcome-oriented SDG indicators, such as those concerning water quality, water stress or water-related ecosystems.

Initially, SDG indicator 6.5.2 was classified by IAEG-SDG as a tier III indicator.⁴³ Tier III indicators are those that have no internationally established methodology or standards but the methodology is being developed or tested.⁴⁴ SDG indicator 6.5.2 was later upgraded to Tier II classification at the fifth IAEG-SDG meeting in March 2018, and then to a Tier I classification in November 2018.⁴⁵ Tier I indicators are classified as being, ‘conceptually clear’, ‘an internationally established methodology and standards are available’ and ‘data are regularly produced by countries for at least 50 per cent of countries and of the population of every region where the indicator is relevant’.⁴⁶ In a short period of time SDG indicator 6.5.2 has therefore become well established within the SDG monitoring framework. This is largely due to the success of the first reporting exercise, which will be discussed in the next section.

³²UN-Water, ‘UN-Water Statement to the 2nd IAEG-SDG meeting in Bangkok, 26–28 October 2015’ <https://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-02/Statements/UNSSO%20statement_Goal%206%20-%20Oct%202015.pdf>.

³³ibid.

³⁴Custodian agencies are main UN agencies (or in some cases other international organizations) that have the responsibility of compiling and verifying country data and submitting that data to the UN Statistics Division. The agencies are also responsible for developing international standards and methodologies for each indicator to ensure that country data is internationally comparable. See generally, UN-Water, ‘Roles and Responsibilities SDG Monitoring and Reporting’ <<https://www.sdg6monitoring.org/activities/roles-and-responsibilities>>.

³⁵UN-Water, ‘Step-by-Step Monitoring Methodology for 6.5.2 on Transboundary Water Cooperation’ (11 January 2017) <<https://www.sdg6monitoring.org/indicators/target-65/indicators652>>.

³⁶ibid. The ‘basin area’ of an aquifer is calculated as the delineation of the extent of the hydraulically connected water-bearing geological formations.

³⁷Such arrangements might include a bilateral or treaty, convention or memorandum of understanding, see UNECE and UNESCO ‘Progress on Transboundary Water Cooperation: Global Baseline for SDG indicator 6.5.2’ UN Doc ECE/MP.WAT/57 (2018) 44.

³⁸See Watercourses Convention (n 2) art 9; Water Convention (n 3) arts 6 and 13.

³⁹UN-Water (n 32) 3. See, e.g., Water Convention (n 3) art 3(3); and Watercourses Convention (n 2) arts 21 and 24.

⁴⁰See, e.g., Strategic Foresight Group, ‘Water Cooperation Quotient’ <https://www.strategicforesight.com/publication_pdf/28799WCQ-web.pdf>.

⁴¹UNEP, ‘Progress on Integrated Water Resources Management 2018’ (UNEP 2018) <<https://www.unwater.org/publications/progress-on-integrated-water-resources-management-651>>. See also M Bertule et al, ‘Monitoring Water Resources Governance Progress Globally: Experiences from Monitoring SDG Indicator 6.5.1 on Integrated Water Resources Management Implementation’ (2018) 10 Water 1744.

⁴²Bertule et al (n 41).

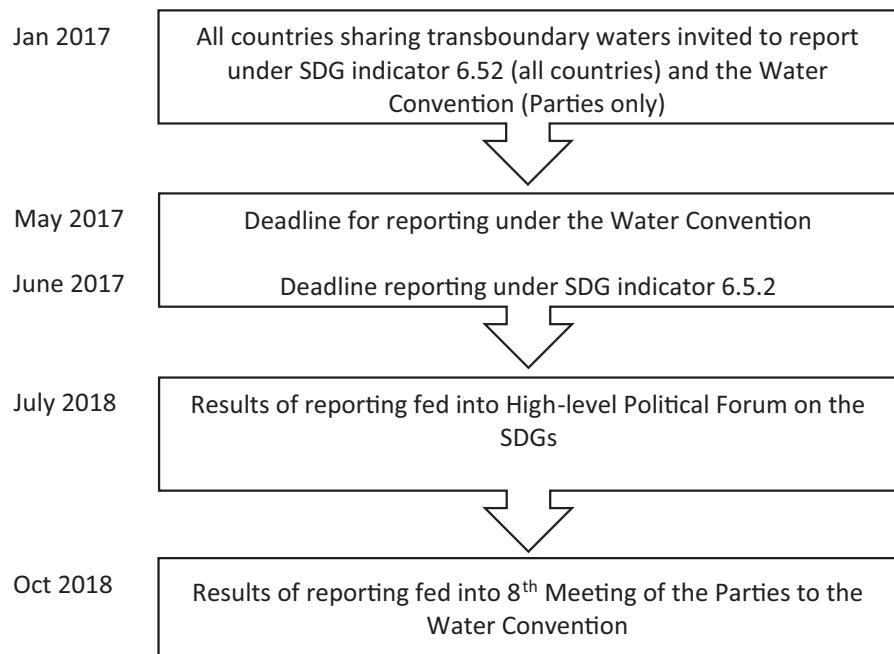
⁴³IAEG-SDGs, ‘Tier Classification for Global SDG Indicators’ (11 December 2019) <<https://unstats.un.org/sdgs/files/Tier-Classification-of-SDG-Indicators-11-December-2019-web.pdf>> 17.

⁴⁴ibid.

⁴⁵ibid.

⁴⁶ibid.

FIGURE 1 The 2017 reporting process: key milestones and timeline



4 | THE REPORTING PROCESS

Early on in the reporting process it became evident that, while separate processes, there were close parallels between reporting under the Water Convention and reporting under SDG indicator 6.5.2. For instance, many of the questions that were asked in section II of the reporting template for the Water Convention, such as what rivers, lakes and aquifers a country shares, whether an arrangement and/or joint body is in place, and whether a country exchanges data or information, also were relevant for determining the SDG indicator 6.5.2 calculation, and more specifically whether an arrangement was operational based on the aforementioned criteria.

It was therefore decided by the custodian agencies to align the two processes. This was effectively achieved by using a similar reporting template to report under SDG indicator 6.5.2 and the Water Convention. In January 2017, all 153 countries sharing transboundary waters were invited by the custodian agencies to report under SDG indicator 6.5.2, and 42 riparian parties were at the same time invited to report under the Water Convention (see Figure 1). A total of 107 countries responded to this invitation and reported under SDG indicator 6.5.2; while 40 out of 42 parties to the Water Convention reported. The response to the first reporting exercise was therefore significant and bodes well for the future of the reporting process, especially given that those countries that submitted reports will be able to build upon that submission in subsequent reporting cycles.

A number of challenges and lessons learned were also identified as a result of the reporting process. One challenge was to ensure that countries submitted their reports in a timely manner. The deadline for reporting under the Water Convention was set at 15 May 2017; while reporting under SDG indicator 6.5.2 was 15 June 2017. As of 15 June 2017, only around 20 reports had been submitted,

thus showing that the majority of reports were submitted past the deadline, and in some cases over a year later.⁴⁷ The submission of late reports posed challenges for the analysis of the reports, and ensuring that data and its analyses were submitted to the UN Statistical Commission for the annual review of progress on SDGs, as well as the High-level Political Forum on the SDGs (July 2018), and the Meeting of the Parties to the Water Convention (October 2018) in a timely manner.

Another challenge related to the timeliness of reporting concerned the need for the custodian agencies to seek clarifications on many of the reports submitted by countries. Once a national report was submitted, the custodian agencies carried out a number of checks.⁴⁸ First, the SDG indicator 6.5.2 calculation was checked. Second, the agencies checked whether there were consistencies in the answers given in the reporting template, and the arrangements claimed to be operational based on the SDG indicator calculation. Third, where a country identified an aquifer as falling within the scope of a transboundary basin arrangement, the custodian agencies checked if the aquifer was fully encompassed within the basin area. Lastly, to verify that the report was official, the agencies checked that it had been signed by a country representative. While the agencies went back to countries requesting clarifications, this proved to be a time-consuming endeavour, and they were only able to secure clarifications from 62 countries. During the initial exercise, the SDG indicator 6.5.2 is therefore only available for 62 of the 107 reports that were submitted.

A particular challenge in seeking clarifications and calculating the SDG indicator value related to aquifers. It was only possible to provide the full indicator value concerning the aquifer component for

⁴⁷ UNECE 'Reporting under the Convention and on Sustainable Development Goal indicator 6.5.2' UN Doc ECE/MR.WAT/WG.1/2017/3 (28 June 2017).

⁴⁸ UNECE and UNESCO (n 37) 23.

64 countries, whereas it was possible to calculate the full river and lake basin value for 87 river and lake basins. The most cited reason for this was that data on aquifers proved to be missing, or not sufficient to calculate the indicator.⁴⁹ However, it should also be recognized that a significant effort has been undertaken in recent years to map the extent of transboundary aquifers globally.⁵⁰ More effort might therefore be needed to ensure that this knowledge is validated at the national level, and/or made available to those experts completing the reporting template.

A further challenge relates to geographic representation. In relation to the Water Convention, almost full coverage among riparian parties across Europe, Central Asia and the Caucasus was achieved.⁵¹ While not formally linked, a large majority of the parties to the Watercourses Convention also submitted national reports on SDG indicator 6.5.2.⁵² High levels of reporting were also evident in several SDG regions.⁵³ For instance, in Europe and North America national reports were submitted for 40 out of 43 countries (93 percent) that share transboundary waters.⁵⁴ High levels of reporting were also evident in sub-Saharan Africa, with only nine countries failing to report out of a total of 41 countries sharing transboundary waters. In other regions, the need to encourage more countries to report is evident.⁵⁵ For instance, in Latin America and the Caribbean only 13 out of a total of 22 (59 percent) countries sharing transboundary waters reported; similarly in North Africa and Western Asia only 57 percent of countries sharing transboundary waters reported; and in Central, Eastern, Southern and South-Eastern Asia only 41 percent of countries sharing transboundary waters reported.⁵⁶

While the process of reporting proved time-consuming, several countries highlighted the beneficial features of the process.⁵⁷ Completing the reporting template, both under the Water Convention and SDG indicator 6.5.2, was recognized as a useful means by which to evaluate the status of transboundary water arrangements at the national level.⁵⁸ Such an evaluation involved

⁴⁹ibid 24.

⁵⁰International Groundwater Resources Assessment Centre, 'Transboundary Aquifers of the World' <https://www.un-igrac.org/sites/default/files/resources/files/TBAmap_2015.pdf>.

⁵¹Only Denmark and Lichtenstein did not report under the Water Convention. Chad and Senegal became parties to the Water Convention after the first reporting exercise.

⁵²Out of the 36 parties to the Watercourses Convention, only six countries (Denmark, Guinea-Bissau, Lebanon, Libya, Palestine and Syria) did not submit national reports. See UNECE and UNESCO (n 37) Annex I.

⁵³The SDG framework adopts the following regional groupings: Australia and New Zealand; Central and Southern Asia; Eastern and South-Eastern Asia; Europe and North America; Latin America and the Caribbean; Northern Africa and Western Asia; Oceania and sub-Saharan Africa; see <<https://unstats.un.org/sdgs/report/2019/regional-groups>>.

⁵⁴UNECE and UNESCO (n 37) 39.

⁵⁵ibid.

⁵⁶ibid.

⁵⁷UNECE, 'Overview of Comments Received on the Template for Reporting under SDG Indicator 6.5.2 and the Water Convention' (16–17 January 2018) <https://www.unece.org/fileadmin/DAM/env/documents/2018/WAT/01Jan_16-17_Budapest/Inf4_Comments_template.pdf> 1–2.

⁵⁸ibid.

reviewing the level of implementation of existing arrangements and identifying where new arrangements might need to be adopted. In some instances, this process had the additional benefit of engaging a wide range of stakeholders within national government that may not ordinarily be involved in transboundary water issues. Some countries also recognized similar benefits at the transboundary level in that completion of the reporting template was done in a collaborative manner with neighbouring riparian countries and, where appropriate, any joint institutional arrangements that might be in place.⁵⁹

While many countries therefore recognized the benefits of the reporting process at both national and transboundary levels, several areas for improvement were identified. For instance, it was highlighted by several countries that the template was very long and some questions appeared repetitive. Although countries were reluctant to make major changes to the template, as this would essentially require completing a different report in subsequent exercises, it was felt that several questions could be simplified or removed.⁶⁰ Additional suggestions aimed at simplifying the reporting template, included ensuring consistency among the key terms used within the template, such as transboundary basin, cooperative arrangement and joint body; and to avoid too many open questions, and instead use 'tick box' responses to allow for better comparison between reports.⁶¹ As discussed further below, this feedback offers important guidance on how reporting might develop.

5 | RESULTS AND THE WAY FORWARD

5.1 | Results of SDG indicator 6.5.2 reporting

While much can be learned from the reporting process during the initial exercise, a number of important insights can also be derived from an analysis of the national reports. However, at the outset it should be recognized that these findings should be considered in light of two important qualifications. First, as noted above, not all countries sharing transboundary waters submitted national reports and the number of reports where it was possible to calculate the SDG indicator value was even more limited. Second, the number of national reports across several regions, particularly across Asia, were limited.

Irrespective of these limitations, the results of the first reporting exercise demonstrate that a significant effort is needed to ensure that transboundary rivers, lakes and aquifers are covered by cooperative arrangements. Out of the 62 countries where it was possible to calculate the indicator, only 17 countries have all their transboundary rivers, lakes and aquifers covered by operational arrangements, and 12 countries reported that they have no operational

⁵⁹ibid.

⁶⁰ibid 3.

⁶¹ibid.

arrangements in place.⁶² Earlier analysis undertaken as part of the Transboundary Water Assessment Programme suggested that of the 91 countries where it is not possible to calculate the SDG 6.5.2 indicator value, 50 have no specific legal framework in place for the 148 transboundary river basins that they share.⁶³

Broken down into SDG regions, North America and Europe has the highest coverage of operational arrangements in place for those countries that were able to report the SDG indicator value, with over 80 percent of transboundary basins covered.⁶⁴

Operational arrangements for transboundary river and lake basins in sub-Saharan Africa also proved to be relatively high. Out of 27 countries in sub-Saharan Africa that reported a value for river and lake basins, 10 reported having operational arrangements in place for all their basins; and 20 countries reported an indicator value of at least 50 percent.⁶⁵ As noted below, transboundary aquifers in sub-Saharan Africa are less well covered by operational arrangements, with only three countries reporting that all their transboundary aquifers were fully covered.⁶⁶

In Latin America and the Caribbean, ascertaining regional trends from the first reporting exercise is problematic given that the SDG indicator value is only available for nine out of the 22 countries sharing transboundary waters. From this limited set of reports, only Ecuador reported that all their basins are covered by operational arrangements, while Brazil and Paraguay reported that 67 and 51 percent, respectively, of their basins were covered.⁶⁷

For the region of Northern Africa and Western Asia, ascertaining regional trends is also problematic given that only 12 of the 21 countries sharing transboundary waters reported. Only one of these countries has operational arrangements in place for all of its transboundary waters, whereas low levels – that is, below 30 percent – are reported for the other countries where it is possible to calculate the SDG indicator value.⁶⁸

A similar story can be seen in the SDG regions of Central and Southern Asia, and Eastern and South-Eastern Asia. Only nine of the 24 countries sharing transboundary waters in these regions reported on their operational arrangements, making it difficult to draw any general conclusions. Out of the reports submitted, no country reported having all their transboundary waters covered by operational arrangements.⁶⁹

Given that not all countries reported and even where countries reported it was not possible to present an SDG indicator value for some, the results of reporting must therefore be qualified. However, as noted above, the results clearly show that more effort is needed to ensure that operational arrangements for transboundary water

cooperation are in place. Another important finding relates to aquifers. The reporting exercise demonstrated that there is a lack of knowledge pertaining to the physical characteristics of transboundary aquifers, and a limited number of aquifer arrangements are in place.⁷⁰ Most of these arrangements are found in Europe and are combined arrangements covering both river and lake basins and connected groundwater.⁷¹

A further important finding from the first reporting exercise is the diversity evident in the types of arrangements and joint institutional bodies that countries have entered into. As noted previously, the Watercourses Convention (Article 3) and the Water Convention (Article 9) both recognize the importance of having arrangements in place to foster transboundary water cooperation. However, both instruments say very little about the form that such an arrangement should take. For instance, the Watercourses Convention simply provides that, 'Watercourse States may enter into one or more agreements, hereinafter referred to as "watercourse agreements", which apply and adjust the provisions of the present Convention to the characteristics and uses of a particular international watercourse or part thereof.'⁷² The Water Convention calls upon riparian parties to, 'enter bilateral or multilateral agreements or other arrangements, where these do not yet exist, or adapt existing ones, where necessary to eliminate the contradictions with the basic principles of this Convention'.⁷³ Additional detail is provided in the Guide to Implementing the Water Convention, which suggests that 'an agreement or other arrangements' refers to 'formal agreements falling under the scope of the 1969 Vienna Convention on the Law of Treaties' and 'less formal types of agreements as well as other forms of cooperation and mutual understandings between the Riparian Parties'.⁷⁴

The national reports demonstrate the diversity of the types of arrangements that countries have entered into, which include framework conventions, bilateral treaties, protocols, memoranda of understanding, joint declarations, exchange of letters and minutes.⁷⁵ In some instances not only States have entered into such arrangements but also subnational entities. For example, Belgium, France, the Netherlands and the Walloon, Flemish and Brussels regions of Belgium are parties to the 2002 Agreement on the River Scheldt;⁷⁶ and the Republic and Canton of Geneva and regions of Annemasse, Genevois and Vivry are parties to the 2007 Arrangement on the Protection and Recharge of the Franco-Swiss Genevois Aquifer Agreement.⁷⁷

⁶²UNECE and UNESCO (n 37) 26.

⁶³UNEP and Global Environment Facility, 'Transboundary Waters Assessment Programme' <<http://twap-rivers.org>>.

⁶⁴UNECE and UNESCO (n 37) 38-39.

⁶⁵ibid 36-37.

⁶⁶ibid 38.

⁶⁷ibid 40.

⁶⁸ibid 35.

⁶⁹ibid.

⁷⁰ibid 31.

⁷¹ibid.

⁷²Watercourses Convention (n 2) art 3(3).

⁷³Water Convention (n 3) art 9(1).

⁷⁴UNECE 'Guide to Implementing the Water Convention' UN Doc ECE/MP.WAT/39 (2013) <<https://www.unece.org/index.php?id=33657>> 64.

⁷⁵UNECE and UNESCO (n 37) 44.

⁷⁶International Agreement on the River Scheldt (adopted 3 December 2002) <<https://iea.uoregon.edu/treaty-text/1994-protectionscheldtentxt>>.

⁷⁷Convention on the Protection, Utilisation, Recharge and Monitoring of the Franco-Swiss Genevois Aquifer (adopted 18 December 2007, entered into force 1 January 2008) <<https://www.internationalwaterlaw.org/documents/regionaldocs/2008Franco-Swiss-Aquifer-English.pdf>>.

The level of diversity found in the adoption of agreements and other arrangements can also be found in relation to joint institutional arrangements. While the most common institutional model would appear to be the basin or bilateral commission, countries have also entered into other types of arrangements, such as establishing regular meetings between experts from the riparian countries that share a particular river, lake or aquifer.⁷⁸ An additional point to note is that often these institutional bodies develop subsidiary bodies that take on a range of topics, including flooding, water protection, hydrogeology and groundwater, hydrology, water quality, navigation, institutional development, socio-economic uses, land management, environment and biodiversity, communication, finance, pollution prevention, accidental pollution, monitoring, data management and legal issues.⁷⁹ The diversity of topics covered by these institutional arrangements also reflects their flexibility to change over time in response to new and emerging challenges.⁸⁰

5.2 | Results of Water Convention reporting

Given that almost all riparian parties reported, the results of Water Convention reporting offer a more comprehensive overview of progress in its implementation, compared to SDG indicator 6.5.2 reporting.⁸¹

In general, these results suggest significant progress in the implementation of the Water Convention since its entry into force over 20 years ago.⁸² Concerning some of the core obligations of the Water Convention, such as the establishment of agreements and joint bodies, between riparian parties, reporting has demonstrated that almost all transboundary waters are covered – although it is evident that in certain basins there is a need to adopt new agreements or revise existing ones.⁸³

Results of the reporting exercise also suggested that there has been a concerted effort by riparian parties to implement these agreements and other arrangements through the adoption of joint or coordinated management plans, the setting of joint objectives, measures to protect ecosystems of transboundary waters, data and information exchange, as well as joint monitoring and assessment.⁸⁴ However, the reporting has also revealed that certain requirements of the Water Convention are less well implemented, such as provisions related to joint water quality standards, accidental pollution, extreme events and public participation.⁸⁵ While this demonstrates

a need to further strengthen the implementation of the Water Convention across its parties, it also shows that countries were willing to identify both strengths and limitations in implementation when reporting during the first reporting exercise.

5.3 | Lessons learned and next steps

A number of important lessons from the initial reporting under the Water Convention and SDG indicator 6.5.2 can help to inform subsequent reporting exercises. These lessons can be categorized into three key areas concerning the quality of reports submitted, the coverage of countries reporting and the impact of the results of reporting.

As noted previously, several weaknesses were highlighted in the reporting template itself, which if addressed, could improve the quality of national reports. These weaknesses concerned overlapping or ambiguous questions, confusing terminology, and the vagueness and time taken to answer open questions.⁸⁶ Responding to these weaknesses, it was decided to develop a revised reporting template for the second reporting cycle.⁸⁷ This revised template sought to clarify and use consistent terminology, revise the questions that were considered ambiguous, and provided the opportunity for more ‘tick box’ answers rather than open questions and answers.⁸⁸

A further change to the template concerned its structure. For the initial reporting exercise, two slightly different reporting templates were used for reporting under the Water Convention and reporting under SDG indicator 6.5.2. For example, the order of the sections of the template for reporting under the Water Convention differed from the template for reporting under SDG indicator 6.5.2. Section I of the Water Convention template dealt with transboundary water management at the national level, section II concerned questions related to the transboundary waters shared, section III referred to the calculation of the SDG indicator 6.5.2 and section IV addressed final questions.⁸⁹ For the template for reporting under SDG indicator 6.5.2, the first and third sections of the template were switched, with the first covering the indicator calculation and the third covering questions related to the national level.⁹⁰ An additional difference in the templates was that the template for reporting under the Water Convention made more references to the articles of the Water Convention. In practice, the differences between both templates were minimal, and a notable outcome of the first reporting exercise

⁷⁸UNECE and UNESCO (n 37) 46.

⁷⁹ibid.

⁸⁰See generally S Schmeier, *Governing International Watercourses: River Basin Organisations and the Sustainable Governance of Internationally Shared Rivers and Lakes* (Routledge 2013).

⁸¹For a detailed analysis of the first reporting exercise under the Water Convention, see UNECE ‘Progress on Transboundary Water Cooperation under the Water Convention: Report on Implementation of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes’ UN Doc ECE/MP.WAT/51 (2018).

⁸²ibid.

⁸³ibid 19.

⁸⁴ibid.

⁸⁵ibid.

⁸⁶UNECE (n 57).

⁸⁷UNECE ‘Draft Decision on Reporting and Revised Template for Reporting under the Convention’ UN Doc ECE/MP/WAT/2018/5 (30 July 2018) <https://www.unece.org/fileadmin/DAM/env/documents/2018/WAT/10Oct_10-12_8thMOP/Official_docs/ECE_MP_WAT_2018_5_ENG.pdf>.

⁸⁸ibid.

⁸⁹See UNECE, ‘Reporting under the Water Convention and Sustainable Development Goal 6.5.2’ <https://www.unece.org/water/transboundary_water_cooperation_reporting.html>.

⁹⁰ibid.

was that almost all countries completed the full template.⁹¹ Completion of all sections of the template offers important supplementary information to the SDG indicator 6.5.2 calculation, and also allowed countries to highlight other areas of cooperation beyond the criteria for operationality, such as any benefits or challenges in entering into arrangements. These completed reports therefore offer a rich data source on current progress in support of transboundary water cooperation, which is likely to gain greater value as more States report and the quality of the reporting improves.⁹²

A revised template was adopted at the eighth session of the Meeting of the Parties.⁹³ This template is designed to be used by both parties to the Water Convention and other countries. However, a clear distinction has to be made between reporting under the Water Convention and SDG indicator 6.5.2. While the template is the same, countries not party to the Water Convention are not obliged to report under that Convention. Any additional information to the SDG indicator 6.5.2 calculation (section I of the revised template) is therefore provided by both these countries to offer supplementary information to support their calculation of the indicator, and to provide a fuller picture of progress towards transboundary water cooperation within a particular country.

In addition to revising the template for reporting, it was decided at the eighth session of the Meeting of the Parties to develop a guide to reporting, which would assist in addressing questions over key terminology, and provide guidance and illustrations concerning how certain questions might be answered.⁹⁴ A drafting group, comprised of experts from around 40 States from Africa, Central Asia, Europe, the Middle East, North and South America, and South East Asia, was established to develop the guide.⁹⁵ The guide closely follows the structure of the revised reporting template, with a particular focus on the sections of the template concerning specific transboundary waters (section II), the national level (section III) and general questions (section IV).⁹⁶ A supplementary 'step-by-step' methodology provides guidance on the calculation of the SDG indicator 6.5.2.⁹⁷ In bringing together a diverse group of States to agree on key terminology, such as 'arrangements', 'joint bodies' and 'transboundary basins', as well as offering examples and experiences related to the completion of certain questions, the development of the guide already reflects a valuable outcome of reporting. Looking forward, it is hoped that by offering support to countries in completing the reporting template, the guide will improve both the quality and consistency of the reports submitted to subsequent reporting exercises.

⁹¹ibid.

⁹²The national reports submitted to the initial reporting exercise are available at <https://www.uncece.org/water/transboundary_water_cooperation_reporting.html>.

⁹³See UNECE 'Decision VIII/1, Reporting under the Convention' UN Doc ECE. MP.WAT/54/Add.2 (30 January 2019).

⁹⁴ibid.

⁹⁵UNECE 'Draft Guide to Reporting under the Water Convention and as a Contribution to Sustainable Development Goal indicator 6.5.2' UN Doc ECE/MP.WAT.WG.1/2019/INF.4 (22–24 October 2019).

⁹⁶ibid.

⁹⁷UN-Water (n 32).

The custodian agencies also recognized that capacity-building activities would be a valuable means by which to enhance subsequent reporting exercises.⁹⁸ As part of UN-Water's Integrated Monitoring Initiative, a series of regional workshops have therefore been organized to support countries in reporting to the second reporting exercise in June 2020. So far, workshops have taken place in Central Africa, Central America, South America, the pan-European region, with other workshops planned for the Middle East and Asia.⁹⁹ These workshops offer an important means by which to not only enhance the quality of national reports submitted, but also to encourage more countries to report. In addition, the workshops can help deepen knowledge and understanding of the value of transboundary water cooperation, and assist in sharing experiences both in the design, negotiation and implementation of cooperative arrangements.

For reporting under the Water Convention and SDG indicator 6.5.2 to be successful, the benefits of the exercise must be evident to those countries that report. While it may take several reporting cycles to realize the full value of reporting, some benefits are already evident. Reporting has already proven to be a useful means by which to highlight the need for greater support for transboundary water cooperation. Building on the evidence from the first reporting exercise, this message has fed into the UN Sustainable Development Report, and also the High-level Political Forum on Sustainable Development.¹⁰⁰ While in previous years many different actors may have called for a greater focus on transboundary water cooperation, that message becomes stronger if based on evidence from national reports submitted by countries as part of the SDG framework. States have therefore, through for example the Ministerial Declaration of the 2019 High-level Political Forum on Sustainable Development, committed to improve 'cooperation across borders, in transboundary waters'.¹⁰¹

Another important outcome of the reporting exercise can be seen at the national and transboundary levels, where the process of reporting has helped to highlight the importance of transboundary water cooperation across a wide range of stakeholders, and also offered a systematic process by which to review a country's cooperative efforts.¹⁰² In some instances, this exercise has been done at the transboundary level, and involved river basin commissions, thus helping to build a common understanding of transboundary water cooperation at the basin or sub-basin levels.¹⁰³ As the reporting exercise progresses, further opportunities to use reporting as a means

⁹⁸UN-ECE (n 81).

⁹⁹ibid.

¹⁰⁰See UN, 'The Sustainable Development Goals Report 2019' (2019) <<https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf>> 34; UN-Water, 'Synthesis Report on Water and Sanitation' (2018) <https://sustainabledevelopment.un.org/content/documents/19901SDG6_SR2018_web_3.pdf>.

¹⁰¹UN Economic and Social Council 'Ministerial Declaration of the High-level Segment of the 2018 Session of the Economic and Social Council on the Annual Theme: From Global to Local: Supporting Sustainable and Resilient Societies in Urban and Rural Communities' UN Doc E/HLS/2018/1 (1 August 2019).

¹⁰²UNECE (n 57).

¹⁰³ibid.

by which to collectively monitor progress and identify areas that might be strengthened are likely. States within a particular basin may therefore consider using reporting as a means by which to set specific targets for that basin, which might be monitored and reviewed during each reporting cycle. As all countries use a common reporting template, lessons on how key challenges might be addressed could be gained from reviewing the experiences of countries from different regions.

Reporting also offers great potential for the parties to the Water Convention. As noted previously, the results of the first reporting exercise under the Water Convention demonstrated that there is a strong track record in the implementation of the Convention. However, the exercise also highlighted that there were areas where implementation might be improved. These areas have been highlighted in the Water Convention Secretariat's report that analyses the results of the pilot reporting exercise, and also by the Water Convention's Implementation Committee, which on the occasion of the eighth session of the Meeting of the Parties, noted 'with concern that certain common challenges to implementation and compliance remain and that some Parties appear to face specific challenges in implementation and compliance'.¹⁰⁴ As a non-confrontational and transparent body of independent experts (both legal and technical) established to support and facilitate parties in addressing issues of implementation and compliance, the Implementation Committee can play an important role in maximizing the value of reporting.¹⁰⁵

Parties to the Water Convention can also use reporting as an important input into its tri-annual work programme, which is designed to coordinate the efforts of partners in support of the implementation of the Water Convention. Reporting itself is an important component of the 2019–2021 work programme.¹⁰⁶ However, the reporting exercise can also support other areas of work set out in the programme, including programme area 1 ('Increasing awareness of and accession to the Convention and application of its principles drawing on the benefits of cooperation'), programme area 2 ('Supporting monitoring, assessment and information sharing in transboundary basins'), programme area 3 ('Promoting an integrated and intersectoral approach to water management at all levels'), programme area 4 ('Adapting to climate change in transboundary basins') and programme area 5 ('Facilitating financing of transboundary water cooperation').¹⁰⁷ The topics of future work programme areas might also be informed by the areas of importance identified through the reporting exercise.

6 | CONCLUSION

The need to strengthen transboundary water cooperation around the world is evident. Water cooperation can play an important role in addressing pressing and interrelated challenges, including climate change, ecosystem degradation, population pressure and water insecurity. It is also evident that, while many countries have benefitted from cooperation over their shared rivers, lakes and aquifers, much work is left to do to ensure the necessary legal and institutional frameworks are in place at the basin and sub-basin levels. The entry into force of the Watercourses Convention, and the opening of the Water Convention to all UN member States, are important signs of progress in recognizing the importance of having such legal and institutional arrangements in place.

As noted at the outset of this article, the benefits of reporting have long been recognized.¹⁰⁸ However, reporting on transboundary water cooperation is certainly lagging behind over environmental concerns. To some extent, given the difficulty States have faced in reaching consensus on transboundary water sharing arrangements, the slow progress within a transboundary water context is understandable. It is therefore remarkable that a commitment to transboundary water cooperation was contained in the SDG framework, and this was bolstered by the introduction of SDG indicator 6.5.2 and its reporting mechanism. Given these challenges it is also perhaps not surprising that reporting is complex, that is, instead of one clear compliance system for all States sharing transboundary waters, two systems (SDG 6.5.2 and the Water Convention) are in place. However, the fact that both mechanisms are indeed coordinated, and the first reporting cycle was a relative success – albeit with the evident need for some adjustments – offers great promise for the future. While early days, these reporting mechanisms may well have sowed the seeds for a more transparent and collaborative system for treaty compliance as envisaged in Chayes and Chayes' 'managerial approach',¹⁰⁹ and one that offers the potential to help ensure that transboundary waters are ultimately managed in an equitable and sustainable manner.

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¹⁰⁴ UNECE 'Decision VIII/3, General Issues of Implementation' UN Doc ECE.MP.WAT/54/Add.2 (30 January 2019).

¹⁰⁵ UNECE 'Decision VI/1, Support to Implementation and Compliance' UN Doc ECE/MP.WAT/37/Add.2 (30 January 2019).

¹⁰⁶ UNECE, 'Water Convention Programme of Work 2019–2021 – Responding to Global Water Challenges in Transboundary Basins' <https://www.unece.org/fileadmin/DAM/env/water/publications/WAT_NONE_14_PoW/UNECE-Transboundary-cooperation-15-19-FINAL-WEB2.pdf>.

¹⁰⁷ *ibid.*

¹⁰⁸ See, e.g., Chayes and Chayes (n 8).

¹⁰⁹ See for example the challenge that riparian countries in the Nile have faced in reaching consensus (R Michaelson, "It'll Cause a Water War": Divisions Run Deep as Filling of Nile Dam Nears' (*The Guardian*, 23 April 2020)).

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