

Distr.
LIMITED
E/ESCWA/SDPD/2018/WP.1
27 December 2018
ORIGINAL: ENGLISH

Economic and Social Commission for Western Asia (ESCWA)

**Progress on Shared Water Resources Management in the Arab Region:
Regional baseline for SDG Indicator 6.5.2**

Working Paper



United Nations
Beirut, 2018

Note: This document has been reproduced in the form in which it was received, without formal editing. The opinions expressed are those of the author and do not necessarily reflect the views of ESCWA.

Table of Contents

Abbreviations.....	ii
Executive Summary.....	iii
I. Introduction: Overview of global reporting on SDG 6.5.2.....	1
II. Global Reporting on SDG 6.5.2.....	2
A. Overall SDG indicator 6.5.2.....	3
B. SDG Indicator 6.5.2: Surface Waters Component.....	4
C. SDG Indicator 6.5.2: Aquifers Component	4
D. SDG indicator 6.5.1	4
III. Findings from the Arab region reporting on SDG indicator 6.5.2	5
A. Regional low response rate	6
B. Limited available regional information.....	7
A. Countries that have not declared significant shared water resources or have not reported.....	9
IV. Lessons learnt from the first reporting exercise	10
A. On the transmission of the questionnaire.....	10
B. On the content of the questionnaire	11
C. The respect of deadlines.....	11
D. Support to countries	11
E. Coordination with reporting under SDG indicator 6.5.1	11
V. Conclusions and Recommendations for the next reporting phase in the Arab region.....	11
Bibliography	13

List of Tables

Table 1. Table of Arab states breakdown of SDG indicator 6.5.2 value, surface water value, and aquifer value for each	5
Table 2. Arab states which have not responded to the reporting request for SDG indicator 6.5.2 and share water with neighbouring States under cooperation agreements.....	10

List of Figures

Figure 1. National level of cooperation on transboundary water, and countries where further clarification is still needed in the Arab region.	6
Figure 2. Transboundary surface water basin level cooperation in the Arab region, including countries that need further clarification.	8
Figure 3. Transboundary groundwater basin level cooperation in the Arab region, including countries that need further clarification.	9

Abbreviations

DA	Draft articles on the law of transboundary aquifers
ESCWA	Economic and Social Commission of Western Asia
GA	General Assembly
HLPF	High Level Political Forum
IAEG-SDGs	Inter-agency and Expert Group on SDG Indicators
IWRM	Integrated Water Resources Management
JA	Joint Authority
NSAS	Nubian Sandstone Aquifer System
NWSAS	North Western Sahara Aquifer System
OSS	Observatoire du Sahara et du Sahel
SDG	Sustainable Development Goal
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
UNWC	United Nations Convention on the law of non-navigational uses of international watercourses

Executive Summary

The Sustainable Development Goal (SDG) indicator 6.5.2 is intended to monitor progress towards transboundary water cooperation through operational arrangements. The results of the first global reporting under SDG indicator 6.5.2 related to transboundary cooperation show an important participation at the global level with 107 countries of 153 with shared waters having responded. However very few countries have an operational arrangement on all their shared waters and many less have specific arrangements for transboundary aquifers. This indicates the need for a significant effort to ensure that operational arrangements for all transboundary water resources are in place by 2030.

However, in the Arab region, which has a heavy reliance on shared waters, the rate of response was very low, with only 9 countries out of 21. Comoros does not share any transboundary waters and as such was excluded from reporting. Furthermore, the few answers received included limited information, and presented often inconsistencies regarding a same shared basin, river, lake or aquifer.

While this first reporting exercise under SDG indicator 6.5.2 is considered successful, the custodian agencies, the United Nations Economic Commission for Europe (ECE) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) plan to improve the process based on this experience. A step by step methodology and guidelines will be prepared to clarify the template. Building partnerships with regional organizations is also planned in view of ensuring a closer assistance to the countries as well as establishing a coordination whenever possible with the reporting exercise under SDG indicator 6.5.1.

Various possibilities can be contemplated to foster a stronger participation of the Arab countries in the second round of reporting. A first step is to link the reporting under SDG indicator 6.5.2 to all the initiatives and work taking place in the Arab region related to shared waters, such as the preparation of the Guiding principles on shared waters between the Arab countries under the umbrella of the AMWC. ESCWA is supporting the AMWC in the preparation of these Guiding principles, and as well as in implementing the Arab Water Strategy.

I. Introduction: Overview of global reporting on SDG 6.5.2

In September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development, which included 17 goals and 169 targets. Sustainable Development Goal (SDG) 6 is the goal dedicated to water, its objective is to ensure the availability and sustainable management of water and sanitation for all. However, it should be stressed that water extends beyond SDG6 and is central to several goals and targets as would be expected in the 2030 Agenda which considers that the SDGs are integrated and indivisible. Under SDG 6, target 5 relates to the implementation of “integrated water resources management at all levels, including through transboundary cooperation as appropriate”.¹ Two indicators were adopted for this target:

- Indicator 6.5.1 monitors the degree of integrated water resources management implementation
- Indicator 6.5.2 monitors the proportion of transboundary basin area with an operational arrangement for water cooperation

SDG Indicator 6.5.2 monitors the percentage of transboundary basin area within a country that has an operational agreement or other arrangements for water cooperation. The basin area is defined as the surface proportion of the catchment for surface water and the surface proportion of aquifer for groundwater within the country. The arrangement for water cooperation could be a bilateral or multilateral treaty, convention, agreement or other formal arrangements, such as memorandum of understanding, among riparian countries that provide a framework for transboundary cooperation or water management. For an agreement to be considered operational under this indicator it would have to demonstrate substantive cooperation in water management consisting of the following four conditions:²

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

Through these criteria, SDG indicator 6.5.2 intends to monitor, not only the existence of an arrangement or joint body, but also if cooperation is operational or not. It is worth noting that SDG indicator 6.5.2 has been granted a tier 1 in November 2018 classification by the Inter-agency and Expert Group on SDG Indicators (IAEG-SDG).³ This means that the indicator is conceptually clear, has an internationally established methodology and that data are regularly produced by a critical mass of countries, a reflection of the last reporting round 70 per cent of countries with transboundary waters reported.

In addition to SDG target 6.5, there is a growing global and regional momentum in support of shared water cooperation. At the global level this is evident by the entry into force of the Convention on the Law of the Non-navigational Uses of International Watercourses (Watercourses Convention) in 2014,⁴ the opening of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) to all United Nations Member States,⁵ which came into effect in 2016 and the adoption of the International Law Commission’s (ILC) Draft Articles on the Law of Transboundary Aquifers by the General Assembly in 2008.⁶ At the regional level, the Arab Ministerial Water Council (AMWC) at the League of Arab

¹ United Nations, General Assembly, 2015.

² UN-Water, 2017.

³ <https://unstats.un.org/sdgs/files/List%20of%20changes%20since%2015%20Oct%202018.pdf>.

⁴ United Nations, General Assembly, 1997.

⁵ UNECE, 2013.

⁶ United Nations, General Assembly, 2009.

States has shown great interest in shared water resources with the adoption of several resolutions since 2009.⁷ A more recent resolution was adopted by the eighth ministerial session of the AMWC held in Cairo in 2016, called for the drafting of a set of common guiding principles for cooperation that could be drawn by Arab states for supporting cooperation on shared water resources. ESCWA assisted in convening the second meeting for discussing of these principles in December 2018 in Beirut and supported the country discussion through extending the services of an international water law expert.⁸

The regional criticality of shared water resources was also recognized in the Regional Preparatory Meeting on Water Issues for the 2018 Arab Forum on Sustainable Development and High-level Political Forum (HLPF) that was held in Beirut in March 2018, where member State representatives of the AMWC, in addition to senior representatives from national, regional and international institutions and civil society organizations engaged in discussions on water-related issues that affect Arab States. Meeting participants agreed in the outcome document that enhancing shared water resources cooperation can support the achievement of the 2030 Agenda and water security in the Arab region.⁹

This regional criticality stems from the fact that most Arab States depend for their water supply on rivers and/or aquifers that are shared with neighbouring countries, within the region and with countries from outside the region. This is evident with 14 countries out of the 22 Arab countries being involved as riparian States and with 41 shared aquifers present in 21 out of 22 Arab countries.¹⁰

This paper presents a regional baseline for the first global reporting exercise on SDG indicator 6.5.2. It provides a summary of the results of the countries that reported with an overview of the regional challenges and means of improving reporting in the second round. The paper provides recommendations for improving reporting on SDG indicator 6.5.2 and ultimately regional cooperation on shared water resources in the Arab region.

II. Global Reporting on SDG 6.5.2

A total of 153 countries worldwide share transboundary rivers, lake basins and aquifer systems which, together, cover over half of the Earth's land surface, account for an estimated 60 per cent of global freshwater flow and are home to more than 40 per cent of the world's population.¹¹ All these countries were invited by the custodian agencies, United Nations Economic Commission for Europe (UNECE) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) to report under SDG indicator 6.5.2. Of these countries, 107 responses were received, representing a 70 per cent answer rate. This rate of reporting is considered a success, especially for a newly introduced SDG indicator. However not all responses could be included in the first analysis as some needed clarification and were still pending at the time of the finalization of the global progress report. The global average of the national percentage of transboundary basins covered by an operational arrangement is 64 per cent for surface water basins and 48 per cent for aquifers

The reporting exercise started in early 2017 where an invitation for countries to report was sent by UNECE and UNESCO with a mid-2017 deadline set for submission of national reports. Countries were supported by a set of measures including a step-by-step methodology, webinars, presentations at relevant meetings and dialogue with custodian agencies. After submission of national reports, UNECE and UNESCO reviewed and analysed the reports and where necessary held exchanges with Member States for clarification, with UNECE dealing with the surface water component and UNESCO the groundwater component. The national SDG indicator 6.5.2 data will next be submitted to the United Nations Statistical Commission by February 2019. National reports are to be made available on line in 2019 unless objections are raised by

⁷ ESCWA, 2017.

⁸ <https://www.unescwa.org/events/improving-shared-water-resources-cooperation-within-framework-global-and-regional-agreements>

⁹ ESCWA, 2018.

¹⁰ ESCWA, 2017.

¹¹ United Nations and UNESCO, 2018.

countries. The next reporting cycle will commence with invitation to report by the end of 2019 with the 30th of June 2020 set as a deadline for reporting.

A. Overall SDG indicator 6.5.2

In view of collecting the most complete information from the countries, the custodian agencies on SDG indicator 6.5.2, UNESCO and UNECE, have prepared a template for reporting in the form of a questionnaire, with the idea of simplifying and standardizing the task of reporting.

The questionnaire was divided into four sections:

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

Section I includes two tables on shared basins: the first one is for surface waters (rivers and lakes) and the second one is for aquifers. The information to provide in each table is:

- Name of the shared basin
- Countries shared with
- Surface area of the basin (in km²) within the territory of the country
- Surface area of the basin (in km²) covered by an operational arrangement within the territory of the country

The above provided information is used to calculate the SDG indicator 6.5.2 value. The value is obtained by dividing the total surface area of transboundary basins of rivers, lakes and aquifers covered by operational arrangements within the territory of the country by the total surface area of transboundary basins of rivers, lakes and aquifers within the territory of a country. This will provide the percent value of the indicator.

Sections II to IV are based on a questionnaire developed by Member States in the framework of the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, to monitor its implementation and progress on transboundary cooperation and implementation. Under section II the countries are asked to provide details about the existing arrangements mentioned in section I, if any. They are requested to complete section II for each shared basin or aquifer. Information provided in section II covers types of cooperation agreements, existence and tasks of joint bodies, coordinated management plans and their objectives, type and frequency of information and data exchange, joint monitoring, joint assessment, joint water quality standards, measures to prevent or limit transboundary pollution and extreme weather events, and public participation. Section III is dedicated to reporting on national legislation related to water and environmental issues as it can impact the management of the shared water body. In Section IV reporting covers main challenges and achievements of transboundary cooperation in addition to the national process of reporting and information on respondent.

Under this indicator, the custodian agencies have supported the countries in identifying appropriate focal points to address shared water issues, mainly through the UNECE Water Convention focal points and UNESCO IHP national committees. Only officially designated focal points nominated through government channels were accepted to complete the survey. All survey results had to be officially signed and submitted.

At the global level, SDG indicator 6.5.2 value for surface waters, lakes and rivers, and aquifers is available for only 62 countries out of the 153 that share transboundary basins, which represents a total of 41 per cent. The average value of this indicator is 59 per cent and represents significant variation across the 62

countries. Only 17 countries have all their transboundary basins covered by operational arrangements, while 12 have no arrangements in place.¹²

B. SDG Indicator 6.5.2: Surface Waters Component

Regarding surface waters component, it was possible to provide an indicator value for 84 countries, which represents 55 per cent of all countries sharing transboundary waters. The value of the indicator is 64 per cent, which is higher than the overall indicator value of 59 per cent. This confirms the well-known fact that worldwide cooperation over transboundary rivers and lakes is more widespread than for aquifers. This is due to several factors including the earlier establishment of frameworks for cooperation on surface waters and the lower complexity of surface waters when compared to groundwater.

C. SDG Indicator 6.5.2: Aquifers Component

Only 61 countries have provided data on the transboundary aquifer component of SDG indicator 6.5.2. The indicator value for these countries is 48 per cent, which is lower than the full value for the overall indicator of 59 per cent. This low number, compared to the number for surface waters, reflects the global situation of the less developed cooperation on transboundary aquifers than for surface waters, with a more limited number of arrangements partly due to the complexity of groundwater and lack of readily available data on it.

D. SDG indicator 6.5.1

The questionnaire related to SDG indicator 6.5.1 also includes questions related to transboundary waters in which countries are asked to assess their most important transboundary basins in terms of economic, social and environmental value. However, it follows a different objective. Its aim is to identify the degree of integrated water resources management (IWRM) in a country. The questionnaire is divided into four sections each covering a key aspect of IWRM:

- Enabling environment,
- Institutions and participation
- Management instruments
- Financing

Each section relates to two levels, national and other. The latter include sub-basin, basin, local and transboundary levels. For each question, the countries are to select a score between 0 and 100, or not applicable. The score selection is guided by descriptive text for six thresholds, which are specific to each question. The total score obtained represents the degree of IWRM implementation. The process of completing the questionnaire included national multi-stakeholder workshops. The focal points for both indicators are not the same.

For SDG indicator 6.5.1, 128 countries reported. Out of these 32 per cent claim to have transboundary cooperation arrangements either fully or mostly implemented, and 37 per cent claim that the mandate of any transboundary organizational framework is either fully fulfilled or mostly fulfilled.¹³ The results would most likely have been lower if the countries would have been asked to report on all their transboundary basins not just their most important transboundary basins.

Therefore, it can be concluded that the reporting results of 6.5.1 and 6.5.2 indicators paint a consistent message that efforts are needed in approximately two thirds of the world's transboundary basins to ensure that, where appropriate, operational arrangements are in place.

¹² United Nations and UNESCO, 2018.

¹³ United Nations and UNESCO, 2018.

III. Findings from the Arab region reporting on SDG indicator 6.5.2

Shared water resources are very important in the Arab region, which is also one of the most water scarce regions in the world. In fact, most Arab States depend for their water supply on rivers and/or aquifers that are shared with neighboring countries, within the region and with countries from outside the region.

There are 27 shared surface water basins in the region, and 14 out of the 22 Arab states are riparian States. Almost all Arab states are riparian to a shared aquifer, as there are 40 shared aquifers in 21 out of 22 of them, the exception is Comoros which does not share any water resources.¹⁴

However, despite this heavy reliance on shared water resources, the results of this first reporting exercise under SDG indicator 6.5.2 from the Arab region resulted in a low response rate of 41 per cent when compared to the global reporting rate of 70 per cent. A summary of the responses received from the Arab region is presented in Table 1 and Figure 1.

Table 1. Table of Arab states breakdown of SDG indicator 6.5.2 value, surface water value, and aquifer value for each

Country	Surface water component (%)	Aquifer Component (%)	SDG indicator 6.5.2 (%)
Algeria	0	-	-
Egypt	-	-	-
Iraq	17.3	0	13.5
Jordan	61.7	13.9	21.9
Kuwait	N	-	-
Morocco	0	0	0
Qatar	N	0	0
Somalia	0	0	0
Tunisia	0	100	80.5

Note: The above are results for countries that reported and whose results were verified by the custodians. Egypt officially submitted results, but further clarification is required by the custodians to officially include these results in the global reporting.

N: Non-relevant: indicates that the figure is not available because the indicator as defined for the global monitoring does not apply to the circumstances of the specific country, and therefore is not reported.

Dashes: indicate that the figure is not available because the country response needs clarification.

The most complete and detailed answers for the first reporting exercise for SDG indicator 6.5.1 in the Arab region come from the following countries:

- Algeria, though the part on aquifers was not validated because of a discrepancy in figures provided for transboundary aquifers, the custodian agencies have requested further clarification,
- Egypt, where clarification is also requested on the Nile because of contradictions in the answers,
- Iraq,
- Jordan, and
- Tunisia.

These countries have operational arrangements on their shared waters, or are very much dependent on them, which might explain their interest and available information for reporting. The Consultation Mechanism on the North Western Sahara Aquifer System (NWSAS) for Algeria and Tunisia and Libya is a good example of an operational arrangement. However, Libya did not reply under indicator 6.5.2 but mentioned the cooperation

¹⁴ ESCWA, 2018.

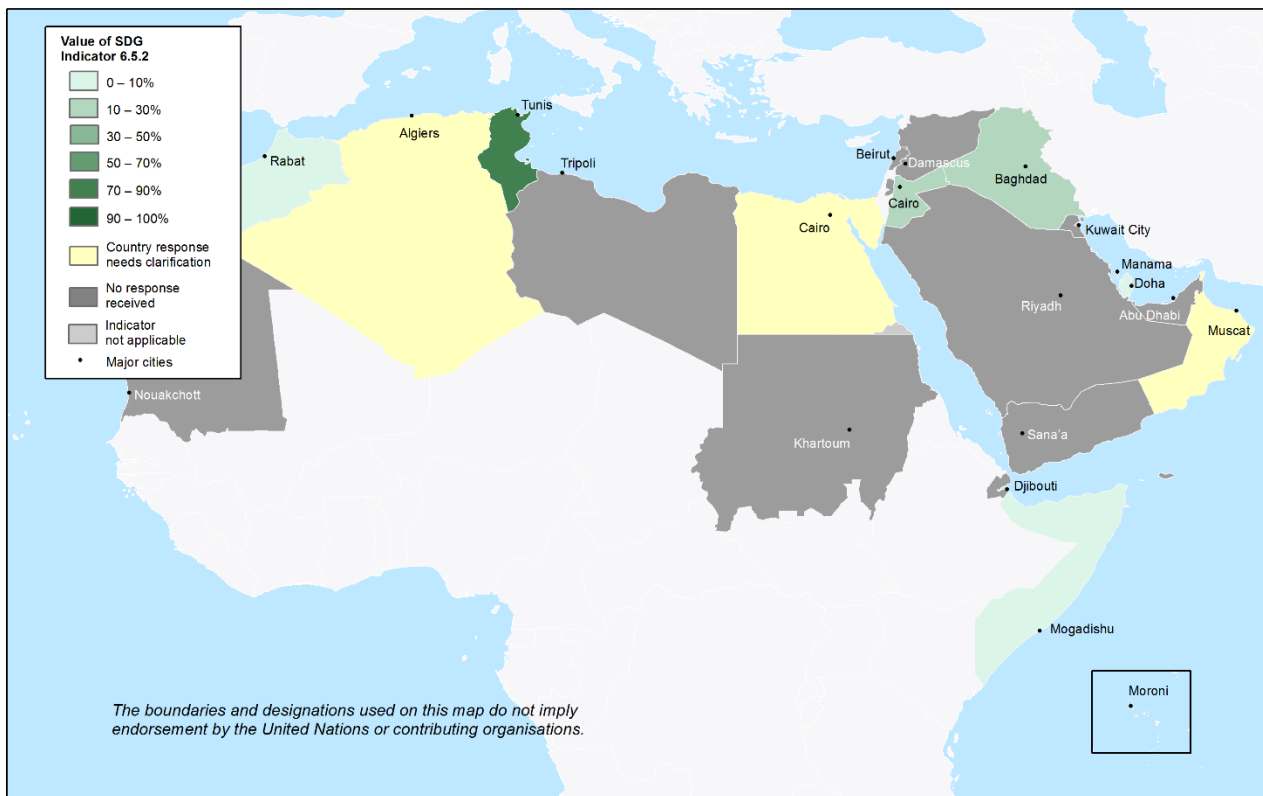
on the NWSAS in its reply for SDG indicator 6.5.1. Jordan is one of the most water scarce countries in the world, therefore its reliance on shared waters and any arrangement on them takes more importance. Egypt and Iraq are countries that developed and were built through history around shared rivers such as the Nile or Tigris and Euphrates. In these countries, there is a strong political focus on these shared rivers.

The characteristics of the responses received are presented in the following sections.

A. Regional low response rate

Out of the 21 Arab states sharing surface water and/or groundwater resources with another country, only 9 Arab states reported under SDG indicator 6.5.2, see Figure 1. These countries are: Algeria, Egypt, Iraq, Jordan, Kuwait, Morocco, Qatar, Somalia and Tunisia. Oman did not complete the template. It informed the custodian agencies that it does not share surface waters, and that the shared aquifers are very small and not covered by any operational arrangement. However, for the custodian agencies to consider the answer, a signed letter from the country is needed. Such letter was never submitted, despite the requests from the custodian agencies and hence Oman's response is not considered official at this stage.

Figure 1. National level of cooperation on transboundary water, and countries where further clarification is still needed in the Arab region.



This rate of responses is very low compared to the importance of shared water resources in the Arab region, and it is also low compared to the other regions of the world. For instance, in Sub-Saharan Africa, 42 countries share surface water and/or groundwater resources and 33 sent back their report. In Latin America and the Caribbean, 13 countries replied out of the 22 sharing a water body. However, in Central, Eastern, Southern and South-Eastern Asia, the situation is similar to the Arab region where 24 out of 30 countries share river basins but only 9 out of these 24 reported. In Europe and North America, out of the 43 countries sharing rivers, lakes and aquifers, 40 replied which is expected especially for Europe with a well-established record of cooperation agreements and the fact that most of these countries report under the Water Convention which they are party to.

This low rate of responses might reflect some specificities of the Arab region regarding shared waters such as the situations of occupation and of armed conflict, where water resources fall under foreign control and are affected by the instable situation. For instance, it can be noted that among the states that have not delivered any report for both SDG indicators 6.5.1 and 6.5.2 are the State of Palestine and the Syrian Arab Republic. Such situations cannot be properly reflected under the SDG indicator 6.5.2. The water scarce conditions of most Arab states and the perceived equivalence of water scarcity to water security in the region further inhibits the willingness to share information on shared water resources. These in addition to other reasons that include lack of studies on groundwater shared water resources and the lack of dedicated financial resources to shared water resources in terms of monitoring, reporting and management.

At the same time, and contrary to the reporting under SDG indicator 6.5.2, the Arab region response rate for SDG indicator 6.5.1 was quite high, as 19 countries out of the 22 replied, which represents a very good rate. As mentioned above, the questionnaire for SDG indicator 6.5.1 includes queries related to cooperation on shared water resources, to which the countries have replied, which means that the information is available and can be transmitted under the monitoring process. However, it should be highlighted that the information requested under each indicator differs significantly. Under SDG indicator 6.5.2, the required responses are more quantitative and require substantiation while the responses under SDG indicator 6.5.1 are more qualitative and are categorized based on judgement of respondent. In all cases, this elevated number of responses for SDG indicator 6.5.1 provides a good reflection of the importance of the shared water issue in the Arab region.

B. Limited available regional information

With the low number of countries reporting, the collected data is inevitably limited in terms of available information on shared water resources. Additionally, the information provided is often incomplete, or absent. Therefore, the results obtained do not allow for a comprehensive analyzes of the full reality of SDG indicator 6.5.2 and its eventual progresses in the Arab region. Some discrepancies were also noted from the questionnaires received which confirm the necessity to consider improving the process for the next monitoring exercises.

On the designation of the shared water resources (Calculation of SDG indicator 6.5.2)

Some Arab countries have declared they have no shared water resources. For instance, Kuwait answered “not appropriate” under section I and Morocco declared that shared water resources are negligible, and Qatar mentioned that the shared aquifer with Saudi Arabia and Bahrain is not usable as it is highly saline. These countries have therefore not filled the questionnaire which they considered as not relevant.

Another discrepancy is the declaration by one of the countries of a shared water body, but the information is not asserted by the other riparian(s) in their own report. Although the basis for SDG indicator 6.5.2 is transboundary basins, the indicator is reported at the national level. In essence, the status of any given transboundary basin should be identical for all countries sharing that basin however this is not the case in the Arab region for any of the basins, see Figure 2 and Figure 3. This calls for increased coordination between these countries. This last discordance has also been noticed also at the global level.¹⁵ An example of this is where Jordan has reported sharing a groundwater aquifer with Saudi Arabia, but Saudi Arabia has not completed the reporting exercise. Similarly, for the Euphrates basin which Iraq has reported on, but Turkey and the Syrian Arab Republic have not done so. It comes from the fact that the SDG indicators are calculated at the country level, and SDG indicator 6.5.2 is the only one related to transboundary aspects. Therefore, such inconsistencies are not specific to the Arab region, but they remain a limitation on the information and analysis at the level of concerned shared basins.

¹⁵ United Nations and UNESCO, 2018.

Finally, among the Arab countries that have not reported under SDG indicator 6.5.2, but have submitted the questionnaire on SDG indicator 6.5.1, some have responded to the questions regarding shared water bodies giving precise answers. One objective under the next reporting exercise for SDG indicator 6.5.2 is to ensure these countries complete the questionnaire with coordinated submittals for both indicators.

Figure 2. Transboundary surface water basin level cooperation in the Arab region, including countries that need further clarification.

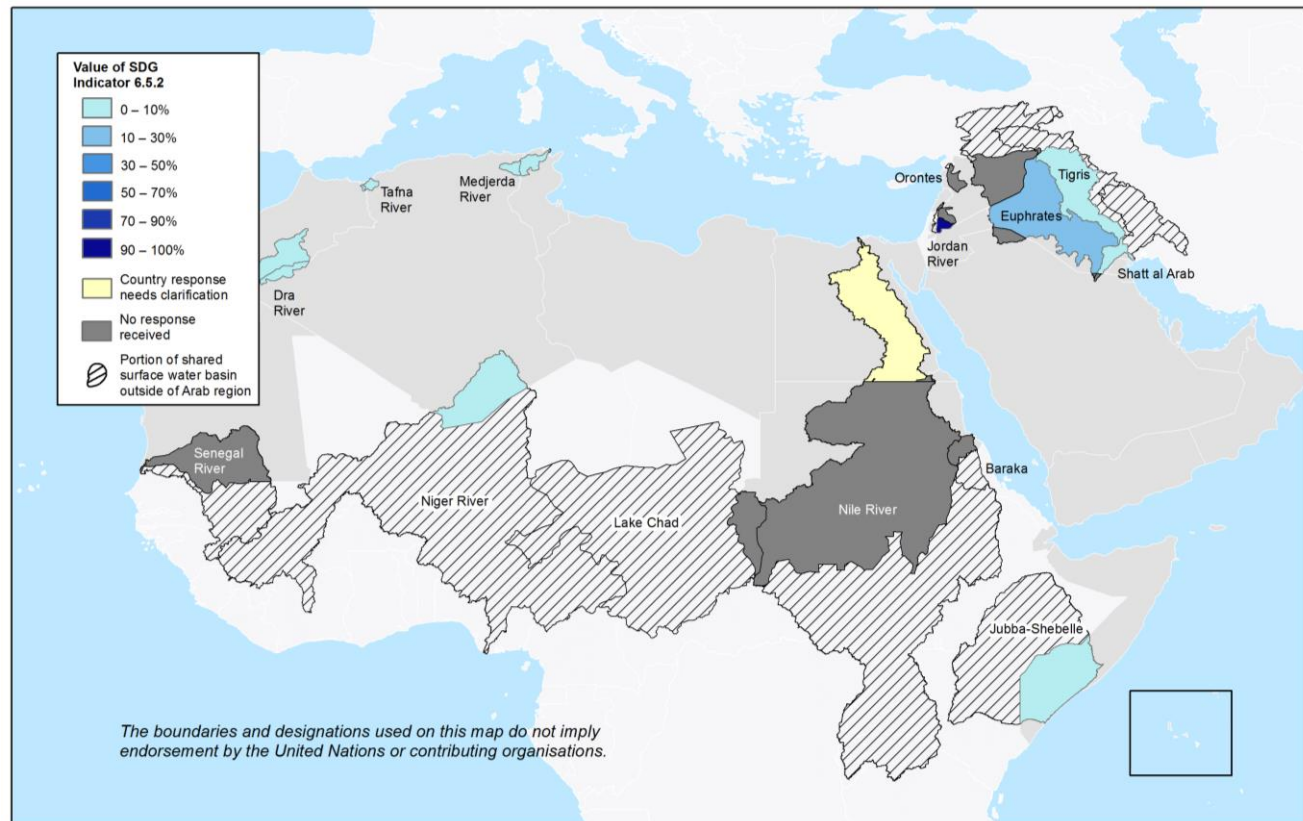
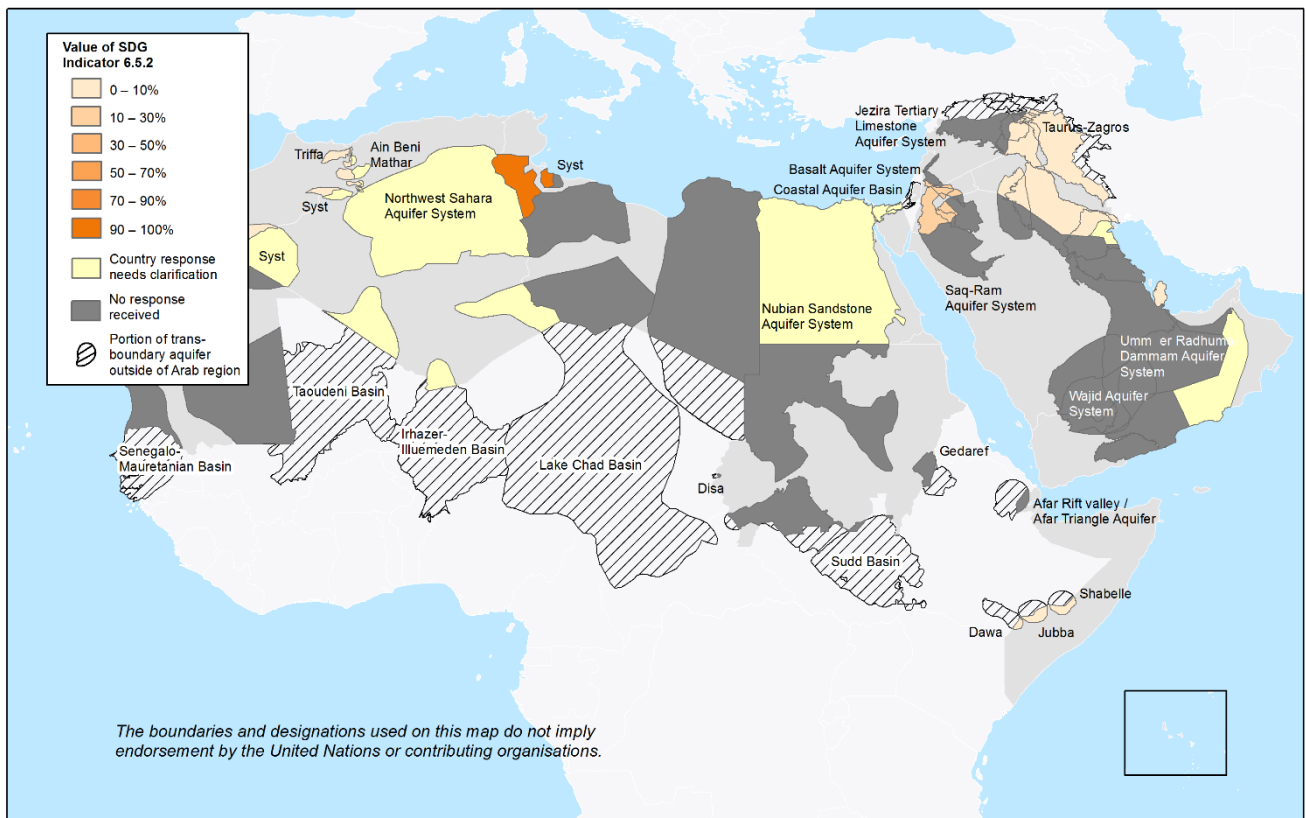


Figure 3. Transboundary groundwater basin level cooperation in the Arab region, including countries that need further clarification.



A. Countries that have not declared significant shared water resources or have not reported

Several countries in the Arab region have either declared that the shared water resources are not significant to them or have not reported. Kuwait for example returned the questionnaire with the mention “not appropriate” to shared water resources as they do not constitute a significant source. Morocco did not send back the template, but sent back a note, stating that its shared waters are very limited, localized and not abundant, and that there exists no arrangement for these waters. Conversely, Algeria had declared shared surface and groundwaters with Morocco.

Out of the Arab states which have not responded to the reporting request for SDG indicator 6.5.2, some share water with neighbouring States, which is the object of an agreement, see Table 2.

Table 2. Arab states which have not responded to the reporting request for SDG indicator 6.5.2 and share water with neighbouring States under cooperation agreements

Country	Shared water body
Lebanon-Syrian Arab Republic	Nahl el Kebir (Syrian Arab Republic) Orontes, the river, is shared with the Syrian Arab Republic and Turkey, but the cooperation agreement is with the Syrian Arab Republic only (Note that these two arrangements were mentioned by Lebanon in the reporting under SDG indicator 6.5.1)
Libya	North Western Sahara Aquifer System (Algeria, Tunisia), Nubian Sandstone Aquifer System (Chad, Egypt, Sudan) (Note that these two arrangements were mentioned in the reporting under SDG indicator 6.5.1)
Saudi Arabia	Saq-Disi aquifer (Jordan) (This arrangement is mentioned in the reporting under SDG indicator 6.5.1 and by Jordan under SDG indicator reporting 6.5.2)
Sudan	Nile river (Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Eretria, Kenya, Rwanda, South Sudan, Tanzania, Uganda) Nubian Sandstone Aquifer System (Chad, Egypt, Libya) (The arrangements and initiatives for these two shared water bodies were mentioned in the reporting under SDG indicator 6.5.1)

IV. Lessons learnt from the first reporting exercise

At the global level, this first reporting exercise under SDG indicator 6.5.2 is considered a success. The response rate is quite high at 70 per cent and it is the first time that the countries submit such information. It is worth noting that 95 per cent of the Parties to the UNECE Water Convention have completed their report, which shows the importance of working under the umbrella of a framework on shared waters that could provide the structure and support needed for states to forge cooperation forward.

One important finding from the first reporting is that only 17 countries have all their shared waters covered by operational arrangements. Therefore, a significant effort is needed to achieve target 6.5. Progress on cooperation must be accelerated especially for aquifers.

The custodian agencies acknowledged also some difficulties receiving responses which can be due to the process adopted and which will be improved for the following exercise.

A. On the transmission of the questionnaire

The questionnaire was transmitted to each country, along with other documents related to SDG 6.5.2 through its Permanent mission at the United Nations in Geneva, by the custodian agencies, as the normal process. These Permanent missions report to the Ministries of Foreign Affairs. However, the custodian agencies have also relied on a parallel channel through their own networks to reach out and transmit the questionnaire to the concerned Ministry, which would be the Ministry in charge of water resources. These official channels unfortunately can be slow in transmitting to the concerned party, but this process is necessary in such a politically charged subject.

B. On the content of the questionnaire

As mentioned above it is important that the riparian countries of a shared water body provide coherent and similar information, whether regarding the identification of the water body or on the rest of the required data. A recommended option is the coordination between the riparian countries to fill the questionnaire, and/or to submit a joint report. A possibility is to assist the countries of a shared water body to organize joint workshops for preparing and completing the reporting exercise.

C. The respect of deadlines

A last difficulty that appeared throughout this first process is related to the respect of the deadline for submitting the report. Numerous reports were transmitted after the deadline, and needed several reminders, which reduced the available time for review and analysis. There is a dual responsibility on custodian agencies to allow enough time for country teams to respond to the reporting exercise and on countries to respond in a timely function.

D. Support to countries

Under this first exercise the custodian agencies acknowledge that they have put an important effort to organize the reporting and to provide support for the countries to fill the template, and they recognize that still more could be done. For the next reporting phase, the two custodian agencies plan to clarify the reporting form by developing a more clear and user friendly step-by-step methodology for SDG indicator 6.5.2, simplifying the questions in the template, and preparing a Guide to reporting on the questionnaire in view of assisting the countries in completing the form, reducing the time required to finalize it and review it, and to improve the quality of the reporting. The custodian agencies plan also to promote assistance to the countries through the organization of regional and thematic meetings.

E. Coordination with reporting under SDG indicator 6.5.1

In this first exercise, the reporting for SDG indicators 6.5.1 and 6.5.2 was conducted separately. The reporting is under the responsibility of different custodian agencies and the national focal points are not the same. However, since the questionnaire for SDG indicator 6.5.1 includes a request for information on transboundary cooperation, it seems appropriate to coordinate between the two processes, at least for questions addressing shared water resources to avoid incoherencies in the replies. As in the case of the Arab countries the responses under SDG 6.5.1 were much higher than for SDG 6.5.2, thus coordination might create a synergy encouraging higher response rates.

V. Conclusions and Recommendations for the next reporting phase in the Arab region

One obvious finding from the first reporting exercise on SDG indicator 6.5.2 in the Arab region is that the low rate of responses does not allow to draw any firm conclusion regarding this indicator in the region and more importantly regarding cooperation. Results should be improved for the next reporting round, especially given the importance of shared waters for the Arab countries. Furthermore, given the high level of responses for SDG indicator 6.5.1, and the replies concerning transboundary cooperation, this could be an indication that the information is available; though perhaps not in the same form or with the required level of detail as required in the template for SDG indicator 6.5.2. The issue may therefore relate more to the reporting process than the availability of the information itself. The Inventory of Shared Water Resources in Western Asia is a readily available source that countries in western Asia can draw upon to support their reporting process.¹⁶ Global

¹⁶ ESCWA and BGR, 2013.

sources of data include products and services offered by the International Groundwater Resources Assessment Center,¹⁷ or the results of the Transboundary Waters Assessment Project¹⁸ and others.

One way to encourage higher response in the Arab region is to link the global process to the regional and national processes, and not to duplicate efforts. This could be done through linking the reporting under SDG 6.5.2 to all the initiatives and work taking place in the Arab region related to shared waters. In its questionnaire under SDG indicator 6.5.2, Kuwait mentioned the Gulf Cooperation Council (GCC) for the exchange of data with the other riparian countries. It also mentions the Economic and Social Commission for Western Asia (ESCWA) for a shared information platform.

A regional process on transboundary cooperation that could be used to encourage reporting, is the process under the Arab Ministerial Water Council (AMWC) under the League of Arab States with support from ESCWA to develop common guidance principles for shared water cooperation in the Arab region. As a matter of fact, it was noted that the reporting under the existing framework of the UNECE Water Convention concerned the vast majority of the Parties, 95 per cent. The elaboration of the cooperation principles under the AMWC may offer such an environment on shared waters in the Arab region and create a dynamic for the next reporting round. Another regional process is the Arab Strategy for Water Security in the Arab Region to meet the challenges and future needs for sustainable development (2010-2030) which has shared water cooperation as one of the main pillars for achieving water security in the region. This Strategy is currently under revision to reflect more recent milestones such as the 2030 Agenda and the SDGs.

Furthermore, workshops at the regional level or transboundary basin levels for countries sharing a water body are needed in view of reaching a common understanding and providing a common response, with the aim of avoiding inconsistencies. Workshops can be useful at the national level also, as was done by the custodian agency under SDG indicator 6.5.1. As mentioned above, the questionnaire is divided in four parts. Each part, except the fourth one, requires a different knowledge and capacity, this might call upon separate expertise, therefore necessitating a coordination effort from the country within its various institutions. In Section I related to the calculation of SDG indicator 6.5.2, the country needs to report on the total surface of the shared basin (river, lake, aquifer) in the country, and the part covered by an operational arrangement. This information is about the physical reality of the shared water body, it calls therefore upon technical data and expertise. The information asked in section II relates specifically to existing arrangements on the shared basins. The section concerns details of the content of the cooperation arrangement and the operational functioning of the cooperation. As indicated above, under this section the countries are invited to coordinate their answers. The capacity needed in this case for a proper answer is an expert involved in the implementation of the arrangement. Finally, section III demands a good knowledge of the national legislation on water management. The answers in section IV can be the result of a joint answer by all the national experts who have answered the previous sections. Egypt for example established a national team for this task.

In summary, answering the template under SDG indicator 6.5.2 requires a coordination effort at the national level, and at the transboundary level. Regional organizations can provide assistance to countries in this aspect with the required regional scale and the bridging of global to regional to national process.

¹⁷ <https://www.un-igrac.org>

¹⁸ <http://geftwap.org>

Bibliography

Economic Commission for Europe (UNECE) (2013). *Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992)* (ECE/MP.WAT/41). Geneva: United Nations. Available from http://www.unece.org/fileadmin/DAM/env/documents/2013/wat/ECE_MP.WAT_41.pdf.

Economic and Social Commission of Western Asia (ESCWA) (2017). *Overview of shared Water Resources Management in the Arab Region for Informing Progress on SDG 6.5* (E/ESCWA/SDPD/2017/Technical Paper.13). Beirut: United Nations.

_____ (2018). *Outcome document of the Regional Preparatory Meeting on Water Issues for the 2018 Arab Forum on sustainable Development and High-level Political Forum*, Beirut, Lebanon, 28-29 March 2018. Beirut.

ESCWA and Federal Institute for Geosciences and Natural Resources (BGR) (2013). *Inventory of Shared Water Resources in Western Asia*. (E/ESCWA/SDPD/2013/Inventory). Beirut.

United Nations and the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2018). *Progress on Transboundary Water Cooperation: Global baseline for SDG indicator 6.5.2* (ECE/MP.WAT/57). Geneva.

United Nations General Assembly (1997). *Convention on the Law of the Non-Navigational Uses of International Watercourses* (A/RES/51/229) (8 July).

United Nations General Assembly (2009). *The Law of Transboundary Aquifers* (A/RES/63/124) (15 January).

United Nations General Assembly (2015). *Transforming our world: the 2030 Agenda for Sustainable Development* (A/RES/70/1) (22 September).

UN-Water (2017). *Step-by-step monitoring methodology for indicator 6.5.2*. Available from http://www.unwater.org/app/uploads/2017/05/Step-by-step-methodology-6-5-2_Revision-2017-01-11_Final-1.pdf.