

**Jordan's New National Report (2020) - Trans-boundary Water - Indicator**  
**SDG 6.5.2**

**Reporting on global SDG indicator 6.5.2**

**TEMPLATE of the second cycle for reporting**

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**Content of the template**

The template is divided into four parts:

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

Country name: [HASHEMITE KINGDOM OF JORDAN]

## I. Calculation of Sustainable Development Goal indicator 6.5.2

### *Methodology*

1. Using the information gathered in section II, the information gathered in this section allows for the calculation of Sustainable Development Goal global indicator 6.5.2, which is defined as the proportion of transboundary basin area with an operational arrangement for water cooperation.
2. The step-by-step monitoring methodology for indicator 6.5.2, developed by UNECE and UNESCO in the framework of UN-Water, should be referred to for details on the necessary data, the definitions and the calculation.<sup>a</sup>
3. The value of the indicator at the national level is derived by adding up the surface area in a country of those transboundary basins (river and lake basins and aquifers) that are covered by an operational arrangement and dividing the area obtained by the aggregate total area in a country of all transboundary basins (both river and lake basins, and aquifers).
4. Transboundary basins are basins of transboundary waters, that is, of any surface waters (notably rivers, lakes) or groundwaters which mark, cross or are located on boundaries between by two or more States. For the purpose of the calculation of this indicator, for a transboundary river or lake, the basin area is determined by the extent of its catchment. For groundwater, the area to be considered is the extent of the aquifer.
5. An “arrangement for water cooperation” is a bilateral or multilateral treaty, convention, agreement or other formal arrangement among riparian countries that provides a framework for cooperation on transboundary water management.
6. For an arrangement to be considered “operational” all the following criteria need to be in place in practice:
  - (a) There is a joint body, joint mechanism or commission (e.g., a river basin organization) for transboundary cooperation (criterion 1);
  - (b) There are regular (at least once per year) formal communications between riparian countries in form of meetings (either at the political or technical level) (criterion 2);
  - (c) Joint objectives, a common strategy, a joint or coordinated management plan, or an action plan have been agreed upon by the riparian countries (criterion 3);
  - (d) There is a regular (at least once per year) exchange of data and information (criterion 4).

### *Calculation of indicator 6.5.2*

7. Please list in the tables below the transboundary basins (rivers and lakes and aquifers) in your country’s territory and provide the following information for each of them:
  - (a) The country/ies with which the basin is shared;
  - (b) The surface area of the basin (the catchment of rivers or lakes and the aquifer in the case of groundwater) within the territory of your country (in square kilometres (km<sup>2</sup>));

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<sup>a</sup> Available from the UN-Water website: <https://www.sdg6monitoring.org/indicators/target-65/indicators652/> (updated version “2020”).

(c) Whether a map and/or a geographical information system (GIS) shapefile of the basin has been provided;

(d) Whether there is an arrangement in force for the basin;

(e) The verification of each of the four criteria to assess operationality;

(f) The surface area of the basin within the territory of your country which is covered by a cooperation arrangement that is operational according to the above criteria.

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

4 Table 1

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

<i>Name of transboundary river or lake basin/sub-basin</i>	<i>It is a basin or a sub-basin? <sup>b</sup></i>	<i>Countries shared with</i>	<i>Surface area of the basin/sub-basin (in km<sup>2</sup>) within the territory of the country</i>	<i>Map and/or GIS shapefile provided (yes/no)</i>	<i>Covered by an arrangement (entirely, partly, no) (Ref. to questions in sect. II)</i>	<i>Criterion 1 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 2 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 3 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 4 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Surface area of the basin/sub-basin (in km<sup>2</sup>) covered by an operational arrangement within the territory of the country</i>
<b>Jordan River</b>	<b>Basin</b>	<b>Jordan, Syria, Palestine, Lebanon, Israel</b>	<b>7,314</b>	<b>Yes (Map)</b>	<b>YES ENTIRELY</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>7,314</b>
<b>Azraq</b>	<b>Basin</b>	<b>Jordan, Syria</b>	<b>11,205</b>	<b>Yes (Map)</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>0</b>
<b>Dead Sea</b>	<b>Basin</b>	<b>Jordan, Israel</b>	<b>1,470</b>	<b>Yes (Map)</b>	<b>YES ENTIRELY</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>1,470</b>
<b>North Wadi Araba</b>	<b>Basin</b>	<b>Jordan, Israel</b>	<b>2,923</b>	<b>Yes (Map)</b>	<b>YES ENTIRELY</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>2,923</b>
<b>South Wadi Araba</b>	<b>Basin</b>	<b>Jordan, Israel</b>	<b>6,334</b>	<b>Yes (Map)</b>	<b>YES ENTIRELY</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>6,334</b>
<b>(A) Total surface area of transboundary basins/sub-basins of rivers and lakes covered by operational arrangements within the territory of the country (in km<sup>2</sup>) (do not double count sub-basins)</b>										<b>18,041</b>
<b>(B) Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km<sup>2</sup>) (do not double count sub-basins)</b>			<b>29,246</b>							

<sup>b</sup> List sub-basins after the basin they belong to.

Table 2

**Transboundary aquifers (please add rows as needed)**

<i>Name of the transboundary aquifer</i>	<i>Countries shared with</i>	<i>Surface area of the aquifer<sup>c</sup> (in km<sup>2</sup>) within the territory of the country</i>	<i>Map and/ or GIS shapefile provided (yes/no)</i>	<i>Covered by an aquifer specific arrangement (entirely, partly, no) (Ref. to questions in sect. II)</i>	<i>Covered within an arrangement not specific to the aquifer<sup>d</sup> (entirely, partly, no) (Ref. to questions in sect. II)</i>	<i>Criterion 1 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 2 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 3 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 4 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Surface area of the aquifer (in km<sup>2</sup>) covered by an operational arrangement within the territory of the country</i>
<b>Azraq-Dhulleil</b>	<b>Jordan, Syria</b>	<b>8,500</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>0</b>
<b>Yarmouk</b>	<b>Jordan, Syria</b>	<b>1,388</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>0</b>
<b>Amman Zarqa</b>	<b>Jordan, Syria</b>	<b>3,739</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>0</b>
<b>Wadi Sirhan</b>	<b>Jordan, Saudi Arabia</b>	<b>9,000</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>0</b>
<b>Hamad</b>	<b>Jordan, Syria, Saudi Arabia, Iraq</b>	<b>17,807</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>0</b>
<b>Saq-Ram</b>	<b>Jordan, Saudi Arabia</b>	<b>82,000</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>7,181</b>
<b>Northern Wadi Araba</b>	<b>Jordan, Israel</b>	<b>3,128</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>3,128</b>
<b>Southern Wadi Araba</b>	<b>Jordan, Israel</b>	<b>1,245</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>1,245</b>

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

<sup>d</sup> In the text of the agreement or arrangement or in the practice.

<i>Name of the transboundary aquifer</i>	<i>Countries shared with</i>	<i>Surface area of the aquifer<sup>c</sup> (in km<sup>2</sup>) within the territory of the country</i>	<i>Map and/ or GIS shapefile provided (yes/no)</i>	<i>Covered by an aquifer specific arrangement (entirely, partly, no) (Ref. to questions in sect. II)</i>	<i>Covered within an arrangement not specific to the aquifer<sup>d</sup> (entirely, partly, no) (Ref. to questions in sect. II)</i>	<i>Criterion 1 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 2 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 3 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 4 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Surface area of the aquifer (in km<sup>2</sup>) covered by an operational arrangement within the territory of the country</i>
<b>Jordan Valley</b>	<b>Jordan, Israel</b>	<b>1,155</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>1,155</b>
<b>Dead Sea</b>	<b>Jordan, Israel</b>	<b>7,510</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>7,510</b>
<b>(C) Sub-total: surface area of transboundary aquifers covered by operational arrangements (in km<sup>2</sup>)</b>										<b>20,219</b>
<b>(D) Total surface area of transboundary aquifers (in km<sup>2</sup>)</b>		<b>135,472</b>								

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### **Indicator value for the country**

#### **Surface waters:**

Percentage of surface area of transboundary basins of rivers and lakes covered by an operational arrangement:

$$A/B \times 100 = 18,041 / 29,246 = 61.7\%$$

#### **Aquifers:**

Percentage of surface area of transboundary aquifers covered by an operational arrangement:

$$C/D \times 100 = 20,219 / 135,472 = 14.9\%$$

#### **Sustainable Development Goal indicator 6.5.2:**

Percentage of surface area of transboundary basins covered by an operational arrangement:

$$((A + C)/(B + D)) \times 100 = 38,260 / 164,718 = 23.2\%$$

### **Operational Arrangement**

#### **Jordan River Basin**

The 1994 Peace Treaty between Israel and Jordan distributed the Jordan River flows roughly 2/3 for Israel and 1/3 for Jordan. The two parties signed the Treaty of Peace Between the State of Israel and the Hashemite Kingdom of Jordan. In November of 1994, about two weeks after the treaty was signed and at the WRGWR meeting in Athens, Greece, the parties approved the Implementation Plan of the Regional Water Data Banks Project, which was initiated a few months later

In the peace treaty (Annex II), the parties agreed to recognize each other's rightful allocations from the Jordan River, Yarmouk River and the Araba/Arava aquifer. For the Yarmouk River, the treaty allocates Israel a summer (12MCM) and winter (13 MCM) quantity, with Jordan receiving the remainder of the flow. For the Jordan River, Jordan conceded to Israel to pump 20 MCM of water during the winter months. In return, Israel is to transfer 20 MCM of water during the summer to Jordan (Treaty of Peace, 1994). Finally, a Joint Water Committee was established, comprised of three members from each country, to monitor water use, enforce regulations and develop new cooperation activities.

The agreement created a Joint Water Committee (JWC) as a permanent institution charged with implementing the agreement and addressing additional water matters that may arise. A number of professional advisors attend the Committee meetings. The JWC was meant to be a means of resolving the ambiguities in the agreement through compromise building. Because the negotiators realized the importance of acknowledging ambiguity and the different types of uncertainties, discussed below, they created a Joint Water Committee with three individuals appointed by each government to oversee implementation and address future challenges. The cooperative approach involving joint fact-finding and monitoring of water quality and flows quantity. Common measures to face drought and water shortages. . Communication between the two countries increased during this time, and data and information exchange became more routine practice

#### **Jordanian-Syrian Cooperation of Yarmouk Basin**

Agreement between Jordan and Syria concerning the utilization of Yarmouk water in 1987, Wehda dam and Joint commission. The aim of the joint Jordanian-Syrian Commission is to manage the shared water resources of the Yarmouk Basin following the Integrated Water Resources Management (IWRM) approach. This approach considers the available surface and groundwater resources in the Jordanian and Syrian parts of the shared water resources and water demand as well. Based on these a joint Water Resources Management Plan will be developed. This plan aims to achieve a long-term sustainable management of water resources and To reduce potential adverse impacts and to avoid and manage future disputes.

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The three bilateral agreements made between Jordan and Syria over the last 50 years regarding use of the shared waters of the Yarmouk River. Jordan began constructing the long-planned Unity Dam and the permanent Adaseya diversion weir only after concluding the most recent agreement in 2001.

- Agreement between Jordan and Syria concerning the utilization of Yarmouk water in 1987, Wehda dam and Joint commission.
- The aim of the joint Jordanian-Syrian Commission is to manage the shared water resources of the Yarmouk Basin following the Integrated Water Resources Management (IWRM) approach.
- This approach considers the available and the shared water resources in the Jordanian and Syrian parts.
- Based on these a joint Water Resources Management Plan will be developed.

This plan aims to achieve a long-term sustainable management of water resources and To reduce potential adverse impacts and to avoid and manage future disputes. In November of 1998, Jordan and Syria reached an agreement on building the long awaited dam on the Yarmouk at Maqarin, renamed in 1987 to al-Wehda dam; construction was to commence in 2000 and completed in 2004. the agreement between Syria and Jordan has been shaped and managed by political relations.

### **Disi – Saq GW Basin**

On 30 April 2015, the Hashemite Kingdom of Jordan and the Kingdom of Saudi Arabia entered into an agreement for the Management and Utilization of the Ground Waters in the Al-Sag /Al-Disi Layer

The Agreement over the Al-Sag /Al-Disi Aquifer is concise with four main articles. Article One contains terms and definitions; Article Two describes the main norms for managing the aquifer; Article Three discusses the creation and responsibilities of a Joint Saudi/Jordanian Technical Committee; and Article Four contains administrative provisions related to the implementation of the Agreement

The Agreement calls for the liquidation of all existing activities in the Protected Area (the Prohibited Area), which depends on the extraction of groundwaters therefrom.. It also stipulates that the maintenance of the Protected Area (the Prohibited Area) between the two States, free from all activities which depend on the extraction of groundwaters from the Protected Area, shall be realized by two countries. According to the Agreement, observatory wells shall be dug in the Protected Area, for the purpose of obtaining information relating to the quality and level of the groundwaters, on the condition that prior coordination through the Technical Joint Committee is carried out before the digging of any well

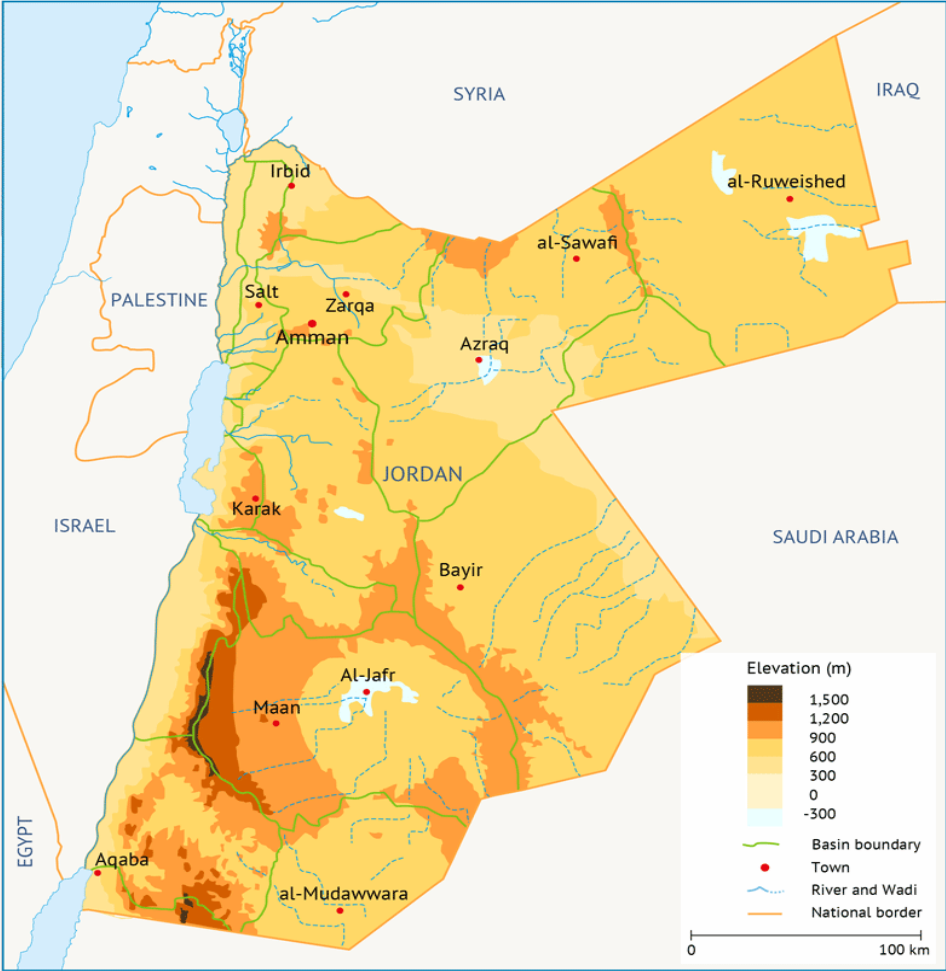
Two countries accepted to establish a Joint Technical Committee to coordinate the tasks proposed by the Agreement. The Joint Technical Committee shall be composed of five members from each country. Saudi side shall be headed by the Undersecretary of the Ministry of Water and Electricity, and Jordanian side by the Secretary-General of the Ministry of Water and Irrigation. Regularly meeting every six months, the Joint Technical Committee shall be entitled to use experts and advisers, and employ assistants, technicians and officials from citizens from the two States or otherwise, according to its needs, for carrying out specified activities. Main responsibilities of the Joint Technical Committee have been described as follows: (a) The supervision of the implementation of the terms of the Agreement. (b) The supervision and observation of the groundwater, from the point of view of the quantity of water extracted, its quality and level, and (c) The collection and exchange of information, statements and studies and their analysis, and the submission of the results to the competent authorities in Saudi Arabia and Jordan.

### **Spatial information**

If a map (or maps) of the transboundary surface water catchments and transboundary aquifers (i.e., “transboundary basins”) is available, please consider attaching them. Ideally, shapefiles of the basin and aquifer delineations that can be viewed in GIS should be sent.



Figure 1: Surface Water Basins in Jordan



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### Additional information

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

Does your country have transboundary agreements or arrangements for the protection and/or management of transboundary waters (i.e., rivers, lakes or groundwater), whether bilateral or multilateral?

Yes /No

*If yes, list the bilateral and multilateral agreements or arrangements (listing for each of the countries concerned):*

- Jordan River Basin (Peace Treaty between Jordan and Israel)
- Cooperation of Yarmouk Basin (Agreement between Jordan and Syria)
- Disi – Saq GW Basin (Agreement between Jordan and Saudi Arabia). **The template was not filled out given that the agreement is a high level agreement with no much technical details**

### II. Questions for each transboundary basin, sub-basin, part of a basin, or group of basins (river, lake or aquifer)

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.<sup>1</sup> In some instances, you may provide information on both a basin and one or more of its sub-basins or parts thereof, for example, where you have agreements<sup>2</sup> or arrangements on both the basin and its sub-basin. You may coordinate your responses with other States with which your country shares transboundary waters, or even prepare a joint report. General information on transboundary water management at the national level should be provided in section III and not repeated here.

Please reproduce this whole section with its questions for each transboundary basin, sub-basin, part of a basin or group of basins for which you will provide a reply.

**Name of the transboundary basin,-sub-basin, part of a basin or group of basins: [JORDAN RIVER + Dead Sea + Yarmouk River + North Wadi Araba + South Wadi Araba]**

List of the riparian States: [JORDAN, ISRAEL]

**In the case of an aquifer, what is the nature of the aquifer and its relation with the river or lake basin:**

- |   |                                     |
|---|-------------------------------------|
| Unconfined aquifer connected to a river or lake                   | <input type="checkbox"/>            |
| Unconfined aquifer with no or limited relation with surface water | <input type="checkbox"/>            |
| Confined aquifer connected to surface water                       | <input checked="" type="checkbox"/> |
| Confined aquifer with no or limited relation with surface water   | <input type="checkbox"/>            |
| Other   | <input type="checkbox"/>            |

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

<sup>2</sup> In section II, “agreement” covers all kinds of treaties, conventions and agreements ensuring cooperation in the field of transboundary waters. Section II can also be completed for other types of arrangements, such as memorandums of understanding.

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Please describe: [fill in]

Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** [fill in]

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin, sub-basin, part of a basin or group of basins?

One or more agreements or arrangements exist and are in force

Agreement or arrangement developed but not in force

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

*Please insert the name of the agreement(s) or arrangement(s)* [Jordan Israel Peace Treaty; ANEX II Water Related Matter]

Ministry of Water and Irrigation MWI considered the Jordan Israel Peace Treaty (ANNEX II, Water Related Matters) is the agreement that covers Jordan River Basin

Agreement or arrangement is under development

No agreement or arrangement

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

**If there is no agreement or arrangement and no joint body or mechanism for the transboundary basin, sub-basin, part of a basin or group of basins then jump to question 4; if there is no agreement or arrangement, but a joint body or mechanism then go to question 3.**

**Questions 2 and 3 to be completed for each bilateral or multilateral agreement or arrangement in force in the transboundary basin, sub-basin, part of a basin or group of basins.**

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

Yes /No

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

Yes /No

Additional explanations? **The Arrangement covers water related matters for both Jordan & Israel**

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

Yes /No

Additional explanations? [fill in]

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

**Jordan, Israel**

- (b) If the agreement or arrangement relates to a river or lake basin or sub-basin, does it also cover aquifers?

Yes /No

If yes, please list the aquifers covered by the agreement or arrangement: [fill in]

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

- 
- All water uses
  - A single water use or sector
  - Several water uses or sectors

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

**Water uses or sectors**

- Industry
- Agriculture
- Transport (e.g., navigation)
- Households
- Energy: hydropower and other energy types
- Fisheries
- Tourism
- Nature protection
- Other (*please list*): [fill in]

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

**Procedural and institutional issues**

- Dispute and conflict prevention and resolution
- Institutional cooperation (joint bodies)
- Consultation on planned measures
- Mutual assistance

**Topics of cooperation**

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

**Monitoring and exchange**

- Joint assessments
- Data collection and exchange
- Joint monitoring
- Maintenance of joint pollution inventories

- 
- Elaboration of joint water quality objectives
  - Common early warning and alarm procedures
  - Exchange of experience between riparian States
  - Exchange of information on planned measures

**Joint planning and management**

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

(e) What are the main difficulties and challenges that your country faces with the agreement or arrangement and its implementation, if any?

- Aligning implementation of agreement or arrangement with national laws, policies and programmes
- Aligning implementation of agreement or arrangement with regional laws, policies and programmes
- Lack of financial resources
- Insufficient human capacity
- Insufficient technical capacity
- Tense diplomatic relations
- Non-participation of certain riparian countries in the agreement
- No significant difficulties

Other (*please describe*): To update terms so that it takes into consideration climate change issues; and consequently apply shares by percentage not quantity to have a dynamic share that is a function of climate change variations.

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? **Securing the right amount of water for Jordan, as well as to institutionalise the ways of handling the water related matter between Jordan & Israel.**

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

3. Is your country a member of any joint body or mechanism for this agreement or arrangement?

Yes /No

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

**Where there is a joint body or mechanism**

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

- Plenipotentiaries
- Bilateral commission

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Basin or similar commission

Expert group meeting or meeting of national focal points

Other (*please describe*): [Joint Water Committee]

(b) Does the joint body or mechanism cover the entire transboundary basin, sub-basin, part of a basin or group of basins?

Yes /No

(c) Which States (including your own) are members of the joint body or mechanism? (*Please list*): [Jordan, Israel]

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [fill in]

(e) If not all riparian States are members of the joint body or mechanism how does the joint body or mechanism cooperate with them?

No cooperation

They have observer status

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

(f) Does the joint body or mechanism have any of the following features (*please tick the ones applicable*)?

A secretariat

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

A subsidiary body or bodies

*Please list (e.g., working groups on specific topics):* Sub-Committee

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

(g) What are the tasks and activities of this joint body or mechanism?<sup>3</sup>

Identification of pollution sources

Data collection and exchange

Joint monitoring

Maintenance of joint pollution inventories

Setting emission limits

Elaboration of joint water quality objectives

Management and prevention of flood or drought risks

Preparedness for extreme events, e.g., common early warning and alarm procedures

Surveillance and early warning of water related disease

Water allocation and/or flow regulation

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<sup>3</sup> This may include tasks according to the agreement or tasks added by the joint body, or its subsidiaries. Both tasks which joint bodies coordinate and tasks which they implement should be included.

- 
- Policy development
  - Control of implementation
  - Exchange of experience between riparian States
  - Exchange of information on existing and planned uses of water and related installations
  - Settling of differences and conflicts
  - Consultations on planned measures
  - Exchange of information on best available technology
  - Participation in transboundary EIA
  - Development of river, lake or aquifer basin management or action plans
  - Management of shared infrastructure
  - Addressing hydromorphological alterations
  - Climate change adaptation
  - Joint communication strategy
  - Basin-wide or joint public participation and consultation of, for example, basin management plans
  - Joint resources to support transboundary cooperation
  - Capacity-building
  - Any other tasks (*please list*): [fill in]

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

- Governance issues   
*Please describe, if any:* [fill in]
- Unexpected planning delays   
*Please describe, if any:* [fill in]
- Lack of resources   
*Please describe, if true:* [fill in]
- Lack of mechanism for implementing measures   
*Please describe, if true:* [fill in]
- Lack of effective measures   
*Please describe, if true:* [fill in]
- Unexpected extreme events   
*Please describe, if any:* [fill in]
- Lack of information and reliable forecasts   
*Please describe, if any:* [fill in]
- Others (*please list and describe, as appropriate*): [fill in]

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(i) Does the joint body or mechanism, or its subsidiary bodies meet regularly?

Yes /No

If yes, how frequently does it meet?

More than once per year

Once per year

Less than once per year

(j) What are the main achievements with regards to the joint body or mechanism?

Getting mutual agreement and arrangement on water released, water purchased, water pricing and flood prevention. Additionally, to guarantee the full cooperation as well as the full exchange of information.

(k) Did the joint body or mechanism ever invite a non-riparian coastal State to cooperate?

Yes /No

*If yes, please give details. If no, why not, e.g. are the relevant coastal States also riparian States and therefore already members of the joint body or mechanism? [fill in]*

4. Have joint objectives, a common strategy, a joint or coordinated management plan or action plan been agreed for the basin, sub-basin, part of a basin or group of basins?

Yes /No

*If yes, please provide further details:* None of the two parties is entitled to pursue individually any activity that affects the water resources, mutual discussion and agreement is mandatory.

5. How is the transboundary basin,-sub-basin, part of a basins or group of basins protected, including the protection of ecosystems, in the context of sustainable and rational water use?

Regulation of urbanization, deforestation, and sand and gravel extraction.

Environmental flow norms, including consideration of levels and seasonality

Water quality protection, e.g. nitrates, pesticides, faecal coliforms, heavy metals

Water-related species and habitats protection

Other measures (*please describe*): The agreement integrally implies environmental protection.

6. (a) Does your country regularly exchange information and data with other riparian States in the basin, sub-basin, part of a basin or group of basins?

Yes /No

(b) If yes, how often:

More than once per year

Once per year

Less than once per year

(c) Please describe how information is exchanged (e.g. in connection with meetings of joint bodies): meetings, websites



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(d) If yes, on what subjects are information and data exchanged?

- Environmental conditions
- Research activities and application of best available techniques
- Emission monitoring data
- Planned measures taken to prevent, control or reduce transboundary impacts
- Point source pollution sources
- Diffuse pollution sources
- Existing hydromorphological alterations (dams, etc.)
- Flows or water levels (including groundwater levels)
- Water abstractions
- Climatological information
- Future planned measures with transboundary impacts, such as infrastructure development
- Other subjects (*please list*): Water Quality

Other comments, e.g. spatial coverage of data and information exchange: [fill in]

(e) Is there a shared database or information platform?

Yes /No

(f) Is the database publicly available?

Yes /No

*If yes, please provide the web address:* N.A.

(g) What are the main difficulties and challenges to data exchange, if applicable?

- Frequency of exchanges
- Timing of exchanges
- Comparability of data and information
- Limited spatial coverage
- Inadequate resources (technical and/or financial)

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

Additional comments: [fill in]

(h) What are the main benefits of data exchange on the basin, sub-basin, part of a basin or group of basins? (*please describe*): mutual cooperation and management of shared water resources.

7. Do the riparian States carry out joint monitoring in the transboundary basin, sub-basin, part of a basin or group of basins?

Yes /No

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

	<i>Hydrological</i>	<i>Ecological</i>	<i>Chemical</i>
Border surface waters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Surface waters in the entire basin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Surface waters on the main watercourse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Surface waters in part of the basin please describe [fill in]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Transboundary aquifer(s) (connected or unconnected)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aquifer(s) in the territory of one riparian hydraulically connected to a transboundary river or lake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

National monitoring stations connected through a network or common stations

*Please describe:* [fill in]

Joint and agreed methodologies

*Please describe:* when the other party directs its team to conduct field measurements, Jordan assigns technical people to participate in the field measurement.

Joint sampling

*Please describe:* [fill in]

Common monitoring network

*Please describe:* [fill in]

Common agreed parameters

*Please describe:* [fill in]

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

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

8. Do the riparian States carry out joint assessment of the transboundary basin, sub-basin, part of a basin or group of basins?

Yes /No

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

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

Yes /No

*If yes, what standards have been applied, e.g. international or regional standards (please specify which), or have national standards of the riparian States been applied? [fill in]*

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

Notification and communication

Coordinated or joint early warning or alarm system for accidental water pollution

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

No measures

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

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

Notification and communication

Coordinated or joint alarm system for floods

Coordinated or joint alarm system for droughts

Joint climate change adaptation strategy

Joint disaster risk reduction strategy

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

No measures

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

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

Yes /No

*If yes, please provide a brief summary:* Through the joint water committee

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, sub-basin, part of a basin or group of basins?

Yes /No

*If yes, how? (please tick all applicable)*

Stakeholders have observer status in a joint body or mechanism

Stakeholders have an advisory role in the joint body

Stakeholders have a decision-making role in the joint body

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

Intergovernmental organizations

Private sectors organizations or associations

Water user groups or associations

Academic or research institutions

- 
- Other non-governmental organizations
- General public
- Other (please specify): [fill in]
- Availability of information to the public
- Consultation on planned measures or river basin management plans<sup>4</sup>
- Public involvement
- Other (*please specify*): [fill in]

**Please remember to complete section II for each of the transboundary basins, sub-basin, part of a basin or group of basins. Please also remember to attach copies of agreements or arrangements, if any.**

### III. Water management at the national level

In this section, you are requested to provide general information on water management at the national level as it relates to transboundary waters. Information on specific transboundary basins, sub-basins, part of basins and groups of basins, should be presented in section II and not repeated here.

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

Yes /No

*If yes, please briefly describe the main national laws, policies, action plans and strategies*  
**National Water Strategy 2016 - 2025**

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

Precautionary principle Yes /No

Polluter pays principle Yes /No

Sustainable development Yes /No

User pays principle Yes /No

*If yes, please briefly describe how these principles are implemented at the national level: [regarding the Sustainable development, the water sector strategy incorporates the SDG 6, besides the strategy encompass the assurance of the highest quality standards]*

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

Yes /No

*If yes, for which sectors?*

Industry

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<sup>4</sup> Or, where applicable, aquifer management plans.

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Mining

Energy

Municipal

Livestock raising

Aquaculture

Other (please list): [fill in]

*Please briefly describe the licensing or permitting system, indicating whether the system provides for setting emission limits based on best available technology?*

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

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

(d) Are the authorized discharges monitored and controlled?

Yes /No

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

Monitoring of discharges

Monitoring of physical and chemical impacts on water

Monitoring of ecological impacts on water

Conditions on permits

Inspectorate

Other means (please list): [fill in]

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

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

**Legislative measures**

Norm for uses of fertilizers

Norms for uses of manure

Permitting system

Bans on or norms for use of pesticides

Others (please list): [fill in]

**Economic and financial measures**

Monetary incentives

Environmental taxes (such as fertilizer taxes)

Others (please list): [fill in]

**Agricultural extension services**

**Technical measures**

*Source control measures*

- 
- |  |                                     |
|--|-------------------------------------|
| Crop rotation                            | <input checked="" type="checkbox"/> |
| Tillage control                          | <input type="checkbox"/>            |
| Winter cover crops                       | <input type="checkbox"/>            |
| Others ( <i>please list</i> ): [fill in] |                                     |
| <i>Other measures</i>                    |                                     |
| Buffer/filter strips                     | <input type="checkbox"/>            |
| Wetland reconstruction                   | <input type="checkbox"/>            |
| Sedimentation traps                      | <input type="checkbox"/>            |
| Chemical measures                        | <input checked="" type="checkbox"/> |
| Others ( <i>please list</i> ): [fill in] |                                     |
| <b>Other types of measures</b>           | <input type="checkbox"/>            |
| <i>If yes, please list:</i> [fill in]    |                                     |

(f) What are the main measures which your country takes to enhance water resources allocation and use efficiency?

*Please tick as appropriate (not all might be relevant)*

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

(g) Does your country apply the ecosystems approach?

Yes /No

*If yes, please describe how:* **Alazraq Reserve, Wadi Mojeb Reserve**

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

Yes /No

*If yes, please briefly describe the most important measures:* **Ground Water Guideline, Water Authority of Jordan Law**

2. Do your national laws require transboundary environmental impact assessment (EIA)?

Yes /No

*If yes, please briefly describe the legislative basis, and any related implementing procedures.* [fill in]

*If not, do other measures provide for transboundary EIA?* [fill in]

#### IV. Final questions

1. What are the main challenges your country faces in cooperating on transboundary waters?

- 
- Differences between national administrative and legal frameworks
  - Lack of relevant data and information
  - Difficulties in data and information exchange
  - Sectoral fragmentation at the national level
  - Language barrier
  - Resource constraints
  - Environmental pressures, e.g. extreme events
  - Sovereignty concerns

Please list other challenges and/or provide further details: **Securing the right amount of water for Jordan**

2. What have been the main achievements in-cooperating on transboundary waters?

- Improved water management
- Enhanced regional integration, i.e. beyond water
- Adoption of cooperative arrangements
- Adoption of joint plans and programmes
- Long-lasting and sustained cooperation
- Financial support for joint activities
- Stronger political will for transboundary water cooperation
- Better knowledge and understanding
- Dispute avoidance
- Stakeholder engagement

Please list other achievements, keys to achieving success, and/or provide concrete examples: **Main achievement is the proper management of transboundary water and the key is the joint cooperation through technical committee, as well as Guarantee the right amount of water for Jordan, through the Joint Committee**

3. Please indicate which institutions were consulted during the completion of the questionnaire

- Joint body or mechanism
- Other riparian or aquifer countries
- National water management authority
- Environment agency/ authority
- Basin authority (national)
- Local or provincial government
- Geological survey (national)
- Non-water specific ministries, e.g. foreign affairs, finance, forestry and energy
- Civil society organizations
- Water user associations

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Private sector



Other (please list): [fill in]

Please briefly describe the process by which the questionnaire was completed: **Ministry of Water and Irrigation is the main institution to handle the negotiation of the rights in the Water in terms of Quantity and Quality**

4. If you have any other comments please add them here (*insert comments*): [fill in]
5. Name and contact details of the person(s) who filled out the questionnaire (*please insert*): **Ali Subah, ali\_Subah@mwi.gov.jo/ Mohammad AL Dwairi, mohammad\_aldwairi@mwi.gov.jo/ Basim Hasan, basim\_hasan@mwi.gov.jo**

Date:

Signature:

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



Private sector




Other (please list): [fill in]

Please briefly describe the process by which the questionnaire was completed: **Ministry of Water and Irrigation is the main institution to handle the negotiation of the rights in the Water in terms of Quantity and Quality**

4. If you have any other comments please add them here (*insert comments*): [fill in]
5. Name and contact details of the person(s) who filled out the questionnaire (*please insert*): **Ali Subah, ali\_Subah@mwi.gov.jo/ Mohammad AL Dwairi, mohammad\_aldwairi@mwi.gov.jo/ Basim Hasan, basim\_hasan@mwi.gov.jo**

**Initial Submission**  
Date: **on 16/07/2020** Signature:

**Final Revised Submission**  
Date: **on 19/11/2020**

  
**Mohammad  
AL Dwairi**

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

**Basim**  
**19/11 2020**