

## Reporting on the global SDG indicator 6.5.2

### TEMPLATE

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Country name: [LIBERIA]

#### Section I. Calculation of SDG indicator 6.5.2

##### a. Methodology

This section allows for the calculation of the Sustainable Development Goal global indicator 6.5.2, which is defined as *the proportion of transboundary basins' area with an operational arrangement for water cooperation*. The information gathered in Section II, will help in completing this section. The Step-by-step monitoring methodology for SDG indicator 6.5.2<sup>1</sup>, developed by UNECE and UNESCO in the framework of UN Water, can be referred to for details on the necessary data, the definitions and the calculation.

The value of the indicator at the national level is derived by **adding up the surface area in a country of those transboundary surface water catchments and transboundary aquifers (i.e. 'transboundary basins') that are covered by an operational arrangement and dividing the obtained area by the aggregate total area in a country of all transboundary basins (both catchments and aquifers)**.

**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.

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.

For an arrangement to be considered **"operational"** all the following criteria needs to be fulfilled:

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

##### b. Calculation of indicator 6.5.2

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:

- the country/ies with which the basin is shared;

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<sup>1</sup> Available at <http://www.unwater.org/publications/publications-detail/en/c/428764/>.

- the surface area of these basins (the catchment of rivers or lakes and the aquifer in the case of groundwater) within the territory of your country (in km<sup>2</sup>);
- the surface area of these basins within the territory of your country which is covered by a cooperation arrangement that is operational according to the above criteria (please consider the replies to the questions in Section II, in particular questions 1, 2, 3, 4 and 6).

In case an operational arrangement is in place only for a sub-basin or 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.

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

Name of the transboundary basin / sub-basin	Countries shared with	Surface area of the basin / sub-basin (in km <sup>2</sup> ) within the territory of the country	Surface area of the basin / sub-basin (in km <sup>2</sup> ) covered by an operational arrangement within the territory of the country
Moa River	Guinea	1730	0
Mano River	Guinea, and Sierra Leone	5539	1981
Lofa River basin	Guinea	9189	1423
St.John	Guinea	14363	2567
St. Paul River	Guinea	10991	9290
Cestos River	Guinea	10389	2220
Cavalla River	Guinea and Ivory Cost	12240	1803
<b>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>)</b> [A] <i>(do not double count sub-basins)</i>			64441km <sup>2</sup> of the basin in Liberia.

<b>Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km<sup>2</sup>)</b> [B] <i>(do not double count sub-basins)</i>	55505km <sup>2</sup>	
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**Transboundary aquifers [please add rows as needed]**

Name of the transboundary aquifer	Countries shared with	Surface area (in km <sup>2</sup> ) <sup>2</sup> within the territory of the country	Surface area (in km <sup>2</sup> ) covered by an operational arrangement within the territory of the country
Cavalla basin - transboundary aquifer	Ivroy Cost and Guinea	N/A	N/A
Lofa River basin	Guinea	N/A	N/A
<b>Total surface area of transboundary aquifers covered by operational arrangements within the territory of the country (in km<sup>2</sup>)</b> [C]			The total surface area covered by the MRU basin is about 751 429 km <sup>2</sup> , with a total population of about 44 million inhabitants in 2015.
<b>Total surface area of transboundary aquifers within the territory of the country (in km<sup>2</sup>)</b> [D]		N/A	

**Indicator value for the country**

<sup>2</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.

$$((A + C) / (B + D)) \times 100\% = 54.6\%$$

### Additional information

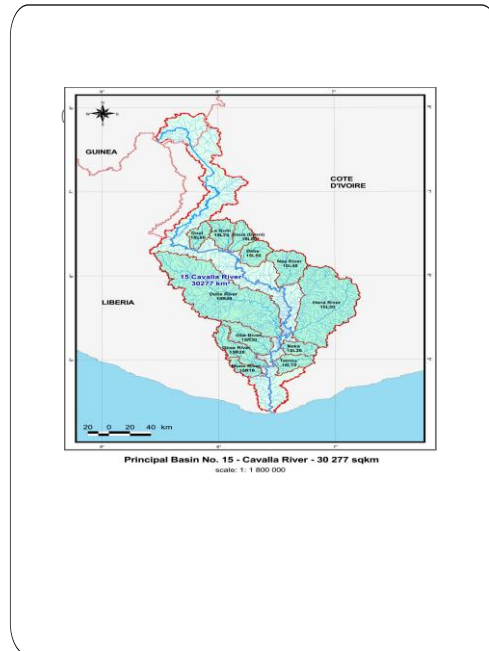
If the respondent has comments that clarify assumptions or interpretations made for the calculation, or the level of certainty of the spatial information, please write them here:

### Spatial information

If a map (or maps) of the transboundary surface water catchments and transboundary aquifers (i.e. 'transboundary basins') is available, please attach them. Ideally, shapefiles of the basin and aquifer delineations that can be viewed in Geographical Information Systems should be sent.

Cavalla River basin is share with MRU .

LOCATION MAP SHOWING THE FOUR Countries OF the MRU BASIN



## Section II. Information on each transboundary basin or group of basins

Please complete this second section for each transboundary basin (river, lake or aquifer) or for group of basins covered by the same agreement or arrangement and where conditions are similar. It might also be convenient to group basins or sub-basins for which your country's share is very small.<sup>3</sup> In some instances, you may provide information on both a basin and one or more of its sub-basins, for example, where you have agreements<sup>4</sup> on both the basin and its sub-basin. You may coordinate your responses with other States with which your country shares the basin or aquifer or even prepare a joint report for shared basins. General information on transboundary water management at the national level should be provided in Section III and not repeated here.

Please reproduce the whole Section II with its questions for each transboundary basin, river, lake or aquifer, or group of basins for which you will provide a reply.

**Name of the transboundary basin, river, lake or aquifer, or group thereof, list of the riparian States, and country's share of the basin: [ **Cavalla River basin is share between Ivory Coast and, Liberia** ]**

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin? Yes.

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 or agreements or arrangements:*

[ **Mano River Union Agreement** ] **Agreement or arrangement is under feasibility study.**

No agreement

*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: [ **There are plan to establish the Mano- Cavalla river basin authority under the Mano river basin authority. Under the Early Warning System project supported by the NAP process Liberia. is to install six Hydrometric station along the basin** ]*

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<sup>3</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>4</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.

**If there is no agreement or arrangement and no joint body for the transboundary basin, river, lake or aquifer then jump to question 4; if there is no agreement, but a joint body 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 (river, lake or aquifer) or group of basins or sub-basins**

2. (a) Does this agreement or arrangement specify the basin area subject to cooperation? **No**

If yes, does it cover the entire basin, or group of basins, and all riparian States? **No**

Yes

If not, what does it cover? [ ]

Or, if the agreement or arrangement relates to a sub-basin, does it cover the entire sub-basin? **No**

Yes /No

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

(b) Are aquifers (or groundwater bodies) covered by the agreement/arrangement? **No**

/No

(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 ( Hydro power and Mining):*

**Water uses or sectors**

✓ Industry Yes

✓ Agriculture Yes

Transport (e.g., navigation) No

Households Yes

✓ Energy: hydropower and other energy types Yes

Tourism

✓ Nature protection Yes

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 Yes
- Institutional cooperation (joint bodies)
- Consultation on planned measures
- ✓ Mutual assistance Yes

### **Topics of cooperation**

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

### **Monitoring and exchange**

- Joint assessments
- Data collection and exchange Yes
- Joint monitoring
- Maintenance of joint pollution inventories
- Elaboration of joint water quality objectives
- Common early warning and alarm procedures Yes
- Exchange of experience between riparian States yes
- Exchange of information on planned measures Yes

### **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 Yes
- Development of shared infrastructure
- Other (*please list*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [There is a need to develop regional cooperation at the basin level]

(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]



4953\_IUCN\_ManoRiver\_ProjectDocument\_Final\_2016\_08\_23 light.pdf

3. Is your country a member of an operational joint body or joint bodies for this agreement/arrangement?

/No

*If no, why not? (please explain):* [There is no Basin authority to create enforce policy guideline for member state in the MRU basin]

**Where there is a joint body (or bodies)**

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

Plenipotentiaries

Bilateral commission

Basin or similar commission

Other (*please describe*): []

(b) Does the joint body cover the entire transboundary basin or sub-basin, river, lake or aquifer, or group of basins, and all riparian States?

/No

(c) Which States (including your own) are member of the joint body? (*Please list*) [Liberia, Serria Lonea Guinea and Ivory Coast call the MRU Basin]

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

A secretariat Yes

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

[Joint Secretariat]

A subsidiary body or bodies

*Please list (e.g., working groups on specific topics):* [fill in]

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

(e) What are the tasks and activities of this joint body?<sup>5</sup>

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<sup>5</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.



- 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
- Water allocation and/or flow regulation
- ✓ 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]
- (f) What are the main difficulties and challenges that your country faces with the operation of the joint body, if any?
- ✓ Governance issues
- Please describe, if any: [Political will]
- Unexpected planning delays
- Please describe, if any: [fill in]
- ✓ Lack of resources

Please describe, if true: [Finical Contribution by member state]

✓ Lack of mechanism for implementing measures

Please describe, if true: [Political Will is lacking]

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: [Lack of Early warning system ]

Others (please list and describe, as appropriate): [fill in]

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

No cooperation

They have observer status

Other (please describe): [fill in]

(h) Does the joint body or its subsidiary bodies meet regularly?

/No

If yes, how frequently does it meet? ]

(i) What are the main achievements with regards to the joint body? [fill in]

(j) Are representatives of international organizations invited to the meetings of the joint body (or bodies) as observers?

/No

(k) Did the joint body ever invite a coastal State to cooperate?

/No

If yes, please give details. If no, why not? [fill in]

4. Is there a joint or coordinated management plan (such as an action plan or a common strategy) or have joint objectives been set specifically on the transboundary waters subject to cooperation?

Yes x /

If yes, please provide further details: [Each country has developed its Action plan to monitor the day to day activities of the basin such as management and protection to include others.]

5. How is the transboundary basin, river, lake or aquifer protected, including the protection of ecosystems, in the context of sustainable and rational water use?

Afforestation

Restoration of ecosystems

Environmental flow norms

Groundwater measures (e.g., protection zones)

Other measures (*please list*): [None of the above applicable]

6. (a) Does your country exchange information and data with other riparian States in the basin? N/A

/No

(b) 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.)

Discharges

Water abstractions

Future planned measures with transboundary impacts, such as infrastructure development

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

(c) Is there a shared database or information platform? N/A

No

(d) Is the database publicly available?

No

*If yes, please provide the web address:* [N/ A]

(e) What are the main difficulties and challenges to data exchange, if applicable? (*please describe*): [ENGLISH country have problem with FRENCH )

(f) What are the main benefits of data exchange on the transboundary waters subject to cooperation? (*please describe*): [N/A]

7. Do the riparian States carry out joint monitoring in the transboundary basin, river, lake or aquifer? /No

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

	Covered?	Hydrological	Ecological	Chemical
Border surface waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Surface waters on the main watercourse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connected aquifers (or groundwaters)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unconnected aquifers (or groundwaters)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

- National monitoring stations connected through a network or common stations
- Joint and agreed methodologies
- Joint sampling
- Common monitoring network
- Common agreed parameters

(c) Please describe the main achievements regarding joint monitoring, if any: [N/A]

(d) Please describe any difficulties experienced with joint monitoring: [ Lack of Monitoring System in place.]

8. Do the riparian States carry out joint assessment of the transboundary basin, river, lake or aquifer? N/A

/No

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

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

Yes /No

*If yes, is the basis an international or regional standard (please specify which) or has it been adapted from the national standards of the riparian States?*

[fill in]

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

Notification and communication

Coordinated or joint 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?: [Our Country lack transboundary policy or water Law that will addressed such issue. We have develop our IWRM action plan but not yet been implement ]*

11. What are the measures implemented to prevent or limit the transboundary impact of extreme weather events?
- 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  No
- 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?

/No

*If yes, please provide a brief summary:* [fill in]

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, river, lake or aquifer?

/No

*If yes, how? (please tick all applicable) (Please note: If your country is a Party to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), you may refer to your country's report under that Convention.):*

Stakeholders have observer status in a joint body

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

Availability of information to the public

Consultation on planned measures or river basin management plans<sup>6</sup>

Public involvement

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

**Please remember to complete Section II for each of the transboundary basins (rivers, lakes or aquifers). Please also remember to attach copies of agreements, if any.**

<sup>6</sup> Or, where applicable, aquifer management plans.

**Name of the transboundary basin, river, lake or aquifer, or group thereof, list of the riparian States, and country's share of the basin: [ Mano River basin is share between Guinea Serra Leone and, Liberia ]**

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin? Yes.

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 or agreements or arrangements:*

[Mano River Union Agreement ] Agreement or arrangement is under feasibility study.

No agreement

*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: [.]*

**If there is no agreement or arrangement and no joint body for the transboundary basin, river, lake or aquifer then jump to question 4; if there is no agreement, but a joint body 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 (river, lake or aquifer) or group of basins or sub-basins**

2. (a) Does this agreement or arrangement specify the basin area subject to cooperation? **No**

If yes, does it cover the entire basin, or group of basins, and all riparian States? No

Yes

If not, what does it cover? [ ]

Or, if the agreement or arrangement relates to a sub-basin, does it cover the entire sub-basin? **No**

Yes /No

Which States (including your own) are bound by the agreement or arrangement? *(Please list):* [Guiana and Serra Leone ]

(b) Are aquifers (or groundwater bodies) covered by the agreement/arrangement? **No**

/No

- (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 ( Hydro power and Mining):*

**Water uses or sectors**

- ✓ Industry Yes
- ✓ Agriculture Yes
- Transport (e.g., navigation) No
- Households Yes
- ✓ Energy: hydropower and other energy types Yes
- Tourism
- ✓ Nature protection Yes
- 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 Yes
- Institutional cooperation (joint bodies)
- Consultation on planned measures
- ✓ Mutual assistance Yes

**Topics of cooperation**

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

**Monitoring and exchange**

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

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

**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 Yes
- Development of shared infrastructure
- Other (*please list*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [ (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]



Feasibility study for the creation of a TRBA in the MRU Member States(2).pdf

3. Is your country a member of an operational joint body or joint bodies for this agreement/arrangement? **YES**

/No

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

**Where there is a joint body (or bodies)**

- (a) If there is a joint body, which kind of joint body (*please tick one*)?
- Plenipotentiaries
  - Bilateral commission
  - Basin or similar commission
  - Other (*please describe*): []

(b) Does the joint body cover the entire transboundary basin or sub-basin, river, lake or aquifer, or group of basins, and all riparian States?

/No

(c) Which States (including your own) are member of the joint body? (*Please list*) [ **Liberia, Serria Lonea Guinea and Ivory Coast call the MRU Basin**]

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



A secretariat Yes

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

A subsidiary body or bodies

*Please list (e.g., working groups on specific topics):* [fill in]

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

(e) What are the tasks and activities of this joint body?<sup>7</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

Water allocation and/or flow regulation

✓ 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

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<sup>7</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.

Joint resources to support transboundary cooperation

✓ Capacity-building

Any other tasks (*please list*): [fill in]

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

✓ Governance issues

*Please describe, if any:* [Political will]

Unexpected planning delays

*Please describe, if any:* [fill in]

✓ Lack of resources

*Please describe, if true:* [Finical Contribution by member state]

✓ Lack of mechanism for implementing measures

*Please describe, if true:* [Political Will is lacking]

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:* [Lack of Early warning system ]

Others (*please list and describe, as appropriate*): [fill in]

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

No cooperation

They have observer status

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

(h) Does the joint body or its subsidiary bodies meet regularly?

/No

If yes, how frequently does it meet? [ ]

(i) What are the main achievements with regards to the joint body? [fill in]

(j) Are representatives of international organizations invited to the meetings of the joint body (or bodies) as observers?

/No

(k) Did the joint body ever invite a coastal State to cooperate?

/No

*If yes, please give details. If no, why not?* [fill in]

4. Is there a joint or coordinated management plan (such as an action plan or a common strategy) or have joint objectives been set specifically on the transboundary waters subject to cooperation?

Yes /

*If yes, please provide further details:* [Each country has developed its Action plan to monitor the day to day activities of the basin such as management and protection to include others.]

5. How is the transboundary basin, river, lake or aquifer protected, including the protection of ecosystems, in the context of sustainable and rational water use?

Afforestation

Restoration of ecosystems

Environmental flow norms

Groundwater measures (e.g., protection zones)

Other measures (*please list*): [None of the above applicable]

6. (a) Does your country exchange information and data with other riparian States in the basin? N/A

/No

- (b) 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.)

Discharges

Water abstractions

Future planned measures with transboundary impacts, such as infrastructure development

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

- (c) Is there a shared database or information platform? N/A

No

- (d) Is the database publicly available?

No

*If yes, please provide the web address:* [N/ A]

(e) What are the main difficulties and challenges to data exchange, if applicable? (*please describe*): [ENGLISH country have problem with FRENCH )

(f) What are the main benefits of data exchange on the transboundary waters subject to cooperation? (*please describe*): [N/A]

7. Do the riparian States carry out joint monitoring in the transboundary basin, river, lake or aquifer? /No

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

	Covered?	Hydrological	Ecological	Chemical
Border surface waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters on the main watercourse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connected aquifers (or groundwaters)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unconnected aquifers (or groundwaters)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

National monitoring stations connected through a network or common stations	<input type="checkbox"/>
Joint and agreed methodologies	<input type="checkbox"/>
Joint sampling	<input type="checkbox"/>
Common monitoring network	<input type="checkbox"/>
Common agreed parameters	<input type="checkbox"/>

(c) Please describe the main achievements regarding joint monitoring, if any: [N/A]

(d) Please describe any difficulties experienced with joint monitoring: [ Lack of Monitoring System in place.]

8. Do the riparian States carry out joint assessment of the transboundary basin, river, lake or aquifer? N/A

/No

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

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

Yes /No

*If yes, is the basis an international or regional standard (please specify which) or has it been adapted from the national standards of the riparian*

States?  
[fill in]

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

Notification and communication

Coordinated or joint 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?:* [Our Country lack transboundary policy or water Law that will addressed such issue. We have develop our IWRM action plan but not yet been implement ]

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

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?

/No

*If yes, please provide a brief summary:* [fill in]

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, river, lake or aquifer?

/No

*If yes, how? (please tick all applicable) (Please note: If your country is a Party to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), you may refer to your country's report under that Convention.):*

Stakeholders have observer status in a joint body

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

Availability of information to the public

Consultation on planned measures or  
river basin management plans<sup>8</sup>

Public involvement

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

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<sup>8</sup> Or, where applicable, aquifer management plans.

### III. General information on transboundary water management at the national level

In this section, you are requested to provide general information on transboundary water management at the national level. Information on specific transboundary basins (rivers, lakes or aquifers) and agreements should be presented in Section II and not repeated here.

1. (a) Does your country's national legislation refer to measures to prevent, control and reduce any transboundary impact? No

No /

*If yes, list the main national legislation:* [fill in]

- (b) Do your country's national policies, action plans and strategies refer to measures to prevent, control and reduce any transboundary impact? No

Yes /No

*If yes, list the main national policies, action plans and strategies:* []

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

Precautionary principle      yes /No

Polluter pays principle      yes /No

Sustainable development      Yes /No

- (d) 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*)? No

No

Yes /No

*If yes, for which sectors? (please list):* [Industry, Energy and Mining]

*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]

*If your country has a licensing system, does the system provide for setting emission limits based on best available technology? No*

Yes /No

- (e) Are the authorized discharges monitored and controlled? No

Yes /No

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

Monitoring of discharges      Yes

Monitoring of physical and chemical impacts on water      Yes

Monitoring of ecological impacts on water      Yes

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]

(f) 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

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  yes

Tillage control  Yes

Winter cover crops

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

*Other measures*

Buffer/filter strips

Wetland reconstruction

Sedimentation traps

Chemical measures  Yes

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

**Other types of measures**

*If yes, please list:* [fill in]

(g) What are the main measures which your country takes to enhance water efficiency?

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



- A regulatory system regarding water abstraction
- Monitoring and control of abstractions
- Water rights are clearly defined
- Water allocation priorities are listed  Yes
- Water-saving technologies
- Advanced irrigation techniques
- Demand management activities
- Other means (please list)

(h) Does your country apply the ecosystems?

Yes /No

*If yes, please describe how:* [fill in]

(i) Does your country take specific measures to prevent the pollution of groundwaters? No

Yes /No

*If yes, please list the most important measures:* [fill in]

2. Does your country require transboundary environmental impact assessment (EIA)? Yes

Yes /No

Does your country have procedures for transboundary EIA? No

Yes /No

*If yes, please make reference to the legislative basis (please insert the name and section of the relevant laws):* [fill in]

3. Does your country have transboundary agreements or arrangements for the protection and/or management of transboundary waters (i.e., surface waters or aquifers), whether bilateral, multilateral and/or at the basin level?

Yes /No

*If yes, list the bilateral, multilateral and basin agreements (listing for each of the countries concerned):* [fill in]

#### Section IV. Final questions

1. What are the main challenges your country faces in cooperating on transboundary waters? ( *Please describe*): [] **Lack of political will to develop trans- boundary monitoring system. No governmental budget or funding to implement project.**

fill in

2. What have been the main achievements in cooperating on transboundary waters? What were the keys to achieving that success? (*Please describe*

*concrete examples): .*

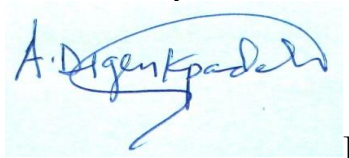
[No achievement in place from Government ]

3. Please include any additional information on the process of preparing the report (e.g., whether there was an exchange or consultation within the joint body or with riparian countries), in particular which institutions have been consulted (*please describe*): [Liberia Water and Sewer Corporation, Ministry of Land Mines and Energy]
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*): [ AnthonyD. Kpadeh/ Director Liberia Hydrological Services/ email= kpadehanthony2015ak@gmail.com]

Date: [February , 2019]

Signature:

[



A. D. Kpadeh

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

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