

**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: **Republic of NAMIBIA**

## 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.

Table 1  
**Transboundary river or lake basin (please add rows as needed)**

Name of transboundary river or lake basin/sub-basin	It is a basin or a sub-basin? <sup>b</sup>	Countries shared with	Surface area of the basin/ sub-basin (in km <sup>2</sup> ) within the territory of the country	Map and/or GIS shapefile provided (yes/no)	Covered by an arrangement (entirely, partly, no) (Ref. to questions in sect. II)	Criterion 1 applied (yes/no) (Ref. to questions in sect. II)	Criterion 2 applied (yes/no) (Ref. to questions in sect. II)	Criterion 3 applied (yes/no) (Ref. to questions in sect. II)	Criterion 4 applied (yes/no) (Ref. to questions in sect. II)	Surface area of the basin/ sub-basin (in km <sup>2</sup> ) covered by an operational arrangement within the territory of the country
Orange-Senqu	Basin	Botswana, Lesotho, South Africa	243,196 km <sup>2</sup>	No	Entirely					243,196 km <sup>2</sup>
Okavango	Basin	Angola, Botswana	153 783 km <sup>2</sup>	No	Entirely					153 783 km <sup>2</sup>
Kunene	Basin	Angola	14 700 km <sup>2</sup>	No	Entirely					14 700 km <sup>2</sup>
Zambezi	Basin	Botswana, Angola, Zambia, Zimbabwe, Malawi, Tanzania, Mozambique	17 100 km <sup>2</sup>	No	Entirely					17 100 km <sup>2</sup>
Cuvelai	Basin	Angola	105 349 km <sup>2</sup>	No	Entirely					105 349 km <sup>2</sup>
<b>(A) Total surface area of transboundary basins/sub-basins of rivers and lakes covered by operational arrangements within the territory of the country</b>										<b>534, 128 km<sup>2</sup></b>

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

Name of transboundary river or lake basin/sub-basin	It is a basin or a sub-basin? <sup>b</sup>	Countries shared with	Surface area of the basin/ sub-basin (in km <sup>2</sup> ) within the territory of the country	Map and/or GIS shapefile provided (yes/no)	Covered by an arrangement (entirely, partly, no) (Ref. to questions in sect. II)	Criterion 1 applied (yes/no) (Ref. to questions in sect. II)	Criterion 2 applied (yes/no) (Ref. to questions in sect. II)	Criterion 3 applied (yes/no) (Ref. to questions in sect. II)	Criterion 4 applied (yes/no) (Ref. to questions in sect. II)	Surface area of the basin/ sub-basin (in km <sup>2</sup> ) covered by an operational arrangement within the territory of the country	
<b>(in km<sup>2</sup>)</b> <b>(do not double count sub-basins)</b>											
<b>(B)</b> <b>Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km<sup>2</sup>)</b> <b>(do not double count sub-basins)</b>			<b>534, 128 km<sup>2</sup></b>								

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>
Stampriet (covered by ORASECOM Agreement)	Botswana, South Africa	63 252 km <sup>2</sup>	No	No	Entirely					63 252 km <sup>2</sup>
Ohangwena (covered by CUVECOM Agreement)	Angola	5 170 km <sup>2</sup>	No	No	Entirely					5 170 km <sup>2</sup>
<b>(C)</b> <b>Sub-total: surface area of transboundary aquifers covered by operational arrangements (in km<sup>2</sup>)</b>										<b>68 422km<sup>2</sup></b>
<b>(D)</b> <b>Total surface area of transboundary aquifers (in km<sup>2</sup>)</b>		<b>68 422 km<sup>2</sup></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.

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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:

$$A/B \times 100 = 534,128/534,128 \times 100 = 100\%$$

**Aquifers:**

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

$$C/D \times 100 = 68,422/68,422 \times 100 = 100\%$$

**Sustainable Development Goal indicator 6.5.2:**

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

$$((A + C)/(B + D)) \times 100 = ((534,128+68,422) / (534,128+68,422)) \times 100 = 100\%$$

**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.

([www.kunene.riverawarenesskit.com](http://www.kunene.riverawarenesskit.com); <http://zambezicommission.org>; <https://www.okacom.org/>; [www.orasecom.org](http://www.orasecom.org); <https://www.cuvecom.org/>)

**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:

None

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): [CUVECOM Agreement 2014, Kunene River Basin Water Use Agreements (1-5) 1926-1991, OKACOM Agreement 1994, ORASECOM Agreement Revised in 2018, Permanent Water Committee 1992, ZAMCOM Agreement 2004 ]*

**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

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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:**  
[Orange-Senqu River Basin]

List of the riparian States: [Botswana, Lesotho, Namibia and South Africa]

**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
- Unconfined aquifer with no or limited relation with surface water
- Confined aquifer connected to surface water
- Confined aquifer with no or limited relation with surface water
- Other
- Please describe: [fill in]
- Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** [243,196 km<sup>2</sup>]

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)* [ORASECOM Agreement 2018, PWC 1992]

- 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**

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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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**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? [fill in]

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): **[Namibia, Botswana, Lesotho and South Africa]**

(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**

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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*): [**Ensuring equitable and reasonable allocation of water, Environmental flows requirements and low water levels especially during dry seasons**]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [**Basin wide IWRM Plan (2014) and Strategic Action Plan (2014), Joint Basin Survey every 5 years, joint water management**]

(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*): [**www.orasecom.org**]

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
- Basin or similar commission
- Expert group meeting or meeting of national focal points

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

(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*): [**Namibia, Botswana, Lesotho and South Africa**]

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [**None**]

(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]

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(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):* **[Joint secretariat – hosted by Republic of South Africa]**

A subsidiary body or bodies

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

Other features (*please list*): **[The Commission has technical bodies comprising of representatives from all the riparian states]**

(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

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

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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.

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- 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:* [**Bilaterals commissions sometimes do not share information at basinwide meetings**]
- Unexpected planning delays   
*Please describe, if any:* [**Uncoordinated projects such as Noordoewer Violsdrfit Dam, Lesotho Botswana Water Transfer and Lesotho Highlands Water Projects Phase 2**]
- Lack of resources   
*Please describe, if true:* [**Finances**]
- 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:* [**Drought events, and floods**]
- Lack of information and reliable forecasts   
*Please describe, if any:* [**Not realtime always but obtained on request or from DWS website**]
- Others (*please list and describe, as appropriate*): [fill in]
- (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? [**Permanent Secretariat, IWRM Plan (2014) and its M&E plan, Joint Basin Survey every 5 years, Funding secured for the basin strategic Action plan implementation through UNDP/GEF support since 2018, review of 2000 ORASECOM agreement, exchange of information**]

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(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?*  
**[Coastal/island states are part of SADC and don't have shared rivers, thus not invited unless at SADC level initiatives]**

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:* **[Orange-Senqu Basin-wide IWRM Plan (2014-2024), Strategic Action Plan for Orange-Senqu River Basin (2014-2024)]**

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*): [fill in]

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): **[Proponents for any development in the basin that have possible impacts on the basin notify other riparian states on future planned measures with transboundary impacts, such as infrastructure development]**

(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*): [fill in]
  - 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:* [fill in]

(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*): **[Early warning on possible occurrence of flood and drought, informed planning and decision making]**

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?

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	<i>Hydrological</i>	<i>Ecological</i>	<i>Chemical</i>
Border surface waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Surface waters on the main watercourse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters in part of the basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<i>Hydrological</i>	<i>Ecological</i>	<i>Chemical</i>
please describe [fill in]			
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:* [fill in]

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: [[Water level standardised equipment, water resource quality – information available on www.orasecom.org](http://www.orasecom.org)]

(d) Please describe any difficulties experienced with joint monitoring: [[Funds for recurrent activities – highly depended on donors and limited national budgets](#)]

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:* [[STAS – Stampriet Transboundary Aquifer project done with UNESCO-IHP with funding from the Swiss Development Agency collected and shared groundwater data and modelling.](#)]

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?* [[Adapted from South African standards – using accredited Laboratories in countries](#)]



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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:* [fill in]
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

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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]

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

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**Name of the transboundary basin, sub-basin, part of a basin or group of basins:**  
**[Okavango River Basin]**

List of the riparian States: **[Angola, Botswana and Namibia]**

**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

Unconfined aquifer with no or limited relation with surface water

Confined aquifer connected to surface water

Confined aquifer with no or limited relation with surface water

Other

Please describe: [fill in]

Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** **[153 783 km<sup>2</sup>]**

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)* **[OKACOM Agreement 1994, currently being reviewed]**

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? [fill in]

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

Yes /No

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Additional explanations? [fill in]

Which States (including your own) are bound by the agreement or arrangement?  
(Please list): [Angola, Namibia and Botswana]

(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*): **[Equitable and reasonable allocation of water]**

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? **[Development of Basin Strategic Action Programme (SAP) for the Sustainable Development and Management of the Cubango-Okavango Basin and National Action Plans (2011), Cubango-Okavango River Basin Transboundary Diagnostic Analysis(2011), Joint hydrological monitoring (twice a year), OKACOM**

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**Notification Consultation Negotiation Guidelines (2018), commitment by the riparian members states]**

(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*): [<https://www.okacom.org/>]

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

Basin or similar commission

Expert group meeting or meeting of national focal points

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

- (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*): [**Botswana, Namibia and Angola**]

- (d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [**None**]

- (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):* [**Joint secretariat – hosted by Republic of Botswana**]

A subsidiary body or bodies

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

Other features (*please list*): [**The Commission has a ministers' forum (comprising of water ministers from the three riparian states, council of commissioners, steering committee and technical bodies comprising of representatives from all the riparian states.)**]

- 
- (g) What are the tasks and activities of this joint body or mechanism?<sup>5</sup>
- |   |                                     |
|---|-------------------------------------|
| Identification of pollution sources   | <input checked="" type="checkbox"/> |
| Data collection and exchange  | <input checked="" type="checkbox"/> |
| Joint monitoring  | <input checked="" type="checkbox"/> |
| Maintenance of joint pollution inventories  | <input checked="" type="checkbox"/> |
| Setting emission limits   | <input type="checkbox"/>            |
| Elaboration of joint water quality objectives   | <input checked="" type="checkbox"/> |
| Management and prevention of flood or drought risks   | <input checked="" type="checkbox"/> |
| Preparedness for extreme events, e.g., common early warning and alarm procedures                  | <input checked="" type="checkbox"/> |
| Surveillance and early warning of water related disease   | <input type="checkbox"/>            |
| Water allocation and/or flow regulation   | <input checked="" type="checkbox"/> |
| Policy development  | <input type="checkbox"/>            |
| Control of implementation   | <input type="checkbox"/>            |
| Exchange of experience between riparian States  | <input checked="" type="checkbox"/> |
| Exchange of information on existing and planned uses of water and related installations           | <input checked="" type="checkbox"/> |
| Settling of differences and conflicts   | <input checked="" type="checkbox"/> |
| Consultations on planned measures   | <input checked="" type="checkbox"/> |
| Exchange of information on best available technology  | <input checked="" type="checkbox"/> |
| Participation in transboundary EIA  | <input checked="" type="checkbox"/> |
| Development of river, lake or aquifer basin management or action plans                            | <input checked="" type="checkbox"/> |
| Management of shared infrastructure   | <input checked="" type="checkbox"/> |
| Addressing hydromorphological alterations   | <input checked="" type="checkbox"/> |
| Climate change adaptation   | <input checked="" type="checkbox"/> |
| Joint communication strategy  | <input checked="" type="checkbox"/> |
| Basin-wide or joint public participation and consultation of, for example, basin management plans | <input checked="" type="checkbox"/> |
| Joint resources to support transboundary cooperation  | <input checked="" type="checkbox"/> |
| Capacity-building   | <input checked="" type="checkbox"/> |
| Any other tasks ( <i>please list</i> ): [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?

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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.

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Governance issues

*Please describe, if any:* **[Differences in country official languages always calls for translations and interpretations when countries communicates.]**

Unexpected planning delays

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

Lack of resources

*Please describe, if true:* **[Finances to execute transboundary projects and activities within member states]**

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:* **[Drought events, and floods]**

Lack of information and reliable forecasts

*Please describe, if any:* **[Member states are in the process of finalizing a Rules and Procedures on the Sharing of Data and Information for the river basin]**

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

(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? **[SAP implementation with support from UNDP/GEF project since 2019, Collaboration with various developmental partners including USAID, EU, SIDA, CRIDIF and others, adaption of the reviewed Organisational structure that emanated from Institutional Functional Analysis (IFA)]**

(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?* **[Coastal/island states are part of SADC and not part of this basin, thus not invited unless at SADC level initiatives]**

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: **[Strategic Action Plan (SAP) of 2011, OKACOM 200/2021 Work plan and Budget]**

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*): [fill in]

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): **[Member states inform each other on planned developments and measures taken to avoid significant harm to other riparian states as provided for in the OKACOM's Rules and Procedures on the sharing of Data and Information]**

(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

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

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: **[The OKACOM's Decision Support System (DSS) is still under development and not yet available for public]**

(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*): **[Some data recording stations not transmitting, non-standardized data collection procedures, data storage in each member state different]**

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*): **[Early warning information sharing, planning and decision making]**

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? **(surface water is done, groundwater monitoring not yet done)**

---

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

---

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(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:* [fill in]

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: **[Transboundary Diagnostic Analysis report produced and SAP/NAP available on <https://www.okacom.org/>, as well as the development of the OKACOM Decision Support System (DSS).]**

(d) Please describe any difficulties experienced with joint monitoring: **[Funds for recurrent activities, breakages of equipment during long distance travel on gravel roads.]**

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: **[Joint water monitoring is carried out twice a year during high flows and during low flows. The last monitoring was done in November 2019.]***

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? **[Currently OKACOM's Water Resources Technical Committee (WRTC) has not yet agreed on which standards to use for the joint monitoring, but all member states do not have standards for Aquatic ecosystems. Botswana and Namibia have national standards for Drinking Water, Angola uses WHO guidelines ]***

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:* [fill in]

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

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management plans<sup>6</sup>



Public involvement



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

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

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**Name of the transboundary basin,–sub-basin, part of a basin or group of basins:**  
[Zambezi River Basin]

List of the riparian States: [Botswana, Angola, Zambia, Zimbabwe, Malawi, Namibia, Tanzania, Mozambique]

**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

Unconfined aquifer with no or limited relation with surface water

Confined aquifer connected to surface water

Confined aquifer with no or limited relation with surface water

Other

Please describe: [fill in]

Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** [17 100 km<sup>2</sup>]

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)* [ZAMCOM Agreement 2004]

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? [fill in]

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): [Botswana, Angola, Zambia, Zimbabwe, Malawi, Namibia, Tanzania, Mozambique]

(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*): [**Flood and drought management, control of alien invasive species, sustainable fishing**]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [**ZACPRO 6 project, Rules and Procedures for sharing of data and information related to**]



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**the management and development of the Zambezi Watercourse (2016), Procedures for Notification of Planned Measures (2017), ZAMWIS-DSS (2019), Zambezi Strategic Action Plan (2019), commitment by member states.]**

(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*): [[www.zambezicommission.org](http://www.zambezicommission.org)]

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

Basin or similar commission

Expert group meeting or meeting of national focal points

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

(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*): [[Angola](#), [Botswana](#), [Malawi](#), [Mozambique](#), [Namibia](#), [Tanzania](#), [Zambia](#), [Zimbabwe](#)]

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [[None](#)]

(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):* [[Joint secretariat – hosted by Republic of Zimbabwe](#)]

A subsidiary body or bodies

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

Other features (*please list*): [[The Commission has technical bodies comprising of representatives from all the riparian states](#)]

- 
- (g) What are the tasks and activities of this joint body or mechanism?<sup>7</sup>
- |   |                                     |
|---|-------------------------------------|
| Identification of pollution sources   | <input checked="" type="checkbox"/> |
| Data collection and exchange  | <input checked="" type="checkbox"/> |
| Joint monitoring  | <input checked="" type="checkbox"/> |
| Maintenance of joint pollution inventories  | <input checked="" type="checkbox"/> |
| Setting emission limits   | <input type="checkbox"/>            |
| Elaboration of joint water quality objectives   | <input type="checkbox"/>            |
| Management and prevention of flood or drought risks   | <input checked="" type="checkbox"/> |
| Preparedness for extreme events, e.g., common early warning and alarm procedures                  | <input checked="" type="checkbox"/> |
| Surveillance and early warning of water related disease   | <input type="checkbox"/>            |
| Water allocation and/or flow regulation   | <input checked="" type="checkbox"/> |
| Policy development  | <input type="checkbox"/>            |
| Control of implementation   | <input type="checkbox"/>            |
| Exchange of experience between riparian States  | <input checked="" type="checkbox"/> |
| Exchange of information on existing and planned uses of water and related installations           | <input checked="" type="checkbox"/> |
| Settling of differences and conflicts   | <input checked="" type="checkbox"/> |
| Consultations on planned measures   | <input checked="" type="checkbox"/> |
| Exchange of information on best available technology  | <input checked="" type="checkbox"/> |
| Participation in transboundary EIA  | <input checked="" type="checkbox"/> |
| Development of river, lake or aquifer basin management or action plans                            | <input checked="" type="checkbox"/> |
| Management of shared infrastructure   | <input checked="" type="checkbox"/> |
| Addressing hydromorphological alterations   | <input checked="" type="checkbox"/> |
| Climate change adaptation   | <input checked="" type="checkbox"/> |
| Joint communication strategy  | <input checked="" type="checkbox"/> |
| Basin-wide or joint public participation and consultation of, for example, basin management plans | <input checked="" type="checkbox"/> |
| Joint resources to support transboundary cooperation  | <input checked="" type="checkbox"/> |
| Capacity-building   | <input checked="" type="checkbox"/> |
| Any other tasks ( <i>please list</i> ): [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?

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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.

- 
- Governance issues   
*Please describe, if any:* [Unharmonised policy and laws of states especially on fisheries]
  - Unexpected planning delays   
*Please describe, if any:* []
  - Lack of resources   
*Please describe, if true:* [Finances]
  - 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:* [Drought events, and floods]
  - Lack of information and reliable forecasts   
*Please describe, if any:* [Not realtime always]
  - Others (*please list and describe, as appropriate*): [fill in]

(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? [ZAMCOM in collaboration with WWF is implementing the Kwando Project with Angola, Botswana, Namibia and Zambia being the target member countries since 2019, ZACPRO 6 project, Rules and Procedures for sharing of data and information related to the management and development of the Zambezi Watercourse (2016), Procedures for Notification of Planned Measures (2017), ZAMWIS-DSS (2019), Zambezi Strategic Action Plan (2019), commitment by member states]

(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?* [Mozambique is a coastal state and a riparian of the Zambezi basin, the Zambezi river mouth is in Mozambique.]

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:* [Strategic plan for the Zambezi Watercourse (2018-2040), and The Zambezi Watercourse Commission (ZAMCOM) through its Secretariat is now rolling out the implementation of the ZSP under its 2019/20 Work Plan and Budget and the 3-year Rolling Work Plan (2019/20 – 2022/23).]

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*): [fill in]

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): [Guided by the ZAMCOM Procedures for Notification of Planned Measures (2017), proponents for any development in the basin that have possible impacts on the basin notify other riparian states on future planned measures with transboundary impacts, such as infrastructure development]

(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

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Climatological information

Future planned measures with transboundary impacts, such as infrastructure development

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

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: [Zambezi Water Information System (ZAMWIS) a web-based, is still under construction.]*

(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*): [**Sometimes outdated/delayed/unavailable information**]

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*): [**Early warning on possible occurrence of flood and drought, informed planning and decision making**]

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

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transboundary river or lake

(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:* [fill in]

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: [**HYCOS installation on the main channels and they feed the ZAMWIS (surface water monitoring)**]

(d) Please describe any difficulties experienced with joint monitoring: [**Non operation of some monitoring stations due to insufficient maintenance, breakage/vandalism and poor network receptions**]

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:* []

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?* []

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:* [fill in]

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): [**Development partners**]

Availability of information to the public

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

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

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Public involvement



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



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**Name of the transboundary basin, sub-basin, part of a basin or group of basins:**  
[Cuvelai Basin]

List of the riparian States: [Angola and Namibia]

**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

Unconfined aquifer with no or limited relation with surface water

Confined aquifer connected to surface water

Confined aquifer with no or limited relation with surface water

Other

Please describe: [fill in]

Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** [105 349 km<sup>2</sup>]

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)* [CUVECOM Agreement 2014]

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? [fill in]

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): [Namibia, Angola]

(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:  
[Ohangwena II Aquifer]

(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*): **[It is still an establishing Commission and recently completed its IWRM Plan and water resources assessment in 2019 and is in search for cooperating partners in development.]**

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? **[CUVECOM IWRM Plan (2020-2024), Operationalizing of the basin**

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**office, webpage development in 2019, establishment of technical committee]**

(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*): [<https://www.cuvecom.org/>]

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

Basin or similar commission

Expert group meeting or meeting of national focal points

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

(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*): [**Namibia and Angola**]

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [**None**]

(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):* [**Joint Secretariat hosted by Republic of Namibia in Oshakati**]

A subsidiary body or bodies

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

Other features (*please list*): [**A satellite office is established in Angola**]

- 
- (g) What are the tasks and activities of this joint body or mechanism?<sup>9</sup>
- |   |                                     |
|---|-------------------------------------|
| Identification of pollution sources   | <input type="checkbox"/>            |
| Data collection and exchange  | <input checked="" type="checkbox"/> |
| Joint monitoring  | <input type="checkbox"/>            |
| Maintenance of joint pollution inventories  | <input type="checkbox"/>            |
| Setting emission limits   | <input type="checkbox"/>            |
| Elaboration of joint water quality objectives   | <input type="checkbox"/>            |
| Management and prevention of flood or drought risks   | <input checked="" type="checkbox"/> |
| Preparedness for extreme events, e.g., common early warning and alarm procedures                  | <input checked="" type="checkbox"/> |
| Surveillance and early warning of water related disease   | <input type="checkbox"/>            |
| Water allocation and/or flow regulation   | <input type="checkbox"/>            |
| Policy development  | <input checked="" type="checkbox"/> |
| Control of implementation   | <input type="checkbox"/>            |
| Exchange of experience between riparian States  | <input checked="" type="checkbox"/> |
| Exchange of information on existing and planned uses of water and related installations           | <input checked="" type="checkbox"/> |
| Settling of differences and conflicts   | <input type="checkbox"/>            |
| Consultations on planned measures   | <input checked="" type="checkbox"/> |
| Exchange of information on best available technology  | <input checked="" type="checkbox"/> |
| Participation in transboundary EIA  | <input checked="" type="checkbox"/> |
| Development of river, lake or aquifer basin management or action plans                            | <input checked="" type="checkbox"/> |
| Management of shared infrastructure   | <input checked="" type="checkbox"/> |
| Addressing hydromorphological alterations   | <input checked="" type="checkbox"/> |
| Climate change adaptation   | <input checked="" type="checkbox"/> |
| Joint communication strategy  | <input checked="" type="checkbox"/> |
| Basin-wide or joint public participation and consultation of, for example, basin management plans | <input checked="" type="checkbox"/> |
| Joint resources to support transboundary cooperation  | <input checked="" type="checkbox"/> |
| Capacity-building   | <input checked="" type="checkbox"/> |
| Any other tasks ( <i>please list</i> ): [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?

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<sup>9</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.

---

Governance issues

*Please describe, if any:* [Limited or no development partners to assist with commission's operations, unavailability of information in Angola, they are busy setting up their flood monitoring network]

Unexpected planning delays

*Please describe, if any:* []

Lack of resources

*Please describe, if true:* [Finances and Human capacity. At the moment the operations depends solely on the two member states' contributions (after the GIZ support ceased), the secretariat is manned by only one personnel (Programme Manager, there is no an appointed Executive Secretary.)]

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:* [Drought events, and floods]

Lack of information and reliable forecasts

*Please describe, if any:* [Not realtime always but obtained on request or from DWS website]

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

(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? [CUVECOM IWRM Plan of 2019, operationalization of secretariat, stakeholder engagement and awareness raising on CUVECOM existence, Webpage development and operationalization.]

(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?* [Coastal/island states are part of SADC and don't have shared rivers, thus not invited unless at SADC level initiatives]

- 
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:* [CUVECOM IWRM Plan of 2019, Annual action plan and budget for 2020/2021 financial year.]

5. How is the transboundary basin, sub-basin, part of a basin 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*): [Being just developed – focus has been on office establishment, plan development and effective early warning procedures.]

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): [Exchange of EIA reports and Presentations on project concepts and proposals.]

(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

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Climatological information

Future planned measures with transboundary impacts, such as infrastructure development

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

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:* [fill in]

(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*): [**Early warning, hydrological data sharing (mainly water levels), sustainable use of water resources, joint planning and decision making**]

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

---



transboundary river or lake

(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:* [fill in]

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:

(d) Please describe any difficulties experienced with joint monitoring:

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:* [

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?*

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:* [fill in]

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>10</sup>

Public involvement

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

---

<sup>10</sup> Or, where applicable, aquifer management plans.

---

**Name of the transboundary basin, sub-basin, part of a basin or group of basins:**  
**[[Kunene River Basin](#)]**

List of the riparian States: [[Angola and Namibia](#)]

**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

Unconfined aquifer with no or limited relation with surface water

Confined aquifer connected to surface water

Confined aquifer with no or limited relation with surface water

Other

Please describe: [fill in]

Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** [[14 700 km<sup>2</sup>](#)]

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)* [[Water Use Agreements \(1-5\) 1926-1991](#)]

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? [fill in]

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): [Namibia, Angola]

(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*): [**Old dated agreements – not based on the SADC water protocol**]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [**Establishment of the Permanent Joint Technical Committee (PJTC for Kunene) and its sub-committees and task forces**]

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(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*): [[www.kunenerak.org](http://www.kunenerak.org)]

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

Basin or similar commission

Expert group meeting or meeting of national focal points

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

(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*): [[Angola and Namibia](#)]

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [[None](#)]

(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):* []

A subsidiary body or bodies

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

Other features (*please list*): [[Secretariat and Kunene Watercourse Commission are yet to be established](#)]

(g) What are the tasks and activities of this joint body or mechanism?<sup>11</sup>

---

<sup>11</sup> This may include tasks according to the agreement or tasks added by the joint body, or its

- 
- |  |                                     |
|--|-------------------------------------|
| Identification of pollution sources  | <input type="checkbox"/>            |
| Data collection and exchange   | <input checked="" type="checkbox"/> |
| Joint monitoring   | <input type="checkbox"/>            |
| Maintenance of joint pollution inventories   | <input type="checkbox"/>            |
| Setting emission limits  | <input type="checkbox"/>            |
| Elaboration of joint water quality objectives  | <input type="checkbox"/>            |
| Management and prevention of flood or drought risks  | <input type="checkbox"/>            |
| Preparedness for extreme events, e.g., common early warning and alarm procedures   | <input checked="" type="checkbox"/> |
| Surveillance and early warning of water related disease  | <input type="checkbox"/>            |
| Water allocation and/or flow regulation  | <input checked="" type="checkbox"/> |
| Policy development   | <input type="checkbox"/>            |
| Control of implementation  | <input type="checkbox"/>            |
| Exchange of experience between riparian States   | <input checked="" type="checkbox"/> |
| Exchange of information on existing and planned uses of water and related installations  | <input checked="" type="checkbox"/> |
| Settling of differences and conflicts  | <input type="checkbox"/>            |
| Consultations on planned measures  | <input checked="" type="checkbox"/> |
| Exchange of information on best available technology   | <input checked="" type="checkbox"/> |
| Participation in transboundary EIA   | <input type="checkbox"/>            |
| Development of river, lake or aquifer basin management or action plans   | <input checked="" type="checkbox"/> |
| Management of shared infrastructure  | <input checked="" type="checkbox"/> |
| Addressing hydromorphological alterations  | <input checked="" type="checkbox"/> |
| Climate change adaptation  | <input type="checkbox"/>            |
| Joint communication strategy   | <input type="checkbox"/>            |
| Basin-wide or joint public participation and consultation of, for example, basin management plans                                    | <input type="checkbox"/>            |
| Joint resources to support transboundary cooperation   | <input checked="" type="checkbox"/> |
| Capacity-building  | <input checked="" type="checkbox"/> |
| Any other tasks ( <i>please list</i> ): [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  | <input checked="" type="checkbox"/> |

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subsidiaries. Both tasks which joint bodies coordinate and tasks which they implement should be included.

---

Please describe, if any: [No real Basin Commission as per SADC Protocol on Shared Watercourses]

Unexpected planning delays

Please describe, if any:

Lack of resources

Please describe, if true: [Finances for major joint development and operations]

Lack of mechanism for implementing measures

Please describe, if true: [Being developed – currently using the 1969 3rd Water Use Agreement]

Lack of effective measures

Please describe, if true: [fill in]

Unexpected extreme events

Please describe, if any: [Drought events, and floods]

Lack of information and reliable forecasts

Please describe, if any: [fill in]

Others (please list and describe, as appropriate): [in the process of establishing the Kunene River Basin Commission to replace the PJTC – Secretariat is shared between the member states]

(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? [Kunene Transboundary water supply project, Baynes hydropower project agreements, rehabilitation of Calueque dam]

(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? [Not applicable]

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: [Joint water master plan to be developed – however joint objectives exists from the Water use agreements, especially the



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**1969 agreement, each committee has activities they carryout jointly e.g. Baynes Hydropower Project, Calueque Dam rehabilitation, Kunene Transboundary Water Supply Project, etc.]**

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*): [**Being developed – focus has been on water supply and hydropower projects**]

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): [**Proponents for any development in the basin that have possible impacts on the basin notify other riparian states on future planned measures with transboundary impacts, such as infrastructure development**]

- (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

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

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:* [fill in]

(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*): **Early warning on possible occurrence of flood and drought, informed planning and decision making**

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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters on the main watercourse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface waters in part of the basin please describe [fill in]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transboundary aquifer(s) (connected or unconnected)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquifer(s) in the territory of one riparian hydraulically connected to a transboundary river or lake	<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
- Please describe:* [fill in]
- Joint and agreed methodologies
- Please describe:* [fill in]
- 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: [N/A]
- (d) Please describe any difficulties experienced with joint monitoring: [N/A]
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:* []
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?* [N/A]
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:* [fill in]

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>12</sup>

Public involvement

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

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<sup>12</sup> Or, where applicable, aquifer management plans.

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**Name of the transboundary basin,–sub-basin, part of a basin or group of basins:**  
[Lower Orange River],

List of the riparian States: [South Africa and Namibia]

**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

Unconfined aquifer with no or limited relation with surface water

Confined aquifer connected to surface water

Confined aquifer with no or limited relation with surface water

Other

Please describe: [fill in]

Unknown

**Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins:** [243,196 km<sup>2</sup>]

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)* [Permanent Water Commission (PWC) Agreement 1992]

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? [Lower Orange, common border between Namibia and South Africa]

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

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Yes /No

Additional explanations? [fill in]

Which States (including your own) are bound by the agreement or arrangement?  
(Please list): **[Namibia and South Africa]**

(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*): [**Coordination with ORASECOM since its establishment having similar functions and covering same part of the larger basin**]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [**Lower Orange River Management Study (LORMS)**]

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(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*): [\[www.orasecom.org\]](http://www.orasecom.org)

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

Basin or similar commission

Expert group meeting or meeting of national focal points

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

(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*): [\[Namibia and South Africa\]](#)

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [\[None\]](#)

(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):* [fill in]

Other features (*please list*): [\[Joint Irrigation Authority\]](#)

(g) What are the tasks and activities of this joint body or mechanism?<sup>13</sup>

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<sup>13</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



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Identification of pollution sources	<input checked="" type="checkbox"/>
Data collection and exchange	<input checked="" type="checkbox"/>
Joint monitoring	<input checked="" type="checkbox"/>
Maintenance of joint pollution inventories	<input type="checkbox"/>
Setting emission limits	<input type="checkbox"/>
Elaboration of joint water quality objectives	<input type="checkbox"/>
Management and prevention of flood or drought risks	<input checked="" type="checkbox"/>
Preparedness for extreme events, e.g., common early warning and alarm procedures	<input checked="" type="checkbox"/>
Surveillance and early warning of water related disease	<input type="checkbox"/>
Water allocation and/or flow regulation	<input checked="" type="checkbox"/>
Policy development	<input checked="" type="checkbox"/>
Control of implementation	<input type="checkbox"/>
Exchange of experience between riparian States	<input checked="" type="checkbox"/>
Exchange of information on existing and planned uses of water and related installations	<input checked="" type="checkbox"/>
Settling of differences and conflicts	<input type="checkbox"/>
Consultations on planned measures	<input checked="" type="checkbox"/>
Exchange of information on best available technology	<input checked="" type="checkbox"/>
Participation in transboundary EIA	<input checked="" type="checkbox"/>
Development of river, lake or aquifer basin management or action plans	<input checked="" type="checkbox"/>
Management of shared infrastructure	<input checked="" type="checkbox"/>
Addressing hydromorphological alterations	<input checked="" type="checkbox"/>
Climate change adaptation	<input type="checkbox"/>
Joint communication strategy	<input type="checkbox"/>
Basin-wide or joint public participation and consultation of, for example, basin management plans	<input type="checkbox"/>
Joint resources to support transboundary cooperation	<input checked="" type="checkbox"/>
Capacity-building	<input checked="" type="checkbox"/>
Any other tasks ( <i>please list</i> ): [ <b>Development of Joint Water infrastructure - gauging weirs and dams</b> ]	
(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	<input checked="" type="checkbox"/>

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included.

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Please describe, if any: **[Part of the ORASECOM area]**

Unexpected planning delays

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

Lack of resources

Please describe, if true: **[Finances and monitoring infrastructure]**

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: **[Drought events, and floods]**

Lack of information and reliable forecasts

Please describe, if any:

Others (please list and describe, as appropriate): **[They are part of ORASECOM which covers the whole basin and information shared at that level from all bilaterals]**

(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? **[LORMS, Noordoewer-Vioolsdrift dam joint pre-feasibility study]**

(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? **[N/A]**

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: **[Covered in the ORASECOM IWRM basin-wide Plan]**

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*): [fill in]
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): **[Proponents for any development in the basin that have possible impacts on the basin notify other riparian states on future planned measures with transboundary impacts, such as infrastructure development]**
- (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*): [fill in]
- 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: [fill in]

(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): **Early warning on possible occurrence of flood and drought, informed planning and decision making**

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

Please describe: [fill in]

Joint and agreed methodologies

Please describe: [fill in]

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: [N/A]

(d) Please describe any difficulties experienced with joint monitoring: [N/A]

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:* []

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?* [N/A]

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:* [fill in]

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>14</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?

<sup>14</sup> Or, where applicable, aquifer management plans.

Yes /No

If yes, please briefly describe the main national laws, policies, action plans and strategies [**Water Resources Management Act No.11 of 2013, National Water Policy, National Development Plan 5, Ministry of Agriculture, Water and Forestry Strategic Plan 2017/18-2021/22, National IWRM Plan of 2010. They collectively advocate for actions towards ensuring Namibian share in shared watercourses, susustainable water resources management as well as stakeholders' participation and engagement**]

(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: [**The Water Resources Management Act No.11 of 2013, provide for water use permit with conditions to report all pollution cases and clean up. Similary the Environmental management Act 2007, as part of the Environmental Clearance Certificate provides for the Environmental Management Plan, to clean up and rehabilitate the sites back to its original state.**]

(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

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): [**There are Effluent standards for industry, mining and municipal sectors which each wastewater discharge permit holders must adhere to. Code of Practice for reuse of wastewater is developed for different reuse purposes including agriculture.**]

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                             | <input checked="" type="checkbox"/> |
| Monitoring of physical and chemical impacts on water | <input checked="" type="checkbox"/> |
| Monitoring of ecological impacts on water            | <input checked="" type="checkbox"/> |
| Conditions on permits                                | <input checked="" type="checkbox"/> |
| Inspectorate   | <input checked="" type="checkbox"/> |

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             | <input checked="" type="checkbox"/> |
| Norms for uses of manure                 | <input type="checkbox"/>            |
| Permitting system                        | <input checked="" type="checkbox"/> |
| Bans on or norms for use of pesticides   | <input checked="" type="checkbox"/> |
| Others ( <i>please list</i> ): [fill in] |                                     |

**Economic and financial measures**

- |  |                                     |
|--|-------------------------------------|
| Monetary incentives                            | <input type="checkbox"/>            |
| Environmental taxes (such as fertilizer taxes) | <input checked="" type="checkbox"/> |
| Others ( <i>please list</i> ): [fill in]       |                                     |

**Agricultural extension services**

**Technical measures**

*Source control measures*

- |  |                                     |
|--|-------------------------------------|
| Crop rotation                            | <input checked="" type="checkbox"/> |
| Tillage control                          | <input checked="" type="checkbox"/> |
| Winter cover crops                       | <input checked="" type="checkbox"/> |
| Others ( <i>please list</i> ): [fill in] |                                     |

*Other measures*

- |  |                                     |
|--|-------------------------------------|
| Buffer/filter strips                     | <input checked="" type="checkbox"/> |
| Wetland reconstruction                   | <input type="checkbox"/>            |
| Sedimentation traps                      | <input type="checkbox"/>            |
| Chemical measures                        | <input type="checkbox"/>            |
| Others ( <i>please list</i> ): [fill in] |                                     |

**Other types of measures**



---

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

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

Yes /No

*If yes, please briefly describe the most important measures: [Designated water protected areas around the country]*

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. [The Environmental Management Act requires all activities, even the cross border ones to have EIA done. Draft transboundary EIA are being developed for ORASECOM and OKACOM to be integrated with national EIA.]*

*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 | <input checked="" type="checkbox"/> |
| Lack of relevant data and information                            | <input checked="" type="checkbox"/> |
| Difficulties in data and information exchange                    | <input checked="" type="checkbox"/> |
| Sectoral fragmentation at the national level                     | <input checked="" type="checkbox"/> |

- 
- Language barrier
  - Resource constraints
  - Environmental pressures, e.g. extreme events
  - Sovereignty concerns

Please list other challenges and/or provide further details: [fill in]

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: [fill in]

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
- Private sector
- Other (please list): [fill in]

Please briefly describe the process by which the questionnaire was completed: **[The national ministry responsible for water initiated the process and shared the questionnaire with relevant offices indicating where they should provide inputs. Inputs were then collated into a country report]**

- 
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*): [**Aune Amwaama (Ms)**]

Date: [**30 June 2020**]

Signature: [ ]

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

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