

Reporting on global SDG indicator 6.5.2
TEMPLATE of the second cycle for reporting

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: [[ANGOLA](#)]

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.^a
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 (km²));
 - (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 operability;

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

(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)

<i>Name of transboundary river or lake basin/sub-basin</i>	<i>It is a basin or a sub-basin? ^b</i>	<i>Countries shared with</i>	<i>Surface area of the basin/sub-basin (in km²) within the territory of the country</i>	<i>Map and/or GIS shapefile provided (yes/no)</i>	<i>Covered by an arrangement (entirely, partly, no) (Ref. to questions in sect. II)</i>	<i>Criterion 1 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 2 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 3 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Criterion 4 applied (yes/no) (Ref. to questions in sect. II)</i>	<i>Surface area of the basin/sub-basin (in km²) covered by an operational arrangement within the territory of the country</i>
Congo	Cuango and Cassai;	Democratic Republic of Congo; Congo (Brazzaville); Zambia; Cameroon; Rwanda; Gabon, Chad and Central African Republic	132,978 ; 154,641	Yes	Entirely	Yes	Yes	Yes	Yes	287619
Cubango	Cubango	Botswana e Namibia	150,461	Yes	Entirely	Yes	Yes	Yes	Yes	150,461
Cunene	Cunene	Namibia	94,822	Yes	Entirely	Yes	Yes	Yes	Yes	94,822
Cuvelai	Cuvelai	Namibia	52,566	Yes	Entirely	Yes	Yes	Yes	Yes	52,566
Zambeze	Alto Zamzeze; Lungué Bungo e Cuando	Botswana; Namibia;								259,154

^b 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? ^b	Countries shared with	Surface area of the basin/sub-basin (in km ²) 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 ²) covered by an operational arrangement within the territory of the country
		Malawi; Moçambique; Tanzanea; Zambia e Zimbabwe	85,039; 66,151 and 107,964	Yes	Entirely	Yes	Yes	Yes	Yes	
(A) Total surface area of transboundary basins/sub-basins of rivers and lakes covered by operational arrangements within the territory of the country (in km ²) (do not double count sub-basins)										844,622
(B) Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km ²) (do not double count sub-basins)			844,622							

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^c (in km²) 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^d (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 km²) covered by an operational arrangement within the territory of the country</i>
Congo dolomitic	Congo (Brazaville);	8,118	No	No	No	No	No	No	No	0
Congo intracratonic	Democratic Republic of Congo;	216,714	No	No	No	No	No	No	No	0
Congo Cotier	Democratic Republic of Congo; Congo (Brazaville) and Gabon	13,107	No	No	No	No	No	No	No	0
Cuvelai-Etoshia	Republic of Namibia	30,766	No	no	entirely	Yes	Yes	Yes	Yes	30,766
Nata-Karoo	Botswana; Namibia; Zambia; Zimbabwe.	12,055	No	no	entirely	Yes	Yes	Yes	Yes	12,055

^c 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.

^d In the text of the agreement or arrangement or in the practice.

<i>Name of the transboundary aquifer</i>	<i>Countries shared with</i>	<i>Surface area of the aquifer^c (in km²) 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^d (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 km²) covered by an operational arrangement within the territory of the country</i>
Bacia Costeira Sedimentar IV	Republic of Namibia	211	No	No	No	No	No	No	No	0
(C) Sub-total: surface area of transboundary aquifers covered by operational arrangements (in km²)										42821
(D) Total surface area of transboundary aquifers (in km²)		280,971								

Indicator value for the country

Surface waters:

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

$$A/B \times 100 = 100\%$$

Aquifers:

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

$$C/D \times 100 = 15\%$$

Sustainable Development Goal indicator 6.5.2:

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

$$((A + C)/(B + D)) \times 100 = 78,84$$

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.

Additional information

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

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

Yes /No

If yes, list the bilateral and multilateral agreements or arrangements (listing for each of the countries concerned): [OKACOM (Cubango/Okavango) Agreement; ZAMCOM (Zambezi) Agreement; CICOS (Congo) Agreement; PTTC (Cunene) Agreement; CUVECOM (Cuvelai) Agreement]

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

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.¹ 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 agreements² 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: [Congo; Cuango and Cassai]

List of the riparian States: [Democratic Republic of Congo; Congo (Brazaville); Zambia; Cameroon; Rwanda; Gabon, Chad and Central African Republic]

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

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

Please describe: [fill in]

Unknown

Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins: [7.85%]

¹ 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.

² 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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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) [CICOS (Congo) Agreement]

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): [Republic of Angola, Democratic Republic of Congo; Congo (Brazzaville); Zambia; Cameroon; Rwanda; Gabon, Chad and Central African Republic]

- (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*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [[Angola adhered to CICOS Agreement in January 2016. Before that, Angola was an Observer to activities developed by the Congo River Basin Commission.](#)]

Achievements implementing the agreement: a common vision to the basin development; ownership of programme and projects; creation of a smooth path for a regional integration; Keys to achieving success: political will; good neighborliness; need for regional cooperation]

(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*): [[CICOS: www.cicos.int](#)]

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 (**6 States of Central Africa**) are members of the joint body or mechanism? (*Please list*): [Republic of Angola, Republic of Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of Congo and Republic of Gabon]

(d) Are there any riparian States that are not members of the joint body or mechanism? (*please list*): [Republic of Zambia; Republic of Malawi; Republic of Burundi; Republic of Rwanda; United Republic of Tanzania]

(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*): [Diplomatic relations through plenipotentiary Embassies]

(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): [Permanent Secretariat based in Kinshasa – Democratic Republic of Congo]

A subsidiary body or bodies

Please list (e.g., working groups on specific topics): [Group on Navigation (Fluvial transport); Platform for National Consultation (PCN)]

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

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

Identification of pollution sources

Data collection and exchange

Joint monitoring

Maintenance of joint pollution inventories

Setting emission limits

Elaboration of joint water quality objectives

³ 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.

-
- | | |
|--|-------------------------------------|
| Management and prevention of flood or drought risks | <input type="checkbox"/> |
| Preparedness for extreme events, e.g., common early warning and alarm procedures | <input 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 checked="" 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? | |
| Governance issues | <input checked="" type="checkbox"/> |
| <i>Please describe, if any:</i> [Lack of an Authority and the lack of a Master Plan in the Angolan portion of the River Basin] | |
| Unexpected planning delays | <input type="checkbox"/> |
| <i>Please describe, if any:</i> [fill in] | |
| Lack of resources | <input checked="" type="checkbox"/> |
| <i>Please describe, if true:</i> [human capacity; technical; financial resources] | |
| Lack of mechanism for implementing measures | <input type="checkbox"/> |
| <i>Please describe, if true:</i> [fill in] | |
| Lack of effective measures | <input type="checkbox"/> |
| <i>Please describe, if true:</i> [fill in] | |

Unexpected extreme events

Please describe, if any: [fill in]

Lack of information and reliable forecasts

Please describe, if any: [inefficient functioning of hydrometeorological system]

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?
[Good cooperation environment; common view for the Basin development; good neighbourly relations]

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

Yes /No

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

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

Yes / No

If yes, please provide further details: [fill in]

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): [[Through reports and documents posted in the website](#)]

(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: [[CICOS: www.cicos.int](http://www.cicos.int)]

(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*): [fill in]

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 checked="" type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input checked="" type="checkbox"/>	<input checked="" 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 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: [fill in]

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

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

Yes /No

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

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

Yes /No

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

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

Notification and communication

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

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

No measures

If not, why not? What difficulties does your country face in putting in place such measures?: [There is no agreement for prevention or limitation of the transboundary impact of accidental pollution]

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: [In case of a natural disaster, a notification is released by the Angolan government, through its Ministry of Affairs, to the Basin Member States]

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 | <input type="checkbox"/> |
| Water user groups or associations | <input type="checkbox"/> |
| Academic or research institutions | <input checked="" type="checkbox"/> |
| Other non-governmental organizations | <input checked="" type="checkbox"/> |
| General public | <input type="checkbox"/> |
| Other (please specify): [fill in] | |
| Availability of information to the public | <input type="checkbox"/> |
| Consultation on planned measures or river basin management plans ⁴ | <input type="checkbox"/> |
| Public involvement | <input type="checkbox"/> |
| Other (please specify): [PCN facilitates the dissemination of information to the public] | |

⁴ Or, where applicable, aquifer management plans.

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

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.¹ 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 agreements² 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:
[Cubango/Okavango]

List of the riparian States: [Republic of Botswana and Republic of 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: [20.21%]

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) [The Permanent Okavango River Basin Water Commission (OKACOM), Agreement]

Agreement or arrangement is under development

¹ 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.

² 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.

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): [[Republic of Angola](#), [Republic of Botswana](#) and [Republic of Namibia](#)]

(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*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [[The main achievements implementing the agreement](#): A common vision to the basin development; ownership of programme and projects; creation of a smooth path for a regional integration; Keys to achieving success: political will; good neighborliness; need for regional cooperation.

Economically prosperous, socially just, and environmentally healthy development of the Cubango-Okavango River Basin.

To establishment of Joint River Basin Commission; establishment of Permanent Secretariat for river basin commission; design of basin-wide Strategic Action Plan; keys to achieving successes: political will; relations of good neighborhoodness; common vision among riparian countries]

(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*): [OKACOM: <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 (**3 States of SADC region**) are members of the joint body or mechanism? (*Please list*): [Republic of Angola, Republic of Botswana and Republic of 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*): [Diplomatic relations through plenipotentiary Embassies]

(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): [Permanent Secretariat based in Baborone – Republic of Botswana]

A subsidiary body or bodies

Please list (e.g., working groups on specific topics): [The Basin-wide Forum (BWF), The Okavango Basin Steering Committee (OBSC) is the technical advisory body to the Commission. The OBSC provides technical leadership to permanent or temporary subsidiary committees or task forces that are established according to the nature and specificity of the matter. The OKACOM Water Resources Technical Committee (WRTC); The OKACOM Institutional and Policy Development Technical Committee; The OKACOM Environment and Biodiversity Technical Committee]

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

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

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

³ 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.

-
- 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
 - 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: []
- Unexpected planning delays
Please describe, if any: [fill in]
- Lack of resources
Please describe, if true: [human capacity; technical; financial resources]
- Lack of mechanism for implementing measures
Please describe, if true: [fill in]
- Lack of effective measures
Please describe, if true: [fill in]
- Unexpected extreme events

Please describe, if any: [fill in]

Lack of information and reliable forecasts

Please describe, if any: [inefficient functioning of hydrometeorological system]

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? [Good cooperation environment; common view for the Basin development; good neighbourly relations.]

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

Yes /No

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

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

Yes /No

If yes, please provide further details: [Transboundary Diagnostic Analysis, Strategic Action Plan for the Cubango/Okavango River Basin]

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): [[Through reports and documents posted in the website](#)]

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

(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*): [[Confidence building among Member States](#); [Joint Planning](#); [Field work in the context of joint hydrological monitoring](#);

Greater support from cooperation partners; Greater control over extreme events and better prevention]

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 checked="" type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" 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 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: [in]

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

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

Yes /No

If yes, please provide the date of the last or only assessment, the frequency and scope (e.g., surface waters or groundwaters only, pollution sources, etc.) of the assessment,

and assessment methodology applied: [TDA – Transboundary Diagnostic Analysis, 2010]

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

Yes /No

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

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

Notification and communication

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

Other (please list): [fill in]

No measures

If not, why not? What difficulties does your country face in putting in place such measures?: [There is no agreement for prevention or limitation of the transboundary impact of accidental pollution]

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: [In case of a natural disaster, a notification is released by the Angolan government, through its Ministry of Affairs, to the Basin Member States]

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? (Reference Group)

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 | <input checked="" type="checkbox"/> |
| Private sectors organizations or associations | <input checked="" type="checkbox"/> |
| Water user groups or associations | <input type="checkbox"/> |
| Academic or research institutions | <input checked="" type="checkbox"/> |
| Other non-governmental organizations | <input checked="" type="checkbox"/> |
| General public | <input type="checkbox"/> |
| Other (please specify): [fill in] | |
| Availability of information to the public | <input checked="" type="checkbox"/> |
| Consultation on planned measures or river basin management plans ⁴ | <input checked="" type="checkbox"/> |
| Public involvement | <input checked="" type="checkbox"/> |
| Other (<i>please specify</i>): [] | |

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.

⁴ Or, where applicable, aquifer management plans.

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

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.¹ 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 agreements² 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: [**Cunene**]

List of the riparian States: [**Republic of 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: [**AF15 – Coastal Sedimentary Basin IV**]

Unknown

Percentage of your country’s territory within the basin, sub-basin, part of a basin or group of basins: [**83.30%**]

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) [**The Permanent Joint Technical Commission – PJTC Agreement. The CTPC is a technical commission created to coordinate the actions of the Republic of Angola and Namibia on the actions to be taken to guarantee sustainable benefits for the Cunene River basin, made up of technicians from both countries.**]

¹ 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.

² 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.

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): [[Republic of Angola and Republic of Namibia](#)]

(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*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [[The main achievements implementing the agreement: A common vision to the basin development; ownership of programme and projects; creation of a smooth path for a regional integration; Keys to achieving success: political will; good neighborliness; need for regional cooperation.](#)

[The establishment of Joint River Basin Commission; establishment of Permanent Secretariat for river basin commission; design of basin-wide Strategic Action Plan; keys to achieving successes: political will; relations of good neighborliness; common vision among riparian countries\]](#)

(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*): []

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 (2 States of SADC region) are members of the joint body or mechanism? (Please list): [Republic of Angola and Republic of 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): [Diplomatic relations through plenipotentiary Embassies]

(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): [Committee for Bilateral Agreements; Committee for the Master General Plan of the Basin; Task force Calueque and Task force Baynes Project]

Other features (please list): [fill in]

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

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

³ 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.

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

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

- Governance issues

Please describe, if any: [Lack of an updated Master Plan in the Angolan portion of the River Basin]

- Unexpected planning delays

Please describe, if any: [fill in]

- Lack of resources

Please describe, if true: [human capacity; technical; financial resources]

- Lack of mechanism for implementing measures

Please describe, if true: [fill in]

- Lack of effective measures

Please describe, if true: [fill in]

- Unexpected extreme events

Please describe, if any: [fill in]

- Lack of information and reliable forecasts

Please describe, if any: [inefficient functioning of hydrometeorological system]

Others (*please list and describe, as appropriate*): [It is necessary to consider that for the Cunene River basin there is already a plan for management and coordination at the level of hydraulic infrastructures.]

(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? [Good cooperation environment; common view for the Basin development; good neighbourly relations]

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

Yes /No

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

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

Yes /No

If yes, please provide further details: []

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): [[Through reports and documents](#)]

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

- | | |
|--|-------------------------------------|
| Environmental conditions | <input checked="" type="checkbox"/> |
| Research activities and application of best available techniques | <input type="checkbox"/> |
| Emission monitoring data | <input type="checkbox"/> |
| Planned measures taken to prevent, control or reduce transboundary impacts | <input type="checkbox"/> |
| Point source pollution sources | <input type="checkbox"/> |
| Diffuse pollution sources | <input type="checkbox"/> |
| Existing hydromorphological alterations (dams, etc.) | <input checked="" type="checkbox"/> |
| Flows or water levels (including groundwater levels) | <input checked="" type="checkbox"/> |
| Water abstractions | <input type="checkbox"/> |
| Climatological information | <input checked="" type="checkbox"/> |
| Future planned measures with transboundary impacts, such as infrastructure development | <input checked="" type="checkbox"/> |

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: []

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

- | | |
|---|--------------------------|
| Frequency of exchanges | <input type="checkbox"/> |
| Timing of exchanges | <input type="checkbox"/> |
| Comparability of data and information | <input type="checkbox"/> |
| Limited spatial coverage | <input type="checkbox"/> |
| Inadequate resources (technical and/or financial) | <input type="checkbox"/> |

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*): [fill in]

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: [fill in]

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

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

Yes /No

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

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

Yes /No

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

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

Notification and communication

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

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

No measures

If not, why not? What difficulties does your country face in putting in place such measures?: [There is no agreement for prevention or limitation of the transboundary impact of accidental pollution]

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: [In case of a natural disaster, a notification is released by the Angolan government, through its Ministry of Affairs, to the Basin Member States]

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 plans⁴
- Public involvement
- Other (*please specify*):

⁴ Or, where applicable, aquifer management plans.

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

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.¹ 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 agreements² 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: [Cuvelai]

List of the riparian States: [Republic of 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: [AF13- Cuvelai-Etosha (Ohangwena)]

Unknown

Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins: [32,93%]

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) [The Cuvelai Watercourse Commission – CUVECOM Agreement]

Agreement or arrangement is under development

¹ 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.

² 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.

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): [[Republic of Angola and Republic of Namibia](#)]

(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*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [[The main achievements implemetenting the agreement](#): A common vision to the basin development; ownwership of programme and projects; creation of a smooth path for a regional integration; Keys to achieving success: political will; good ~~neighborhoodness~~neighborliness; need for regional cooperation.

Sustainably managed basin with a safe, resilient and prosperous population of the CUVELAI BASIN.

~~To~~The establishment of Joint River Basin Commission; establishment of Permanent Secretariat for river basin commission; design of basin-wide Strategic Action Plan; keys to achieving successes: political will; relations of good ~~neighborhoodness~~neighborliness; common vision among riparian countries]

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

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 (2 States of SADC region) are members of the joint body or mechanism? (Please list): [Republic of Angola and Republic of 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): [Diplomatic relations through plenipotentiary Embassies]

(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): [Two interim Secretariat based one in Ondjiva – Republic of Angola and other in Ondangwa – Republic of Namibia]

A subsidiary body or bodies

Please list (e.g., working groups on specific topics): [The Cavelai Basin Steering Committee (OBSC), The Surface Water Committee; The Groundwater Committee; Disaster management Committee; The Water, Sanitation and Health Management Committee]

Other features (please list): [fill in]

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

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

³ 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.

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

(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: []
- Unexpected planning delays
Please describe, if any: [fill in]
- Lack of resources
Please describe, if true: [human capacity; technical; financial resources]
- Lack of mechanism for implementing measures
Please describe, if true: [fill in]
- Lack of effective measures
Please describe, if true: [fill in]
- Unexpected extreme events
Please describe, if any: [fill in]
- Lack of information and reliable forecasts

Please describe, if any: [inefficient functioning of hydrometeorological system]

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? [Good cooperation environment; common view for the Basin development; good neighbourhood relations]

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

Yes /No

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

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

Yes /No

If yes, please provide further details: [Basin-wide IWRM Plan for the basin]

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): [[Through reports and documents posted in the website](#)]

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

(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*): [[Sustainable and integrated management](#); [More effective actions towards natural disasters](#); [Improvement in means of subsistence](#); [Cooperation and good governance](#); [Provide more drinking water in sufficient quantities.](#)]

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 checked="" type="checkbox"/>	<input type="checkbox"/>
Surface waters in the entire basin	<input checked="" type="checkbox"/>	<input checked="" 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 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: [fill in]

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

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

Yes /No

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

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

Yes /No

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

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

Notification and communication

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

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

No measures

If not, why not? What difficulties does your country face in putting in place such measures?: [There is no agreement for prevention or limitation of the transboundary impact of accidental pollution]

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: [In case of a natural disaster, a notification is released by the Angolan government, through its Ministry of Affairs, to the Basin Member States]

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 plans⁴
- Public involvement
- Other (*please specify*): []

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.

⁴ Or, where applicable, aquifer management plans.

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

Please complete this second section for each transboundary basin (river or lake basin, or aquifer), sub-basin, part of a basin or a group of basins covered by the same agreement or arrangement where conditions are similar.¹ 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 agreements² 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: [Zambeze, Alto Zambeze, Lungué Bungo e Cuando]

List of the riparian States: [Republic of Botswana, Republic of Namibia, Republic of Zimbabwe, Republic of Zambia, Republic of Malawi, Republic of Moçambique and United Republic of Tanzania]

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: [AF14 - Nata-Karoo]
- Unknown

Percentage of your country's territory within the basin, sub-basin, part of a basin or group of basins: [18,51%]

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) [Zambezi Watercourse Commission - ZAMCOM Agreement]

Agreement or arrangement is under development

¹ 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.

² 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.

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):* [[Republic of Angola](#), [Republic of Botswana](#), [Republic of Namibia](#), [Republic of Zimbabwe](#), [Republic of Zambia](#), [Republic of Malawi](#), [Republic of Moçambique](#) and [United Republic of Tanzania](#)]

(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*): [fill in]

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success? [[The main achievements implemetenting the agreement](#): A common vision to the basin development; ownwership of programme and projects; creation of a smooth path for a regional integration; Keys to achieving success: political will; good ~~neighborhoodness~~[neighborliness](#); need for regional cooperation.

~~The~~ establishment of Joint River Basin Commission; establishment of Permanent Secretariat for river basin commission; design of basin-wide Strategic Action Plan; keys to achieving successes: political will; relations of good ~~neighborhoodness~~[neighborliness](#); common vision among riparian countries]

(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*): [ZAMCOM: 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 (8 States of SADC region) are members of the joint body or mechanism? (Please list): [Republic of Angola, Republic of Botswana, Republic of Namibia, Republic of Zimbabwe, Republic of Zambia, Republic of Malawi, Republic of Moçambique and United Republic of Tanzania]

(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): [Diplomatic relations through plenipotentiary Embassies]

(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): [Permanent Secretariat based in Harere – Republic of Zimbabwe]

A subsidiary body or bodies

Please list (e.g., working groups on specific topics): [In the Zambezi River Basin Commission, it was ~~instituted~~ the National Steering Committees (NASC) ~~was instituted~~. NASC convey their views to the ZAMCOM technical committee (ZAMTEC)]

Other features (please list): [fill in]

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

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

³ 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.

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

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

- Governance issues
Please describe, if any: [Lack of an Authority of the River Basin]
- Unexpected planning delays
Please describe, if any: [fill in]
- Lack of resources
Please describe, if true: [human capacity; technical; financial resources]
- Lack of mechanism for implementing measures
Please describe, if true: [fill in]
- Lack of effective measures
Please describe, if true: [fill in]
- Unexpected extreme events
Please describe, if any: [fill in]
- Lack of information and reliable forecasts
Please describe, if any: [inefficient functioning of hydrometeorological system]
- 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?
[[Good cooperation environment; common view for the Basin development; good neighbourhood relations](#)]

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

Yes /No

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

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

Yes /No

If yes, please provide further details: [[Strategic Action Plan for the Zambezi River Basin](#)]

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): [[Through reports and documents posted in the website](#)]

(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: [www.zamwis.zambezicommission.org]

(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*): [fill in]

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?

	Hydrological	Ecological	Chemical
Border surface waters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	<i>Hydrological</i>	<i>Ecological</i>	<i>Chemical</i>
Surface waters in the entire basin	<input checked="" type="checkbox"/>	<input checked="" 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 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: [fill in]

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

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

Yes /No

If yes, please provide the date of the last or only assessment, the frequency and scope (e.g., surface waters or groundwaters only, pollution sources, etc.) of the assessment, and assessment methodology applied: [ZEO – Zambezi Environmental Outlook, 2015]

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

Yes /No

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

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

Notification and communication

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

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

No measures

If not, why not? What difficulties does your country face in putting in place such measures?: [There is no agreement for prevention or limitation of the transboundary impact of accidental pollution]

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: [In case of a natural disaster, a notification is released by the Angolan government, through its Ministry of Affairs, to the Basin Member States]

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 plans⁴
- Public involvement
- Other (*please specify*):

⁴ Or, where applicable, aquifer management plans.

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

III. Water management at the national level

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

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

Yes /No

If yes, please briefly describe the main national laws, policies, action plans and strategies [Water Law (Law no. 6/02); Regulation on Water Quality (Decree no. 261/11); Regulation on General Utilization of Water Resources (Decree no. 82/14); Regulation on Public Water Supply and Sanitation (Decree no. 83/14); National Water Master Plan (Decree no. 126/17); National Water Council (Decree no. 76/17)]

- (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: [As matter of licencing, it is mandatory to all water users to apply for a Water Permit prior the utilization of water resources. According to Regulation on General Utilization of Water Resources (Decree no. 82/14), this is mandatory precondition.]

- (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): [Agriculture/Irrigation]

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): [Angola is in a process of setting up emission limit regarding wastewater discharges and other point source pollution]

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

(d) Are the authorized discharges monitored and controlled?

Yes /No

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

Monitoring of discharges

Monitoring of physical and chemical impacts on water

Monitoring of ecological impacts on water

Conditions on permits

Inspectorate

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

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

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

Legislative measures

Norm for uses of fertilizers

Norms for uses of manure

Permitting system

Bans on or norms for use of pesticides

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

Economic and financial measures

Monetary incentives

Environmental taxes (such as fertilizer taxes)

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

Agricultural extension services

Technical measures

Source control measures

Crop rotation

Tillage control

Winter cover crops

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

Other measures

-
- Buffer/filter strips
 - Wetland reconstruction
 - Sedimentation traps
 - Chemical measures
 - Others (*please list*): [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
- Monitoring and control of abstractions
- Water rights are defined
- Water allocation priorities are listed
- Water-saving technologies
- Advanced irrigation techniques
- Demand management activities
- Other means (*please list*)

(g) Does your country apply the ecosystems approach?

Yes /No

If yes, please describe how: [[There is in Angola a specific Law on Environmental Impact Assessment](#)]

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

Yes /No

If yes, please briefly describe the most important measures: [In main aquifers were set up a network of piezometers, where from are collected samples that allow to monitor the quality of the water]

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. [[According to the Environmental Law it is mandatory to carry out EIA, whenever we interfere either on water bodies or on aquifers](#)]

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

IV. Final questions

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

-
- Differences between national administrative and legal frameworks
 - Lack of relevant data and information
 - Difficulties in data and information exchange
 - Sectoral fragmentation at the national level
 - Language barrier
 - Resource constraints
 - Environmental pressures, e.g. extreme events
 - Sovereignty concerns
 - Please list other challenges and/or provide further details: [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:
[fill in]

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*): [Manuel Quintino – Instituto Nacional de Recursos Hídricos do Ministério da Energia e Águas, Bairro Talatona, Rua do MAT, Complexo Administrativo Classicos de Talatona, Bloco C/Luanda; Email: manuel.quintino@inrh.gv.ao]

Date: [13th July 2020]

Signature: [

A handwritten signature in black ink, appearing to read 'Manuel Quintino', enclosed in square brackets. The signature is stylized and cursive.

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