

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: **LIECHTENSTEIN**

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));

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

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

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

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

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

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

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

Name of transboundary river or lake basin/sub-basin	It is a basin or a sub-basin? ^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
Rhine	basin	Switzerland Austria, Italy, Germany, France, Luxemburg, Belgium, Netherlands	160	no	entirely	yes	yes	yes	yes	160
(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)										160
(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)			160							

^b List sub-basins after the basin they belong to.

Table 2

Transboundary aquifers (please add rows as needed)

<i>Name of the transboundary aquifer</i>	<i>Countries shared with</i>	<i>Surface area of the aquifer^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>
Rheinschotter	Switzerland Austria	52	no	no	yes	yes	yes	yes	yes	52
(C) Sub-total: surface area of transboundary aquifers covered by operational arrangements (in km ²)										52
(D) Total surface area of transboundary aquifers (in km ²)		52								

^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.

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:

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

Sustainable Development Goal indicator 6.5.2:

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

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

Spatial information

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

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):

International Commission for the Protection of the Rhine (ICPR / CC)

France, Germany, Luxembourg, Netherlands, Switzerland and the European Commission (ICPR) as well as Austria, Liechtenstein, the Region of Wallonia and Italy (Coordinating Committee / CC). The Coordinating Committee was formed in 2001 (https://www.iksr.org/fileadmin/user_upload/Dokumente_en/IKSR-CC-EN_30.06.10.pdf)

Furthermore there are two other agreements within the Alpine Rhine / Bodensee catchment area.

- **1998 Kooperationsvereinbarung Alpenrhein: Internationale Regierungskommission Alpenrhein (IRKA)**
Swiss Cantons Graubünden and St. Gallen, the Austrian Province of Vorarlberg and Liechtenstein.
- **1960 Agreement on the Protection of Lake Constance Against Pollution: Internationale Gewässerschutzkommission für den Bodensee (IGKB)**
Baden-Württemberg, Bayern, Austria, Switzerland
Liechtenstein = observer status

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:

Rhine

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.

List of the riparian States: **France, Germany, Luxembourg, Netherlands, Switzerland
Austria, Liechtenstein, the Region of Wallonia and Italy**

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: 100%; 0.1% of total Rhine catchment area

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)

Liechtenstein is not a party to the 1999 Convention on the protection of the Rhine but it participates in the Coordinatong Committee.

See International Commission for the Protection of the Rhinie (ICPR / CC)
<https://www.iksr.org/en/>

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?

This applies for the ICPR / CC.

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

Yes /No

Additional explanations?

This applies for the IRKA / IGKB.

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

ICPR International Commission for the Protection of the Rhine: France, Germany, Luxembourg, Netherlands, Switzerland and the European Commission

CC Coordinating Committee Rhine: France, Germany, Luxembourg, Netherlands, Switzerland, the European Commission as well as Austria, Liechtenstein, the Region fo Wallonia and Italy

The Convention under the ICPR covers only the main stream. In order to cover the whole basin and to involve Austria, Belgium (Walloon region) and Liechtenstein as well as Italy, the other countries in the basin, the so called Coordinating Committee has been established via a decision of a ministerial conference. There are special rules of procedure (Rules of Procedure and Financial Regulations for the Cooperation for the Cooperation of the International Commission for the Protection of the Rhine (ICPR) with the Coordinating Committee (CC) Rhine.

Thus there is an international platform to coordinate the basin related implementation of the EU Water Framework Directive and the EU Floods Directive.

(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:

Rheinschotter

(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]

With regard to navigation, a cooperation between the ICPR and the Central Commission for the Navigation of the Rhine exists.

(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*):

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

For ICPR / CC: In terms to the entire Rhine we refer to the Bilanz Rhein 2020 (https://www.iksr.org/fileadmin/user_upload/DKDM/Dokumente/Broschueren/DE/berro_De_Bilanz_„Rhein_2020“.pdf). In terms to Liechtenstein we want to highlight following points: Joint coordination of the main topics along the entire Rhine, exchange of information and data between the parties, close collaboration at all levels.

For IKRA: Joint coordination of the main topics along the alpine part of the Rhine. Joint development concept addressing: groundwater, aquatic ecology, flood protection, working & living. <https://www.alpenrhein.net/Projekte/Generationen-Projekt>

(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*):

International Commission for the Protection of the Rhine (ICPR / CC)
<https://www.iksr.org/en/>

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

Yes /No

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

Where there is a joint body or mechanism

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

Plenipotentiaries

Bilateral commission

Basin or similar commission

Expert group meeting or meeting of national focal points

Other (please describe): [fill in]

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

Yes /No

(c) Which States (including your own) are members of the joint body or mechanism? (Please list):

France, Germany, Luxembourg, Netherlands, Switzerland and the European Commission (ICPR) as well as Austria, Liechtenstein, the Region of Wallonia and Italy (Coordinating Committee / CC).

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

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

No cooperation

They have observer status

Other (please describe): [fill in]

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

A secretariat

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

It is a joint secretariat.

A subsidiary body or bodies

Please list (e.g., working groups on specific topics):

see organigramme: <https://www.iksr.org/en/icpr/about-us/organisation>

Other features (please list):

regular ministerial conferences

Adaptive working structur. Project and expert groups are established as needed, often with a time limited mandate.

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

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

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.

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

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

Governance issues

Please describe, if any: [fill in]

Unexpected planning delays

Please describe, if any: [fill in]

Lack of resources

Please describe, if true: [fill in]

Lack of mechanism for implementing measures

Please describe, if true: [fill in]

Lack of effective measures

Please describe, if true: [fill in]

Unexpected extreme events

Please describe, if any: [fill in]

Lack of information and reliable forecasts

Please describe, if any: [fill in]

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

(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? **see above**

(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?

We don't know that. Please refer to the answer of the ICPR respectively ICPR states.

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:

Internationally coordinated Rhine river basin management plan 2015
(<http://www.iksr.org/en/water-framework-directive/river-basin-management-plan-2015/index.html>)

Internationally coordinated Rhine river flood risk management plan 2015
(<http://www.iksr.org/en/floods-directive/flood-risk-management-plan/index.html>)

Programme Rhine 2040 – The Rhine and its catchment: Sustainable managed and Climate-resilient
(<https://www.iksr.org/en/rhine-ministerial-conference-on-13-february-in-amsterdam>)

Sediment Management Plan
(http://www.iksr.org/fileadmin/user_upload/Dokumente_en/Reports/Bericht_175e.pdf and <http://www.iksr.org/en/topics/pollution/sediments/index.html>)

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): [fill in]

(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: <http://iksr.bafg.de/iksr>

(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

For the questions 7 to 13: These questions strongly refer to the entire collaboration along the the Rhine, especially along the main Rhine from Basel to the North Sea. Liechtenstein is a « small » partner and we are too far away from the processes in detail. Therefore we have to refer to the answers of the „main“ ICPR states. For us it is not possible to answer these questions.

(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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<i>Hydrological</i>	<i>Ecological</i>	<i>Chemical</i>
watercourse			
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?:* [fill in]
11. What are the measures implemented to prevent or limit the transboundary impact of extreme weather events and climate change?
- Notification and communication
- Coordinated or joint alarm system for floods
- Coordinated or joint alarm system for droughts
- Joint climate change adaptation strategy
- Joint disaster risk reduction strategy
- Other (*please list*): [fill in]
- No measures
- If not, why not? What difficulties does your country face in putting in place such measures?:* [fill in]
12. Are procedures in place for mutual assistance in case of a critical situation?
Yes /No
If yes, please provide a brief summary: [fill in]
13. Are the public or relevant stakeholders involved in transboundary water management in the basin, sub-basin, part of a basin or group of basins?
Yes /No
If yes, how? (please tick all applicable)
- Stakeholders have observer status in a joint body or mechanism
- Stakeholders have an advisory role in the joint body
- Stakeholders have a decision-making role in the joint body
- If yes, please specify the stakeholders for the joint body or mechanism:* [fill in]
- Intergovernmental organizations
- Private sectors organizations or associations
- Water user groups or associations
- Academic or research institutions
- Other non-governmental organizations
- General public
- Other (please specify): [fill in]
- Availability of information to the public
- Consultation on planned measures or river basin

management plans⁴

Public involvement

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

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

- **Gewässerschutzgesetz (Water Protection Act):**
<https://www.gesetze.li/konso/pdf/2003159000?version=11>
- **Gewässerschutzverordnung (Water Protection Ordinance):**
<https://www.gesetze.li/konso/pdf/2017012000?version=1>
- **Verordnung zum Schutze des Grundwassers:**
<https://www.gesetze.li/konso/pdf/1988060000?version=4>
- **Wasserrechtsgesetz:**
<https://www.gesetze.li/konso/pdf/1976069000?version=3>
- **Nationaler Bewirtschaftungsplan und Massnahmenprogramm nach Wasserrahmenrichtlinie:**
https://www.ilv.li/files/au/bewirtschaftungsplan-und-massnahmenprogramm_final-2.pdf

- (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: [see Water Protection Act / Ordinance](#)

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

Yes /No

If yes, for which sectors?

Industry

Mining

-
- Energy
 - Municipal
 - Livestock raising
 - Aquaculture

Other (please list): [fill in]

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

The licensing or permitting system is generally based on limit values or other criteria, both based on best available technology and the precautionary principle.

If yes, for which sectors? (please list): see Water Protection Act / Ordinance

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: Our **Office of Environment** (www.au.llv.li) consists the four departments: 1) environmental protection (including waterprotection and management, fisheriy, aquatic ecology), 2) agriculture, 3) forest/nature/landscape and 4) administration/coordination (including environmental impact assessment) -> See organigramme: <https://www.llv.li/files/organigramme/organigramm-25.pdf>. Therefore an integrated view is given.

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

Yes /No

If yes, please briefly describe the most important measures: [fill in]

Definition of protection zones (see Art. 23a and 24 Water Protection Act)

Restrictions with the protection zones (concerning fertilizers, pesticides, buildings, etc.)

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.

see [Gesetz über die Umweltverträglichkeit / ESPOO Convention](https://www.gesetze.li/konso/pdf/2014019000?version=4)
<https://www.gesetze.li/konso/pdf/2014019000?version=4>

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*):

A lot of questions strongly refer to the entire collaboration along the the Rhine, especially along the main Rhine from Basel to the North Sea. Liechtenstein is a « small » partner within the ICPR/CC and we are often too far away from the processes in detail. We tried to answer the question as good as possible. But some questions we are not able to answer, especially 3k and 7 to 13.

5. Name and contact details of the person(s) who filled out the questionnaire (*please insert*):

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Date: 29.09.2020 (draft submission 1), 04.12.2020 (draft submission 2), 10.02.2021 (final revised submission)

Signature:




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