



REPUBLIC OF ESTONIA
MINISTRY OF THE ENVIRONMENT

Secretariat of the Water Convention
United Nations
Economic Commission for Europe
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Pilot reporting on the Water Convention and
SDG indicator 6.5.2

Please find enclosed Estonian report on the implementation of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and on the progress on SDG indicator 6.5.2.

Sincerely Yours,

Harry Liiv
Deputy Secretary General

CC:
UNESCO for the monitoring of indicator 6.5.2
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Template for reporting under the Water Convention and for global SDG indicator 6.5.2

Country name: Estonia

This template or reporting form is in the form of a questionnaire to be filled out. Questions can be either “closed”, Yes /No , with appropriate boxes to tick; “open”, requiring further information to be supplied, indicated by the words in square brackets [fill in]; or a combination of both. Depending on the country situation, it will not always be necessary to fill in extra information where space is provided for this.

The questions are divided into four parts: national (section I); by transboundary basin, river, lake or aquifer (section II); list of transboundary waters and information for calculation of the SDG indicator 6.5.2, Proportion of transboundary basin area with an operational arrangement for water cooperation (section III), and final questions (section IV). Please answer open questions very briefly, and in less than 200 words, using bullet points as appropriate. Section II will need to be completed for each of the transboundary basins, rivers, lakes or aquifers (please just copy the template for these questions and fill out again for each additional transboundary basin, river, lake or aquifer).

The template encourages those reporting to refer to the reporting under other multilateral environmental agreements to which their country is a Party.

I. Transboundary water management at the national level

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

1. (a) Does your country’s national legislation refer to measures to prevent, control and reduce any transboundary impact (art. 2 of the Convention)?

Yes

If yes, list the main national legislation: Water Act, Environmental Impact Assessment and Environmental Management System Act

- (b) Do your country’s national policies, action plans and strategies refer to measures to prevent, control and reduce any transboundary impact?

Yes

If yes, list the main national policies, action plans and strategies: River Basin Management Plans, Estonian Environmental Strategy 2030.

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

Precautionary principle Yes

Polluter pays principle Yes

Sustainable development Yes

- (d) Does your country have a national licensing or permitting system for wastewater discharges and other point source pollution (art. 3, para. 1 (b)) (e.g., in industry, mining, energy, municipal, wastewater management or other sectors)?

Yes

If yes, for which sectors? (please list): for industrial and municipal wastewater discharges

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

If your country has a licensing system, does the system provide for setting emission limits based on best available technology?

Yes (for industrial emissions)

- (e) Are the authorized discharges monitored and controlled (art. 3, para. 1 (b))?

Yes

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

Monitoring of discharges	X
Monitoring of physical and chemical impacts on water	X
Monitoring of ecological impacts on water	X
Conditions on permits	X
Inspectorate	X

Other means (please list): [fill in]

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

(f) What are the main measures which your country takes to reduce diffuse sources of water pollution on transboundary waters (art. 3, para. 1) (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	X
Norms for uses of manure	X
Bans on or norms for use of pesticides	X
Others (please list): [fill in]	

Economic and financial measures

Monetary incentives	X
Environmental taxes (such as fertilizer taxes)	X
Others (please list): [fill in]	

Agricultural extension services X

Technical measures

Source control measures

Crop rotation	X
Tillage control	X
Winter cover crops	X
Others (please list):	

Other measures

Buffer/filter strips	X
Wetland reconstruction	X
Sedimentation traps	X
Chemical measures	
Others (please list): [fill in]	

Other types of measures

If yes, please list: [fill in]

(g) What are the main measures which your country takes to enhance water efficiency (art. 3)?

Please tick as appropriate (not all might be relevant)

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

(h) Does your country apply the ecosystems approach (art. 3, para. 1 (i), and art. 2, para. 1 (d))?

No

If yes, please describe how: [fill in]

(i) Does your country take specific measures to prevent the pollution of groundwaters (art. 3, para. 1 (k))?

Yes

If yes, please list the most important measures: sanitary protection zones around groundwater abstraction points, agricultural requirements in order to protect groundwater (control of use of manure, fertilizers etc), regulation of discharges to soil (special requirements for elements in discharge, prohibition of straight discharge into groundwater etc)

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

Yes

Does your country have procedures for transboundary EIA?

Yes

If yes, please make reference to the legislative basis (please insert the name and section of the relevant laws). (Please note: If your country is a Party to the Convention on Environmental Impact Assessment in a Transboundary Context, you may refer to your country's report under that Convention.): Estonia is a Party to the Convention on Environmental Impact Assessment in a Transboundary Context, links to our reports are the following:

Review of implementation of the Espoo Convention

1st review (to mid-2003):

http://www.unece.org/fileadmin/DAM/env/eia/documents/Review_of_Implementation_2003.pdf

2nd review (mid-2003 to end 2005):

<http://www.unece.org/fileadmin/DAM/env/documents/2008/eia/ece.mp.eia.11.pdf>

<http://www.unece.org/fileadmin/DAM/env/eia/documents/Review%202003-2005/Questionnaire%20-%202003-2005%20-%20Estonia.pdf>

3rd review (start 2006 to end 2009):

<http://www.unece.org/fileadmin/DAM/env/documents/2011/eia/ece.mp.eia.16.e.pdf>

http://www.unece.org/fileadmin/DAM/env/eia/documents/Review_2006_2009/Questionnaire2006_09_Estonia_en.pdf

http://www.unece.org/fileadmin/DAM/env/eia/decisions/Listing_of_transboundary_EIA_procedures_July_2011.pdf

4th review (start 2010 to end 2012):

http://www.unece.org/fileadmin/DAM/env/eia/Publications/2015/lastECE.MP.EIA.2014.3_e_Publication_7Jul2015_FINAL_version_for_TYPO3.pdf

http://www.unece.org/fileadmin/DAM/env/eia/documents/Review_2010_2012/Completed_EIA/Estonia_EIAQuest__2010-12__english_070313.pdf

http://www.unece.org/fileadmin/DAM/env/eia/decisions/List_of_transboundary_EIA_procedures_Nov_2014.pdf

5th review (start 2013 to end 2015):

http://www.unece.org/fileadmin/DAM/env/eia/documents/ImplementationCommittee/5th_review_IC_Espoo__start_2013_to_end_2015_/Responses_by_Parties/Estonia_EIA_2013-2015_31.03.2016.pdf

Review of implementation of the protocol on SEA

1st review (2010-2012):

http://www.unece.org/fileadmin/DAM/env/eia/Publications/2015/ECE.MP.EIA.SEA._REVTA_TYPO3_ENG.pdf

http://www.unece.org/fileadmin/DAM/env/eia/documents/Review_2010_2012/Completed_SEA/Estonia_SEA_quest_2010-12_290513.pdf

http://www.unece.org/fileadmin/DAM/env/eia/documents/Review_2010_2012/Domestic_and_transboundary_SEA_procedures_Dec_2014.pdf

2nd review (start 2013 to end 2015):

http://www.unece.org/fileadmin/DAM/env/eia/documents/ImplementationCommittee/2nd_review_IC_SEA__start_2013_to_end_2015_/Responses_by_Parties/Estonia_SEA_2013-2015_31.03.2016.pdf

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

Yes

If yes, list the bilateral, multilateral and basin agreements (listing for each of the countries concerned): Agreement between the Government of the Republic of Estonia and the Government of the Russian Federation on Co-operation in Protection and Sustainable Use of Transboundary Waters (Moscow, 20. August 1997). Agreement between the Ministry of the Environment of the Republic of Estonia and the Ministry of the Environment of the Republic of Latvia on Co-operation in Protection and Sustainable Use of Transboundary Water Courses (Palanga, 24. October 2003).

II. Questions for each transboundary basin, river, lake or aquifer

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

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

Name of the transboundary basin, river, lake or aquifer, or group thereof, list of the riparian States, and country's share of the basin: River Narva basin, riparian states: Republic of Estonia (30%) and Russian Federation (70%).

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin (art. 9)?

One or more agreements or arrangements exist and are in force x

Agreement or arrangement developed but not in force

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

Please insert the name of the agreement or agreements or arrangements: Agreement between the Government of the Republic of Estonia and the Government of the Russian Federation on Co-operation in Protection and Sustainable Use of Transboundary Waters (Moscow, 20. August 1997).

Agreement or arrangement is under development

No agreement

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

If there is no agreement or arrangement and no joint body for the transboundary basin, river, lake or aquifer then jump to question 4; if there is no agreement, but a joint body then go to question 3.

Questions 2 and 3 to be completed for each bilateral or multilateral agreement or arrangement in force in the transboundary basin, river, lake or aquifer or group of basins or sub-basins

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

Yes

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

Yes

^a In principle, section 2 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.

^b In section II, "agreement" covers all kinds of treaties, conventions and agreements ensuring cooperation in the field of transboundary waters. Section II can also be completed for other types of arrangements, such as memorandums of understanding.

If not, what does it cover?: [fill in]

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

Which States (including your own) are bound by the agreement or arrangement?
(Please list): Republic of Estonia, Russian Federation

(b) Are aquifers (or groundwater bodies) covered by the agreement/arrangement?

Yes

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

All water uses x

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 x

Agriculture x

Transport (e.g., navigation) x

Households x

Energy: hydropower and other energy types x

Tourism x

Nature protection x

Other (please list): [fill in]

(d) What topics or subjects of cooperation are included in the agreement or arrangement (art. 9)?

Procedural and institutional issues

Dispute and conflict prevention and resolution

Institutional cooperation (joint bodies) x

Consultation on planned measures x

Mutual assistance (art. 15) x

Topics of cooperation

Joint vision and management objectives x

Joint significant water management issues x

Navigation x

Environmental protection (ecosystem) x

Water quality x

Water quantity or allocation x

Cooperation in addressing floods

Cooperation in addressing droughts

Climate change adaptation

Monitoring and exchange

Joint assessments	x
Data collection and exchange (art. 13)	x
Joint monitoring (art. 11)	x
Maintenance of joint pollution inventories	x
Elaboration of joint water quality objectives	x
Common early warning and alarm procedures (art. 14)	x
Exchange of experience between riparian States	x
Exchange of information on planned measures	x

Joint planning and management

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

(e) What are the main difficulties and challenges that your country faces with the agreement or arrangement and its implementation, if any (*please describe, if applicable*): The main difficulties and challenges in the frames of this co-operation are setting comparable assessment criteria of the status of waterbodies, elaboration of joint river basin management plan, regulation of Narva reservoir.

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success?: The main achievements to mention are organisation of comprehensive co-operation, the same understanding of problems and the same targets, systematical exchange of information about situation in water management and water quality, approaching of principles and criteria about situation of waterbodies, joint monitoring on Lake Peipsi and on Narva reservoir based on agreed monitoring programme. Such success was achieved mainly due to establishing comprehensive co-operation between 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*): In Estonian: <https://www.riigiteataja.ee/akt/78746>, in English: <http://www.google.ee/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwj9yFz6xcHTAhWFXBoKHfeuBhcQFgghMAA&url=http%3A%2F%2Ffaolex.fao.org%2Fdocs%2Ftexts%2Fbi-32669.doc&usg=AFQjCNFdzhiYZLo05qOpeEKvPXZyXGCEUQ>

3. Is your country a member of an operational joint body or joint bodies for this agreement/arrangement (art. 9)?

Yes

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

Where there is a joint body (or bodies)

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

Plenipotentiaries

Bilateral commission

x

Basin or similar commission

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

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

Yes

(c) Which States (including your own) are member of the joint body? (*Please list*):
Republic of Estonia, Russian Federation

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

A secretariat x

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

A subsidiary body or bodies x

Please list (e.g., working groups on specific topics): Two joint working groups under the joint commission – working group on integrated water resources management and working group on monitoring, assessment and research.

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

(e) What are the tasks and activities of this joint body (art. 9, para. 2)?^c

Identification of pollution sources x

Data collection and exchange x

Joint monitoring x

Maintenance of joint pollution inventories x

Setting emission limits

Elaboration of joint water quality objectives x

Management and prevention of flood or drought risks

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

Water allocation and/or flow regulation x

Policy development x

Control of implementation x

Exchange of experience between riparian States x

Exchange of information on existing and planned uses of water and related installations x

Settling of differences and conflicts x

Consultations on planned measures x

Exchange of information on best available technology

Participation in transboundary EIA

^c 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.

Development of river, lake or aquifer basin management or action plans	x
Management of shared infrastructure	x
Addressing hydromorphological alterations	x
Climate change adaptation	
Joint communication strategy	x
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 (<i>please list</i>): [fill in]	
(f) What are the main difficulties and challenges that your country faces with the operation of the joint body, if any?	
Governance issues	x
<i>Please describe, if any:</i> Different countries in cooperation (European Union versus non-European Union country) with different legal space and targets resulting there is no joint river basin management plan for joint activities and therefore no joint and coordinated measures for protection and sustainable use of transboundary waterbodies.	
Unexpected planning delays	
<i>Please describe, if any:</i> [fill in]	
Lack of resources	x
<i>Please describe, if true:</i> As no joint river basin management plan there are no joint measures and no joint financial mechanism for supporting implementation of measures. Although several international co-operation projects have been implemented, applying resources from funds is time-consuming and not easy, although joint commission could take more active role to apply such funds. Unfortunately there are not many options for such funds to be funded. Usually there is a strong competition for these resources and repeating actions needed to ensure sufficient management on transboundary water.	
Lack of mechanism for implementing measures	x
<i>Please describe, if true:</i> Due to absence of joint river basin management plan there is a lack of mechanism for joint measures implementation.	
Lack of effective measures	x
<i>Please describe, if true:</i> As unfortunately no joint river basin management plan, no joint measures that could be the most effective.	
Unexpected extreme events	
<i>Please describe, if any:</i> [fill in]	
Lack of information and reliable forecasts	
<i>Please describe, if any:</i> [fill in]	
Others (<i>please list and describe, as appropriate</i>): [fill in]	

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

No cooperation

They have observer status

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

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

Yes

If yes, how frequently does it meet? Once per year (both, joint commission and its working groups)

(i) What are the main achievements with regards to the joint body?: The main achievement is organising joint monitoring of waterbodies, organising exchange of monitoring and water management data between the parties, organising scientific seminars, defining priority co-operation areas.

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

No

(k) Did the joint body ever invite a coastal State to cooperate (art. 9, paras. 3 and 4)?

No

If yes, please give details. If no, why not?: Co-operation on coastal waters is done within the frames of HELCOM.

4. Is there a joint or coordinated management plan (such as an action plan or a common strategy) or have joint objectives been set specifically on the transboundary waters subject to cooperation (art. 9, para. 2 (f)) ?

No joint river basin management plan but joint commission defines co-operation programme for a three year period and perspective research objectives for the period.

If yes, please provide further details: Joint commission defines co-operation programme for a three year period.

5. How is the transboundary basin, river, lake or aquifer protected, including the protection of ecosystems, in the context of sustainable and rational water use (art. 2, para. 2 (b), and art. 3, para. 1 (i)) ?

Afforestation x

Restoration of ecosystems

Environmental flow norms x

Groundwater measures (e.g., protection zones) x

Other measures (*please list*): Agricultural measures x

6. (a) Does your country exchange information and data with other riparian States in the basin (art. 13)?

Yes

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

Environmental conditions (art. 13, para. (1) (a)) x

Research activities and application of best available techniques (arts. 5, 12 and 13, para. 1 (b))

Emission monitoring data (art. 13, para. 1 (c)) x

Planned measures taken to prevent, control or reduce transboundary impacts (art. 13, para. 1 (d))	x
Point source pollution sources	x
Diffuse pollution sources	x
Existing hydromorphological alterations (dams, etc.)	x
Discharges	x
Water abstractions	x
Future planned measures with transboundary impacts, such as infrastructure development	x
Other subjects (<i>please list</i>): [fill in]	

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

No

(d) Is the database publicly available?

No, but Estonian data is publicly available

If yes, please provide the web address: [fill in]

(e) What are the main difficulties and challenges to data exchange, if applicable? (*please describe*): No remarkable difficulties.

(f) What are the main benefits of data exchange on the transboundary waters subject to cooperation? (*please describe*): Getting information from the other side on the status of waterbodies and implemented measures, getting information on planned activities.

7. Do the riparian States carry out joint monitoring in the transboundary basin, river, lake or aquifer (art. 11, para. 1)?

Yes

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

	Covered?	Hydrological	Ecological	Chemical
Border surface waters				
Surface waters in the entire basin	x		x	x
Surface waters on the main watercourse				
Connected aquifers (or groundwaters)				
Unconnected aquifers (or groundwaters)				

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

National monitoring stations connected through a network or common stations
 x |

Joint and agreed methodologies
 x |

Joint sampling
 |

Common monitoring network
 |

Common agreed parameters
 x |

(c) Please describe the main achievements regarding joint monitoring, if any: As a result of joint monitoring, there is an overview of the whole area of surface water bodies, not only on national part of it.

(d) Please describe any difficulties experienced with joint monitoring: There used to be joint sampling on the whole area of surface water body, but for some

years now there is a practice that each riparian country takes samples within its part of surface water body at the same time and then the samples are exchanged between riparian countries.

8. Do the riparian States carry out joint assessment of the transboundary basin, river, lake or aquifer (art. 11)?

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: [fill in]

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

No

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

10. What are the measures implemented to prevent or limit the transboundary impact of accidental pollution (art. 14)?

Notification and communication x

Coordinated or joint alarm system for accidental water pollution x

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 (art. 14)?

Notification and communication x

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 (art. 15)?

Yes

If yes, please provide a brief summary: Notification, communication and co-ordination between national competent authorities (thru environmental inspectorates etc).

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, river, lake or aquifer? (art. 16)?

Yes

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

2017 report: https://www.unece.org/env/pp/reports_trc_implementation_2017.html

2014 report: https://www.unece.org/env/pp/reports_trc_implementation_2014.html

2011 report: https://www.unece.org/env/pp/reports_implementation_2011.html

2008 report:

https://www.unece.org/fileadmin/DAM/env/documents/2008/pp/mop3/ece_mp_pp_ir_2008_EST_e.pdf

2005 report: https://www.unece.org/env/pp/reports_implementation_2005.html

Stakeholders have observer status in a joint body x

If yes, please specify the stakeholders for each joint body: Working group on monitoring, assessment and research has permanent members from universities, working group on integrated water resources management has a permanent member from relevant NGO, that deals with corresponding issues (NGO Peipsi Center for Transboundary Cooperation), other stakeholders will be invited to the meetings of working groups depending on the agenda items. Stakeholders to joint commission meeting will be invited depending on the agenda.

Availability of information to the public x

Consultation on planned measures or river basin management plans^d x

Public involvement x

Other (*please specify*): Relevant stakeholders will be invited to the meetings of joint commission or working groups depending on the agenda.

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

^d Or, where applicable, aquifer management plans.

II. Questions for each transboundary basin, river, lake or aquifer

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

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

Name of the transboundary basin, river, lake or aquifer, or group thereof, list of the riparian States, and country's share of the basin: River Koiva basin, riparian states: Republic of Estonia (13%) and Republic of Latvia (87%).

1. Is there one or more transboundary (bilateral or multilateral) agreement(s) or arrangement(s) on this basin (art. 9)?

One or more agreements or arrangements exist and are in force x

Agreement or arrangement developed but not in force

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

Please insert the name of the agreement or agreements or arrangements: Agreement between the Ministry of the Environment of the Republic of Estonia and the Ministry of the Environment of the Republic of Latvia on Co-operation in Protection and Sustainable Use of Transboundary Water Courses (Palanga, 24. October 2003).

Agreement or arrangement is under development

No agreement

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

If there is no agreement or arrangement and no joint body for the transboundary basin, river, lake or aquifer then jump to question 4; if there is no agreement, but a joint body then go to question 3.

Questions 2 and 3 to be completed for each bilateral or multilateral agreement or arrangement in force in the transboundary basin, river, lake or aquifer or group of basins or sub-basins

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

Yes

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

Yes

^e In principle, section 2 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.

^f In section II, "agreement" covers all kinds of treaties, conventions and agreements ensuring cooperation in the field of transboundary waters. Section II can also be completed for other types of arrangements, such as memorandums of understanding.

If not, what does it cover?: [fill in]

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

Which States (including your own) are bound by the agreement or arrangement?
(Please list): Republic of Estonia, Republic of Latvia

(b) Are aquifers (or groundwater bodies) covered by the agreement/arrangement?

Yes

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

All water uses x

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 x

Agriculture x

Transport (e.g., navigation) x

Households x

Energy: hydropower and other energy types x

Tourism x

Nature protection x

Other (please list): In the agreement it is not separately specified which kind of pressures, sectors, activities it covers. Based on agreement all appropriate uses and sectors should be taken into account and all information and data necessary for co-operation on managing of international river basin district (please take this into account also for following questions)

(d) What topics or subjects of cooperation are included in the agreement or arrangement (art. 9)?

Procedural and institutional issues

Dispute and conflict prevention and resolution

Institutional cooperation (joint bodies) x

Consultation on planned measures x

Mutual assistance (art. 15) x

Topics of cooperation

Joint vision and management objectives x

Joint significant water management issues x

Navigation x

Environmental protection (ecosystem) x

Water quality x

Water quantity or allocation x

Cooperation in addressing floods x

Cooperation in addressing droughts

Climate change adaptation

Monitoring and exchange

Joint assessments

Data collection and exchange (art. 13) x

Joint monitoring (art. 11)

Maintenance of joint pollution inventories

Elaboration of joint water quality objectives

Common early warning and alarm procedures (art. 14)

Exchange of experience between riparian States x

Exchange of information on planned measures x

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 x

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 (*please describe, if applicable*): No remarkable difficulties, still there could be better coordination on monitoring, status assessment and development of measures and plans. In the 1st cycle of River Basin Management Plans (RBMP) there was no management plan for Koiva/Gauja international river basin district, in the 2nd cycle RBMP background document for Estonian-Latvian transboundary waterbodies was compiled as a first step towards joint plan. Because of lack of joint funding options and differences in timetables for counties in processing and compiling internal RBMPs the process of compiling international plan is rather slow.

(f) What are the main achievements in implementing the agreement or arrangement and what were the keys to achieving such success?: Steps taken to harmonize methodologies and conduct first analysis on pressures, economics etc. (Koiva/Gauja INTERREG project 2011). In 2015 a RBMP background document consisting information about transboundary waterbodies, pressures, measures, environmental objectives etc. compiled and approved by water directors in both 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*): PDF attachment

3. Is your country a member of an operational joint body or joint bodies for this agreement/arrangement (art. 9)?

Yes

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

Where there is a joint body (or bodies)

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

Plenipotentiaries

Bilateral commission

- Basin or similar commission
- Other (*please describe*): bilateral basin working group x
- (b) Does the joint body cover the entire transboundary basin or sub-basin, river, lake or aquifer, or group of basins, and all riparian States?
- Yes
- (c) Which States (including your own) are member of the joint body? (*Please list*):
Republic of Estonia, Republic of Latvia
- (d) Does the joint body 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 x
- Please list (e.g., working groups on specific topics):* bilateral working group established in order to implement this agreement.
- Other features (*please list*): [fill in]
- (e) What are the tasks and activities of this joint body (art. 9, para. 2)?^g
- Identification of pollution sources x
- Data collection and exchange x
- Joint monitoring
- Maintenance of joint pollution inventories
- Setting emission limits
- Elaboration of joint water quality objectives x
- Management and prevention of flood or drought risks x
- Preparedness for extreme events, e.g., common early warning and alarm procedures
- Water allocation and/or flow regulation
- Policy development x
- Control of implementation x
- Exchange of experience between riparian States x
- Exchange of information on existing and planned uses of water and related installations x
- Settling of differences and conflicts
- Consultations on planned measures x
- Exchange of information on best available technology
- Participation in transboundary EIA
- Development of river, lake or aquifer basin management or action plans x
- Management of shared infrastructure

^g 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.

Addressing hydromorphological alterations	x
Climate change adaptation	
Joint communication strategy	x
Basin-wide or joint public participation and consultation of, for example, basin management plans	x
Joint resources to support transboundary cooperation	
Capacity-building	
Any other tasks (<i>please list</i>): [fill in]	

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

Governance issues

Please describe, if any: [fill in]

Unexpected planning delays

Please describe, if any: Usually the time when compiling internal RBMP for countries are very busy and it is difficult to find time and resources to separately work on international RBMP and transboundary issues. Another problem is that timetables in the history were different for countries, i.e. pressure analysis, monitoring and status evaluation finished in one country and starting in other. This led to difficulties in harmonization of data etc. This could be and is planned to be improved in the future.

Lack of resources

Please describe, if true: There has been one previous project funded by Interreg Estonian-Latvian programme in 2011-2013 concerning Estonian-Latvian transboundary waterbodies. The aim was to harmonize methodologies and conduct first analysis on pressures, economics etc. This project was very valuable for both sides and provided first methodologies and assessments. Still, further work and harmonization of practise is needed to ensure proper management of transboundary waterbodies. Estonian and Latvian colleagues are planning new project to INTERREG in near future to improve transboundary coordination, cover monitoring programme and measures action plans for transboundary waterbodies as well.

Unfortunately there are not many other options for such transboundary work to be funded and promoted. It is quite difficult. Usually there is a strong competition for these resources and repeating actions needed to ensure sufficient management on transboundary water resources are not usually funded (updating and revising pressures, measures, data, methodologies, updating plans etc.). This could be and is planned to be improved in the future.

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: Monitoring, pressures etc. information on

transboundary waterbodies could be better circulated and exchanged between institutions in Estonia and Latvia. Currently there is no joint monitoring programme or evaluation on waterbody status, pressures etc. This could be and is planned to be improved in the future.

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

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

No cooperation

They have observer status

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

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

Yes

If yes, how frequently does it meet?

1-2 times a year, depending on topics to be discussed and the need to meet.

What are the main achievements with regards to the joint body?: Organizing co-operation, steps taken to harmonize methodologies and conduct first analysis on pressures, economics etc. (Koiva/Gauja INTERREG project 2011) add compilation of RBMP background document for Estonian-Latvian transboundary waterbodies

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

No.

(k) Did the joint body ever invite a coastal State to cooperate (art. 9, paras. 3 and 4)?

No

If yes, please give details. If no, why not?: No separate institution/state. In Estonia the responsible authority for coastal management is MoE. Ministry already attend all appropriate meeting. In this RBD there is no additional state to Est, Lat.

4. Is there a joint or coordinated management plan (such as an action plan or a common strategy) or have joint objectives been set specifically on the transboundary waters subject to cooperation (art. 9, para. 2 (f)) ?

Yes

If yes, please provide further details: Co-ordinated elaboration of RBMP background document (joint transboundary paper)

5. How is the transboundary basin, river, lake or aquifer protected, including the protection of ecosystems, in the context of sustainable and rational water use (art. 2, para. 2 (b), and art. 3, para. 1 (i)) ?

Afforestation x

Restoration of ecosystems

Environmental flow norms x

Groundwater measures (e.g., protection zones) x

Other measures (*please list*): Agricultural measures x

6. (a) Does your country exchange information and data with other riparian States in the basin (art. 13)?

Yes

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

Environmental conditions (art. 13, para. (1) (a))	x
Research activities and application of best available techniques (arts. 5, 12 and 13, para. 1 (b))	
Emission monitoring data (art. 13, para. 1 (c))	x
Planned measures taken to prevent, control or reduce transboundary impacts (art. 13, para. 1 (d))	x
Point source pollution sources	x
Diffuse pollution sources	x
Existing hydromorphological alterations (dams, etc.)	x
Discharges	x
Water abstractions	x
Future planned measures with transboundary impacts, such as infrastructure development	x
Other subjects (<i>please list</i>): [fill in]	

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

No

(d) Is the database publicly available?

No separate database, databases in Estonia concerning Estonian data are publicly available

If yes, please provide the web address: [fill in]

(e) What are the main difficulties and challenges to data exchange, if applicable? (*please describe*): Monitoring, pressures etc. information on transboundary waterbodies could be better circulated and exchanged between institutions in Estonia and Latvia. Currently there is no joint monitoring programme or evaluation on waterbody status, pressures etc. This could be and is planned to be improved in the future.

(f) What are the main benefits of data exchange on the transboundary waters subject to cooperation? (*please describe*): Getting information from the other side on the status of waterbodies and implemented measures, getting information on planned activities.

7. Do the riparian States carry out joint monitoring in the transboundary basin, river, lake or aquifer (art. 11, para. 1)?

No. But preliminary work was done within abovementioned INTERREG project

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

Covered? Hydrological Ecological Chemical

Border surface waters

Surface waters in the entire basin

Surface waters on the main watercourse

Connected aquifers (or groundwaters)

Unconnected aquifers (or groundwaters)

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

National monitoring stations connected through a network
or common stations

Joint and agreed methodologies

Joint sampling

Common monitoring network

Common agreed parameters

(c) Please describe the main achievements regarding joint monitoring, if any:

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

8. Do the riparian States carry out joint assessment of the transboundary basin, river, lake or aquifer (art. 11)?

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:
[fill in]

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

No

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

10. What are the measures implemented to prevent or limit the transboundary impact of accidental pollution (art. 14)?

Notification and communication x

Coordinated or joint alarm system for accidental water pollution

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

No measures

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

11. What are the measures implemented to prevent or limit the transboundary impact of extreme weather events (art. 14)?

Notification and communication x

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 (art. 15)?

No

If yes, please provide a brief summary:

13. Are the public or relevant stakeholders involved in transboundary water management in the basin, river, lake or aquifer? (art. 16)?

Yes

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

2017 report: https://www.unece.org/env/pp/reports_trc_implementation_2017.html

2014 report: https://www.unece.org/env/pp/reports_trc_implementation_2014.html

2011 report: https://www.unece.org/env/pp/reports_implementation_2011.html

2008 report:

https://www.unece.org/fileadmin/DAM/env/documents/2008/pp/mop3/ece_mp_pp_ir_2008_EST_e.pdf

2005 report: https://www.unece.org/env/pp/reports_implementation_2005.html

Stakeholders have observer status in a joint body

If yes, please specify the stakeholders for each joint body:

Availability of information to the public x

Consultation on planned measures or river basin management plans^h x

Public involvement x

Other (*please specify*): Relevant stakeholders will be invited to the meeting of working group depending on the agenda.

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

^h Or, where applicable, aquifer management plans.

III. Calculation of SDG indicator 6.5.2

Methodology

Using the information gathered in section II, the information gathered in this section allows for the calculation of the Sustainable Development Goal global indicator 6.5.2, which is defined as *the proportion of transboundary basins' area with an operational arrangement for water cooperation*.

The Step-by-step monitoring methodology for SDG indicator 6.5.2ⁱ, developed by UNECE and UNESCO in the framework of UN Water, can be referred to for details on the necessary data, the definitions and the calculation.

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

Transboundary basins are basins of transboundary waters, that is, of any surface waters (notably rivers, lakes) or groundwaters which mark, cross or are located on boundaries between by two or more States. For the purpose of the calculation of this indicator, for a transboundary river or lake, the basin area is determined by the extent of its catchment. For groundwater, the area to be considered is the extent of the aquifer.

An "**arrangement for water cooperation**" is a bilateral or multilateral treaty, convention, agreement or other formal arrangement among riparian countries that provides a framework for cooperation on transboundary water management.

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

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

Calculation of indicator 6.5.2

Please list in the tables below the transboundary basins (rivers and lakes and aquifers) in your country's territory and provide the following information for each of them:

- the country/ies with which the basin is shared;
- the surface area of these basins (the catchment of rivers or lakes and the aquifer in the case of groundwater) within the territory of your country (in km²); and
- the surface area of these basins within the territory of your country which is covered by a cooperation arrangement that is operational according to the above criteria (please consider the replies to the questions in section II, in particular questions 1, 2, 3, 4 and 6).

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

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

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

Name of transboundary basin / sub-basin	Countries shared with	Surface area of the basin / sub-basin (in km ²) within the territory of the country	Surface area of the basin / sub-basin (in km ²) covered by an operational arrangement within the territory of the country
River Narva basin	Republic of Estonia, Russian Federation	17000	17000
River Koiva basin	Republic of Estonia, Republic of Latvia	1100	1100
Total surface area of transboundary basins / sub-basins of rivers and lakes covered by operational arrangements within the territory of the country (in km²) [A] (do not double count sub-basins)			18100
Total surface area of transboundary basins of rivers and lakes within the territory of the country (in km²) [B] (do not double count sub-basins)		18100	

Transboundary aquifers [please add rows as needed]

Name of the transboundary aquifer	Countries shared with	Surface area (in km ²) ^j within the territory of the country	Covered by an operational arrangement (yes/no)
Cambrian-Vend Voronka groundwater body (Cm-V2vr)	Republic of Estonia, Russian Federation	5756	yes
Cambrian-Ordovician groundwater body (O-Cm)	Republic of Estonia, Russian Federation, Republic of Latvia	33571	yes

^j 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.

Ordovician East-Viru groundwater body (O_viru)	Republic of Estonia, Russian Federation	2129	yes
Ordovician East-Viru oilshale basin groundwater body (O_pkivi)	Republic of Estonia, Russian Federation	1175	yes
Middle-Lower-Devonian groundwater body (D2-1)	Republic of Estonia, Russian Federation, Republic of Latvia	13102	yes
Middle-Devonian groundwater body (D2)	Republic of Estonia, Russian Federation, Republic of Latvia	13255	yes
Upper-Devonian groundwater body (D3)	Republic of Estonia, Russian Federation, Republic of Latvia	730,4	yes
Sub-total: surface area of transboundary aquifers covered by operational arrangements (in km²) [C]		69718,4	
Total surface area of transboundary aquifers (in km²) [D]		69718,4	

Indicator value for the country

$$((A + C)/(B + D)) \times 100\% = ((18100+69718,4)/(18100+69718,4)) \times 100\% = 100\%$$

Additional information

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

Spatial information

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

IV. Final questions

1. What are the main challenges your country faces in implementing the Convention and cooperating on transboundary waters? (*Please describe*): Implementing the Convention between Estonia and Russia is a challenge, as on the other hand the transboundary waterbodies between riparian countries are unique – Lake Peipsi is the biggest transboundary lake in Europe, water from River Narva is used for production of drinking water to approximately 70 000 inhabitants in Narva town, Narva reservoir has an energetic importance for energy enterprises in both countries, and on the other hand cooperative countries are different (European Union vs non-European Union country) and to tackle all the water management issues is therefore a challenge.
2. What have been the main achievements in implementing the Convention and cooperating on transboundary waters? What were the keys to achieving that success? (*Please describe concrete examples*): The main achievement have been the organisation of comprehensive cooperation itself between Estonia and Russia with the same understanding of problems and the same targets. Also, systematical exchange of information about situation in water management and water quality and joint monitoring based on agreed monitoring programme between these two countries.
3. Name and contact details of the person(s) who filled out the questionnaire (*please insert*):

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Date: 12.05.2017
4. Please include any additional information on the process of preparing the report (e.g., whether there was an exchange or consultation within the joint body or with riparian countries), in particular which institutions have been consulted (*please describe*): It is a country report.
5. If you have any other comments please add them here (*insert comments*): [fill in]

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