



**Convention on the Protection and Use of Transboundary
Watercourses and International Lakes**

Working Group on Integrated Water Resources Management

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Support for implementation and application of the Convention:

Development of a concept for a third comprehensive assessment

**PRELIMINARY PROPOSAL ON THE SCOPE, CONTENT AND PROCESS FOR THE THIRD ASSESSMENT OF
TRANSBOUNDARY WATERS**

Submitted by Finland in cooperation with the secretariat

According to the programme of work under the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) adopted at the seventh session of the Meeting of the Parties (Budapest, 17-19 November 2015), a proposal for a third comprehensive assessment of transboundary waters should be elaborated in 2016–2017 under the leadership of Finland, for further discussion by the Working Group on Monitoring and Assessment or the Working Group on Integrated Water Resources Management, as appropriate, and in view of its submission to the Meeting of the Parties at its eight session in October 2018 (see the Water Convention’s programme of work for 2016-2018 contained in document ECE/MP.WAT/49/Add.1).

The present document puts forward a draft concept for the Third Assessment. The proposal is based on discussions and consultations held during the eleventh meeting of the Working Group on Integrated Water Resources Management (18 - 19 October 2016) where some initial thinking by the Bureau about the possible scope and approach was presented.

The concept was further refined and enriched during an Expert Group meeting on the Third Assessment which was convened in Geneva on 9 - 10 May 2017. The Expert Group, which gathered representatives of Parties and non-Parties to the Water Convention, international and regional organizations, joint bodies, NGOs and research centers, discussed the possible geographic and thematic scope, structure, possible information sources as well as the process of preparation for a Third Assessment of Transboundary Waters, in order to best serve countries’ and regions’ needs. It also helped identify gaps from and synergies with other relevant monitoring and assessment initiatives. More information on the First Meeting of the Expert Group on Third Assessment, including list of participants, programme and presentations, can be found at <http://www.unece.org/index.php?id=45779#/>.

While the whole proposal is up for discussion and comment by the Working Group, the document puts forward a number of questions that either need to be clarified as they represent the backbone of the proposal or were raised in the preparations without conclusive responses. It also highlights a number of issues which will require further thinking and definition in the next steps of the process of preparation of the concept.

The Working Group is invited to:

- (a) Review and discuss the draft proposal, including the questions raised in the present document;
- (b) Discuss and agree on the next steps and way forward to finalize the proposal;
- (c) Tentatively propose transboundary basins (both surface water basins and aquifers) which could be included in the Third Assessment;
- (d) Discuss funding opportunities and ways and means to gather the resources needed to carry out the Third Assessment.

Executive summary: the Third Assessment in a nutshell

- A participatory assessment, based on countries' data, information and joint assessment, of 15-20 surface water basins (or sub-basins) and/or aquifers around the world which represent a diversity of transboundary water management challenges, climatic zones and institutional settings; about one third to a half of them from the UNECE region and from a half to two thirds from Africa, Asia and Latin America.
- Demand-driven: based on an open call for basins, open to both Parties and non-Parties to the Convention. For a basin or sub-basin to be included in the Assessment, all riparian countries need to express an interest and support the exercise.
- Basic information with a consistent approach will be gathered and presented for all the basins. In addition, the assessments of the different transboundary basins will have a selected thematic focus jointly decided by the riparian countries. The proposed themes include: 1) Climate change, hydrological extremes and resilience; 2) Intersectoral issues/energy and/or agriculture; 3) Water quality (wastewater, diffuse pollution, mining or others); 4) Ecosystems and their services. This will allow deepening the analysis on topics of common interest.
- A common methodology but a flexible approach that will be adjusted according to data availability and ambition of the riparian countries, from 1) a mostly qualitative and descriptive approach employing e.g. expert judgment to 2) a more quantitative (and ideally harmonized basin-wide) approach.
- Pressures and the status of waters will be linked to measures taken and evolution of cooperation to form storylines that demonstrate the effectiveness (or not) of actions and the value of (or a need for) cooperation.
- In addition to the basin assessments, the Third Assessment will undertake an analysis drawing lessons of wide interest on the different thematic issues analysed in the basins, thereby making the exercise relevant and useful beyond the basins concerned
- The process of preparation will be participatory and interactive, promoting dialogues, exchange and cooperation at both the basin and inter-basin / global level. It will entail basin and/or regional level workshops to discuss and agree on the joint assessments as well as interbasin / interregional / global exchanges of experience. It will therefore have a strong capacity building dimension benefitting the basins and the countries involved.
- The process will foster transboundary dialogue. It will provide a process for identifying and agreeing on common challenges in selected basins, for developing a shared understanding of the status and for

agreeing about follow up on the basis of sound and agreed information. It will therefore lay the basis for starting cooperation where it does not exist or feed official cooperation processes to respond to emerging needs.

- The Assessment will also facilitate the identification of opportunities for cooperative activities, e.g. “lowering the bar” for developing joint projects, including investment opportunities on themes of common interest.
- The preparation of the assessment will not produce new data but will build on existing global and national data and promote data elaboration, visualization, analysis and uptake in cooperation processes. It will build, complement and enrich other monitoring processes, in particular the monitoring of the Sustainable Development Goal (SDG) 6 indicators.
- The methodological approach will build on previous assessments under the Water Convention, employing the Driving force, Pressure, State, Impact and Response (DPSIR) framework, and integrates relevant elements from the Convention’s work on water and climate, the water-food-energy-ecosystems nexus and benefits of transboundary cooperation.
- The Assessment should be supported by a strong consortium of partners at the regional and global level. Previous assessments have gathered the Global Resource Information Database (GRID) of the UN Environment, International Groundwater Resources Assessment Centre (IGRAC), Ramsar Convention on Wetlands, Global Water Partnership (GWP) and others. For the next assessment, in addition to global partners, regional organizations will also be involved.
- The process will draw upon the convening power and acquired assessment experience of the Water Convention and its partners (other regional commissions or regional organizations, international specialized agencies)
- The link to the Water Convention’s intergovernmental framework will allow political and technical follow up, including responses from other actors / donors
- Rough cost estimate: between 2.7 and 4.4 million USD

1. Background to the Third Assessment and relation to other monitoring and assessment exercises

Assessment of water resources is of fundamental importance as it forms the basis for effective policies and management measures. This is particularly pertinent in transboundary basins where there is a need for a common basis for decision-making and where harmonized and comparable assessment methods are required. Regular assessments of waters support verification of effectiveness of measures. This is why joint monitoring and assessment are key obligations under the Water Convention.

In 2003, the Parties to the Water Convention decided to regularly carry out assessments of the status of transboundary waters in the region of the United Nations Economic Commission for Europe (UNECE) with the aim to evaluate implementation of the Convention and assess progress achieved in improving the status of transboundary waters in the pan-European region. The First Assessment was published in 2007; the Second Assessment in 2011. These assessments involved both Parties and non-Parties to the Convention, and in the second one also several countries from outside the UNECE region sharing waters with UNECE countries participated. More than 150 transboundary rivers, 40 lakes, 200 transboundary groundwaters and 25 Ramsar

sites or other wetlands of transboundary importance were assessed in close cooperation with the national administrations.¹

These assessment exercises promoted exchange of experience and good practices, capacity building, progressive harmonization as well as transboundary cooperation through both political and technical dialogue. They also informed and guided further action under the Water Convention.

In 2012, the Meeting of the Parties at its seventh session concluded that a new comprehensive assessment of transboundary waters could be timely some 8 to 10 years from the Second Assessment published in 2011. Considering the opening of the Water Convention to all UN Member States, the Third Assessment would not be limited to the pan-European region but would include transboundary basins from all over the world.

The Third Assessment will build on and complement results from the reporting under the Convention and the monitoring of Sustainable Development Goal (SDG) indicator 6.5.2 measuring “the proportion of transboundary basin area with an operational arrangement for water cooperation” carried out in 2017. It will couple information on institutional arrangements for cooperation derived from the reporting under the Convention and the monitoring of indicator 6.5.2 with information on pressures, status and trends of transboundary water resources, thereby providing a complete picture of progress and challenges in the management of transboundary water resources.

The Third Assessment will also rely and enrich the monitoring of other SDG 6 indicators. It will build on previous relevant global and regional assessments, in particular from the Global Environment Facility’s (GEF) Transboundary Waters Assessment Project (TWAP), the Assessment of transboundary waters in the Economic and Social Commission for Western Asia (ESCWA) region, the European Environment Agency’s State of Water assessment activities and water data collection, the work of the International Groundwater Resources Assessment Centre (IGRAC) and the United Nations Educational, Scientific, and Cultural Organization International Hydrological Programme (UNESCO-IHP)-lead monitoring and assessment of transboundary aquifers, the Global water quality assessment of UN Environment/GEMS, and the hydrological and climate monitoring by the World Meteorological Organization (WMO). While it will ensure the use of data produced through these programmes and projects and other relevant initiatives, it will only rely on data agreed upon by the participating countries.

2. Objectives of the Third Assessment and added value of the process

The overarching objective of the Third Assessment is to support riparian countries and joint bodies in cooperating on the protection and sustainable management of their transboundary waters by developing a joint, comprehensive and up to date picture of their transboundary waters, with a focus on priority or emerging challenges.

Through its process of preparation and through its final results, the Third Assessment will aim to:

- provide for a participatory process between riparian countries for identifying challenges, for developing a shared understanding of the status of waters and for agreeing about follow up on the basis of sound and agreed information
- investigate gaps and opportunities for strengthening cooperation, in particular

¹ More information on the Second Assessment of Transboundary Rivers, Lakes and Groundwaters is available at <http://www.unece.org/?id=26343>.

- provide an opportunity to explore development of cooperation in transboundary basins where there is none
- provide an opportunity to explore new/emerging issues in basins where cooperation is established
- facilitate the identification of opportunities for cooperative activities, e.g. “lowering the bar” for developing joint projects, including investment opportunities on themes of common interest
- provide evidence for the benefits of transboundary water cooperation (but also the costs of the lack thereof)
- promote the sharing of information, the exchange of experience, dialogue and mutual learning between riparian countries and across basins with similar challenges
- develop lessons learned from the basins assessed with a value and an impact beyond the basins assessed
- assess the impacts of the implementation of the Water Convention by its Parties
- build capacity on the Water Convention and pave the way for possible accession by interested non-Parties
- inform and guide future work under the Convention and of other actors supporting transboundary water cooperation such as the GEF, financing institutions and bilateral donors.

The main characteristic and added value of this exercise compared to other assessment programmes will be its intergovernmental and participatory nature: the assessments of the basins will be jointly developed by the concerned riparian countries, based on their information, the exchanges during the process, etc.

Moreover the collective approach of this exercise - with several basins assessed at the same time following a similar methodology and with further exchanges promoted through the intergovernmental framework of the Convention and of partners at the regional level - will promote good practices and exchanges of experiences on common challenges and responses.

Finally, linking this exercise to the Convention’s intergovernmental framework and to that of regional partners will allow political and technical follow up to the issues emerged in the Assessment, including promoting interventions by development partners.

3. Possible geographical and substantive scope of the Third Assessment

3.1. Overall content

The Third Assessment will consist of:

- A general part synthesizing from conclusions of all the individual basin assessments and drawing lessons on progress and challenges in the management of transboundary waters and on the thematic issues analysed. This part will, if possible, also provide general recommendations.
- Basin assessments. A limited number of basins(or sub-basins)/aquifers from different regions of the world will be included (see section 3.2 below)
 - These assessments will follow a common methodology and have a similar structure (see section 3.4 below)
 - Each basin will have a thematic focus selected jointly by the concerned riparian countries from a predefined set of possible themes (see section 3.3 below)
 - The basin assessments will be based on existing, available data, provided or agreed upon by riparian countries (as priority official data from the countries but also previous projects, and data from global and regional assessments). The exercise will not involve collection of new data but will build on existing global and national data and promote data elaboration, analysis and uptake in cooperation processes
 - The basin assessments will include maps and other elements of data visualization to enhance the readability and policy impact of the exercise.
 - For basins assessed in the Second Assessment, the Third Assessment will highlight developments since then in the governance context, changes in pressures, status and responses, and track progress or regress and relevant trends.

To account for and reflect the significant differences in the availability of information between basins, a tiered approach is proposed in the basin assessment. This will entail that, depending on the availability of information, the assessment will be based on different data and information, exploiting what is available. Consequently, the approach to presenting information on a specific aspect may differ between basins, also in the level of detail. At the same time, agreed minimum information should be ensured throughout the basins, to allow for comparability.

Questions for discussion: Is the overall structure of the Third Assessment suitable? Is there anything essential missing?

Aspects to be further refined:

The structure of the general part synthesizing conclusions should be developed.

The tiered approach and what information should be included at minimum need to be further discussed and defined.

3.2. Geographical scope

The Third Assessment will include a limited number of basins (or sub-basins)/aquifers from different regions of the world, at least 15 but no more than 20 in total.

These will include a representative set of basins shared by Parties in the UNECE region, e.g. a third or a half of the total, and half or two thirds of basins in Africa, Asia and Latin America.

The objective of the selection will be to have a balanced geographical coverage and a good illustration of the

main challenges in the management of transboundary waters. A variety of climatic zones and institutional settings should also be aimed at. The selection will also reflect the different level of advancement of transboundary cooperation, from basins where there is no or little official cooperation to basins with a mature cooperation setting. These criteria will be particularly important for the basins shared by countries in the UNECE region which have been assessed in the first and second Assessments, as they should be illustrative of the changes and trends in the region which have been tracked since 2007.

An important criterion for inclusion in the Assessment will be that all riparian countries in the basin/sub-basin/aquifer will express their interest and commitment to the exercise.

Countries will be invited through an open call to propose basins to be assessed and to indicate the preferred thematic focus. Preferably the proponent riparian country should reach out to co-riparians and ideally joint submissions should be made. Involvement of all riparians could possibly be facilitated through involvement of UNECE, regional organizations or other partners, where helpful. Interested basin organizations and regional organizations are encouraged to support the process in its different stages.

Questions for discussion: Is the geographic scope adequate? Is the ratio between basins shared by Parties and basins shared by non-Parties appropriate? How will it be possible to also attract and support basins in which the cooperation between the riparians is a challenge?

3.3. Thematic focus

The basins assessments will have a thematic focus, agreed upon between the riparian countries. Such a focus will be useful for both basins with an advanced cooperation and for basins where cooperation is not developed.

For the former, where the existing cooperation framework already offer opportunities for regular joint assessments, the exercise will allow exploring areas/topics which have not been already extensively analysed and might therefore provide the basis for extending cooperation to these areas. For the latter, where normally information on the status of the water resources in the basin is limited, it will allow focusing on issues of common interest that might lay the basis for future more formalized cooperation.

The focus on specific themes will also facilitate the exchange of experience between basins with the same thematic focus and drawing lessons of wider applicability

To fully benefit from possibilities of comparisons and exchange, a critical mass of basins with similar challenges or interests is necessary. For this reason, a limited number of topics are suggested, representing common mutual challenges or common development interests. The following themes are proposed:

- 1) Climate change, hydrological extremes and resilience;
- 2) Intersectoral issues/energy and/or agriculture;
- 3) Water quality (wastewater, diffuse pollution, mining or others);
- 4) Ecosystems and their services.

With such themes, some areas of work under the Convention where guidance has been developed – in this case adaptation to climate change² and the water-food-energy-ecosystems nexus³ – can provide support for

² Guidance on Water and Adaptation to Climate Change (UNECE, 2009). Available from: <http://www.unece.org/index.php?id=11658>

defining the approach and identifying indicators.

A specific set of information, indicators and analysis would be presented for each thematic cluster.

Questions for discussion: Are the thematic focal area proposed above the appropriate ones?

Aspects to be further refined: The specific information and indicator for each thematic cluster need to be defined.

3.4. Structure of the basin assessments

The basin assessments will have the following structure.

1) **Basin overview:**

A short section providing a snapshot of the main information and key challenges in the basin, including through indicators, symbols and pictograms.

This section should allow clustering of the basins according to categories linked to overall conditions (e.g. climate, level of cooperation) and main challenges, thereby facilitating comparisons and identifying basins with similarities for drawing lessons.

This section will describe the thematic focus of the assessment for the basin.

It will also include a map of the basin/sub-basin/aquifer.

Aspects to be further refined: Specific data and information to be included in this section as well as categories of challenges to be used.

2) **Governance context:**

This section will describe the existing governance framework at the national and transboundary levels. This will include the legal and regulatory framework, organizations and main policies for water management. This will also include an analysis of the governance framework of other sectors which have an impact on water management, with an emphasis on the governance dimension of the thematic focus of the basin assessment. Multiple levels of governance (vertical) and working across sectors (horizontal) will be considered.

The information provided by countries in the framework of the reporting under the Water Convention and on SDG indicator 6.5.2 will feed this section. The methodological approach could be informed, among others, by the principles of effective joint bodies⁴ and by the governance component of the nexus assessments carried out under the Convention.

3) **Description of pressures, status and responses**

As in previous assessments under the Convention, the logical flow will be established following the

³ Reconciling resource uses in transboundary basins: assessment of the water-food-energy-ecosystems nexus (UNECE, 2015). Available from: <http://www.unece.org/index.php?id=41427>

⁴ Draft principles for effective joint bodies for transboundary water cooperation (ECE/MP.WAT/2015/6). Seventh session of the Meeting of the Parties, Budapest, 17–19 November 2015. Available from: http://www.unece.org/fileadmin/DAM/env/documents/2015/WAT/11Nov_17-19_MOP7_Budapest/ECE_MP.WAT_2015_6_joint_bodies_ENG.pdf

Driving forces, Pressures, State, Impact, Responses (DPSIR) framework⁵, with some practical merging.

The common methodological approach would need to be applied flexibly, adjusting according to the data availability and ambition of riparians. The approach could be mostly qualitative and descriptive employing e.g. expert judgment in basins with a lack of data, and more quantitative (and ideally harmonized basin-wide) in basins with adequate data and information.

3.1) Drivers and pressures

This section will describe main drivers and pressures in the basin.

Such drivers and pressures will be substantiated by selected indicators (e.g. population in the basin, water abstraction) or from global assessments (notably TWAP) common to all basins harmonized across basins using international and globally consistent sources. For instance, selected SDG indicators may be helpful in describing the importance of sectoral development in countries sharing the basin.

Additional information will need to be tailored to the basins. The description of drivers and pressures linked to the thematic focus of the basin assessment will have a special emphasis.

The spatial distribution of the main pressures will be shown as a map.

Some pressure factors have an important variability in time, water uses such seasonally variable water use for agriculture and tourism, which it will be important to capture especially in basins with a high level of water scarcity.

Aspects to be further refined: Common indicators to be used for all basins. Specific indicators/information related to the thematic focus of the basin.

3.2) Status of water resources

3.2.1) Water quantity

Delineations of transboundary surface water basins and aquifers/groundwater bodies is among basic information to be shown as is the distribution of surface water bodies. At least the general distribution of discharges in the principal watercourse as well as on its main tributaries will be presented. The extent of water reuse, desalination or managed aquifer charge to augment water resources may be relevant to reflect in some basins at least. The location of selected Ramsar sites and wetlands of transboundary importance could also be shown.

The assessment should quantify with relevant indicators the water resource in each basin, including ideally its intra-annual and inter-annual variability.

⁵ The DPSIR framework contains the following elements: (i) Driving forces relate to population trends and human activities such as agriculture, urbanization, energy production and industry; (ii) Pressures refer to the intentional and unintentional consequences of these trends and activities, such as water pollution, altered surface waters (e.g. canals), and changes in flow; (iii) State looks at changes that occur in ecosystems as a result of pressures; (iv) Impact refers to the consequences for humans and ecosystem services resulting from changes in state; (v) Responses refer to decisions taken by human beings to address the drivers, pressures and impacts. Source: *Environmental indicators: Typology and overview*. Technical report No. 25/1999. EEA. 1999.

The approach to presenting information about water quantity could be adjusted to the availability of information. Table 1 shows an example for selected aspects of water quantity.

Table 1. Tiered approach to selected aspects of water quantity

| | Low data availability | Good data availability |
|--------------------------------|---|--|
| Discharge/flow (surface water) | lower – long-term variability (min-average-max) | in addition, intra-annual variability |
| Groundwater resources | estimated resources (volume) | clear distinction about (annually) renewable and long-term stock (groundwater reserve) |
| Scarcity | semi-quantitative ranking by questions | illustrative distribution of water availability and needs |
| Storage | main reservoirs only, descriptive | current total storage capacity (and planned?) by riparian countries |

Questions for discussion: Should water-dependent ecosystems be described also in basins which have not chosen that specific thematic focus? If yes, how exactly that should be done?

3.2.2) Water quality

The assessment of water quality will be approached through a combination of 1) a common set of indicators for all countries/basins and 2) a specific assessment by basin. The data requirements for the latter could be adjusted to the level of information available as sketched in Table 2.

Table 2. Tiered approach to selected aspects of water quality

| Basis | Approach to water quality assessment |
|------------------------|---|
| No data | expert qualitative assessment (e.g. good – moderate - poor) |
| Some data | qualitative/quantitative assessment based on data available |
| Good data availability | quantitative assessment based on national classifications |
| Joint approach | Harmonized quantitative assessment |

Also in this case, the thematic focus of the assessment will influence the issues analysed in this session and their emphasis. However, depending on the challenges in the basin and data availability, relevant water quality parameters will be included.

Aspects to be further refined: Common indicators/parameters to be used for all countries/basins to describe water quality.

3.3) Responses

This section will describe responses, spanning a broad range of policy and technical actions. As governance aspects will be described in the relevant section, the focus here will be on other aspects, including monitoring of water resources at the national and transboundary levels, technical measures implemented, e.g. infrastructure, ecosystems-based solutions, etc. A categorization of measures, into e.g. economic, technical or awareness-raising measures will be helpful for presenting this information in a structured way.

This section will reflect both measures already taken and measures planned. Financing of measures merits also attention.

Also in this case, the thematic focus of the assessment will determine the emphasis of this session.

The reporting under the Convention and reporting on indicator 6.5.2 will provide relevant information for developing this part of the assessment. Specifically, the reporting templates include information about measures in place related to monitoring and controlling discharges, economic and financial measures, agricultural extension services, technical measures (water saving technologies, advanced irrigation etc.). Additional information about the implementation of the measures - the extent, location and timing – will be necessary.

The assessment will present a diversity of cases: While it is instructive to include basins where cooperation and coordinated measures taken have reduced the pressures and improved the status of waters, also basins where the current status makes need for action pressing are valuable to showcase. Indeed the assessment may draw attention to the challenges and serve as a call for support, to assist the co-riparians to move forward.

4) Trends

Trends linked to different aspects – pressures, status etc. – of shared surface water basins and aquifers will be analyzed to describe how the current situation was arrived at, what the outlook is and what is possible. Among factors to consider are, for example, climatic trends, demographics, economic development, water withdrawals and possibly investment.

This section will therefore look both at historical trends and predictions about the future. In basins covered by the Second Assessment, developments since then will be paid specific attention.

Also in this case, the thematic focus of the assessment will determine the emphasis of this section. While all basin assessments should include some basic information on climate change related trends, the basins opting for having it as a focus theme could cover it in much more detail.

Reflect the timing of measures implemented and evolution of institutions over time, and linking them to evolution of the status of the shared waters would allow for some storylines to be developed about the impact of cooperation. This could be done in the shape of a historical timeline of development of cooperation compared to evolution of pressures and status. Such graphical information could show some evidence about the effect and benefit of cooperation on the development of the basin and status of the waters.

4. Process of preparation of the Third Assessment

The design of the process should ensure targeted gathering of the necessary information in the countries and validation of information used from additional sources. However, the most important need is that the information and the process allow the co-riparians revisit, discuss and agree about their challenges and possible responses. The frequency and intensity of direct interaction (notably workshops) and the level of detail of the analysis will be affected by the amount of resources and in-kind support that can be mobilised.

The assessment would therefore involve both, firstly, a basin level or sub-regional level process. Secondly, this would be complemented by a global process which provides for an exchange of experience across all basins and aquifers participating in the process.

A modality of working with the countries consisting of the following stages is proposed.

4.1. At the basin level:

1. **Identification of focal persons/country teams.** Nomination of focal point will be requested from the countries sharing the basins selected to be assessed. Especially in the case of themes of intersectoral nature (intersectoral issues/energy and/or agriculture, climate change), gathering of the necessary also across sectors may be needed, and in such case identification of a country team may facilitate.
2. **Refinement of the thematic focus among the riparians** for each basin. This can be done in the form of a meeting or through correspondence. Although the preferred thematic focus should be indicated in the initial proposal, this may need to be detailed or formally agreed among the co-riparians.
3. **Identification of key information and data sources** by the countries. Providing the secretariat with at least the priority information sources to be referred will make the information collection more efficient. Applying a tiered approach to adjust to different data availability, this can involve some distinct categories of information to be requested.
4. **Prefilling the information into a questionnaire or into an assessment template or factsheet.** The secretariat, supported by experts and possibly by the International Water Assessment Centre (IWAC), will consolidate the information from the documents provided and from agreed information sources.
5. **Review and completing of the questionnaires** by the riparians. The prefilled questionnaire will be sent for review and completion to each of the riparian countries. On this occasion, the secretariat and/or experts also ask for clarifications and complementary information that may be needed.
6. **Assessment workshop(s)** (for a basin or for >2 basins at the regional level) to discuss the draft assessment and agree on how to further develop it. Ideally maps and graphics to be included to illustrate the assessment should also be discussed on this occasion. At least one basin workshop will be required for the process to be meaningful, but pending availability of resources additional workshops would be beneficial, for instance to finalize the assessment, present it at the political level and agree on the next steps. In addition to the resources which should be available to support the process, participating countries and/or basins are invited to consider organising additional meetings.
7. **Completion of the draft basin assessment** based on workshop outcomes and additional information collected and sending for review by the riparians. The draft assessment is further developed with any revisions and additions identified to be needed in the workshop, and after a review of the document by the riparians, the assessment is finalised taking into account the comments provided.

4.2. At the global level

Yearly intergovernmental consultations and exchange of experience between the basins and the countries in the Working Group on Monitoring and Assessment (WGMA) will significantly add to the value of the process. A part of benefits is the analysis of the different thematic issues to draw lessons of wide interest for upscaling the results. Another benefit is the potential for exchange of experience between basins with similar challenges.

The themes could be integrated into the process e.g. in the form of break-out sessions in the meetings of the Working Group on Monitoring and Assessment overseeing the assessment, promotes an active exchange of experience between transboundary basins with similar challenges.

As the individual basin assessments would be worked on gradually, the WGMA with representation of all the countries concerned by the basin assessments, would be the key body overseeing the work where any necessary adjustments to the approach could be discussed and any general or particular lessons drawn.

The analysis of the basin assessments and a summary of the whole body of work would be developed in an appropriate format (to be discussed) for the MoP or other pertinent forum. This could consist of an overview report, basin assessments (issued at least electronically), summaries and briefs. The format of an eventual on-line publication and dissemination of at least the main conclusions in the UN languages of the regions concerned would need to be discussed.

Questions for discussion:

Is the outlined process of preparation appropriate and responding to the objectives of the Assessment?

What should the role of the civil society, and NGOs in particular, be in the assessment process?

5. Roles of partners and potential synergies

The role of partners – from joint bodies, to regional and international organizations, think-tank and research centers – will be crucial in the preparation of the Third Assessment, in terms of bringing in the needed expertise and experience, fostering synergies with other closely connected processes and strengthening the political importance of the Third Assessment and its follow-up.

Partners could, for example, contribute to the following stages:

- Contribute to refining the methodological approach
- Cooperate in the identification of basins and specification of the thematic foci
- Provide data and information
- Organize/co-organize workshops, either for developing the assessment, or for discussing the conclusions.
- Fund-raise jointly based on synergies identified
- Promote and use the results of the assessment in the work.

Different levels of involvement of partners are possible but a common product would be the preferred aim, that is, the assessment should become a part of the partners' programme of work.

Given their experience in the topic and their mandate, the following organizations were invited to the Expert

Group meeting in May 2017: African Minister's Council on Water (AMCOW), Association of Southeast Asian Nations (ASEAN), European Environment Agency (EEA), GWP, IGRAC, Niger Basin Authority, Titicaca Lake Commission, Mekong River Commission, Organization of the American States (OAS), UNEP – DHI, GEMS/Water Unit of the UN Environment, UNESCO – IHP; UN Economic Commissions for Africa (ECA), Latin America and the Caribbean (ECLAC), Asia and the Pacific (ESCAP), Western Asia (ESCWA); World Meteorological Organization (WMO), Zoi Environment Network, Ramsar Convention, UN-Water.

Most of them attended the event and expressed general interest and support to the exercise. It will be crucial to confirm which partners will be involved and their role as soon as possible.

Questions for discussion to partners:

Which partners are interested to further engage and support the process?

What should be the next steps to define the partnership?

6. Sources of information

The assessment approach has to be a mix of qualitative, semi-quantitative and quantitative information. Concretely, a good balance has to be struck between use of data from international sources and what is requested from national administrations specifically. In general, official data sources will be prioritised and complementing unofficial data will go through the validation in the Working Group meetings and in basin assessment reviews.

A tiered approach is a way to adjust to the different levels of data availability.

The sources of information include data reported by national statistical offices, country reports (notably to UN organizations), plans and reports of basin organizations, regional/global monitoring systems and reports of previous joint projects.

Among relevant projects from the point of view of information and methodological approaches are at the global level the Transboundary Waters Assessment Programme (TWAP) and UN Environment GEMS/Water Global water quality assessment. At the regional level, a number of assessments have been carried out and depending on which basins will be assessed, these may turn out very relevant: ESCWA with partners completed the Inventory of Shared Water Resources in Western Asia and UNESCO has carried out regional inventories of transboundary aquifers.

To the degree possible, the assessment will make use of data on the relevant SDG indicators. The reporting under the Convention as well as the associated reporting on indicator 6.5.2 provides information about the scope of cooperation and related activities.

Mutually accepted data and information as well as the shared understanding should go in the assessment but, if necessary, the assessment can also reflect differences in the co-riparian points of view, if they are not reconcilable.

Remote sensing information or satellite based data products could be used for selected aspects such as drivers or pressures for consistency across basins and between basins.

Spatial information (maps) should ideally be prepared in parallel with the assessment to support the analysis. Therefore, the visual material intended to be included in the assessment needs to be early in the process and an overall communication plan developed.

7. Rough estimate of resource requirements

Table 3 presents, in very rough terms, an estimate of the costs of the Assessment's preparation. Two options are explored: a basic one with only one workshop per basin and a more ambitious one with two workshops per basin and more resources to analyze information and support the process.

Compared to the Second Assessment, with either option, the ambition of the Third Assessment as outlined in this document is significantly higher. First of all it puts a higher emphasis on the participatory nature of the process which has budgetary implications (organization of basin workshops, global workshops, etc.). Secondly it foresees the preparation of focused analysis (including graphics and maps) feeding the basins assessments to reflect the thematic priority of the riparian countries. Obviously the staff costs to manage and support the process are also higher.

It is hoped that, as in the Second Assessment, some of these costs could be covered in-kind by the participating countries or the partners involved. Synergies would be sought also in the organization of the meetings for the basin level process.

Table 3. Estimate of the costs of the Assessment preparation

| Process component/cost item | Cost (USD) – basic version | Cost (USD) – version with more in-depth and extended basin level process and participation⁶ |
|--|-----------------------------------|---|
| (1) Personnel costs: manager for 24 months, supported by a junior professional staff member for 36 months | 792,000 | 1,008,000 |
| (2) Personnel costs: administrator for 18 months | 154,800 | 206,400 |
| (3) Meeting involving relevant experts and the key partners for refining the methodological options, scope, format, indicators, etc., on the basis of a preliminary identification of basins | 60,000 | 60,000 |
| (4) Consultancy for developing a methodology tailored for this assessment | 20,000 | 20,000 |

⁶ The upgraded process would, in particular, require additional secretariat staff time (1), 54 months of junior professional staff time; 24 months of manager's time and 24 months of administrative staff, as well as local expert support in the basins. The more extensive basin level process (organisation of two workshops per basin, the latter being to discuss the findings and follow-up) and more detailed basin level (7) and cross-cutting analysis (9) would also imply higher costs. As proposed in the more in-depth option, if basin summary assessments would be produced as deliverable in addition to the overview report, in the regional UN languages, this would mean higher production costs (12). Dissemination travel (13) to the each basins instead of only to regional level events would have only minor impact on the overall costs.

| | | |
|---|------------------|------------------|
| (5) Pilot data collection based on a pilot basin; workshop including travel of staff and participants plus a light analysis and write up | 50,000 | 100,000 |
| (6) Basin-level process: organization of working meetings (estimated for 19 basins) bringing together the different sectors to discuss the main points of the assessment, preceded by a preliminary data collection/review | 570,000 | 1,140,000 |
| (7) Basin analysis (a simple write up of information provided in a fixed format & a desk study of the documentation provided) | 285,000 | 570,000 |
| (8) Organization of two sessions of the supervising Working Group on Monitoring and Assessment for a review and endorsement of the assessment at intergovernmental level | 120,000 | 120,000 |
| (9) Consultancy fees for the cross-basin analysis, including graphics, etc | 45,000 | 70,000 |
| (10) Consultancy fees for the finalization and technical editing of the assessment report and graphical layout | 35,000 | 35,000 |
| (11) Consultancy fees for the production of maps and graphics | 130,000 | 130,000 |
| (12) Production of the publication: printing of the report, development of an online version with data and maps | 80,000 | 390,000 |
| (13) Dissemination travel (1 per region or 1 per basin) | 12,000 | 60,000 |
| Sub-total | 2,353,800 | 3,909,400 |
| Project support costs (13%) | 306,000 | 508,200 |
| Total | 2,659,800 | 4,417,600 |

8. The next steps in the process of preparing the concept of the assessment

The following timeline is proposed for preparation of the further elaboration of the concept of the third Assessment:

The proposed approach will be adjusted in the light of the discussion at the meeting of the Working Group on IWRM from 5 to 6 July 2017, and the suggestions made will be integrated into a revised version of the present document.

- 5-6 July 2017: discussion at the meeting of the Working Group on IWRM, confirmation/revision of the approach
- By 31 August 2017: More detailed comments in writing on the draft concept by countries, joint bodies and potential partner organizations
- By 30 September 2017: Call launched for expressions of interest by interested countries or channeled through joint bodies (for submission by 15 November 2017)
- August 2017 – January 2018: Consultations with potentially interested countries, joint bodies and partners. Further development of the concept (structure and content, potential basin involved). This dialogue should allow putting together a set of basins to be assessed which reflects the criteria highlighted in section 3.2.
- By 31 December 2017: A revised concept with a preliminary list of the basins and aquifers to be assessed.
- 21-22 February 2018: Meeting of the Working Group on Monitoring and Assessment convened to review the concept and refine it, with the close involvement of countries / basins potentially involved
- 19 March 2018: Elaborated concept & process for consideration by the Working Group on Integrated Water Resources Management (WG IWRM)
- 29-30 May 2018: Further discussions at the WG IWRM
- October 2018: Decision on the production of the Assessment by the Meeting of the Parties, including list of basins included.
- Report not before 2021 (timeline to be detailed when the related processes, resource contributions etc. more clear)

Annex

Some relevant monitoring and assessment initiatives

Annex

Some monitoring and assessment initiatives relevant for the Third Assessment

| Initiative | Organizations | Website |
|---|--|---|
| European Environment Information and Observation Network (EIONET) | European Environment Agency (EEA) | https://www.eionet.europa.eu/ |
| European water resources - overview | EEA | https://www.eea.europa.eu/themes/water/water-resources/overview |
| Information system of IGRAC | IGRAC | https://www.un-igrac.org/global-groundwater-information-system-ggis |
| Internationally Shared Aquifer Resources Management | UNESCO, Organization of the American States, International Association of Hydrogeologists | http://isarm.org/isarm-brief |
| Inventory of Shared Water Resources in Western Asia | German Federal Institute for Geosciences and Natural Resources (BGR), UN ESCWA | https://waterinventory.org/ |
| Snapshot of the World's Water Quality | UN Environment | https://uneplive.unep.org/media/docs/assessments/unep_wwqa_report_web.pdf |
| Transboundary Waters Assessment Project (TWAP) | International Lake Environment Committee, International Union for Conservation of Nature, UN Environment, UNEP-DHI Partnership – Centre on Water and Environment, UNESCO | http://www.geftwap.org/ |
| UN Environment GEMS/Water | UN Environment | https://www.unep.org/gemswater/ |
| WMO Hydrological Information System | World Meteorological Organization | http://www.wmo.int/pages/prog/hwrp/chy/w hos/ |