



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

Working Group on Monitoring and Assessment
Tenth meeting, 10-11 June 2009
Agenda item 4

**ELEMENTS FOR THE ASSESSMENT OF TRANSBOUNDARY WATERS IN
SOUTH-EASTERN EUROPE**

Prepared by the secretariat
with the assistance of Global Water Partnership Mediterranean

The present document is based on the discussions and outcome of the **International Workshop on Transboundary Water Resources Management in South-Eastern Europe (SEE)** held in Sarajevo on 18-20 May and jointly organized by the Regional Cooperation Council (RCC) and the United Nations Economic Commission for Europe (UNECE) in cooperation with the Global Water Partnership Mediterranean and the International Sava River Basin Commission.

The workshop contributed to the regional dialogue on transboundary water resources management in SEE facilitated under the Petersberg Phase II / Athens Declaration Process. The workshop highlighted cooperation on shared water resources management as a crucial component of the stability and prosperity process in SEE. It promoted a high level discussion on key issues facing transboundary waters and cooperation in the region linked with: (i) institutional and legal settings for cooperation; (ii) multipurpose use of water resources; and (iii) climate change adaptation.

Moreover the workshop was a determinant step in the preparations of the second assessment of transboundary waters under the UNECE Water Convention. At the workshop, participants worked together to develop an accurate picture of all transboundary waters in SEE - both surface and groundwaters - with the aim to highlight achievements and challenges, shed light on the effectiveness of the measures taken, identify most urgent actions and provide the grounds for further measures to prevent, control and reduce transboundary impact.

The present document is a first draft of the sub-regional summary of the assessment of transboundary waters in SEE, in accordance with the outline agreed by the Working Group on Monitoring and Assessment (see ECE/MP.WAT/WG.2/2009/3). The summary will be complemented by facts and figures on transboundary rivers, lakes and groundwaters in SEE draining to the Mediterranean or the Black Sea, based on information and assessments provided and jointly agreed by riparian countries. The draft summary will be further enriched taking into account such information, including with the inclusion of additional specific examples.

As the assessment of transboundary waters in SEE will be presented to the fifth meeting of the Parties to the Water Convention (Geneva, 10-12 November 2009), its finalization will need to take place by end July 2009, therefore riparian countries in SEE are requested fill in the relevant data sheets by 26

June 2009. Those SEE countries which have not yet done so should inform as soon as possible the secretariat on who are the surface waters and groundwaters experts who are responsible for the provision of information and the preparation of the SEE assessment.

The Working Group, and in particular countries in South-Eastern Europe, are invited to:

(a) Comment the present draft, advice on issues which should be highlighted in the summary, correct and inaccuracy and provide additional information for its finalization so to cover all issues of relevance for the region in accordance with the agreed outline of the second assessment;

(b) Discuss and agree on how to ensure the completion and submission to the secretariat of the datasheets by 26 June 2009;

(c) Discuss and agree on the process for finalization of the official documents on the SEE assessment for the fifth meeting of the Parties.

Chapter 1 LEGAL, POLICY AND INSTITUTIONAL FRAMEWORKS FOR TRANSBOUNDARY WATER MANAGEMENT

1. With 90% of the territory of South Eastern European (SEE) countries falling within shared water basins, the effective management of transboundary water bodies is of particular importance for the region. There are thirteen major transboundary rivers and four international lakes as well as more than 50 transboundary aquifers. More than half of the transboundary basins are shared by three or more riparian countries. Such a fragmented situation underlines the need for agreements and other cooperation arrangements to ensure protection and sustainable use of shared resources.

2. There is an increasing consensus in the region that cooperation on water should provide a sustainable framework to share benefits from transboundary resources. Nevertheless, there are still numerous obstacles in achieving this objective that derive from the interdependence and the still potential conflict that exist among different uses. The situation is made more complicated by the various and often non-harmonized levels of infrastructure, legal and institutional frameworks, policies, priorities and interests of each country as well as political unrest in specific parts of the region.

3. A remarkable number of actors are active in the region to support cooperation. The involvement of the European Union (EU) and several United Nations (UN) agencies and other international organizations and nongovernmental organizations (NGOs) as well as donor countries has been important in supporting regional initiatives, investments and projects.

4. Transboundary cooperation for the management of shared water bodies has been influenced by political and socio-economic developments at the national and regional level, and by bilateral relationships of riparian countries. Progress, although slow, has been achieved. The on-going cooperation between Bosnia and Herzegovina and Croatia regarding their shared water bodies and between Albania and the Former Yugoslav Republic of Macedonia on Lake Ohrid, the newly established official cooperation between Albania and Montenegro in Skadar/Shkoder Lake as well as the relevant efforts among the riparian countries in Prespa Lake are to be mentioned as positive examples.

5. The example of the cooperation on the Sava River basin, the most advanced in SEE clearly shows that transboundary waters could provide a base for cooperation, thus being an element of stability, security and peace building in the region.
6. In most of the transboundary basins and for the total of the shared aquifers, though, such steps are yet to be taken. This may be explained by low political prioritization of the issue or by the lack of appropriate resources and/or institutional and legal provisions.
7. The water resources management framework of the non EU countries of the SEE region is under an on-going reform process. The EU Stabilisation and Association as well as the EU Accession Process play an important role in this respect calling for integration of policies and supporting priority water management related investments. The EU *acquis communautaire* and in particular the Water Framework Directive, asking for balance between protection and use of water, constitute the basis for this reform. Countries have proceeded with different pace; the level of transposition of the EU WFD in the national legal frameworks varies and so is the level of implementation.
8. In non-EU countries, major gaps still exist and so are difficulties, mostly in relation with the implementation and enforcement of laws and the effective functioning of the newly established institutional frameworks. Insufficient institutional capacities linked to limited human, financial and technical resources pose serious constraints. Full approximation to EU standards will need further major reforms, time, and extraordinary efforts by national and local administrations, along with adequate resources. Nevertheless, progress is evident in all non EU member countries and especially in Croatia and the former Yugoslav Republic of Macedonia.
9. Countries which are members of the European Union are ahead in the reform of their water sector but are also often struggling with similar issues.
10. The role of the Water Convention in the region in this respect can be very useful as it offers a common platform for EU and non-EU countries sharing transboundary resources. Moreover, it also offers a tool for a step-by-step implementation of EU water legislation by non-EU countries. It is a positive development that Bosnia and Herzegovina has completed the national process of accession to the Convention and that the former Yugoslav Republic of Macedonia is preparing for accession.
11. At the regional level the EU WFD and the UNECE Water Convention represent two important frameworks that support water management and cooperation. The consistency and complementarity of the two legal frameworks represent a great asset in the region to promote cooperation through harmonization of policies and legal frameworks on the one hand and providing a set of sound rules and conditions for cooperation on the other.
12. However the different levels of advancement in the implementation of the EU WFD and of ratification to the Water Convention create some unbalances that often constitute an additional barrier for cooperation in a transboundary context.

Chapter 2 MONITORING OF TRANSBOUNDARY RIVERS, LAKES AND GROUNDWATER

13. Accurate and up-to date information on the quality and quantity status and trends in a basin system through monitoring is essential for effective protection and management. At the national level, well functioning monitoring systems either need to be rationalised and become efficient where already in place, as for instance in Bosnia and Herzegovina, or put in place where not present. With relation to the latter, progress is ongoing in a number of countries (e.g. Albania).
14. In most transboundary basins in the region, information exchange is still very weak and information produced in riparian countries is not harmonized. Joint monitoring and assessment almost do not exist.
15. Efforts for the creation of joint monitoring systems have been initiated in some basins, such as Prespa, providing an example to be followed. In the Sava River basin the existence of the Sava Commission facilitates flow of information among the riparian countries.
16. Harmonization of monitoring approaches and data collection methods -as in the Ohrid Lake where Albania and the former Yugoslav Republic of Macedonia have harmonized procedures for water monitoring and established joint protocols for sampling analyzing and quality assurance- as well as exchange of information are the needed first steps towards joint monitoring, establishing a trust building process.

Chapter 3 MAIN PROBLEMS, IMPACT AND STATUS

17. Transboundary resources are faced by numerous challenges: water pollution from operating and old industrial facilities, mines, urban wastewater and agriculture, illegal wastewater discharges and illegal waste deposits, groundwater pollution, water scarcity and destructive floods.
18. In addition, climate change will pose an additional threat. According to the Intergovernmental Panel on Climate Change (IPCC) the region is among those that are projected to be most severely hit by climate change. The increasing frequency and severity of droughts, floods and other extreme weather events is expected to result in an increased water supply-demand gap, as well as in other important impacts such as damages to human health and settlements, forest fires, increasing desertification, soil degradation, and loss of inhabitable and arable land and natural habitats. Economic activities depending on water will be adversely affected. This in return will exacerbate the already demanding challenge of balancing competing demands among different uses - navigation, hydropower generation, agriculture, industry, tourism/recreation, etc. - at national and transboundary levels, stemming from the multipurpose use of basins. Additional attention has to be given within such a changing environment so as to ensure the functioning of ecosystems and the preservation of the natural capital.
19. This constitutes already an issue to be addressed in several basins. The Sava, Neretva, Drin, Meric/Maritza/Evros are among the shared basins where there is a need to balance competing demands taking into account the social, economic and environmental values of water.

20. In the case of transboundary groundwaters, the above problems are exacerbated by weaker knowledge base. This is in particular true for karst aquifer systems. Those are fragile, and vulnerable to anthropogenic as well as climatic stresses. Any change in land use, or in rainfall patterns will rapidly impact water quality, quantity, and even subterranean flows. Their potential and characteristics as well as their extent, however, are little known, and the general lack of understanding of their vulnerability to land use patterns and water channelling/diversions increase the level of difficulty to manage them – especially at the transboundary level- and are threatening their value and long-term sustainability.

Chapter 4 RESPONSES

21. The on-going reform process of the water sector is expected to strengthen the management framework for the integrated management of the water resources in the SEE.

22. All countries, with different pace, are making the necessary steps for the development of integrated basin management plans; this effort extends –to a level- also at transboundary basins. There are examples: an integrated management plan, being a pilot in Croatia, has been developed for the Krka river basin; Greece and Bulgaria are coordinating for the preparation of two river basin management plans in their respective parts of the Mesta/Nestos basin in the framework of an EU financed project. The Sava Commission is moving towards the preparation of an IWRM plan including climate change considerations, while in the Prespa Lake the countries have initiated the process for the preparation of a management plan for the basin in the framework of the on-going GEF project. Of course there is still a long way until these plans are prepared and efficiently implemented and furthermore until integrated management plans are prepared for all transboundary basins.

23. As for the aquifers, an effort for the initiation of cooperation among Albania, Bosnia and Herzegovina, Croatia and Montenegro, with the involvement of Slovenia and Greece, over the karstic aquifers of the Dinaric Arc region through joint fact finding and the preparation of a Strategic Action Programme for the addressing of pressing issues, is under preparation also with the assistance of GEF.

Chapter 5 THE WAY FORWARD

24. There is a great potential for sharing the benefits of transboundary waters in the SEE-region. However, the current level of cooperation is not suited to support such development and to ensure its long term sustainability and the prevention of transboundary impacts in most of the basins.

25. Cooperation needs to be strengthened and special attention should be given to the following issues:

- Ratification and implementation of the Water Convention
- Combine cooperation at the technical and political levels
- Establish and reinforce institutions for cooperation
- Improve the understanding of the potential impacts of climate change and increase efforts to develop climate change adaptation strategies at the transboundary level
- Improve wastewater treatment of both industrial facilities as well as of households waste waters;
- Reduce and prevent industrial and other pollution from mining etc.
- Develop and implement good agriculture practices to reduce pollution from agriculture
- Protect karstic aquifers, including the preservation of pristine aquifers.

26. It should be noted that there is a growing awareness of the importance of cooperation in the region, creating a momentum that may be used to proceed and enhance joint action or initiate it in cases that is absent.

27. A precondition for success is to strengthen the political will for cooperation in general and in particular on transboundary waters. Sustainable political process supporting the development of cooperation should be put in place where they do not exist. Prioritization of issues and a clear, agreed timeline for further progress need to be agreed upon by riparian countries.

28. International actors play an important role in facilitating the development of cooperation: both by making political leverage and by providing resources to develop human and technical capacities as well as infrastructure. SEE should take advantage of this but at the same time be aware that they bear the main responsibility for cooperation on their shared waters,

Chapter 6 FACTS AND FIGURES ON TRANSBOUNDARY RIVERS, LAKES AND GROUNDWATER

The following countries have clearly indicated who will be the experts (both surface and groundwaters) responsible for filling the datasheets:

- Greece
- Romania
- Serbia
- Slovenia.

Drainage basin of the Black Sea

No preliminary datasheet has been received yet.

Drainage basin of the Mediterranean Sea

No preliminary datasheet has been received yet.

Groundwater not related to a specific transboundary basin

No preliminary datasheet has been received yet.

ANNEX 1: Inventory of Transboundary Rivers, Lakes and Groundwater in SEE

Basin of the Black Sea

Basin/sub-basin (s)	Recipient	Riparian countries
Lower Danube basin - Lake Iron Gates I and II		Romania, Serbia
- Drava and Mura	Danube	Austria, Croatia, Hungary, Italy, Slovenia
- Sava	Danube	Albania, Bosnia and Herzegovina, Croatia, Montenegro, Serbia, Slovenia
- Velika Morava	Danube	Bulgaria, Montenegro, the Former Yugoslav Republic of Macedonia, Serbia
- Timok	Danube	Bulgaria, Serbia

Basin of the Mediterranean Sea

Basin/sub-basin (s)	Recipient	Riparian countries
Krka	Mediterranean Sea	Bosnia and Herzegovina, Croatia
Neretva	Mediterranean Sea	Bosnia and Herzegovina, Croatia
Drin	Mediterranean Sea	Albania, Greece, the Former Yugoslav Republic of Macedonia, Montenegro, Kosovo (UN administered territory under UN Security Council resolution 1244)
- Lake Ohrid		Albania, the Former Yugoslav Republic of Macedonia
- Lake Prespa		Albania, Greece, the Former Yugoslav Republic of Macedonia
- Lake Skadar/Shkoder and Buna/Bojana River	Mediterranean Sea	Albania, Montenegro
Aos/Vijose	Mediterranean Sea	Albania, Greece
Vardar/Axios	Mediterranean Sea	Greece, the Former Yugoslav Republic of Macedonia
- Lake Doirani/Dojran		Greece, the Former Yugoslav Republic of Macedonia
Struma/Stymonas	Mediterranean Sea	Bulgaria, Greece, the Former Yugoslav Republic of Macedonia, Serbia
Mesta/Nestos	Mediterranean Sea	Bulgaria, Greece
Maritza/Meric/Evros	Mediterranean Sea	Bulgaria, Greece, Turkey
- Arda	Maritza/Meric/Evros	Bulgaria, Greece
- Tundja	Maritza/Meric/Evros	Bulgaria, Turkey

Transboundary groundwaters in SEE

No ¹	Aquifer Name	Countries	Notes
<u>1</u>	<u>Secovlje-Dragonja/Istra</u>	<u>Croatia - Slovenia</u>	These four are all parts of the Istra groundwater
<u>2</u>	<u>Mirna/Istra</u>	<u>Slovenia --- ► Croatia</u>	
<u>3</u>	<u>Opatija/Istra</u>	<u>Slovenia --- ► Croatia</u>	

¹ Notes: Groundwater numbered on map below.

Direction of flow between countries indicated by arrow where known.

Boxes with underlined text correspond to karstic formations; boxes containing text that is not underlined correspond to alluvial sediments.

No ¹	Aquifer Name	Countries	Notes
<u>4</u>	<u>Rijeka/Istra</u>	<u>Slovenia --- ► Croatia</u>	system
<u>5</u>	<u>Cerknica/Kupa</u>	<u>Slovenia --- ► Croatia</u>	
<u>6</u>	<u>Radovic-Metlika/Zumberak</u>	<u>Slovenia --- ► Croatia</u>	
<u>7</u>	<u>Bregana-Obrezje/Sava-Samo- bor</u>	<u>Slovenia --- ► Croatia</u>	
<u>8</u>	<u>Sutla/Bizeljsko</u>	<u>Croatia ---- ► Slovenia</u>	
<u>9</u>	<u>Ormoz-Sredisce ob Drava/ Drava-Varazdin</u>	<u>Slovenia --- ► Croatia</u>	
<u>10</u>	<u>Dolinsko-Ravensko/Mura</u>	<u>Slovenia - Croatia</u>	
<u>11</u>	<u>Mura</u>	<u>Hungary - Croatia</u>	
<u>12</u>	<u>Drava/Drava West</u>	<u>Croatia ---- ► Hungary</u>	
<u>13</u>	<u>Drava East/Baranja</u>	<u>Hungary ---- ► Croatia</u>	
<u>14</u>	<u>SW Backa/Dunav</u>	<u>Serbia - Croatia</u>	
<u>15</u>	<u>Srem -West Srem/Sava</u>	<u>Serbia - Croatia</u>	
<u>16</u>	<u>Posavina I/Sava</u>	<u>Bosnia and Herzegovina -- ► Croatia</u>	
<u>17</u>	<u>Kupa</u>	<u>Croatia - Bosnia and Herzegovina</u>	
<u>18</u>	<u>Una/Plesevica</u>	<u>Croatia ---- ► Bosnia and Herzegovina</u>	
<u>19</u>	<u>Krka</u>	<u>Bosnia and Herzegovina -- ► Croatia</u>	
<u>20</u>	<u>Glamocko/Cetina</u>	<u>Bosnia and Herzegovina -- ► Croatia</u>	
<u>21</u>	<u>Neretva right</u>	<u>Bosnia and Herzegovina -- ► Croatia</u>	
<u>22</u>	<u>Trebisnjica/Neretva left</u>	<u>Bosnia and Herzegovina -- ► Croatia</u>	
<u>23</u>	<u>Bileko lake</u>	<u>Bosnia and Herzegovina - Montenegro</u>	
<u>24</u>	<u>Dinaric littoral (west coast)</u>	<u>Montenegro - Croatia</u>	
<u>25</u>	<u>Skadar/Shkodra Lake</u>	<u>Montenegro - Albania</u>	
<u>26</u>	<u>Beli Drim/Drini Bardhe</u>	<u>Serbia ---- ► Albania</u>	
<u>27</u>	<u>Metohija</u>	<u>Montenegro - Serbia</u>	
<u>28</u>	<u>Pester</u>	<u>Montenegro- Serbia</u>	
<u>29</u>	<u>Lim</u>	<u>Montenegro - Serbia</u>	
<u>30</u>	<u>Tara massif</u>	<u>Serbia---- ► Bosnia and Herzegovina</u>	
<u>31</u>	<u>Macva-Semberija</u>	<u>Serbia - Bosnia and Herzegovina</u>	
<u>32</u>	<u>Danube –Tisza /NE Backa</u>	<u>Hungary ---- ► Serbia</u>	
<u>33</u>	<u>North and South Banat</u>	<u>Romania ---- ► Serbia</u>	4231(N) + 4325 (S)
<u>34</u>	<u>Stara Planina/Salasha Montana</u>	<u>Bulgaria---- ► Serbia</u>	<u>Includes Vidlic/ Nishava and Tran</u>
<u>35</u>	<u>Korab/Bistra-Stogovo</u>	<u>Albania - The former Yugoslav Republic of Macedonia</u>	
<u>36</u>	<u>Jablanica/Golobordo</u>	<u>Albania ---- ► The former Yugoslav Republic of Macedonia</u>	
<u>37</u>	<u>Mali Gjere/Mourgana Mountain</u>	<u>Greece - Albania</u>	
<u>38</u>	<u>Nemechka/Vjosa-Pogoni</u>	<u>Albania - Greece</u>	

No ¹	Aquifer Name	Countries	Notes
<u>39</u>	<u>Prespa and Ohrid Lakes</u>	<u>Albania, Greece and The former Yugoslav Republic of Macedonia</u>	<u>Includes Galicica mountain</u>
40	Pelagonija/Florina	Greece - The former Yugoslav Republic of Macedonia	
41	Gevgelija/Axios-Vardar	The former Yugoslav Republic of Macedonia --- ▶ Greece	
42	Dojran Lake	Greece - The former Yugoslav Republic of Macedonia	
43	Sandansky-Petrich	Greece - The former Yugoslav Republic of Macedonia	
<u>44</u>	<u>Orvilos-Agistros/Gotze Delchev</u>	<u>Bulgaria, Greece and The former Yugoslav Republic of Macedonia</u>	
45	Svilegrad Stambolo/ Orestiada/Edirne	Greece - Bulgaria	
<u>46</u>	<u>Topolovgrad massif</u>	<u>Bulgaria, Greece and Turkey</u>	
47	Maros/Mures alluvial fan	Romania ---- ▶ Hungary	Upper & Lower
48	Samos/Somes alluvial fan	Romania ---- ▶ Hungary	Upper & Lower
49	Middle Sarmatian - Pontian	Romania ---- ▶ Moldova	
<u>50</u>	<u>Neogene-Sarmatian</u>	<u>Bulgaria----- ▶ Romania</u>	
<u>51</u>	<u>U Jurassic - L Cretaceous</u>	<u>Bulgaria----- ▶ Romania</u>	

ANNEX 2: Inventory of existing legal and institutional frameworks for cooperation (e.g. transboundary agreements)

To be developed
