

## **Workshop on WATER-FOOD-ENERGY-ECOSYSTEMS NEXUS ASSESSMENT IN THE SAVA RIVER BASIN**

**Venue and date:** Panorama Zagreb Hotel (Trg Krešimira Čosića 9, Zagreb),  
Meeting room “Kaptol II”,  
4-6 March 2014

### **Programme**

**Organizers:** United Nations Economic Commission for Europe (UNECE)  
International Sava River Basin Commission (ISRBC)

**Language:** English

Meeting the growing water demand without compromising sustainability is a rising challenge in the context of growing population and under the pressure of climate change impacts. It is therefore crucial to better understand the interactions between water, food, energy and ecosystems in river basins, in order to strengthen synergies and policy coherence between the water, agriculture, energy and land management sectors. The assessment of these interdependencies is particularly relevant in transboundary basins, where identifying intersectoral synergies and mutually beneficial solutions can help reducing trade-offs and potential conflicts, not only across sectors but also across borders, as well as supporting the decision-making process to enhance sustainability.

Recognising this, the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) have included in the Work Programme 2013-2015 an assessment of the water-food-energy-ecosystems nexus in selected transboundary basins and established the Task Force on the Water-Food-Energy-Ecosystem Nexus to overview and guide its preparation.

Participation in the assessment is expected to benefit the participating countries and actors through increased efficiency in resource use and coherence in policies, through identification of opportunities for improving inter-sectoral coordination and transboundary cooperation, and through building capacity in addressing intersectoral impacts.

Based on the interest expressed by the ISRBC member countries, the Sava river basin has been selected as one of the transboundary basins where the nexus assessment would be conducted. The assessment exercise is expected to contribute to further integration of water policy with other policies and further dialogue with the key sectoral stakeholders, as specific objectives in river basin management, defined in the Strategy on Implementation of the Framework Agreement on the Sava River Basin.

This workshop is organised as an introduction to the nexus assessment in the Sava river basin. The event is meant to provide inputs to the nexus assessment of the Sava and, at the same time, it is an opportunity to participate in the development of the approach and scope of the assessment and influence the materials to be used, for example. It is also an occasion to discuss among the sectoral authorities, private sector and the civil society: 1) about needs and policy challenges related to inter-sectoral coordination and cooperation, as well as 2) how the assessment could meaningfully link to and provide helpful information for decision-making at different levels.

The nexus assessment in the Sava river basin is supported financially by the Swiss Agency for Development and Cooperation, as well as by the Environment and Security Initiative.



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra



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## DAY 1 • Tuesday, March 4, 2014

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12.30 – 13.30

### Registration of participants

13.30 – 14.00

### Welcome and opening

*Annikka Lipponen, UNECE*

*Dejan Komatina, ISRBC*

### Introduction

Introduction to the workshop: objectives and expectations, background, assessment of the water-food-energy-ecosystems nexus under the UNECE Water Convention, inputs to the workshop

*Annikka Lipponen, UNECE*

### Opinion survey – distribution and collection

14.00 – 15.15

### SESSION 1. Setting the stage: The regional context

The session is aimed at providing the participants with the information on relevant regulation and documents developed on the EU, Danube and SEE levels.

Moderator: *Dejan Komatina, ISRBC*

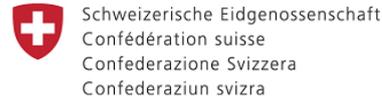
#### Interventions:

- Guiding Principles on Sustainable Hydropower Development in the Danube Basin: *Ivan Zavadsky, International Commission for the Protection of the Danube River (ICPDR)*
- Energy and Environmental Dimensions of the SEE 2020 Strategy – links to IWRM: *Miroslav Kukobat, Regional Cooperation Council (RCC)*
- Implications of the EU renewable energy acquis for the SEE sub-region and the Energy Strategy of the Energy Community: *Gabriela Cretu, Energy Community Secretariat*
- Regional food and agriculture outlook and implications to the resource nexus: *Lucie Pluschke, Food and Agriculture Organization of the United Nations (UN-FAO)*
- Environmental information supporting decision-making: *Lidija Globevnik, European Topic Center ICM Waters partner (on behalf of the European Environment Agency)*
- Ecosystem perspective: *Irma Popović Dujmović, WWF*
- Report on the Sarajevo Roundtable on water-energy nexus: *Dimitris Faloutsos, Global Water Partnership-Mediterranean (GWP-Med)*

#### Questions and answers

15.15 – 15.30

### Coffee break



15.30 – 16.00

**SESSION 2. Introduction to the nexus: What is the nexus (in this context)? How it helps policy making?**

This session is aimed at providing all participants with knowledge about the key concepts related to the water-food-energy-ecosystems nexus. Notably, the energy security, water security, food security and environmental security will be explained, as well as their critical importance to sustainable development. Problems of a sectoral management approach to management of resources will be highlighted and the benefits of an inter-sectoral (nexus) approach will be illustrated with some examples.

Moderator: *Dejan Komatina, ISRBC*

Presenters: *Mark Howells and Manuel Welsch, Royal Institute of Technology, Sweden (KTH)*

16.00 – 17.30

**SESSION 3. National development plans and sectoral goals in the Sava river basin**

This session will include presentations / short statements (5-7 min. each) of governmental representatives of the water, energy, agriculture and environment sectors/authorities from the Sava river basin countries summarising the main strategic orientations and sectoral goals.

Moderator: *Dejan Komatina, ISRBC*

Interventions:

- Water sector: *Alan Cibilić (Croatia), Dragana Djukić (Montenegro), Merita Borota (Serbia)*
- Energy sector: *Tarik Kupusović (Bosnia and Herzegovina), Miroslav Marković (Montenegro), Bogdan Barbič (Slovenia)*
- Agriculture sector: *Nenad Djukić (Bosnia and Herzegovina), Marija Pinter (Croatia)*
- Environment: *Aleksandra Drobac Čik (Serbia), Stanka Koren (Slovenia)*

Questions and answers

19.00

**Joint dinner**

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**DAY 2 • Wednesday, March 5, 2014**

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[9.00 – 9.30 Preparatory meeting for the group work facilitators]

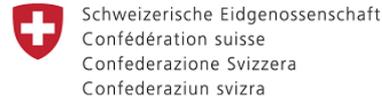
9.30 – 11.00

**SESSION 4. Relevant developments in the Sava river basin**

In this session, the objective is to learn and share information about the current conditions, on-going trends and developments in the basin, such as the preparation of the Sava River Basin Management Plan, rehabilitation of navigation and development of river tourism, etc.

Moderator: *Ivan Zavadsky, ICPDR*

Presenter: *Dejan Komatina, ISRBC*



#### Discussion:

- What are the needs and expectations of the authorities and stakeholders regarding the nexus assessment under the Convention?
- Taking into account also the national level developments, presented the day before, what might be relevant policy questions that the assessment could help to answer?

#### Additional presentations on the Sava/Danube context:

- Scientific Support to the EU Strategy for the Danube Region – Danube water nexus project: *Giovanni Bidoglio, Joint Research Centre (JRC)*
- The approach and technical specificities in the Danube water nexus, and the Sava sub-basin case: *Ad De Roo, JRC*

11.00 – 11.15

#### Coffee break

11.15 – 13.00

#### **SESSION 5: Group work by nexus component – water, energy, environment, land/agriculture**

The session starts by an explanation of the work to be carried out in groups divided by nexus components. Examples from the pilot basin (the Alazani/Ganikh) will be shown. Each group will be assigned a facilitator and one group member to report for the group.

The discussion will be facilitated by the prior distribution of the prepared material (maps of the basin and nexus graphs).

Group work facilitators: Water — *Annikka Lipponen, Dimitris Faloutsos* (Room: Kaptol II)  
Land/Agriculture — *Mark Howells, Lucie Pluschke* (Room: Kamelija)  
Energy — *Manuel Welsch, Samo Grošelj* (Room: Magnolija)  
Ecosystems — *Lucia de Strasser, Dejan Komatina* (Room: Fortuna)

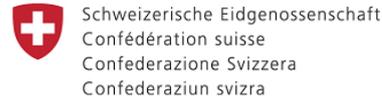
#### Questions to be discussed in the groups:

- What will the Sava look like in the year 2020 and 2030 based on sectoral plans (each group discusses only about sectors that relate to the nexus component they are assigned to)?
- What are the assumptions about the conditions and availability of resources to achieve this future successfully? Do these set particular requirements to other sectors?
- What are the benefits that the discussed sectoral developments provide (locally, regionally, nationally, internationally)?
- How will this help other sectors? How will other sectors help this?
- How is each nexus area influenced by and how does it influence other areas? (Work on the material provided)

At the end of this session, the organizers collect the most important interlinkages identified by the groups.

13.00 – 14.00

#### Lunch break



14.00 – 15.45

### **SESSION 6: Presentation of the group work and plenary discussion about the plans**

The nominated rapporteur for each of the groups will report back to the plenary about the findings (10 min/group). The groups representing the other sectors are invited to think and make notes. Following each presentation, the plans outlined for each sector, the vision and the demands are discussed (10 min/sector).

Moderator: *Dimitris Faloutsos, GWP-Med*

Questions for the plenary discussion:

- Are these 10 and 20 year visions and plans compatible? When they are not:
  - o How do you think each sector/nexus component impacts other sectors?
  - o Where are there potential trade-offs or conflicts?
- Are some plans complementary? How can that be improved and those linkages strengthened?
- How will we know these conflicts emerge – what happens?
- How do these trade-offs or conflicts compare in urgency or scale of impacts (priority for action)?

15.45 – 16.00

**Coffee break**

16.00 – 17.30

### **SESSION 7: Group work – intersectoral linkages and influences**

The participants are divided into mixed groups with the different sectors represented in each group.

The discussion will be facilitated by the prior distribution of intersectoral nexus graphs.

Group work facilitators: Group 1 — *Annikka Lipponen, Dimitris Faloutsos* (Room: Kaptol II)  
Group 2 — *Mark Howells, Lucie Pluschke* (Room: Kamelija)  
Group 3 — *Manuel Welsch, Dejan Komatina* (Room: Magnolija)  
Group 4 — *Lucia de Strasser, Samo Grošelj* (Room: Fortuna)

Discussion in groups:

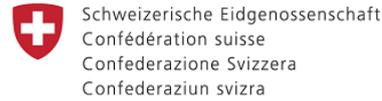
- What are the interlinkages identified by more than one group in Session 5? Are they the most important ones?
- Which incompatibilities or trade-offs have the greatest impact? (Try to agree in the group about an order of importance).
- What are some possible “solutions” to these stresses (modifications to existing policies, new policies, management measures, ways of operating infrastructure, communication/coordination arrangements etc.)?

The groups should note down possible solutions or improvements to the current situation, without evaluating them too critically yet. Their advantages and limitations will be discussed on Day 3.

The groups are encouraged to start thinking what information is still needed (time permitting).

Discussion groups report back to the plenary.

[18.00 UNECE-KTH-ISRBC-JRC working meeting]



19.30

## Joint dinner

## DAY 3 • Thursday, March 6, 2014

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10.00 – 11.00

### SESSION 8: Reconciling different uses – potential solutions

In this session, potential solutions to alleviate the negative impacts in the nexus are discussed (plenary), taking as a starting point the ideas put forward in the discussions on Day 2 (Sessions 5, 6 and 7). Solutions could be of various kinds – changes to policies, new policies, management and measures practices, institutional arrangements, infrastructure operation and so on.

Moderator: *Dimitris Faloutsos, GWP-Med*

#### Questions:

- What opportunities are there to reduce negative intersectoral impacts and enhance positive impacts (synergy)?
- Who (which sector, etc.) is in a position to do something about the identified potential solutions?
- Can some priorities for the above be identified for possible follow-up?

11.00 – 11.15

### Coffee break

11.15 – 12.30

### SESSION 9: Predicted impacts of the climate change on the Sava river basin (plenary)

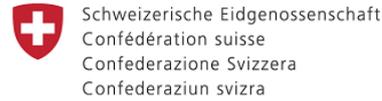
Climate variability and change influence the conditions for the different sectors and the ecosystems, and hence how the nexus plays out in the future. In this session, the climate change-related activities, performed in Sava river basin so far, will be presented.

- Climate change predictions for the Sava river basin: *Jasna Plavšić, COWI*
- The Water and Climate Adaptation Plan for the Sava River Basin: *Jasna Plavšić, COWI*
- Activities on flood risk management and climate change adaptation in the Sava river basin: *Vasiljka Kolarov, ISRBC*
- Findings on the climate change impact on flood discharge on the Sava river and preliminary identification of adaptation measures: *Mitja Brilly, University of Ljubljana*

Moderator: *Annikka Lipponen, UNECE*

#### Discussion:

- What the predicted impacts of climate change mean concretely at the level basin — for the sectors?
- What targets or measures the new Adaptation Plan sets?



12.30 – 13.30

### **SESSION 10: Information and sources, indicators and presentation of findings**

In this session, information needed to describe the identified inter-sectoral linkages and impacts (from Session 7) as well as possible indicators to quantify them will be discussed. Different options for possible future inter-sectoral settings will also be discussed.

To stimulate the discussion the international experts will show some initial elements/findings for the nexus assessment based on the data and documentation available, including as much as possible the questionnaire replies and the highlights of previous sessions. It will also be discussed what analyses or quantification could be made, and whether some scenarios could be developed based on the sectoral plans outlines (Session 6) and/or climate change.

Moderator: *Mark Howells, KTH*

Group work: Reviewing the proposed nexus issues and key indicators for the Sava river basin, identification of possible gaps and proposals for additional indicators.

Discussion:

- What are the possible indicators for the trade-offs or conflicts identified? (international experts can provide a list for review and inspiration)
- Is the proposed list of nexus issues descriptive of the Sava basin?
- Should other qualitative or quantitative indicators be added to the list?
- What information is still needed? What are sources for this information?

13.30 – 14.30

### **Lunch break**

14.30 – 16.00

### **SESSION 11: Further steps of the nexus assessment in the Sava river basin**

The schedule of the nexus assessment is recalled in this session. The next steps in the assessment process are agreed upon, including the deadlines and responsibilities.

- Collection and sharing of information and data
- Analyses and quantification
- “Nexus profile”, preparation of the draft assessment
- Review of the draft assessment by the national administrations and commenting
- Endorsement process in the Task Force on the Water-Food-Energy-Ecosystems Nexus

Moderator: *Mark Howells, KTH*

### **Summary of the workshop**

*Dejan Komatina, ISRBC*

*Annukka Lipponen, UNECE*

16.00

### **Closure of the workshop**