



Convention of the Protection and Use of
Transboundary Watercourses and International Lakes
Task Force on the Water-Food-Energy-Ecosystems Nexus
Seventh meeting
Geneva, Switzerland, 12-13 December 2022

REPORT OF THE SEVENTH MEETING

Held in the Palais des Nations, Geneva and hybrid,
Monday 12 and Tuesday 13 December 2022

Introduction and attendance

The Task Force on the Water-Food-Energy-Ecosystems Nexus, established under the UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) is responsible for activities related to the water-food-energy-ecosystems (WFEE) nexus as well as to water allocation, in accordance to the programme of work for 2022-2024¹ of the Water Convention (Programme Area 3: Promoting an integrated and intersectoral approach to water resources management at all levels).

The Task Force was established by the sixth session of the Meeting of the Parties to the Water Convention in 2012 (Rome, 28-30 November 2012). Since then, the Task Force, which brings together policy makers and experts, oversaw the development of a Transboundary Nexus Assessment Methodology (TBNA)² to carry out participatory assessments of intersectoral links, trade-offs and benefits in transboundary basins; the methodology's piloting and application in multiple shared river basins as well as on a shared aquifer; and activities on sustainable renewable energy planning taking into account trade-offs and synergies with water, land, and environmental planning³ as well as other activities, including taking stock of nexus assessments and exchanging experience about addressing intersectoral issues.

The work on WFEE nexus that the Task Force is overseeing is increasingly focusing on “nexus solutions and investments”, which are synergetic actions designed and implemented across sectors and countries. A global stocktaking of experience from transboundary basins⁴ was presented to the 9th Meeting of the Parties (Geneva and hybrid, 29 September – 01 October 2021). The operationalization of nexus solutions and investments (with its challenges and opportunities) is the

¹ UNECE, 2022. *Water Convention Programme of Work for 2022-2024*. Available at:

<https://unece.org/environment-policy/publications/water-convention-programme-work-2022-2024>

² UNECE, 2018. *Methodology for assessing the water-food-energy-ecosystems nexus in transboundary basins and experiences from its application: synthesis*. Available at: <https://unece.org/environment-policy/publications/methodology-assessing-water-food-energy-ecosystems-nexus>

³ UNECE website: [Water-food-energy-ecosystem nexus | UNECE](#)

⁴ UNECE, 2021. *Solutions and investments in the water-food-energy-ecosystems nexus: A synthesis of experiences in transboundary basins*, available at: <https://unece.org/environment-policy/publications/solutions-and-investments-water-food-energy-ecosystems-nexus>

focus of Programme Area 3.2 “Supporting intersectoral dialogues and assessments through the application of the water-food-energy-ecosystems nexus approach” in the Programme of Work 2022-2024 and was a central topic of discussion the seventh meeting of the Task Force.

Opening, election of Chair and adoption of the agenda

The meeting opened with a speech by the Chief of Transboundary Cooperation Section, Environment Division at UNECE, who noted the increasing participation of stakeholders to the Task Force under the Water Convention since its establishment: the seventh meeting being attended by 56 countries including several new Parties or countries in the process of accession, 40 partners from international organizations, joint bodies and NGOs, and academia. She encouraged countries to submit their commitments on transboundary cooperation and WFEE nexus action to the upcoming 2023 UN Water Conference⁵ (23-24 March 2023, New York), which will focus on both transboundary and nexus cooperation, and which will result in a global Water Action Agenda.

The Secretary of the Water Convention asked the Task Force to elect a new Chair to facilitate its work throughout the new Programme of Work (2022-2024). Following a nomination from Finland, the Task Force elected Ms Annukka Lipponen (Ministry of Agriculture and Forestry of Finland) as the new Chair. The representatives of Slovenia, Georgia, Chad, Senegal, Kazakhstan, Germany, Sweden, North Macedonia, Djibouti, Gambia, Nigeria, and Niger Basin Authority, expressed their support to the candidacy of Ms Lipponen. The Task Force adopted its agenda as set out in the document TFWFEEN/2022/1.

Nexus activities under the Water Convention

The Chair briefly presented the status of work on WFEE nexus and the increasing focus on “operationalisation” of nexus solutions and investments. A representative of Global Water Partnership Mediterranean (GWP-Med) and Organization for Economic Cooperation and Development (OECD) then presented recent and upcoming nexus projects that they have in cooperation with UNECE. The representative of GWP-Med presented the work in South-eastern Europe and in particular in the Drin and Drina River Basin, as well as in Albania. He focused mainly on the “SEE Nexus Project” (2016-2022)⁶, which resulted in the following outputs for the Drin and Drina basins: Nexus Assessments backed by quantitative nexus analysis and integrated modelling of water-energy systems; Nexus Roadmaps to coordinate cross-sectoral policies at basin level; and Project Documents for selected nexus investments⁷. He also highlighted future opportunities to implement and finance nexus activities and investments, notably through an upcoming Global Environment Facility (GEF) project in the Drin that will focus on the implementation of the Drin Strategic Action Programme. The representatives of OECD presented the project “Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land Nexus in Central Asia”⁸, which is expected to start in Spring 2023, and which

⁵ 2023 UN Water Conference website: [UN 2023 Water Conference | Department of Economic and Social Affairs](#)

⁶ Funds from Austrian Development Agency. All project outputs available at: [SEE Nexus project - GWP](#)

⁷ All material will soon be available on the websites of GWP Med and UNECE.

⁸ Funds from International Climate Initiative IKI of Germany. Project implemented by OECD and UNECE in cooperation with the Scientific Information Center of the Interstate Coordination Water Commission of the Central Asia (SIC-ICWC), the European Bank for Reconstruction and Development (EBRD), and the Food and Agriculture Organization of the UN (FAO).

will support political and technical dialogues both at regional and national levels, and which will have a strong focus on the “business case” for nexus investments.

The representative of Permanent Okavango River Basin Water Commission (OKACOM) recalled their project with EU and GWP on water-food-energy nexus in Southern Africa, and the importance to better reflect “ecosystems”, and tackle ecosystems related issues through the nexus approach. The representative of the NGO Onegoal Initiative stressed the importance of carrying out comprehensive risk analysis when it comes to financing cross-sectoral investments, to avoid that risks get shifted from one area to another instead of being reduced overall. The representative of the Executive Committee of the International Fund for Saving the Aral Sea (EC-IFAS) talked about the key role of transboundary cooperation in Central Asia, and the importance of sharing good practices among basin organizations around the world. The representative of Mono Basin Authority also intervened, to stress the persisting difficulties in the implementation of the nexus approach in practice, and the urgency of tackling land management and ownership issues.

The Transboundary Nexus Assessment Methodology and similar approaches

The Secretariat briefly presented the Leaflet “Transboundary Nexus Assessment Methodology TBNA”, which explains the methodology developed under the Water Convention in a simple and visual way, to encourage its broader application under the framework of the Water Convention and beyond⁹. Afterwards, partners presented their experience and lessons learned from activities promoting transboundary nexus cooperation by implementing or building capacity on the TBNA and similar approaches.

A representative from the Global Nexus Secretariat of the German Development Agency (GIZ) presented their capacity building activities to support the implementation of nexus approaches at different scales (including transboundary) within the global platform for experts and practitioners¹⁰, which includes dissemination of the TBNA, and in different regions, including the Niger River Basin in cooperation with the Niger Basin Authority (NBA). The representative of International Waters Learning Exchange and Resource Network (IW:LEARN) implemented by the United Nations Educational, Scientific and Cultural Organization (UNESCO) presented the global transboundary water community of practice of GEF-International Waters, which will include more guidance to tackle cross sectoral issues, through a “nexus toolkit”¹¹. Then, the representative from German-Kazakh University (DKU) in Almaty presented a newly established regional network of students and public administrations from Central Asian countries, and the training and material that DKU developed specifically to support transboundary nexus drawing from the Nexus Assessment of the Syr Darya River Basin under the Water Convention (2015-2017). Lastly a representative from United Nations Environment Program (UNEP) presented the work carried out by Amazon Cooperation Treaty Organization (ACTO) and partners to promote

⁹ The TBNA is a flexible framework, applicable in any kind of basin, that can be combined with other transboundary dialogue processes. An overview of the TBNA is available on the UNECE website) <https://unece.org/environment-policy/water/areas-work-convention/nexus-methodology>) and in the Leaflet *Transboundary Nexus Assessment (TBNA) Methodology* (UNECE, 2022) available in English, French, Russian, and Spanish at: <https://unece.org/environment/documents/2022/12/working-documents/nexus-methodology-leaflet>

¹⁰ Water, Energy, Food Nexus Resource Platform online. Available at: [Home | Nexus - The Water, Energy & Food Security Resource Platform \(water-energy-food.org\)](https://www.weforum.org/initiatives/nexus/)

¹¹ IW-LEARN website: [IW:LEARN | Home \(iwlearn.net\)](https://www.iwlearn.net/)

multi-stakeholder and cross-sectoral cooperation in the Amazon basin, also through a nexus assessment of natural resources in the basin.

Operationalizing nexus solutions through transboundary cooperation

To introduce the session, the Secretariat presented a recent UNECE stocktaking publication of nexus solutions and investments in shared basins¹², based on a survey from 2020-21 and a review of literature available and including an analysis of the main factors of success and obstacles to implementation. The representative of the secretariat highlighted that transboundary cooperation emerged as the highest-ranking success factor for successful implementation, and that data and information sharing and high-level political commitment to cooperate were also consistently reported. She stressed the central role of regional and transboundary institutions and then introduced the subsequent presentations about the experience of River Basin Organizations aiming to better coordinate energy, agriculture, environment, and other sectors in transboundary water cooperation - be it through changes in institutions and legislation (first set of presentations) or through dedicated activities (second set).

The representative of EC-IFAS presented a few concrete examples of transboundary and cross-sectoral cooperation between Central Asian countries and explained the evolution cooperation on the Aral Sea Basin, which is culminating in an institutional reform of EC-IFAS to better tackle energy issues (along with water environment and socio-economic development). Then, the representative of the Senegal river basin authority (OMVS) presented his organization's development from the point of view of how cross-sectoral cooperation had evolved over time. The main objective of OMVS since its establishment was to deliver water to these multiple users (food, energy, water, and environment), reconciling their different needs. He noted that as these different needs are not always complementary, difficult choices have to be made sometimes, which is why the OMVS has a Permanent Commission in charge of arbitration. Lastly the representative of NBA talked about the importance of having a Shared Vision for the basin, as it is in the transboundary Niger basin. This common vision allowed, among others and with the support of the GIZ, the development of Guidelines, recently approved by the NBA Council of Ministers, to “nexus-proof” new projects in the basin.

In response to a question about the effectiveness of different possible forms of cooperation, the Chair referred participants to the following UNECE resources, namely: the “Principles for effective joint bodies for transboundary water cooperation”¹³, the process of country reporting to SDG indicator 6.5.2¹⁴, and the “Practical guide for the development of agreements or other arrangements for transboundary water cooperation”¹⁵. Responding to questions from Cote d’Ivoire, the representative of OMVS shared the fact that OMVS takes a scientific approach to

¹² UNECE, 2021. *Solutions and investments in the water-food-energy-ecosystems nexus: A synthesis of experiences in transboundary basins*, available at: <https://unece.org/environment-policy/publications/solutions-and-investments-water-food-energy-ecosystems-nexus>

¹³ UNECE, 2018. *Principles for Effective Joint Bodies for Transboundary Water Cooperation*, available at: <https://unece.org/environment-policy/publications/principles-effective-joint-bodies-transboundary-water-cooperation>

¹⁴ More information available in the UNECE website: [Monitoring SDG indicator 6.5.2 | UNECE](#)

¹⁵ UNECE, 2021. *Practical guide for the development of agreements or other arrangements for transboundary water cooperation*, available at: <https://unece.org/environment-policy/publications/agreements-transboundary-water-cooperation-practical-guide>

determine the costs and benefits of large investments across countries in a clear and transparent way, and the representative of NBA explained that bringing together many riparians (nine in the case of NBA) is more a strength than a weakness, as it allows for greater mobilization of resources and greater impact when it comes to acting to improve regional food, energy, and environmental security. One participant brought up the need for planning taking into account the changes brought by climate change to the hydrological cycle. In response to a question from Costa Rica, NBA talked about the value of effective instruments for cooperation to implement the nexus Guidelines, namely the Niger Water Charter and the Water Convention (which several Niger riparians are in the process of accession to).

The second set of presentation started with one by the International Sava River Basin Commission (ISRBC), which highlighted the long history and renewed commitment to involve multi-sectoral stakeholders in the process of river basin management and planning. As one example of nexus cooperation, she mentioned the Expert Group on Flow Regulation and Environmental Flows in the Drina River Basin (a sub-basin of the Sava), which was established by ISRBC and the Water Convention. One benefit of the nexus approach is the development of a common understanding and language, while one challenge is the increased risk to duplicate multi-sectoral initiatives and projects. Through its strong institutional platform, the ISRBC is supporting the Sava and Drina Integrated Development Program (supported by World Bank and GEF), a cross-sectoral investment program aimed at the sustainable development of many sectors, including navigation and eco-tourism. A presentation from the representative of El Salvador followed, about the Trifinio region, which is a shared biosphere reserve that the countries manage together through a joint Plan and Commission. Given the importance of the region, and the Lempa River Basin in particular (as a provider of water for multiple users inside and outside the basin), the Commission is finalizing the feasibility study of a Water Fund for the basin with support from the Inter-American Development Bank (IADB). This innovative financial mechanism aimed to ensure payment for ecosystem services from multiple water users (incl. agriculture, energy, and municipalities) will be the first transboundary Water Fund in the region. Closing the set of presentations, the representative of GEF shared their experience providing finance for cooperation in transboundary basins through their International Waters program. The presenter stressed that, as climate and environmental issues become more pressing, all water related issues become inherently cross-sectoral, hence nexus cooperation is necessary to tackle them and the tools to analyse issues and to develop solutions need to be flexible enough to respond to different needs, and fit for purpose (e.g. flood and drought response). She stressed the fact that cooperation needs investment and vice versa, and in this sense international agreements and regional/transboundary organizations can be crucial for de-risking investments in shared basins.

ISRBC and NBA both discussed their experience from dealing with groundwater management. ISRBC mentioned their joint work on delineating transboundary groundwater bodies, and assessing their importance, vulnerability, etc. This information is included in the GIS database and aims to improve the monitoring network. NBA mentioned two projects on groundwater management: the first aimed to develop a groundwater database for monitoring wells in the basin and the other (with GEF and African Development Bank), to improve transboundary aquifer monitoring systems in the broader region. Responding to a question from Cote d'Ivoire, GEF clarified that it is possible to integrate GEF grants at basin level beyond the International Waters program (linking to energy, food production land degradation programs, etc.) but this requires

strong multi-sectoral coordination among the interested riparian countries. OKAKOM shared the challenges they experienced in attracting investments for a Water Fund in the Okavango, and the importance of making a dedicated effort (beyond institutional representation within the RBO) to really ensure multi-sectoral cooperation.

Group work (in-person)

In-person participants divided in groups to discuss different approaches about how nexus solutions can be advanced at transboundary level and how the Water Convention can best support countries and RBOs in the operationalisation of the nexus solutions and investments. They discussed the following questions:

- How can institutional and legal frameworks for transboundary cooperation better address the needs for intersectoral cooperation?
- How can nexus solutions and investments support transboundary water cooperation and what is the added value of this approach for the work of transboundary institutions like River Basin Commissions?
- How can the Water Convention best support countries and RBOs in the operationalisation of the nexus solutions and investments?

Water allocation in a transboundary context

The Secretariat presented past and future activities under the area of work “water allocation in transboundary contexts” in the Water Convention Programme of Work. In particular, he presented the recent UNCE Publication Handbook on Water Allocation in a Transboundary Context¹⁶, which is not a prescriptive guidance document but rather a compendium of experiences in the form of case studies that offers practical tools to tackle issues of water allocation¹⁷. He stressed that combining water allocation and the nexus approach broadens the scope for action and supports the development of adaptable allocation agreements. Afterwards, two presentations illustrated the most recent activities under the Water Convention: the representative of the International Water Assessment Centre (IWAC) presented the main outcomes of a regional workshop on water allocation in Central Asia they organized in 2022¹⁸, notably, possible lines of future actions for the region, and a researcher from Central European University (and consultant for UNECE) presented the Drina Study on Flow Regulation as a practical case of proposing different options to reconcile multiple needs through the formalization of flow regulation¹⁹. The Chair added the clarification that the latter study adds to a broader effort to study, also through integrated modelling, the possibilities for cooperation among hydropower operators and the water and energy sectors in the Drina countries more broadly²⁰.

The representative of NBA asked if the Handbook gives indication on how to prioritize uses when it comes to decisions on water allocation and the Secretariat clarified that the Handbook doesn't give a prescriptive system but it gives options based on the experience collected from many case

¹⁶ UNECE, 2021. *Handbook on Water Allocation in a Transboundary Context*, available at:

<https://unece.org/environment-policy/publications/handbook-water-allocation-transboundary-context>

¹⁷ A Brief for policy makers is in the making and will be soon published.

¹⁸ Astana, 2-3 November 2022. Organized by IWAC, UNECE, Kazakhstan, Finland, and Switzerland.

¹⁹ The Study is part of the Drina Nexus Assessment and features in the Handbook on Water Allocation.

²⁰ See the various steps of the Drina nexus assessment under the Water Convention in the UNECE website, webpage on nexus activities: [Water-food-energy-ecosystem nexus | UNECE](#)

studies. Again in relation to the Handbook, the representative of Togo asked what are the main issues encountered in the case studies and the Secretariat responded that the issues encountered are various, but one common challenge is the fact that allocation is often based on pre-existing agreements that do not reflect changes, which calls for more flexibility in the approach to water allocation. The representative from OMVS explained that water resources in the Senegal basin are allocated between types of use and not by country, and every time there is a new need from one country it is brought up to the Permanent Commission to consider changes in cross-sectoral allocation, and that this system is allowing countries to cooperate smoothly on the matter.

Ecosystems in the nexus

The Task Force discussed the crucial importance of ecosystems in the WFEE nexus, and the increasing recognition of their central role, both in academia and among policy makers. The Chair stressed that, since transboundary basins are complex ecosystems in themselves, the conceptual framework adopted under the Water Convention included them explicitly since the beginning, along with water, energy, and food. However, more research is needed to truly integrate them in analytical works (on biosphere and on society/economics) as well as in sectoral policies, and to fill the big gap of scientific data and methods available. Researchers from the University of Oulu and University of Florence presented the COST Action “Nexus Net” and its Working Group specifically dedicated to the Integration of Ecosystems in the Nexus²¹, which is an open network of universities, research institutions, policymakers and the business sector to support the transition towards a circular and low-carbon economy in Europe and beyond, and invited experts to join it. The representative of Iraq gave a presentation on the status of the marshes in the country (a very important water ecosystem for humans and wildlife), the degradation of which is driven by anthropogenic and non-anthropogenic factors, including the construction of and/or existence of hydraulic infrastructure, as well as climate change. A researcher from International Centre for Integrated Mountain Development (ICIMOD) presented a research project aimed at preserving ecosystems in the Hindu Kush Himalaya (HKH) mountain region with a landscape approach - which also draws from the TBNA - that considers the impact of climate change on ecosystems.

In the discussion, Task Force participants commented that the political commitment to tackle ecosystems-related issues is increasing. The representative of Egypt reported from the recent 27th Conference of the Parties to the UN Framework Convention on Climate Change (COP27) in Sharm-el-Sheik, highlighting that the Conference focused heavily on the linkages between climate change and biodiversity loss, with an entire day dedicated to biodiversity²². He also stressed a new initiative of the Convention on Biodiversity (CBD), the UN Convention to Combat Desertification (UNCCD) and UNFCCC aimed to facilitate the coherent implementation of the three conventions. A representative from the UK Centre for Ecology & Hydrology presented the first “thematic assessment of the interlinkages among biodiversity, water, food and health”, that was being produced by the Intergovernmental Platform on Biodiversity and Ecosystems Services (IPBES)²³ and invited experts to consider contributing as reviewers.

In relation to the presentation from Iraq, Ghana asked about transboundary cooperation with upstream countries, and Iraq responded that new negotiations are being launched in the Tigris and

²¹ More information available at: [NexusNet Cost – NETWORK ON WATER-ENERGY-FOOD \(nexusnet-cost.com\)](https://nexusnet-cost.com)

²² More information available at: [COP27: Protecting biodiversity is protecting the Paris Agreement | UN News](https://www.un.org/press/en/2022/cop27-protecting-biodiversity-is-protecting-the-paris-agreement-20220901.shtml)

²³ More information available at: [Nexus assessment | IPBES secretariat](https://www.ipbes.net/)

Euphrates. A comment from a participant from Türkiye stressed the importance to cooperate at transboundary level because climate change has an impact on all countries. The representative from OKAKOM suggested that, in the absence of a clear agreement, it could be useful to use the Water Convention and a specific dialogue on the construction of infrastructure, and the representative from Iraq confirmed, and mentioned the fact that Iraq is in the final stage of the process of acceding to the Water Convention. In response to a comment from NBA, Iraq mentioned a new initiative to manage stormwater and groundwater to respond to declining water availability in the Tigris and Euphrates basins and added that there are good opportunities to improve the situation with upstream countries, with whom regional cooperation and trade are already strong. The representative of the Ramsar Convention on Wetlands argued that putting ecosystems at the centre of the WFEE nexus requires a clear integration of them into sectoral policies, and into socio-economic planning, as well as the scaling-up of conservation efforts. The representative of Cote d'Ivoire noted the lack of scientific data in the discussion and the implications this has when it comes to advocating for stronger political commitments. The representative of El Salvador shared their experience analysing different basins with numerical and with biological indicators, stressed that each river is different from the point of view of ecosystems, and offered to share their methodologies.

Water and Energy Solutions to advance the Sustainable Development Goals

Introducing the session, the representative of UNDESA presented the «Sustainable Water-Energy Solutions Network (SWESN)»²⁴ (supported by UNDESA and ITAIPU), which is a platform for knowledge, experience sharing, and capacity building that includes several UN agencies, international and regional organizations, as well as stakeholders from the private sector. Solutions include those systems using water for energy (e.g. hydropower, thermal power, etc.), systems using energy for water (e.g. water supply networks, wastewater, desalination), decentralized systems, efficiency, and innovative sanitation. The SWESN and the Task Force on the Water-Food-Energy-Ecosystems Nexus under the Water Convention can work in synergy, highlighting that transboundary cooperation could help making sure that investments in the energy sector are implemented peacefully and result in sustainable and equitable use of resources and that the energy sector can help unlocking the financial resources needed to modernize water infrastructure and protect ecosystems. He also mentioned the importance of discussing energy in the 2023 UN Water Conference. The representative of ITAIPU shared their experience of supporting and co-financing development projects in municipalities around the hydropower plant, and shared the way they measure the effectiveness of nexus investments in environmental terms (e.g. greenhouse gases, biodiversity, etc.). He mentioned new research aimed to measure territorial sustainability through specific indicators. With the Network, ITAIPU hosted in 2022 a global symposium to discuss climate change, transboundary water cooperation, economic and social linkages²⁵.

The representative of Jordan presented the water situation in the country, which is characterized by severe water shortages and increasing use of groundwater (and of energy for pumping). He then presented two scientific projects aimed to quantify nexus issues and explore possible solutions and

²⁴ More information available on the SWESN webpage: [Water Energy Network | United Nations](#)

²⁵ The report of the Global Symposium is available at: [First Global Symposium on Sustainable Water and Energy Solutions \(itaiyu.energy\)](#)

scenarios, namely the NENA Nexus project²⁶ which focused on water efficiency productivity and sustainability (based on a GIS-based integrated water-food-energy model for the country) and the SALAM initiative²⁷, aimed to develop transboundary strategies for the resolution of water deficit problem in the Middle East. He also pointed a possible opportunity coming from an MOU between Jordan and Israel, and current political discussions which could result in an agreement between the countries to exchange desalinated water and solar energy. The representative of ESCWA presented the Tools for the Water-Energy Nexus developed with UNECE, and the experience of ESCWA promoting an integrated approach, specifically on renewable energy and in the agricultural sector. In agriculture, energy inputs representing a significant cost for farmers, hence stabilizing energy prices and increasing the share of (locally produced) renewable energy could significantly help farmers – as promoted through the REGEND project²⁸ aimed at providing small scale renewable energy application in rural areas of the Arab region.

Closing the session, the Director of the Sustainable Energy Division of UNECE informed the Task Force of the support UNECE provides to countries on water-energy policy development. He recalled the experience of the Renewable Energy Hard Talks in Bosnia and Herzegovina and Serbia (2018 and 2019), co-organized with the Environment Division (Water Convention Secretariat), which involved water, energy, and agriculture stakeholders in a policy dialogue to unblock renewable energy barriers to investment (notably those that exist at a cross-sectoral level). A UNECE Publication had been produced to capture this experience and in the form of a “toolkit” to develop renewable energy sustainably taking into account water, environment, and transboundary cooperation²⁹. He also mentioned current UNECE efforts to help develop resilient energy systems in Central Asia, also by improving knowledge and capacity on water and energy cooperation in the region, notably the Almaty Energy Forum (2021 and 2022) and the meetings of the UN Special Programme for the Economies of Central Asia (SPECA) and its Working group on water, energy, and environment. Citing data from the World Meteorological Organization and International Energy Agency, he stressed the fact that water availability is critical to sustain global energy production and that it will be even more so because of climate change. He called water experts to take an active role in the energy discussions and policy dialogues. To this end invited interested participants to join the Group of Experts on Renewable Energy and the Task Force on Energy Transition on Central Asia.

Responding to questions from Cote d’Ivoire, the representative of ITAIPU clarified that there were significant returns from their reforestation efforts because of the positive impact on water quality (estimated 4-8 dollars saving for 1 USD invested), and the representative from Jordan explained that desalinization emerges as one of the most promising options for them to tackle the issue of groundwater depletion. The representative of Costa Rica asked where to begin to address energy issues in transboundary water dialogues that focus mainly on agriculture, and the Director of SED

²⁶ More information available at: [Water-Food-Energy-Climate-Ecosystems Nexus analytical framework | Water efficiency, productivity and sustainability in the NENA regions \(WEPS-NENA\) | Food and Agriculture Organization of the United Nations \(fao.org\)](#)

²⁷ More information available at: [Home - SALAM Initiative \(uni-goettingen.de\)](#)

²⁸ More information available at: [REGEND - United Nations Economic and Social Commission for Western Asia \(unesco.org\)](#)

²⁹ UNECE, 2020, *Towards sustainable renewable energy investment and deployment: Trade-offs and opportunities with water resources and the environment*, available at: [Towards sustainable renewable energy investment and deployment: Trade-offs and opportunities with water resources and the environment | UNECE](#)

suggested to take a technical approach aimed at considering the existing infrastructure. The representative of South Sudan explained that rather than water scarcity, the main issues in his country are related to floods, which also triggered conflict. Responding to Togo, he also discussed the issues of energy efficiency and water storage, and their potential in Central Asia. A researcher from KTH Royal Institute of Technology - who contributed to the nexus analysis presented by Jordan as well as the development of the TBNA and the assessments under the Convention – stressed that it is often challenging to involve energy stakeholders in water-energy dialogues. A participant from Zambia mentioned the need assess nexus issues in the Zambesi and Kafue basins. The representative of Jordan added that it is important to keep in mind that encouraging renewable energy for groundwater pumping can result in an overall expansion of agricultural areas. The Secretary of the Water Convention stressed that climate change dialogues are an opportunity to bring the water and energy communities together to discuss what investments are needed, and viable. OMVS representative mentioned their effort trying to link water payments to energy production.

Next steps and Closing

The Secretariat presented the upcoming nexus activities as per the 2022-2024 Programme of Work, and the next steps – notably to the 2023 UN Water Conference and the next meeting of the Task Force under the Water Convention in December 2023 - and the Chair closed the meeting with a recapitulation of the main points discussed during the seventh session.

In particular, she summarized the most important issues on water-energy in transboundary basins to be passed as key messages from the Task Force to the 2023 UN Water Conference:

- there is a place for energy in water cooperation's regional frameworks;
- depletion of water resources has implications for the energy sector, and for renewable energy to be more sustainable and impactful, it needs to account for water;
- coordination across water and energy as well as joint planning are much needed but they are also an underused opportunity;
- availability of information across water-energy is a constraint;
- transboundary coordination and planning is reassuring for investors;
- cross-sectoral investment programmes have started to emerge in transboundary settings but the economic and financial case for nexus investments needs to be strengthened;
- climate action can bring together water and energy, and motivate joint action;
- there is a need to better mainstream water into energy discussions (conferences, strategies, policies etc.)