



REPORT

United Nations Special Programme for the Economies of Central Asia (SPECA) 26th Session of the Working Group on Water, Energy and Environment

(7 November 2023, Kazakhstan, Almaty, hybrid)

Organization

The 26th Session of the Working Group (WG) on Water, Energy and Environment of the United Nations Special Programme for the Economies of Central Asia (SPECA) (hereinafter referred to as SPECA WG or WG) was held on 7 November 2023 and hosted by the Kazakhstan-British Technical University.

Forty participants attended the meeting, including representatives of the SPECA member countries, United Nations organizations, regional and development bodies including Organization for Economic Co-operation and Development (OECD), the Central Asian Regional Environmental Centre (CAREC), the Scientific Information Centre, Inter-State Commission for Water Coordination (SIC ICWC), the USAID's Regional Water and Vulnerable Environment project.

The session was moderated by Ms. Zulfiya Suleimenova, Advisor to the President Special Representative of the President on International Environmental Cooperation

Background and Expectations

Background and Expectations

In 2015, the UN member States adopted the 2030 Agenda for Sustainable Development with its 17 Sustainable Development Goals (SDGs) to address crucial issues facing the global community. It became clear that cross-border collaboration is essential to achieving some SDGs and their targets. Cross-sectoral and regional cooperation on the energy and water has potential to provide economic gains, improve the environment and increase the wellbeing of citizens. Cooperation can also support the region's adaptation to climate change including response to natural disasters. To this end, the main objective of this Session of the Working Group is to discuss opportunities for intersectoral and regional cooperation on water, energy and environmental challenges.

The session was built upon the conclusions and recommendations made during the previous years' Working Group decisions and recommendations (<https://unece.org/wg-on-wee>). During its previous sessions the Working Group discussed the future work of the Group that should, among others, aim at identifying economic, investment and policy development opportunities in the water-food-energy-ecosystem nexus to coherently achieve SDGs 6 and 7; capacity building for sustainable management of natural resources at national and regional levels; and conducting feasibility study of water-energy consortium. More specifically, this discussion focused on:

- Presentations on the current state of the (water-food-energy) nexus in the region (key challenges, ongoing efforts, and recent developments).
- Country-specific case studies – national presentations on their challenges and achievements in implementing the (water-food-energy) nexus (innovative solutions and successful practices).

Meeting proceedings

WG programme implementation in 2022-2023

Representatives of UNECE and UNESCAP reported on activities implemented during 2022-2023 under the aegis of SPECA.

UNESCAP secretariat informed about the progress in implementation of the following projects: [SDG-7 Roadmap for Kyrgyzstan and Tajikistan](#), UNDA project “[Strengthening energy policies of Countries with Special Needs to build back better from COVID-19](#)”.

UNECE secretariat informed the participants about the progress on the development of the second phase of the project on transboundary cooperation and integrated water resources management in the Chu and Talas rivers. More information about the results and achievements of the project could be obtained [here](#). Further, UNECE informed about the status of implementation of the National Policy Dialogues on Integrated Water Resources Management project in [Kazakhstan](#), [Kyrgyzstan](#) and [Tajikistan](#). The project, among others, supported the following activities: development of the legislation on IWRM and water and sanitation, methodology for water, investment concepts, labour market in water sector, water-energy relations among the countries, economic instruments for water management. Participants were also briefed about the [inventory of the potential pollution sources in the Syr-Darya basin](#) jointly conducted with the [International Water Assessment Center](#) and progress of accession of Kazakhstan and Uzbekistan to the Protocol on Water and Health. Participants were also informed about the support UNECE provides in supporting countries to mobilize resources for implementation of priority projects in the area of water savings technologies. In the area of sustainable energy UNECE conducted a study “[In-Depth Analysis of Coal Demand Dynamics in Tajikistan until 2050](#)” that was developed upon a request from the Ministry of Industry and New Technologies of the Republic of Tajikistan and organized a [workshop](#) on the dynamics of coal demand in Tajikistan until 2050 and viability of replacing coal with alternative domestic energy sources. Preparation phase of the project “[Improving the energy efficiency of the global building supply chain industry and its products to deliver high performance buildings](#)” in its completion stage. Project on “Sustainable hydrogen production in the UNECE region and its role in the development of a hydrogen ecosystem and export potential” is aimed at: improving national capacities of beneficiary countries to identify the potential in the development of a hydrogen ecosystem; strengthening national capacity in understanding the potential of global, subregional and national cost effective sustainable hydrogen production and transport; and enhancing knowledge of policymakers and other stakeholders about barriers to developing a hydrogen ecosystem and options for overcoming them. Building on the discussions and recommendations from the Almaty Energy Forum in 2022, UNECE co-organized the [3rd Almaty Energy Forum](#) that aimed at strengthening regional partnership to help countries in Central Asia accelerate energy transition.

Review of decisions and recommendations of the previous session

IKI Project “Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land Nexus in Central Asia

Dinara Ziganshina, Director, SIC ICWC - [Rethinking Institutional and Financial Mechanisms on Water and Energy Cooperation in Central Asia](#). Ms. Ziganshina presented the findings of a comprehensive study on the prevailing institutional and financial mechanisms governing water and energy cooperation in Central Asia. The study analyses the current organizational and financial mechanisms within the water and energy sector of Central Asia, identifies key challenges and showcasing pertinent case studies from both within and beyond the region. The

study serves as a valuable resource for informing discussions aimed at enhancing water and energy coordination in Central Asia.

Mr. Takayoshi Kato, Environment Directorate, OECD - Financing for water, energy and land-use nexus in Central Asia. In his presentation, Mr. Kato underscored the multifaceted advantages of effective water and energy coordination, emphasizing its potential to yield substantial economic, social, environmental, climate-related, and political gains. The presentation outlined the types of financial mechanisms required for this coordination, emphasizing governance, institutional capacity, technology, and investment needs. It also discussed opportunities to leverage the benefits of water-energy coordination, including joint funding proposals, enhanced institutional interactions, and adaptive planning for long-term investment in water and energy sectors. Further information could be obtained: <https://oe.cd/well-nexus>

Green hydrogen production in Central Asia

Ms. Nadejda Khamrakulova, Economic Affairs Officer, UNECE - Analyzing water demand for sustainable hydrogen production in Central Asia. The presentation focused on the challenges and potential of hydrogen production in Central Asia. It covered the various routes for hydrogen production, the readiness level of the UNECE region for integrating hydrogen into energy systems, and the estimated water requirements for hydrogen production by 2040 in Central Asian countries. The presentation also highlighted the comparative water consumption for different uses, including green hydrogen production, and the water stress index in Central Asian countries, emphasizing the need for balanced water use and attention to water availability in the context of hydrogen production

Ms. Peline Atamer, Senior Policy Analyst and Head of SIPA, OECD - Insights from the ongoing work on green hydrogen in Mongolia under the Sustainable Infrastructure Programme in Asia. The presentation explored the impact of green hydrogen production on water resources, offering insights from global situations and specific case studies in Mongolia. It emphasized the importance of sustainable approaches, with learnings drawn from Australia, and discusses potential ways forward, including information collection, peer-to-peer learning, and integrating water governance frameworks in renewable hydrogen development. <https://www.cepsa.com/en/press/cepsa-to-produce-green-hydrogen-with-recycled-wastewater>

Remarks – Ms. Zulfiya Suleimenova, the development of hydrogen energy is highly relevant, especially for Kazakhstan, which aims for carbon neutrality by 2060. An important aspect of this process is the decarbonization of the economy. Production of green hydrogen is a process that requires a significant amount of water. Therefore, renewable energy sources are essential for its production. Various regions in Kazakhstan have high potential for developing such sources, like solar and wind energy, which facilitate green hydrogen production. However, these regions face the problem of water scarcity, while other areas have sufficient water resources. Consequently, an integrated approach is necessary for efficient green hydrogen production, such as the nexus approach discussed today. One possible solution for Kazakhstan could be the utilization of meltwater. It is also important to devote more attention and resources to hydrogen transportation issues, particularly considering its efficient resource use.

SPECA countries perspectives

Kazakhstan is undertaking significant reforms in its water and energy sectors, reflecting their crucial importance to the country's future. This focus extends particularly to innovative water management practices, efficient water use, and transboundary cooperation. Regional and transboundary cooperation is vital for Kazakhstan, as seven out of eight of its water basins are shared with neighboring countries. In this context, the International Fund for Saving the Aral Sea (IFAS) experience holds immense relevance. During Tajikistan's recent presidency of IFAS, the Fund further strengthened regional water cooperation through several key initiatives. These

included enhancing institutional governance of the Fund, developing national action plans, and the development and implementing a regional program for environmental protection in Central Asia.

Kyrgyzstan – Kyrgyzstan has made notable progress in managing its water, energy, and environmental sectors. The establishment of the National Water and Land Resources Council in 2021 led to the development of the National Water Strategy 2040, approved in February 2023. This strategy aims to create a sustainable water management system, addressing immediate and future needs, especially in the agriculture sector, while tackling challenges like water scarcity and climate change impacts. In the energy sector, Kyrgyzstan uses its significant hydropower potential, which is crucial for sustainable energy production and regional energy security. The country faces challenges such as aging infrastructure and the need for diverse renewable energy sources. Efforts are underway to modernize hydropower facilities and explore solar and wind power.

Tajikistan - Tajikistan has prioritized significant reforms in the water and energy sectors, aligning with both national and regional development goals. Nationally, the country adopted a comprehensive strategy that aims to increase its energy capacity to 10,000 megawatts by 2030 and to implement sustainable water management practices across all five river basins. These efforts include the development of diverse energy sources and the nationalization of water infrastructure, backed by modern legislation and institutional mechanisms. Regionally, Tajikistan is committed to strengthening regional initiatives in water and energy management, recognizing their critical importance in the Central Asian context. The strategies reflect an integrated approach to address the challenges and opportunities in these sectors, contributing to regional stability and development. By promoting sustainable practices and engaging in international dialogues, Tajikistan is playing a pivotal role in driving progress towards sustainable development goals in the region.

Turkmenistan - Turkmenistan has placed significant emphasis on sustainable management in its water and energy sectors, which are crucial for national development and environmental stability. At the national level, the strategies are anchored in equitable resource management, with a focus on utilizing water as a global common good and on technological advancements in energy. These efforts are in line with President Gurbanguly Berdimuhamedow's vision of responsible stewardship and growth in these sectors. The approach addresses the interlinked challenges of economics and food security, emphasizing the need for efficient agricultural practices and sustainable energy solutions. Turkmenistan is also committed to fostering collaborative efforts under the auspices of the United Nations, ensuring solutions in the energy sector are grounded in international law and mutual respect. In water management, diplomatic efforts are geared towards creating a systematic dialogue for sustainable distribution and conservation of water resources. This strategy is vital for combating climate change impacts and achieving environmental sustainability.

Uzbekistan - In Uzbekistan, significant reforms in water, energy, agriculture, and water facilities management are underway to address environmental and economic challenges. The country is focusing on efficient water use and modernization of irrigation systems in the agriculture sector, a major consumer of water resources. Efforts are also being made to improve the management of transboundary water resources and to modernize water infrastructure for energy production and water storage. Furthermore, Uzbekistan is committed to regional cooperation for effective distribution and management of shared water resources, particularly with neighboring countries. Long-term strategies extending to 2030 have been formulated, including infrastructural, policy, and institutional measures, to ensure sustainable development in these sectors. These initiatives aim to achieve water and food security, economic stability, and environmental sustainability.

Next steps and decisions

Based on discussions under the previous agenda items, the WG discussed and agreed on decisions of its 26th session.



**UNITED NATIONS SPECIAL PROGRAMME FOR THE ECONOMIES OF
CENTRAL ASIA (SPECA)**

26th Session of the Working Group on Water, Energy and Environment
(7 November 2023)

14.30 – 14.40	Opening of the session Opening remarks by UNECE and UNESCAP
14.40 – 14.45	Overview of the session
14.45 – 15.00	WG programme implementation in 2022-2023 and review of new activities for inclusion in the work plan for 2024-2025 Presentations of ESCAP activities - Mr. Sergey Tulinov, Economic Affairs Officer, UNESCAP Presentation of UNECE activities – Ms. Tamara Kutonova, Environmental Affairs Officer, UNECE and Ms. Nadejda Khamrakulova, Economic Affairs Officer, UNECE
15.00 – 15.45	Review of decisions and recommendations of the previous session IKI Project “Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land Nexus in Central Asia: <ul style="list-style-type: none">- Rethinking Institutional and Financial Mechanisms on Water and Energy Cooperation in Central Asia - Dinara Ziganshina, Director, SIC ICWC- Financing for water, energy and land-use nexus in Central Asia – Mr. Takayoshi Kato, OECD Green hydrogen production in Central Asia <ul style="list-style-type: none">- Analysing water demand for sustainable hydrogen production in Central Asia – Nadejda Khamrakulova, Economic Affairs Officer, UNECE- Insights from the ongoing work on green hydrogen in Mongolia under the Sustainable Infrastructure Programme in Asia – Ms. Peline Atamer, Senior Policy Analyst and Head of SIPA, OECD
15.45 – 16.45	SPECA countries perspectives
16.45 – 17.15	Discussion
17.15 – 17.30	Decisions and recommendations of the meeting



**UNITED NATIONS SPECIAL PROGRAMME FOR THE ECONOMIES OF CENTRAL
ASIA (SPECA)**

**TWENTY-SIXTH SESSION OF THE SPECA WORKING GROUP
ON WATER, ENERGY AND ENVIRONMENT**

(7 November 2023)

DISCUSSIONS AND RECOMMENDATIONS

1. The Working Group took note of the comprehensive analysis on the prevailing institutional and financial mechanisms governing water and energy cooperation in Central Asia, underscoring the urgent need for a re-evaluation of current organizational structures and financial strategies within these sectors. The emphasis was placed on adopting a collaborative approach to overcome challenges to establishing a regional platform that facilitates continuous dialogue and the exchange of best practices.
2. The Working Group acknowledged the multifaceted benefits of effective water and energy coordination, recognizing its potential to yield substantial economic, social, environmental, climate-related, and political gains. The discussions pointed towards the necessity of strengthening governance frameworks, enhancing institutional capacity, and fostering technological innovations. It was agreed that investments in these areas are crucial for the successful implementation of the required financial mechanisms. The potential for joint funding initiatives and enhanced institutional interactions was also highlighted, emphasizing the importance of adaptive planning and long-term investment in SPECA countries.
3. The Working Group welcomed the initiative to integrate nexus approach to work on sustainable hydrogen production in Central Asia. The region has big potential for development of hydrogen economy. At the same time, regional challenges such as population growth, increasing demand for energy and water - coupled with decarbonization, require inter-sectoral approach and coordinated policies in governing of hydrogen production and water resources. The hydrogen-water nexus approach can address the planning and management of energy and water resources in a coordinated and integrated way. The Working Group requests the United Nations Secretariat to support the SPECA participating countries to:
 - i. conduct assessment of water requirements for green hydrogen production pathways in Central Asia to differentiate between the types of renewable energy and between the types of electrolysis techniques as each one of them have different water requirements.

- ii. conduct analysis of impacts of hydrogen economy development on water situation in the national context to ensure the most effective allocation of resources and maximize mutual benefits.

 - 4. The Working Group acknowledged reforms and collaborative efforts in the water and energy sectors across the region, emphasizing the importance of innovative management, sustainable practices, and transboundary cooperation. Initiatives such as the development of national water strategies, modernization of hydropower facilities, and the focus on efficient water use and renewable energy sources underscore a collective commitment to sustainability. These efforts are pivotal for ensuring regional stability, sustainable development, and environmental sustainability, reflecting a shared vision for a responsible management of natural resources.
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Annex III
List of participants



26th Session of the SPECA Working Group on Water, Energy and Environment

Date: November 7, 2023

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