



Economic Commission for Europe**Committee on Sustainable Energy****Thirtieth session**

Geneva, 22-24 September 2021

Item 7(b) of the provisional agenda

Future work of the Committee on Sustainable Energy:**Regional advisory services in sustainable energy****Report on regional advisory services in sustainable energy****Note by the secretariat****I. Introduction**

1. The regional advisory services in sustainable energy are provided in accordance with the Guidelines of the Regular Programme for Technical Cooperation (RPTC). The programme objective, in the context of the United Nations Economic Commission for Europe (ECE) region, is to support, through the transfer of knowledge and expertise, countries with economies in transition in their efforts to develop the capacity to achieve internationally agreed development goals and the outcomes of United Nations conferences and summits. There are 17 ECE member States¹ eligible to receive regional advisory services. In this context, technical cooperation is a core component of ECE's support to member States for the achievement of the 2030 Agenda for Sustainable Development. The regional advisory services complement and reinforce the regular and extrabudgetary programmes.

2. A description of operational activities under the regional advisory services is provided in the document "Report on regional advisory services in sustainable energy" (ECE/ENERGY/2018/9) presented to the Committee on Sustainable Energy at its twenty-seventh session in September 2017.

3. The regional advisory services are in line with the Programme of work of the sustainable energy subprogramme for 2021 (ECE/ENERGY/2020/2)² and support the work of the subsidiary bodies of the Committee on Sustainable Energy. The Regional Adviser works in close cooperation with colleagues in the Sustainable Energy Division, other ECE Divisions, other UN Regional Commissions, UN Resident Coordinator Offices (RCOs) in eligible ECE member States, organizations of the UN system, and international and national organizations in support of needs of countries eligible for technical cooperation activities based on demand expressed by countries.

¹ Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Republic of North Macedonia, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan.

² <https://undocs.org/ECE/ENERGY/2020/2>

4. During the period under review (November 2020 - September 2021), technical assistance was provided to countries of South-Eastern Europe, Eastern Europe, the Caucasus and Central Asia. Specifically, the Regional Adviser managed the following projects:

(a) United Nations Development Account (UNDA) project “Integrated energy and water resource management in support of sustainable development in South-East Europe and Central Asia”,³ in cooperation with the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in which ECE is the lead agency;

(b) UNDA project “Global Initiative towards post-COVID-19 resurgence of the micro, small, and medium enterprises (MSMEs) sector”, in which the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Economic and Social Commission for Western Asia (ESCWA) are the lead agencies and ECE is one of the participating agencies;

(c) Extrabudgetary project “Enhancing national capacities to develop and implement energy efficiency standards for buildings in the ECE region” funded by the Russian Federation;

(d) Project on “Improving capacity of the Government of Ukraine to develop infrastructure for production and use of hydrogen to support green post-COVID-19 recovery” funded by RPTC.

5. The provision of regional advisory services in the period under review was affected by the continuing COVID-19 pandemic. Advisory missions to countries and in-person capacity-building workshops continued to be almost impossible. Innovative ways to provide regional advisory services were explored and implemented. Capacity-building workshops and training courses were organized mostly online and proved to be an effective way for knowledge sharing. Engaging consultants for studies requested by eligible countries was given a priority.

II. Key regional advisory services (November 2020 - September 2021)

6. Outreach and engaging partners have been a focus of efforts of the Regional Adviser in the period under review. Internally at ECE, the Environment Division, the Forests, Land and Housing Division, and the Sustainable Transport Division were the main partners for joint activities. Externally, it was possible to leverage limited RPTC funds by working actively with and attracting in-kind and/or financial contributions from the following international organizations, governments, and academic institutions: United Nations Economic Commission for Latin America and the Caribbean (ECLAC), United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations Economic and Social Commission for Western Asia (ESCWA), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO), Copenhagen Centre on Energy Efficiency (UNEP-Technical University of Denmark (UNEP DTU) Partnership), Passive House Institute (PHI), Institute for Energy Efficiency in Production (EEP), Governments of Germany, the Russian Federation, and Ukraine.

A. Capacity-building activities

7. In the period under review, capacity-building activities were organized in conjunction with field projects and studies. This section of the report presents information on studies and related capacity-building activities.

8. The Regional Adviser managed the preparation of the report “Women entrepreneurship in natural resource management: Challenges and opportunities for the micro-, small, and medium enterprises (MSME) sector in the post-COVID-19 socio-

³ <https://unece.org/integrated-energy-and-water-resource-management-project-0>

economic recovery.”⁴, which was requested by the Government of Kyrgyzstan. It contains analysis of MSMEs in sustainable and integrated management of natural resources; COVID-19 impact on women entrepreneurs in natural resource management; new opportunities for women entrepreneurs in natural resource management; case studies for Azerbaijan, Belarus, Georgia, Kazakhstan and Kyrgyzstan; country-specific recommendations; and overall conclusions and recommendations. Based on this study, an online training course was developed, and an online training workshop was conducted on 17 December 2020. The workshop was attended by 93 participants, of which 65 were women, including from the following RPTC programme countries: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, North Macedonia, Republic of Moldova, Serbia, Tajikistan, Turkey, and Uzbekistan. The activity was conducted in close coordination with the ECE Expert Group on Resource Management and its Women in Resource Management Working Group and the Technical Lead in the Sustainable Energy Division responsible for this area of work. The workshop materials are available on the ECE website.⁵

9. The Regional Adviser oversaw preparation of the report “Geological CO₂ storage in Eastern Europe, Caucasus and Central Asia: An initial analysis of potential and policy.”⁶ This activity was implemented in close cooperation with a colleague in the Division responsible for work on carbon neutrality. The study was requested by the National Agency of Natural Resources of Albania and the State Agency on Energy Efficiency and Energy Saving of Ukraine. The study seeks to provide countries with tools and methodologies to carry out assessment of carbon capture, utilization and storage (CCUS) potential and describes policy tools that can support its development and deployment, including by stimulating private sector investment. An important element of the policy recommendations is the proposal to shift the focus of incentive schemes from the capture stage to the storage stage by implementing a certificate scheme for CCUS that would effectively enable trade of ‘units’ of CO₂ stored. Governments could use such a mechanism to support technology development and deployments achieve their nationally determined contributions to climate change mitigation.

10. The Regional Adviser organized the workshop “Attaining Carbon Neutrality: The Role of Hydrogen” jointly with the programme officers in the Sustainable Energy Division responsible for the Groups of Experts on Cleaner Electricity Production, on Gas, and on Renewable Energy. The workshop was attended by 219 participants, of which 48 were women, including from the following RPTC programme countries: Albania, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, North Macedonia, Republic of Moldova, Serbia, Tajikistan, Turkey, Ukraine, and Uzbekistan. Workshop participants agreed that all technological options for hydrogen production, transportation and storage, and use should be considered agnostically and discussed from a level playing field perspective. They noted the role of industry as the main early adopter of hydrogen applications and recommended that industrial applications for steel, cement and high-temperature applications should be supported and incentivised. They agreed that integration is the key for hydrogen deployment and called for adopting integrated cross-sector approaches. The workshop participants stressed that the transition to a future hydrogen economy needs to be achieved in a cost-effective way and recommended to develop and implement innovative risk-sharing schemes between public and private investors to finance clean hydrogen production projects. They agreed to offer their support to facilitate international and cross-sectoral collaboration to increase awareness and public acceptability of hydrogen and to accelerate the transition to a future hydrogen economy in the ECE region and beyond. The workshop materials are available on the ECE website.⁷

11. The Regional Adviser co-organized the online roundtable on the topic “Prospects for the development of inexpensive, reliable, sustainable and modern energy” dedicated to Sustainable Development Goal (SDG) 7 in Tashkent, Uzbekistan on 11 June 2021, as part of the SDG Week under the headline “Leave No One Behind” linked to the Global

⁴ https://unece.org/sites/default/files/2021-04/Final%20report%20submission_11_04_21%20RevisionAZ.pdf

⁵ <https://unece.org/info/Sustainable-Energy/Regional-Advisory-Services/events/350054>

⁶ https://unece.org/sites/default/files/2021-04/Geologic%20CO2%20storage%20report_final_EN.pdf

⁷ <https://unece.org/info/Sustainable-Energy/Regional-Advisory-Services/events/354150>

Interparliamentary Forum on SDGs (Bukhara, Uzbekistan, 23-24 June 2021). The event is organized by the Government of Uzbekistan with the involvement of the United Nations Resident Coordinator Office (UN RCO) in Uzbekistan.

12. At the time of preparation of this report, the Regional Adviser was co-organizing the online workshop “Strengthening national capacity in applying sustainable energy policies and practices based on the recommendations of the Environmental Performance Reviews” jointly with colleagues from the ECE Environment Division on 30 June 2021. The workshop aims to strengthen the national capacity of countries of the Caucasus, Central Asia, Eastern and South-Eastern Europe in applying sustainable energy policies and practices, based on recommendations from recently concluded Environmental Performance Review (EPR) chapters on energy and environment, as well as other good practices in sustainable energy. The main objectives of the workshop are: review and analysis of the recent EPR recommendations on energy and environment; sharing of experiences by selected countries on the implementation of recommendations drawn from the EPR chapters on energy and environment; assessment of tools and instruments to support sustainable energy, including draft National Sustainable Energy Action Plans (NSEAPs); identification of common priorities for technical assistance; and discussion of the way forward. The workshop materials will be posted to the workshop webpage.⁸

B. Field projects

13. The Regional Adviser manages the UNDA project on “Integrated energy and water resource management in support of sustainable development in South-East Europe and Central Asia” in close cooperation with the programme officers responsible for the ECE Expert Group on Resource Management. The project is led by ECE and implemented in cooperation with ESCAP. The project had initially four beneficiary countries - Bosnia and Herzegovina, Kazakhstan, Kyrgyzstan, and Serbia - to which two others were added in 2021, Tajikistan and Ukraine. The project aims to develop an integrated management and monitoring tool focused on interconnecting energy and water systems and helping to manage the impact of energy production on water systems. In the period under review, four national case studies were developed. The case studies analyse opportunities and challenges in using the United Nations Framework Classification for Resources (UNFC)⁹ for integrated energy and water resource management in beneficiary countries. They include specific energy projects on coal, uranium, and renewable energy, and associated groundwater resources where appropriate information on the socio-economic project feasibility is available and there is confidence in the estimates/level of knowledge. Specifically, the case studies analysed the social, economic and environmental impacts of the development of the following energy projects and of their impact on the groundwater system: in Bosnia and Herzegovina, the geothermal project “Slobomir” and groundwater bottling project “Vivia” are presented and analysed; in Kazakhstan, projects on uranium deposit and groundwater utilization in South Inkai; in Kyrgyzstan, projects on coal deposit and groundwater resources; and in Serbia, projects on the coal deposit “Tamnava – West field” and on groundwater in the area of the Zlatibor mountain. A series of project workshops were organized from 26 to 30 April 2021 in conjunction with the twelfth session of the Expert Group on Resource Management.¹⁰ In response to the COVID-19 crisis, a study on the impact of COVID-19 on critical raw material supplies needed for the healthcare sector and possible mitigation actions is under preparation. Policy recommendations for integrated energy and water resources management, applicable nationally, taking into account the particularities of the countries, and recommendations regarding the transboundary aspects will be developed. Project materials are available on the project webpage.¹¹

14. The Regional Adviser manages the energy-related component of the UNDA project “Global Initiative towards post-COVID-19 resurgence of the MSMEs sector”, in which

⁸ <https://unece.org/info/Environmental-Policy/Environmental-Performance-Reviews/events/356967>

⁹ <https://unece.org/sustainable-energy/unfc-and-sustainable-resource-management>

¹⁰ <https://unece.org/info/Sustainable-Energy/UNFC-and-Resource-Management/events/352046>

¹¹ <https://unece.org/integrated-energy-and-water-resource-management-project-0>

UNCTAD and ESCWA are the lead agencies and ECE is one of the participating agencies. At the time of preparation of this report, Phases 1 and 2 of the project were successfully completed. Under Phase 1 of the project, two sets of Guidelines and best practices have been developed: Guidelines and best practices for MSMEs to assure resiliency and progress towards a circular economy in sustainable resource management and critical raw material supply chain solutions and Guidelines and best practices for MSMEs in delivering energy efficient products and in providing renewable energy equipment. The online trainings were organized in September-October 2020. Under Phase 2 of the project, the first set of Guidelines and best practices were customized for Tajikistan and Ukraine, and the second set for Georgia and North Macedonia. The online training workshops were conducted from February to June 2021. Phase 3 is ongoing and will be completed in 2021. Four more countries will receive customized Guidelines and best practices under each of the two topics, for a total of eight countries. Both sets of regional Guidelines and best practices will be updated. A final workshop will be organized to exchange experiences among the project beneficiary countries. Project materials are available on the project webpage.¹²

15. The Regional Adviser manages the extrabudgetary project “Enhancing national capacities to develop and implement energy efficiency standards for buildings in the ECE region” funded by the Russian Federation. In the period under review, a gap analysis between the performance objectives set forth in the Framework Guidelines for Energy Efficiency Standards in Buildings and current energy efficiency standards and their implementation in the countries of South-Eastern and Eastern Europe, the Caucasus, Central Asia, and in the Russian Federation has been completed. Three national studies with a more detailed gap analysis for Armenia, Kyrgyzstan, and the Republic of Moldova have been prepared. A validation workshop to launch the gap analysis report was organized on 9 April 2021. At the time of preparation of this report, national training seminars in the three selected ECE member States on high-performance energy efficiency standards in buildings were under preparation. A Collaborative Environment for Experts on Energy Efficiency in Buildings in the ECE region has been designed and launched and is at the testing stage. Implementation of the project activities will continue until March 2022. Project materials are available on the project webpage.¹³

16. The Regional Adviser is managing the project “Improving capacity of the Government of Ukraine to develop infrastructure for production and use of hydrogen to support green post-COVID-19 recovery” funded by RPTC. The Government of Ukraine requested ECE to provide technical assistance in preparing a Roadmap for the hydrogen technologies market development. The project was implemented in close cooperation with colleagues from the Sustainable Energy Division, the Environment Division, the Sustainable Transport Division, Ministry of Energy of Ukraine, State Agency on Energy Efficiency and Energy Saving (SAEE) of Ukraine, and UNDP Office in Ukraine. As a result of the project, the draft Roadmap for production and use of hydrogen in Ukraine, the draft Roadmap for the use of hydrogen in Ukraine in road transport, and the draft scoping report under the Strategic Environmental Assessment (SEA) procedure of the Roadmap in line with the ECE Protocol on SEA were developed. The draft Roadmap for production and use of hydrogen in Ukraine contains: analysis of best international practices and plans for the use of hydrogen; analysis of the importance of hydrogen technologies and the potential for their use in Ukraine; analysis of hydrogen production methods and their cost-effectiveness; analysis of existing and required infrastructure for hydrogen storage and transportation for domestic use and export opportunities; analysis of potential for and experience of manufacturing equipment to produce renewable hydrogen domestically; roadmap for the introduction of hydrogen technologies in Ukraine; and conclusions and recommendations. The results of the project gained high visibility in Ukraine. The draft Roadmap will serve as a basis for developing a Hydrogen Strategy for Ukraine to be approved as an official document by the Parliament or the Cabinet of Ministers of Ukraine. It may also serve as a template for other countries in the region that are interested in preparing a similar document on developing hydrogen infrastructure in their countries. A capacity-building workshop on the development of

¹² <https://unece.org/sustainable-energy/regional-advisory-services/un-development-account-project>

¹³ <https://unece.org/sustainable-energy/regional-advisory-services/about-project>

hydrogen infrastructure was held in Kyiv (Kiev) on 25 February 2021. Project materials are available on the project webpage.¹⁴

C. Other technical assistance activities

17. The Regional Adviser is managing the preparation of the study “Renewable energy – key actors and status of investments in selected ECE member states” jointly with the programme officer responsible for the Group of Experts on Renewable Energy. The study was requested by the Governments of Albania and Georgia. It will inform on national targets, status, policies and programmes that support renewable energy investment in Albania, Georgia, Kazakhstan, and Serbia with a view to enabling cost-effective deployment of renewable energy within future energy systems. The study findings can be used not only in the target countries but also in neighbouring countries with similar issues. The study will be completed in June-July 2021.

18. The Regional Adviser manages the preparation of the study “Energy transition and post-COVID-19 socio-economic recovery: role of women and impact on them” in cooperation with colleagues from the Sustainable Energy Division. The study was requested by the Governments of Albania, Belarus, and Ukraine and will focus on the impact of the energy transition and post-COVID-19 socio-economic recovery on women and their role in these processes. It will include case studies from several countries to highlight success stories, good practices, and challenges and will provide a summary of policy imperatives and insights that will be useful for ECE member States in their decision making. The study will be completed in September-October 2021.

19. The Regional Adviser participated in an advisory mission to Kyiv (Kiev), Ukraine on 15-16 June 2021. The mission included participation in the UN Environmental Forum and presentation in the panel “How to restore nature and reduce carbon footprint?”, meetings with Government officials, UN Country Team members, and other stakeholders.

20. At the time of preparation of this report, the Regional Adviser was preparing the workshop on Implementation of National Sustainable Energy Action Plans (NSEAPs) jointly with ESCAP. The workshop will be held online in the second half of 2021. The issues to be discussed include governmental support for the implementation of NSEAPs and other policies and strategies aimed at the transition to sustainable energy; the involvement of various stakeholders in finding practical solutions to implement proposed measures; and attracting necessary financial and other resources (both domestic and international) for implementation.

21. At the time of preparation of this report, requests were received from Kazakhstan and Ukraine for a study on energy intensive industries and ways to improve their efficiency and provide decarbonization. The Regional Adviser will manage the requested study to be funded by RPTC in close cooperation with Sustainable Energy Division colleagues.

22. In 2020, a number of capacity-building workshops were planned to be organized by the Regional Adviser in the framework of the Eleventh International Forum on Energy for Sustainable Development (IFESD-11) in Georgia. Due to the COVID-19 pandemic, the Forum was postponed to 2021. This year a decision was taken in coordination with the other UN Regional Commissions to organize IFESD-11 in a hybrid (in person and online) format over a period of several weeks in the second half of 2021. Preparations for the Forum and capacity-building workshops in its framework have begun.

D. Future regional outreach, partnerships, fundraising and other activities

23. The Regional Adviser continues to be engaged in maintaining and expanding partnerships with other organizations of the UN system and other international organizations. The Regional Adviser has been working on several capacity-building activities with ECLAC,

¹⁴ <https://unece.org/sustainable-energy/regional-advisory-services/improving-capacity-government-ukraine-develop>

ESCAP and ESCWA. The Regional Adviser has been working with colleagues from the Sustainable Energy Division and other Divisions, in particular the Environment Division, the Forests, Land and Housing Division, and the Sustainable Transport Division on developing project proposals for extrabudgetary, UNDA, and RPTC projects. The Regional Adviser actively participates in the work of the ECE Working Group on Technical Cooperation (WGTC). The Regional Adviser has been assigned by the Executive Secretary to serve as a coordinator of ECE technical cooperation activities in three countries: Belarus, Georgia, and Kyrgyzstan. This activity is conducted in close cooperation with UN Regional Coordinator Offices (RCO) in the countries and the ECE Project Management Unit (PMU). The work of the Regional Adviser will continue to be based on demand from member States and in support of the Programme of Work of the Sustainable energy subprogramme. Assistance to countries to achieve progress in the implementation of the 2030 Agenda for Sustainable Development, and in particular of the targets of SDG7, remains the focus of the Regional Adviser's activities at the country and regional level, subject to availability of resources.

24. In 2020, the Regional Adviser, jointly with colleagues from the Sustainable Energy Division, developed the project proposal "Improving the energy efficiency of the global building supply chain industry and its products to deliver high performance buildings" under a call for proposals by the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) of Germany (IKI Thematic Selection Procedure 2019 (2.0)). In February 2021, the IKI Secretariat informed ECE as the lead agency (joint project coordinator) that the project outline had been approved. Beneficiary countries of the planned project are Armenia, Georgia, Kyrgyzstan, Republic of Moldova, Tajikistan, Ukraine, and Uzbekistan. Implementing partners include UNDP Offices in all beneficiary countries, Green Building Alliance (GBA), Passive House Institute, Institute for Energy Efficiency in Production (EEP), UNEP DTU Partnership, and ESCAP. The kick-off meeting for the project was held on 25 May 2021. The expected start of the preparation phase of the project is early 2022.

25. The Regional Adviser continues to be involved in the further development of the project proposal "Green financing facility to improve air quality and combat climate change in North Macedonia" that has been selected under the UN Sustainable Development Goals (SDG) Fund call for proposals for potential funding. The project proposal is in the pipeline (the only one from the ECE region) and is currently in the second preparatory phase. UNDP is the lead agency, and ECE is an implementing partner.

26. The Regional Adviser continues to be engaged in consultations with the Environment Division regarding participation of the Sustainable Energy Division in the project "Regional mechanisms for the low-carbon, climate-resilient transformation of the energy-water-land nexus in Central Asia" pre-selected by IKI for funding. OECD is the lead agency (joint project coordinator) and ECE is one of the implementing partners. The beneficiary countries are Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

27. The Regional Adviser responded to the challenges created by the COVID-19 pandemic by focusing on developing new field projects, adjusting existing projects to respond to COVID-19 challenges, organizing capacity-building activities online when possible, actively seeking information from the governments of RPTC-eligible countries on their needs in response to the COVID-19 crisis, and following up on these requests.