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Regional cooperation

Summary of the work of the Economic Commission for Europe, 2023–2024

Note by the Secretary-General

The Secretary-General has the honour to transmit herewith a summary of the work of the Economic Commission for Europe for the period 2023–2024.



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Summary

While the commitment to advance the 2030 Agenda for Sustainable Development remains strong in the aftermath of the Sustainable Development Goals Summit, progress in achieving the Sustainable Development Goals is still insufficient in the Economic Commission for Europe (ECE) region. Reconciliation between increased prosperity and environmental sustainability remains a major challenge. ECE is promoting the transformation of the critical energy and transport sectors and the improvement of the way in which natural resources are managed, including through an increased adoption of circular models to exploit them. It continues to support public-private partnerships aligned with the Goals and promotes cooperation among multiple actors as a way to unlock opportunities and mobilize finance. It is harnessing the possibilities arising from digitalization to enhance its impact on sustainable development and facilitate trade. It promotes innovation by providing tailored policy advice and strengthening networks for knowledge exchange. ECE facilitates technical cooperation, which is anchored in its normative work, is demand driven and reflects its mandates and recognized expertise. Resilience has emerged as an important policy concern in recent years, and ECE assists its member States in recovering from shocks and addressing various risks, including in connection with energy systems and urban environments. Collaborative partnerships with a wide range of actors play an important role in effectively fulfilling ECE mandates and advancing the attainment of the Goals.

I. Introduction

1. Strong political commitment to the 2030 Agenda for Sustainable Development continues to prompt multiple initiatives to implement the Sustainable Development Goals in the Economic Commission for Europe (ECE) region. The increased availability of indicators gives a more accurate picture of progress, which, despite ongoing efforts, remains insufficient, in a context characterized by multiple crises and the negative effects of past shocks. The Sustainable Development Goals Summit gave a renewed impetus to accelerating achievement of the Goals and to the search for more effective policy responses to ongoing challenges. International cooperation, including at the regional level, can help to catalyse action, address bottlenecks and seize opportunities for advancing attainment of the Goals.

2. Addressing environmental pressures while promoting economic dynamism and enhancing social inclusion requires transformational changes in key sectors, including transport and energy. Multilateral frameworks are critical for preserving the environment and managing natural resources effectively. In a world that remains prone to various shocks, policy attention to enhancing resilience and preventing risks has increased.

3. ECE has continued to support its member States in advancing the implementation of the Goals in its mandated areas of work, in circumstances that remain difficult. It continues to update and develop normative frameworks and policy guidance to better address relevant issues and respond to an evolving context, including because of rapid technological change. In a diverse region, the facilitation of technical cooperation is critical to ensure overall progress that leaves no one behind, supporting the practical implementation of normative outputs in all countries.

II. Advancing implementation of the 2030 Agenda in the region

4. While the commitment to advance implementation of the 2030 Agenda remains strong in the aftermath of the Sustainable Development Goals Summit, progress in achieving the Goals is still insufficient. In recent years, the ECE region has been shaken by the coronavirus disease (COVID-19) pandemic, the war in Ukraine, the energy crisis and surging inflation. Progress had already been too slow in the region before the emergence of these negative factors. The 2024 progress report on the Goals prepared by ECE¹ shows that the region is getting further off track. With the inclusion of newly available data, this latest assessment reveals further deterioration in performance, alongside a few positive developments.

5. The Regional Forum on Sustainable Development for the Economic Commission for Europe Region, held in Geneva on 13 and 14 March 2024, highlighted the insufficient progress in achieving the Goals and the need for urgent action to get back on track. The Forum also emphasized that the Summit of the Future, to be held in September 2024, offered a new opportunity to strengthen multilateral cooperation in support of sustainable development. While there were serious challenges, there was also a unique opportunity to be seized, as advances in knowledge and technology, if properly managed, could deliver a better future for all.

6. On the basis of current trends, the region will achieve only 20 targets by 2030, or just 17 per cent of measurable targets, down from 21 targets in 2023 and 26 targets in 2022. For 80 targets, progress needs to be accelerated. Current trends need to be reversed for 17 targets, up from 15 targets in the previous assessment. Data

¹ *Sustainable Development in the UNECE Region: Facing a Headwind in 2024* (United Nations publication, 2024).

availability is improving, with the number of global indicators that cannot be assessed declining from 77 to 71.

7. Insufficient progress in attaining the Goals persists in several key transition areas. With regard to food security and diversity (Goal 2), none of the targets will be reached in the region by 2030. Progress has been too slow to achieve most of the targets related to energy. The region must address disparities to achieve targets on education. With regard to Goals 12 to 15, relating to climate and the environment, the region is on track to achieve only two targets; for seven targets under these Goals, the trends must be reversed. Fossil fuel subsidies have recently begun to increase in most countries. While disaster risk reduction strategies have been adopted comprehensively at the national and local levels, the number of persons affected by disasters has continued to increase.

8. Reconciliation between increased prosperity and environmental sustainability remains a major challenge in the region. There is a need to reignite economic dynamism while diminishing environmental pressures, reducing resource consumption and advancing decarbonization. This would require an overhaul of the critical energy and transport sectors and significant improvements in the way in which natural resources are managed, including through an increased adoption of circular models to exploit them. All these transformations are taking place in an international context, in which trade implications and the management of shared environmental commons define necessary spaces for cooperation. New technological developments trigger a continued need for adaptation to take advantage of emerging opportunities and respond to new challenges.

9. Work carried out under ECE environmental agreements is helping to address environmental challenges and increase resilience against future shocks in the region and beyond. Normative guidance, research, coordination and targeted support for countries that require it are providing tangible benefits for member States and other stakeholders.

10. Water management is becoming an increasingly pressing issue, both in the region and globally. Urbanization is increasing demand while climate change is exacerbating scarcity and unpredictability. In 2023, long-term drought persisted in north-western Africa and parts of the Iberian Peninsula, as well as in parts of Central and South-West Asia, and intensified in many parts of Central America, northern South America and the southern United States of America. Droughts do not recognize borders, and cooperation is essential in order to address them.

11. In the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, serviced by ECE, droughts are addressed through climate change adaptation efforts and the promotion of an integrated and intersectoral approach to water resource management. To help countries sharing transboundary waters to allocate limited water resources more equitably and sustainably, a *Summary Handbook on Water Allocation in a Transboundary Context* was published in December 2023, which offers a targeted practical resource for policymakers. It provides key elements, frameworks and modalities to consider in the application of transboundary water allocation, while recognizing that every context is unique.

12. Given climatic conditions, shared water resources and the importance of agriculture in Central Asia, water cooperation is particularly important in that region. ECE has been supporting such cooperation efforts for many years, including by facilitating the establishment and functioning of a water management commission for the Chu and Talas rivers and its working groups. In December 2023, Kazakhstan and Kyrgyzstan signed a joint statement on the approval of a strategic action programme for the Chu and Talas river basins for the period 2022–2030, which is aimed at ensuring effective transboundary cooperation in the context of climate change. ECE

has collaborated on the development of the programme, including the preparation of a transboundary diagnostic analysis.

13. As the context for water management becomes more challenging, access to clean water and sanitation services requires increased attention. The Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, jointly serviced by ECE and the World Health Organization Regional Office for Europe, offers a framework to navigate this context. The Protocol outlines a multilateral approach to managing water resources and ensuring access to clean water and sanitation. Member States commit to setting targets and reporting on progress, thereby fostering collaboration and accountability.

14. Following the accession to the Protocol by North Macedonia in September 2023, Uzbekistan was the first country in Central Asia to accede, in December 2023. With several other countries currently undergoing the process of accession, there is currently a strong momentum to expand the membership of the Protocol throughout the pan-European region.

15. Collective action in addressing environmental challenges helps to advance progress. The decrease in air pollution achieved since the 1990s as a result of measures adopted under the Convention on Long-range Transboundary Air Pollution is leading to ongoing biological recovery from acidification in freshwater environments in Europe. A report published in August 2023 showed the effectiveness of emission reduction measures under the Convention. The gradual decrease in air pollution has resulted in improved chemical conditions in freshwaters and a reduction in the concentration of other components. This chemical recovery is a precondition for biological recovery, namely the return of acid-sensitive organisms.

16. However, despite significant reductions in air pollutants in the region, more work is required. A recent report on the effectiveness of the amended Protocol to the 1979 Convention on Long-range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground-level Ozone showed that current efforts are insufficient to avoid long-term damage to human health, ecosystems, crop yields and climate resulting from air pollution. In response to the report, parties to the Convention agreed in December 2023 to revise the Gothenburg Protocol, which is expected to further strengthen efforts to reduce air pollution in Europe and North America.

17. Technical guidance has already been produced to assist member States in reducing emissions from shipping, agriculture, waste and energy. Despite a significant reduction in the sulphur content of marine fuel oil, marine shipping is the largest source of sulphur dioxide per ton-km of all transport modes and is also a significant source of nitrogen oxides and particulate matter. In agriculture, ECE provides guidance on the mitigation of methane and ammonia emissions from agricultural sources (accounting for about half of anthropogenic methane emissions) and technical measures for reducing methane emissions from landfill, the natural gas grid and biogas facilities, which are other major sources.

18. Global nitrogen losses pose a serious threat to environmental sustainability and compromise the ability of the agricultural sector to feed a growing population. A report issued in December 2023, prepared by the Expert Panel on Nitrogen and Food of the ECE Task Force on Reactive Nitrogen, showed that a combination of a shift in diet towards plant-based products and technical measures across the food chain can reduce nitrogen waste by half. It provides a path to reaching targets set out in the Colombo Declaration on Sustainable Nitrogen Management, the European Union Farm to Fork Strategy and the Kunming-Montreal Global Biodiversity Framework.

19. Methane is a potent greenhouse gas. The 100-year global warming potential of methane is 25 times higher than that of carbon dioxide. About 60 per cent of global

methane emissions are a result of human activities, such as extraction and use of fossil fuels, agriculture, landfills and wastewater treatment. Capturing and using methane offer opportunities to generate energy and mitigate climate change.

20. The Global Methane Pledge was launched at the twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change by the European Union and the United States. Participants joining the Pledge agreed to take voluntary actions to contribute to a collective effort to reduce global methane emissions by at least 30 per cent from 2020 levels by the end of the decade. ECE actively supports the Pledge and undertakes constant efforts not only to convince its member States to join the Pledge but also to support and guide their work towards successful fulfilment of the commitments made thereunder. Over the past year, four ECE member States, namely Azerbaijan, Kazakhstan, Romania and Turkmenistan, joined the Pledge.

21. In the context of rapidly growing political momentum for methane mitigation, ECE and the Global Methane Initiative, in partnership with the Global Methane Hub and the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants, organized the Global Methane Forum in Geneva from 18 to 21 March 2024, which brought together experts and industry leaders to promote replicable methane mitigation successes and mobilize action to continue making progress.

22. The work of ECE on methane is aimed at exploring methane management methods and technologies along value chains in key energy-related extractive industries. The aim is to determine and promote the most efficient methods for measuring, reporting and verifying emissions in these industries and to identify best practices for preventing them from escaping into the atmosphere. In July 2023, the Economic and Social Council decided to recommend the dissemination of the publication entitled *Best Practice Guidance for Effective Management of Coal Mine Methane at National Level: Monitoring, Reporting, Verification and Mitigation*, drafted under the direction of the ECE Group of Experts on Coal Mine Methane, and invited Member States to consider its application.

23. Economic activities are the source of multiple pollutants, with negative implications for human health and the environment. The Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters sets international standards for reporting on pollutant releases from a range of economic activities, such as mineral industry operations, plastic production, waste and wastewater management and the rearing of animals. The Protocol also regulates how data are made publicly available. Data on releases of pollutants into the environment can be used to identify solutions to better manage waste, use water resources and nutrients from wastewater or apply pollutant release and transfer registers to track progress in pollution reduction and meet commitments related to sustainable development, climate change and pollution.

24. Transportation, in particular inland transport, is a significant contributor to global greenhouse gas emissions, accounting for about 23 per cent annually. With road transport alone contributing 69 per cent of these emissions and demand projected to rise substantially by 2050, urgent action to curb carbon emissions from inland transport is imperative. The Strategy on Reducing Greenhouse Gas Emissions from Inland Transport, which was approved by the ECE Inland Transport Committee in February 2024, addresses this pressing issue, with a view to achieving carbon neutrality by 2050.

25. The Strategy sets forth ambitious goals to transform the approach to inland transport globally. It emphasizes prioritizing public transport alongside cycling and walking for passenger transport, promoting zero-emission vehicles and adopting

energy-efficient transport networks. In addition, the Strategy highlights the importance of circular economy practices, sustainable fuel usage and enhanced regulatory support to facilitate the transition to sustainable low-carbon mobility.

26. ECE, through its Inland Transport Committee, plays a crucial role in supporting the implementation of the Strategy. Activities include developing and enhancing decarbonization policies, promoting energy-efficient transport practices, supporting the adoption of zero-emission vehicles and facilitating research and development of carbon-neutral energy technology. ECE will work closely with Member States and contracting parties to United Nations legal instruments to implement the Strategy effectively, including by developing a climate action plan with milestones and conducting periodic reviews to ensure alignment with global climate objectives.

27. Decarbonization efforts are ongoing in the region, prompting a continued increase in the share of renewable sources. However, progress will need to be accelerated to meet the associated Sustainable Development Goal target by 2030, according to the latest progress report for the region. In Central Asia, where fossil fuels account for 95 per cent of total energy supply, a massive shift towards renewable sources will be needed to comply with obligations under the Paris Agreement and put in place a low-carbon and sustainable energy system.

28. Analysis published by ECE as part of its Carbon Neutrality Toolkit shows that, under a business-as-usual scenario aiming at strengthening energy resilience to prevent blackouts and ensure reliable supply, Central Asia would need to invest some \$1.4 trillion between 2020 and 2050. However, given the region's high and still largely untapped potential to produce renewable energy, in particular hydro, wind and solar power, the transition to a net-zero scenario by 2050 would only entail a minimal 2.15 per cent increase in overall energy investment over this period.

29. Overall performance regarding the achievement of Goal 12, on responsible consumption and production, falls well behind what would be necessary to reach the Goal by 2030. Moving to a more circular economy is increasingly recognized as vital to sustainable development, decarbonization, resource efficiency and competitiveness. Following the impetus received from member States at its sixty-ninth session, held in 2021, ECE has been making a strong push for circularity in all its areas and sectors of work, as a way to advance the sustainable use of natural resources and reduce waste generation.

30. The lack of a shared understanding of how to measure the circular economy raises difficulties in tracking progress and shaping policy responses. New guidelines prepared jointly by ECE and the Organisation for Economic Co-operation and Development, which were published in February 2024, will support the development of internationally comparable statistics on the circular economy by providing a common definition and clarifying what needs to be measured. In the guidelines, 19 core statistical indicators are proposed to measure the circular economy, which will be further refined through pilot testing by volunteer countries.

31. ECE activities on the traceability of supply chains in support of circularity in the textile industry are having a significant impact. Initiatives undertaken under The Sustainability Pledge, which brings together many stakeholders, are supporting the development of such international standards and norms as the proposal of the European Commission for a directive on corporate sustainability due diligence.

32. The practice of exporting second-hand clothing from developed to developing countries has been intensified by the rapid expansion of the fast-fashion industry, affecting the environment and social and human rights in importing countries. Overall, the global market for second-hand clothing has multiplied by seven in the past four decades. In 2023, together with the Economic Commission for Latin

America and the Caribbean, ECE conducted a global study on used clothing flows and the business models driving them, with a focus on Europe as the origin and Chile as the destination.

33. The elaboration of standards is a core undertaking of ECE. Fast technological change is radically altering the context and the object of regulation. The ECE Working Party on Regulatory Cooperation and Standardization Policies is looking into the impact of artificial intelligence from a gender-responsive standards perspective. Artificial intelligence reflects the society in which it is created and may contain inherent gender biases in its hard coding. The ECE Team of Specialists on Gender-Responsive Standards is seeking ways to ensure that all products benefit all consumers, both men and women, equally.

34. In addition, artificial intelligence poses regulatory challenges from a product conformity perspective. Products are tested against technical regulations and safety standards. Products with integrated artificial intelligence pose a particular challenge to this conformance check because they can inherently change over time. To rethink the current compliance models while seizing the advantages of artificial intelligence, the Working Party on Regulatory Cooperation and Standardization Policies has recently launched a project on the regulatory compliance of products with embedded artificial intelligence or other digital technologies.

III. Strengthening the means of implementation of the 2030 Agenda

A. Data and statistics

35. The swift evolution of technology, including advancements in artificial intelligence and machine learning, alongside the use of data analytics and data science, has opened new doors for statistical agencies. Leveraging novel data sources can enhance the speed, efficiency and quality of statistical production. However, the acquisition of these new data sources, often owned by private entities, necessitates a legal framework, coupled with new methodologies, skills and technologies. This shift also gives rise to challenges related to data quality and the safeguarding of confidentiality. Data are now a crucial asset, and national statistical agencies must ensure they remain relevant and trusted as information providers. In the evolving data landscape, these agencies can play a broader role, drawing on their expertise in data quality assurance, privacy protection and data management. Encouraging the development of innovative business models, forging new partnerships and embracing new sources and technologies are essential steps to modernize official statistics and unlock their full potential.

36. Investing in the strengthening and modernization of official statistics is crucial as they are an essential part of the information infrastructure of a country. International cooperation on developing common approaches and tools and exchanging experiences becomes even more important in these conditions, particularly for countries that may not have resources for investing in modernization on their own. ECE has been developing its statistical work in this evolving environment, addressing a range of emerging issues, ranging from collaborations with private data providers to the use of data science, artificial intelligence, cloud computing and other advanced techniques.

37. In collaboration with the main international partners working in the respective areas, ECE has developed methodological guidelines and recommendations on a range of issues over the past year, including on the practical implementation of the core values of official statistics and the Fundamental Principles of Official Statistics,

data stewardship, measuring the circular economy and measuring hazardous events and disasters through a set of core disaster-risk related indicators.

38. Censuses form the very foundation of statistical systems. They provide the baseline information used to plan public infrastructure and services and to produce Sustainable Development Goal indicators and many other statistics in which population is the denominator. The complexity and high cost of censuses necessitate thorough planning. In 2023, ECE initiated a long-term project aimed at providing globally accepted guidelines and recommendations. Census data collection methods have changed significantly over the past 10 years, underscoring the need to revise existing guidance to embrace new techniques and respond to evolving requirements. It is anticipated that an updated compilation of recommendations will be released in 2025.

39. The statistical work of ECE encompasses all the Sustainable Development Goals, helping national statistical offices to facilitate country-led reporting of Goal-related statistics. Work has continued to enhance the ECE regional platform for data on the Goal indicators launched in 2020. ECE maintains a knowledge hub on Goal-related statistics, with detailed information about its work in this area and useful resources for experts.

B. Finance

40. Infrastructure plays a pivotal role in achieving sustainable development. However, the related financing needs are substantial and multifaceted, encompassing investments in renewable energy, clean water and sanitation systems, sustainable transportation and digital connectivity. While needs continue to grow, tighter financial conditions have created a more challenging context for raising resources. Innovative financing strategies that blend public and private resources to channel investment to critical areas for the necessary transformation are required. Such investments should not only address immediate infrastructure gaps but also lay the groundwork for long-term resilience, economic growth, environmental sustainability and social inclusion.

41. Public-private partnerships provide a viable financing mechanism for sustainable investment in infrastructure projects, opening up access to larger capital pools and expertise. The challenge is to set up public-private partnerships that create and enhance developmental impacts across the three pillars of sustainability. To address this challenge, ECE continued to help countries to use its practical and user-friendly evaluation methodology, the Public-Private Partnerships and Infrastructure Evaluation and Rating System. This tool enables Governments to undertake comprehensive ex ante and ex post quantitative and qualitative assessments of the developmental impacts of all types of infrastructure projects, irrespective of their size and the terms of procurement.

42. The Public-Private Partnerships and Infrastructure Evaluation and Rating System has so far been used for evaluating over 200 projects from 35 countries. It is now available on an interactive online platform and is complemented by detailed guidelines, including on delivering projects for sustainable economic recovery and reconstruction.

43. As global water challenges are intensified by climate change, there is a growing need to raise resources for transboundary water cooperation and basin development. ECE brings together various stakeholders, including government officials, water experts and multilateral development banks, to find ways to address those needs. As part of these efforts, a global workshop on funding and financing transboundary water cooperation and basin development was held in Geneva on 5 and 6 December 2023.

C. Trade

44. Trade plays a key role in increasing prosperity and lifting people out of poverty while advancing sustainable development. However, unsustainable trade patterns continue to contribute to greenhouse gas emissions and deplete natural resources, thereby aggravating the triple planetary crises of climate change, biodiversity loss and pollution.

45. To support sustainable trade, the ECE Team of Specialists on Environmental, Social and Governance Traceability of Sustainable Value Chains in the Circular Economy develops solutions for enabling environmental, social and governance traceability throughout international supply chains, using digital standards, including United Nations Centre for Trade Facilitation and Electronic Business e-business standards.

46. As part of this work, in 2019, ECE launched The Sustainability Pledge, targeting the garment and leather sector, under which Governments, manufacturers and industry stakeholders were invited to implement solutions developed by the United Nations Centre for Trade Facilitation and Electronic Business. ECE has so far received over 100 pledges from 750 industry actors, spanning 28 countries across the globe. Following achievements in the garment and leather sector, ECE is currently extending this call to action to the agrifood sector and extractive industries, including the critical raw materials sector.

47. In the area of regulatory cooperation, recent achievements include the development of foundational principles for the market surveillance of products integrated with new technologies, including artificial intelligence. In addition, ECE published *The Basics of Quality Infrastructure for Trade*, in which it introduced forward-looking approaches to standardization. It also updated the existing recommendation on metrology, offering technical guidelines and strategic insights for Governments to optimize their national metrological services. ECE has continued to promote gender-responsive standards and published a guide entitled *Why Gender-Responsive Standards are Better for Everyone* to help standard-setting agencies to incorporate gender considerations into standards development.

48. Standards are powerful tools for facilitating trade. ECE continued to update its suite of over 100 voluntary agricultural quality standards, which are aimed at facilitating trade in fresh fruit and vegetables, dried fruit and nuts, meat cuts and seed potatoes. ECE also provided support to member States in transitioning to a circular economy in the agrifood sector by reducing food loss and waste.

49. ECE helps countries with economies in transition to better integrate into the world economy. In 2023, its Steering Committee on Trade Capacity and Standards endorsed strategic decisions to incorporate both circular and digital economy considerations into future studies on regulatory and procedural barriers to trade. The aim is to identify and address regulatory and procedural barriers that hinder circular trade flows, focusing on trade facilitation, regulatory and standardization policies and supportive international and regional initiatives. With regard to the digital economy, the goal is to conduct an analysis of the digitalization of trade-related procedures and a detailed assessment of regulatory barriers.

50. Momentum is growing on the digitalization of the Middle Corridor, linking the European Union and Asia, through Central Asia, the Caucasus, Türkiye and Eastern Europe, through the use of ECE and United Nations Centre for Trade Facilitation and Electronic Business standards for the digitalization of multimodal data and document exchange. At the ministerial meeting of the United Nations Special Programme for the Economies of Central Asia, held on 17 April 2023, participating States gave new

impetus to the momentum, requesting ECE to develop a road map for the digitalization of multimodal data and document exchange along the trans-Caspian transport corridor using relevant United Nations standards, including a regional pilot project for participating States of the Special Programme.

51. In July 2023, countries along the Middle Corridor agreed on specific next steps to accelerate the interconnection of their national customs systems with the eTIR international system in an effort to digitalize transit in the region. The transformation of the Middle Corridor to an eTIR corridor will give the opportunity to large exporting countries and contracting parties to the Customs Convention on the International Transport of Goods under Cover of TIR Carnets to also start using the electronic procedure of the TIR System, further increasing the volumes being transported along the corridor.

D. Innovation

52. Innovation drives structural transformation and can provide answers to critical sustainability challenges. ECE, through its Innovation Policy Outlook project and innovation for sustainable development reviews, helps countries to improve their innovation performance by mobilizing more resources and using them more effectively. The *Innovation for Sustainable Development: Review of Armenia 2023* was published in June 2023, advancing the development of an innovation policy road map and the government strategy to foster the high-tech sector. Work is under way to support the Central Asia subregion in devising supportive policy frameworks for promoting innovation and aligning it with sustainable development needs.

53. ECE continues to expand the Transformative Innovation Network, which brings together public and private sector stakeholders to harness transformative innovation for sustainable development. The Network operates along workstreams: strategic learning for transformative innovation and innovation ecosystem development, with a particular emphasis on the catalytic role of Governments in fostering innovation. Particular attention is being given to supporting the Western Balkan subregion in advancing the green and digital transitions through innovation.

E. Technical cooperation

54. ECE facilitates technical cooperation, which is anchored in its normative work, is demand driven and reflects its mandates and recognized expertise. This work, which includes analytical support and platforms for the exchange of information and learning, has both a national and regional focus while being integrated into joint work plans developed at the country level. Regular meetings with resident coordinators and United Nations country teams contribute to stronger linkages between ECE normative work and ECE technical cooperation. Collaboration with United Nations country teams serves to identify emerging areas for joint initiatives.

55. The bulk of technical cooperation projects, representing 43 per cent of the resources expended in 2023, are undertaken on a regional basis. Central Asian countries are by far the largest individual beneficiaries, absorbing 22 per cent of total spending, followed by South-Eastern European countries, which accounted for 14 per cent.

56. As part of its technical cooperation portfolio, ECE conducted several country-focused assessments to improve national capacities in the areas of environment and statistics. ECE supported Uzbekistan in preparing a national report on the state of the environment, which contained an analysis of environmental trends and suggested

responses to address environmental challenges. Through its global assessments of the national statistical systems of Georgia and Kazakhstan, ECE reviewed the countries' statistical systems in terms of their compliance with internationally agreed methodologies and international quality frameworks and the adequacy of resources. The recommendations were subsequently used to prepare development plans for the national statistical systems in both countries and serve as a guide for multilateral and bilateral assistance.

57. Analytical support at the country level included the preparation, at the request of the Government of the Republic of Moldova, of a study entitled "Guide for the implementation of energy efficiency measures and valorization of renewable energy sources for public sector buildings", to support national efforts to improve energy efficiency and increase the share of renewable energy in response to the energy crisis.

58. At the subregional level, ECE supported countries of the Caucasus, Central Asia and Eastern Europe in developing and improving forest information systems. In a regional workshop, jointly organized by ECE and the Food and Agriculture Organization of the United Nations in Bishkek on 10 and 11 October 2023, national experts were introduced to state-of-the-art technologies and analytical methods for the development of their own national forest information systems. A guide with detailed practical information has also been developed.

IV. Spotlight on enhancing resilience

59. Resilience has emerged as an important policy concern in recent years. Resilience refers to the ability of communities, systems and institutions to anticipate, adapt to and bounce back from adverse events while maintaining essential functions and safeguarding well-being. The escalating frequency and intensity of natural disasters, coupled with the unpredictability of global challenges, such as climate change, pandemics and socioeconomic disruptions, has underscored the need for societies to enhance their capacity to withstand and recover from shocks. ECE supports its members States in their efforts to enhance resilience through multiple activities.

60. Energy provides a backbone for economic activity and social interaction. Avoiding disruption to energy systems is therefore critical to enhancing resilience. ECE has been advancing the concept of resilient energy systems in its work. In these systems, energy makes an optimal contribution to a country's sustainable development. Countries are able to withstand and recover quickly from any unanticipated shocks and to reflect potential impacts of climate change on energy resources in their planning and operations. A resilient energy system is thus based on three pillars: energy security, whereby energy independence is strengthened through decentralization, interconnectivity and trade; affordability, through a reduction in the costs of electricity, heating, cooling and transport; and environmental sustainability, whereby the carbon footprint is lowered and efficiency is enhanced across the energy supply chain.

61. In order to mainstream this systems-thinking approach to resilience into national policies, ECE is creating a platform for resilient energy systems. The platform's objective is to provide member States and the energy expert community with an advanced artificial intelligence-based tool that allows users to navigate through a reputable knowledge base built by ECE and partner organizations, producing user-friendly insights for informed decision-making on how to make energy systems more resilient. This interactive compendium of resources will comprise relevant and accurate information on the resilience of energy systems and enable users to gain access to official documents and data.

62. ECE is assisting its member States in developing resilient energy systems through the use of its Carbon Neutrality Toolkit, which is designed to help countries to identify technology and policy options to attain carbon neutrality. The Toolkit is being applied at both the national and subregional levels to help countries to implement their sustainable energy agendas. It was applied to develop a strategy for rebuilding Ukraine with a resilient, carbon-neutral energy system. Final consultations are being conducted for the Central Asia carbon neutrality road map and the road map to carbon neutrality for the Republic of Moldova.

63. The integration of critical raw materials into resilience strategies is essential. By ensuring a secure and sustainable supply of critical raw materials, States enhance their ability to transition to low-carbon economies. The United Nations Resource Management System supports countries' efforts to enhance resilience by providing a comprehensive system for managing resources sustainably, helping to improve the readiness of communities and industries to face future challenges.

64. The use by the European Union of the United Nations Framework Classification for Resources under the proposed Critical Raw Materials Act marks a significant step towards securing a sustainable supply of critical raw materials. The Act is aimed at strengthening capacities of European Union members along the critical raw materials value chain, diversifying imports to reduce strategic dependencies and improving the monitoring and mitigation of supply disruptions.

65. The endorsement of the United Nations Resource Management System principles and requirements by the Economic and Social Council paves the way for the global application of sustainable resource management practices. The United Nations Resource Management System provides a methodology to balance economic development with environmental sustainability and social responsibility, in line with the Sustainable Development Goals and the Paris Agreement.

66. The exploitation of natural resources can involve significant risks. The safe management of mine tailings is a major concern in the ECE region and beyond. Failures at tailings management facilities can have severe consequences, including transboundary effects. Studies show that the consequences of tailings failures have become more severe in recent decades, resulting in more fatalities and increased amounts of released waste. Significant increases in the global demand for minerals and metals are expected in the coming years owing to the energy transition. Increased demand and production will lead to more tailings and thus more tailings management facilities in which hazardous waste is stored and higher risks. Climate change poses another major stress factor for tailings management facilities, requiring additional measures in all phases of a facility's life cycle to ensure that it is safe and stable, in order to prevent natural hazard-triggered technological accidents and their adverse effects.

67. These developments pose challenges to countries' resilience and disaster risk governance. Addressing those challenges requires a multi-stakeholder approach and cross-sectoral cooperation and coordination at all levels. The Convention on the Transboundary Effects of Industrial Accidents supports countries in the prevention of, preparedness for and response to industrial accidents, particularly those with transboundary consequences or triggered by natural disasters. Actions to reduce the risk of technological disasters and enhance disaster risk governance are critical.

68. ECE is helping its member States in Central Asia to address tail mining risks. Inter-institutional working groups on tailings safety and the prevention of accidental water pollution, with the support of the Convention secretariat in Kazakhstan and Tajikistan, hold regular meetings that bring together various stakeholders. In 2024, Uzbekistan agreed to establish a similar group. In addition to assisting in the strengthening of national governance, the Convention secretariat organized a

subregional workshop on tailings safety and the prevention of accidental water pollution in Dushanbe on 25 and 26 May 2023 to facilitate subregional cooperation and exchanges on the matter.

69. Ecosystem health and vitality are fundamental requirements for forest durability and resilience and for the preservation of the many benefits forests provide to society. Droughts, fires, storms and insect infestations continue to cause large-scale tree mortality in forest ecosystems. Current and future forest damage might exceed everything experienced to date owing to anticipated changes in climate, with significant negative socioeconomic consequences. Monitoring forest damage and its impact on ecosystems is part of the regular work of ECE. Recently, ECE carried out a critical analysis of existing international forest damage reporting systems, providing a foundation for a substantial revision of existing reporting schemes and approaches. Improved information on forest conditions and damage in the ECE region will be an essential asset for effective forest governance in order to protect forest health and build their resilience to anthropogenic and natural threats.

70. Adapting to climate change, including by making the necessary investment and anticipating related risks, is critical to enhance resilience in view of likely adverse developments. The ECE Environmental Performance Review Programme continues to routinely include chapters in its reviews on both climate change – including adaptation to improve resilience – and risk management of natural, technological or anthropogenic hazards. Resilience aspects are also addressed when covering water, transport or other sectoral issues. Over the past year, reviews were published on Azerbaijan and Kyrgyzstan.

71. Local action is critical in advancing sustainable development and enhancing urban resilience and is an essential component of overall strategies to increase the ability of economic and social systems to withstand shocks. ECE is deeply engaged in supporting the localization of efforts to attain the Sustainable Development Goals and promoting good practices to build urban resilience and improve policy coherence. In October 2023, it organized an Urban Resilience Week, which brought together representatives of national and subnational governments, experts and civil society representatives to discuss strategies and solutions for building more resilient and sustainable cities. A particular emphasis was made on innovative approaches to urban planning and design and innovative financing instruments for urban infrastructure and community engagement. At the third Forum of Mayors, which was held the same week, participants discussed urban regeneration projects to achieve more inclusive, resilient and sustainable urban development.

72. Urban and peri-urban forests can increase resilience by reducing urban heat island effects and lowering ambient temperatures, reducing flood and landslide risks, improving physical and mental health and providing a habitat for biodiversity. They also attract residents, shoppers and tourists to vibrant neighbourhoods and create green jobs. Moreover, the establishment of such forests can contribute to advancing goals on climate, biodiversity and sustainable development.

73. ECE is working to promote collective and systemic approaches to plan and manage urban forests to exploit their many benefits. The San Marino Regional Urban Forestry Action Plan, adopted by the ECE Committee on Forests and the Forest Industry in 2023, is the first United Nations plan to guide collective, multilevel and multisectoral efforts towards a more resilient and vibrant urban environment. ECE directly engages with member States and cities to promote the implementation of key actions through such initiatives as the Trees in Cities Challenge and the Trees in Dry Cities Coalition, which seek to boost resilience at the city and national levels.

V. Leveraging partnerships for sustainable development

74. Collaborative partnerships play an important role in effectively fulfilling ECE mandates and advancing implementation of the 2030 Agenda. These partnerships involve a range of activities, including knowledge-sharing, normative work dissemination, standard setting, and capacity-building initiatives.

75. Environmental work is underpinned by a dense network of collaboration with other international organizations. ECE co-chairs the issue-based coalition on environment and climate change, which brings together 17 United Nations entities in support of United Nations country teams and resident coordinators. The coalition, among other activities, organized a regional workshop in November 2023 on integrating climate change, pollution, biodiversity, water management and a just green transition into United Nations Sustainable Development Cooperation Frameworks. It also launched a series of webinars in June 2023 on incorporating the Kunming-Montreal Global Biodiversity Framework into United Nations Sustainable Development Cooperation Frameworks, on disability-inclusive climate change adaptation and disaster-risk reduction educational materials, and on the nexus of climate action and leaving no one behind.

76. ECE also leads an informal inter-agency coordination group on environmental assessments for Ukraine, bringing together the United Nations Development Programme, the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization, the Resident Coordinator Office in Kyiv, the Organization for Security and Cooperation in Europe, the World Bank and the secretariat of the Convention on Wetlands of International Importance especially as Waterfowl Habitat. In May 2023 and March 2024, the group organized webinars on the use of Earth observations to assess environmental damage. ECE, UNEP and the Organisation for Economic Co-operation and Development are considering the development of a platform to support a green recovery in Ukraine.

77. As countries seek to rapidly decarbonize their economies, investing in energy efficiency and the improved performance of buildings offers significant short-term gains. ECE is leading a broad partnership supporting Armenia, Georgia, Kyrgyzstan, the Republic of Moldova, Tajikistan, Ukraine and Uzbekistan in addressing the readiness of the building supply chain industry to deliver the needed materials, technologies and equipment for high-performance buildings. It also aims to connect building energy efficiency plans with the nationally determined contributions submitted under the Paris Agreement. This regional project is supported by the International Climate Initiative of Germany and will be implemented from 2024 to 2029. The project is led by ECE, in cooperation with the United Nations Development Programme country offices in all beneficiary countries, UNEP, the Economic and Social Commission for Asia and the Pacific, the UNEP Copenhagen Climate Centre, the Green Building Alliance, the Institute for Energy Efficiency in Production and the Passive House Institute.

78. ECE regularly collaborates with multilateral development banks, in particular on water, transport and energy issues. The partnership with the European Investment Bank is supported by a memorandum of understanding, joint action plans and regular consultations, and is focused on operational and capacity-building activities and the dissemination of ECE normative products and analytical outputs. A joint project on strengthening industrial safety in Ukraine through enhanced implementation of and alignment with the Industrial Accidents Convention was initiated in December 2023.

VI. Conclusion

79. The significance of the 2030 Agenda is becoming even more pronounced in times marked by uncertainty, unresolved environmental challenges and dangerously approaching tipping points. The preventative orientation of the 2030 Agenda – spotting potential risks and guiding the efforts of various stakeholders in tackling them before they evolve into tangible problems – provides essential direction to collective efforts. Analytical studies and robust data are essential to identify likely developments in the case of inaction and to inform appropriate policy choices. In an uncertain world, the use of foresight methodologies, with the participation of different actors, is essential to chart potential futures and increase countries' readiness to deal with them. ECE continues to engage with multiple stakeholders and reach out to different levels of government to support implementation of the 2030 Agenda.

80. Normative outputs that reflect both the common knowledge and the shared commitment to tackle various sustainable development challenges remain critical instruments in advancing the 2030 Agenda. These outputs need to be complemented and updated to address changing realities, including as a result of new scientific evidence and evolving technological possibilities.

81. For the ECE region, environmental challenges and the energy transition remain central to the achievement of the Sustainable Development Goals. These are issues that transcend national boundaries and require continued strong international cooperation. National capacities to act are diverse, across countries and policy areas. Technical cooperation is therefore important to ensure that these differences do not hinder progress towards sustainability, which is a common concern.

82. The increased frequency of shocks in recent years highlights the importance of devising and implementing strategies and policies that enhance resilience. This requires investing in robust infrastructure and building the capacity to withstand and adapt to future shocks. Such goals can only be appropriately framed in a shared vision of the future, for which broad collaboration and strong partnerships are crucial. Fulfilling the 2030 Agenda demands the involvement of diverse actors at the local, national and regional levels, each facing unique challenges and offering various capacities to mobilize resources. These considerations are increasingly significant in the work of ECE.
