Statement

by

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at

"Achieving planetary health and energy security: the contribution of AI and digitization"

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Minister Vasilev,
Excellencies,
Ladies and gentlemen,

It is my great pleasure to be here today to speak about how digital tools, including artificial intelligence, can help in tackling planetary challenges.

Digital solutions can help scale the circular economy by driving innovation, the low-carbon energy transition and improving resource efficiency. However, to be efficient, these solutions must be deployed in the context of regulatory frameworks, to reduce associated environmental impacts and digital risks and to ensure their responsible use, accountability, and transparency. This is a topic on which my organization, the UN Economic Commission for Europe (UNECE), works extensively. In fact, in 2023, our 56 member States from the pan-European region mandated us to adopt "digital and green transformations for sustainable development" as the overarching theme of our work. So I hope that you will allow me to bring a UN perspective to the topics that the panels will address today.

Let us talk first about AI. Generative artificial intelligence holds much promise – but it carries a potentially long list of threats to human rights, such as growing inequalities, amplification of hate speech and disinformation, undermining of democracy, etc. The UN Secretary-General has therefore issued a call for a Global Digital Compact between governments, regional organizations, the private sector and civil society -- to mitigate the risks of digital technologies, and identify ways to harness their benefits for the good of humanity. The Secretary-General also appointed last year a High-Level Advisory Body on Artificial Intelligence. It has so far released an interim report identifying principles to guide the formation of new global AI governance institutions:

    i.Inclusivity: all citizens, including those in the Global South, should be able to access and meaningfully use AI tools.
    ii.Public interest: governance should go beyond the do no harm principle and define a broader accountability framework for companies that build, deploy and control AI, as well as downstream users.
    iii.Centrality of data governance: AI governance cannot be divorced from the governance of data and the promotion of data commons.
    iv.Universal, networked and multistakeholder: AI governance should prioritize universal buy-in by countries and stakeholders. It should leverage existing institutions through a networked approach.
    v.International Law: AI governance needs to be anchored in the UN Charter, International Human Rights Law, and the Sustainable Development Goals.

So what can this look like in practice? How can we put these good governance principles into practice, for AI and for other digital tools? I am happy to say that my organization can provide a few examples of that.

The United Nations Economic Commission for Europe, UNECE for short, is one of the five Regional Commissions of the UN. We are a multilateral platform that brings together experts

from governments, academia and other stakeholders to develop technical standards and norms. We work in various areas pertaining to sustainable development, such as environment, statistics, transport and many others. Our goal is to promote pan-European economic integration and support the achievement of the 2030 Agenda. The standards, norms and policy recommendations we develop are intended to enhance good governance based on international best practice. Furthermore, our intergovernmental expert groups and committees provide member States and other stakeholders with a forum to exchange experiences and jointly identify challenges and solutions.

As I already mentioned, our 56 member States have mandated us to work on the topic of digital and green transformations for the period of 2023 to 2025. So allow me to provide a few examples of what this looks like in practice, and how it relates to good governance on digitalization.

When you speak about planetary health, a big component to address is forests. UNECE has worked jointly with FAO on the topic of **sustainable forest management** for several decades. Information technology and AI are widely used here.

i. Information technology supports almost all aspects of forest protection and management. IT is widely applied in in mapping forest resources, monitoring the condition of forests, organizing forest management and protection, as well as information exchange and communication.

ii. Forest ecosystems span over large areas of land. Their management faces significant challenges in light of the vast amount of information required and collected within the context of climate change, biodiversity, land use and the bio-economy. IT has opened new opportunities for improved forest ecosystem management by enabling better data management.

iii. AI has the potential to address these challenges, revolutionize the management of information, and help foresters make more informed decisions about land management and conservation efforts. AI can be used to:

- analyze remote sensing data and ground-based measurements
- identify tree species and ecosystems and detect changes in tree cover.
- monitor the health of forests, detect early the occurrence of pests and diseases, and identify areas at risk.
- estimate the volume and value of timber and carbon in a given area.
- optimize harvesting practices, and plan for sustainable timber production, reducing waste and environmental impacts.

UNECE uses IT in its data collection and dissemination, the INForest data knowledge platform, and in support to country efforts in monitoring and assessing forest disturbance and damage. We also work on forest information systems for the optimized use of IT in complex forest protection and management systems to collect and publish information; monitor results and align policies. This increases operational efficiency and transparency, reduces the cost of forest ecosystem services and their governance.

Another example I can give is our **work on resilient energy systems**, which actually relates to the topic of both of the panels today.

As we all know, the ongoing geopolitical situation has led to an energy crisis, and highlighted the need for resilient energy systems. We define such a system as one where:

i. Energy makes an optimal contribution to a country's social, economic, and environmental development
ii. The system is able to withstand and recover quickly from any unanticipated shocks
iii. The system reflects the potential impacts of climate change on energy resources in its planning and operations.

To achieve this, we need to strengthen energy independence through decentralization, interconnectivity and trade. We need to make energy affordable and accessible to all. And We need to lower the carbon footprint and enhance energy efficiency across the entire energy supply chain.

Countries across the UNECE region are in high need of tools to make informed decisions on how to design and build such energy systems. AI has great potential here, as a means to coordinate, analyze and interpret increasing quantities of energy system data, user preferences, and system requirements. AI-based digital technologies may facilitate the complex system-level optimization of decentralized energy, and will be at the core of multi-sector electrification. They can also optimize the storage of these energy resources to help ensure energy delivery during extreme weather events.

However, we need to manage the potential economic, social, or environmental issues arising from adopting digital technologies in electricity systems. These include:

i. different levels of sophistication and investment across countries when it comes to digitalization,
ii. the intensive electricity consumption of data centres (of which we need more and more),
iii. increased need for data storage and processing capacity
iv. increased need for critical raw materials to power the digital transformation
v. interoperable computing, networking, and storage infrastructure
vi. and of course, cybersecurity.

In order to help navigate this complex web of options, UNECE, together with the University of Zürich, is creating a **Platform for Resilient Energy Systems.** The objective is to provide member States and the energy expert community with an advanced AI-based tool, one which allows to navigate through a secure and authoritative knowledge base built by UNECE and partnering international organizations. It will produce user-friendly insights for informed decisions on how to reach more resilient energy systems.

We are looking for partners on this project and I greatly welcome discussion with interested parties.

In conclusion, I hope I have been able to demonstrate in some pragmatic ways of how AI and digitalization can contribute to planetary health and energy security. UNECE will continue its work on digital and green transformations and I look forward to the discussions today to see how we may strengthen our collaboration with the actors gathered here on this topic.

Thank you.