**Seventy-fourth session of the Economic and Social Commission
for Asia and the Pacific: High-level Ministerial Segment**

**Agenda item 9: Policy issues for the Asia-Pacific region: theme topic for the
seventy-fourth session of the Commission on "Inequality in the era of the 2030 Agenda
for Sustainable Development"**

**High-level debate on frontier technological innovations - policies to accelerate the
implementation of the Sustainable Development Goals**

Date: Wednesday 16 May 2018
Time: 9:00 a.m. to 12:00 noon
Venue: ESCAP Hall, United Nations Conference Centre

Overview

Concerns regarding the economic implications of emerging technologies are nothing new. However, as the global economy enters the fourth industrial revolution, a revolution defined by frontier technological breakthroughs,[1] there is a prevailing narrative that, this time, the changes could have a much more profound impact. In considering only 15 major developed and emerging economies, the World Economic Forum predicts that emerging technological trends will lead to a net loss of over 5 million jobs by 2020. Worldwide, this number will almost certainly be much higher. However, frontier technologies could also enhance productivity and have significant positive impact for society and the environment. For example, data suggest that improved application of information and communication technologies to smart grids and transportation will reduce carbon emissions by an estimated 4.5 billion tons by 2020.

The Asia-Pacific region is leading from the front in the development of frontier technologies and is forecast to be the prominent market of the future. Several countries in the region including Australia, China, Japan and Singapore are in a leading group of countries investing in frontier technologies such as FinTech, robotics, and autonomous vehicles. As highlighted in ESCAP's (2017) report "Artificial Intelligence in Asia and the Pacific," the global market for artificial intelligence is forecast to hit $60 billion by 2025 and the Asia-Pacific region is forecast to be the key world market.

---

[1] The UN defines frontier technologies as *"technological innovations that have high potential impact on social, economic and environmental spheres whereby both intended and unintended consequences are likely to disrupt or reveal gaps related to current norms, institutions and structures/processes, and which may call for shifts in economic and social investments in order to achieve sustainable development. Examples of frontier technologies include autonomous technologies, artificial intelligence and modern biotechnology (genetic engineering, cell fusion), in contrast to well established and understood mobile applications for providing or collecting data, as well as e-commerce".*

This prominent position means governments in the region need to think carefully about the role and scope of frontier technologies. To date, policy responses have been extreme, innovative and practical. As highlighted in ESCAP's (2017) report "Digital and Virtual Currencies for Sustainable Development", Bitcoin has been banned in Bangladesh and Indonesia while in Japan it has been made a legal form of payment; the Republic of Korea has developed the world's first robot tax; Japan has proposed setting up an international set of basic rules for developing artificial intelligence, and devised "Japan's Robot Strategy" recognizing the need for robot regulatory reform; universal basic income pilots have taken place in India; and the Government of Singapore now offers adults personal accounts which they can use to buy training, and tax incentives to encourage firms to invest more in their lower paid workers. These are just some of the policies that have been put in place to maximize the positive, while minimizing the negative, impacts of frontier technologies.

A next generation technology and innovation policy framework is required for the coming fourth industrial revolution future. This will require thoughtful research and policy analysis; cross-government cooperation; inter-governmental knowledge-sharing and consensus-building; and honest, open and regular discussion with civil society and the private sector, specifically technology developers.

Session format

The session will be structured to begin with presentations by a mix of eminent policy makers, representatives from government, academia and the private sector who will present actionable ideas and approaches to addressing these issues, followed by statements by member States. The questions that will be addressed by the speakers and member States include:

- What is the size of the opportunity/threat of frontier technologies both globally and regionally?
- How can frontier technologies spur inclusive and sustainable development?
- How have some countries in the region become leaders in frontier technology development and policy formulation?
- From the perspective countries, what are some of the positive and negative effects of frontier technology, and what are some of the policy measures that could be implemented to maximize opportunities and minimize threats?
- How can countries in the region cooperate and collaborate on frontier technologies to support shared prosperity, and address current and potential future inequalities?

Following the opening statements by the guest speakers, country statements may be up to 5 minutes each. Prepared texts of longer statements can be circulated. A copy of the written statement should be submitted to the secretariat, preferably before the commencement of the session if possible.

Expected outcome

This session will contribute to an enhanced understanding of (1) the size of the opportunity/threat of frontier technologies and how they could spur inclusive and sustainable development; (2) possible policy measures that could underpin a "next generation" technology and innovation policy framework relevant to a fourth industrial revolution future; and (3) priority areas for regional frontier technology cooperation, and

effective modalities, that could support shared prosperity and address current and potential future inequalities.

* * * *