Agenda item 6

Promoting regional cooperation in new and emerging technologies to achieve sustainable development

Asian and Pacific Centre for Transfer of Technology of the Economic and Social Commission for Asia and the Pacific
Introduction

New and emerging technologies, incl. 4IR technologies, are important for progress towards SDGs

Rapid growth in development & utilization of technologies, with increase in market size

Asia-Pacific – comprises innovative countries; showed dynamic innovation performances & advances in innovation indicators

(Global Innovation Index 2022)
Technologies and SDGs

At the current pace, the region will not achieve the SDGs until 2065.

- Development, diffusion, transfer of new and emerging technologies can be harnessed for environmental, social, economic benefits

- **70% of the 169 targets** underpinning the SDGs could be enabled by 4IR technologies. (Source: Unlocking Technology for the Global Goals 2020, WEF)

- For example:
  - AI enabled smart solar energy systems, intelligent motors, 5G wireless systems networks, cloud-based control centres
  - Machine learning techniques for accurate rainfall and climatic predictions, Drone-based solutions for sustainable agriculture

(Source: Asia and the Pacific SDG Progress Report, 2022. ESCAP)
Technology innovation, development and absorption

**Capacity-related constraints**
- Shortage of skilled technical personnel in new and emerging technology areas
- Infrastructure constraints

**Structural constraints**
- Low resource base of MSMEs to adopt new and emerging technologies
- Technical, organizational, economic & system barriers to technology transfer and adoption
- Inadequate policy and legal frameworks, especially for intellectual property
- Weak government and private programme delivery mechanisms for technology promotion

**Institutional constraints**
- Weak interlinkages within NIS for synergistic development & scaling up of technologies
- Inadequate institutional support mechanisms for scaling up of technologies
Role of regional cooperation

Action needed

- Planning well-formulated strategy for increased usage of new and emerging technologies
- Strengthening institutional and digital infrastructure
- Strengthening R&D, innovation and demonstration
- Augmenting financing for the scaling up of innovations and commercialization
- Addressing issues of safety and data set related protocols
- Supporting workforce through capacity-building, training, exchange programmes
- Establishing multi-stakeholder partnerships and collaborations
Work of the secretariat on promoting new and emerging technologies to meet SDGs (2021-2022)

Regional technology cooperation strengthened
- 5 consultative meetings
- **Focus** - Health-care biotechnology & biomedical technologies; Technologies to address the COVID-19; Emerging energy technologies for climate change mitigation; Industry-academia-government collaboration

Innovation and technology transfer capacity enhanced
- 13 demand-driven capacity-building activities
- **Focus** - 4IR technologies; Decentralized power plants & smart grids; Technologies to address climate change and COVID-19; Air pollution control technologies, IP management, renewable energy and circular economy

Technology intelligence enhanced
- **Focus** - analytical work & knowledge products
  - Asia-Pacific Tech Monitor
  - Guidebook on Intellectual Property Management; Theme papers on 4IR technologies for SDGs
Work of the Secretariat – Capacity building on new & emerging technologies

Series of international conferences and capacity building events

- Workshop on Emerging technologies to respond to climate change, 2021, China
- Conference on 4IR Technologies for Sustainable Development, 2021, India
- Expert group meeting on Strengthening regional cooperation in health care biotechnology and biomedical sector, 2022, online
- Side event on Strategic Priorities for Adoption of Emerging Technologies in the Energy Sector for Climate Change Mitigation, 2022, 78th Commission session, online
- Conference on Innovation, Transfer and Diffusion of 4IR Technologies, 2022, China
- Industry-academic-government consultative meeting to address challenges of the energy sector, 2022, Delhi and online

Recommendations

- Strengthening stakeholders’ capacities to develop & effectively utilize new and emerging technologies
- Redesign educational curriculum, reskilling and upskilling of workforce
- Promoting innovation through incubators, collaborative platforms
- Knowledge sharing & partnerships for regional cooperation

APCTT’s Strategic Plan (2023-27): Enhanced cooperation for adoption, diffusion & transfer of innovative and emerging technologies in the Asia Pacific region for addressing climate change and achieving SDGs
Issues for consideration by the Committee

- Identify the types of support that may be needed to advance the promotion of new and emerging technologies for sustainable development in the region

- Make recommendations to advance the promotion of these technologies for sustainable development in the region

- Identify new and priority policy issues related to new and emerging technologies and support member States in the promotion of such policies for the rapid absorption of the same
THANK YOU

Follow us

www.unescap.org
unescap
unitednationsescap
united-nations-escap
unescap
unescap
unescap