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#### **Economic and Social Commission for Asia and the Pacific**

Asian and Pacific Centre for Transfer of Technology

Governing Council

#### **Nineteenth session**

Tashkent, 6 and 7 December 2023

Item 2 of the annotated provisional agenda\*

Report on the activities of the Centre for the period from December 2022 to November 2023

# Report on the activities of the Centre for the period from December 2022 to November 2023

## I. Introduction

- 1. The Asian and Pacific Centre for Transfer of Technology promotes an enabling environment for innovation, transfer and diffusion of technologies in the member States for achieving the Sustainable Development Goals.
- 2. As per the revised statute adopted by the 72<sup>nd</sup> session of ESCAP held in 2016<sup>1</sup>, the Centre assists member States to strengthen their capabilities to develop and manage national innovation systems; develop, transfer, adapt and apply technologies; improve the terms of transfer of technologies; and identify and promote the development and transfer of technologies relevant to the region.
- 3. The Centre fosters inclusive partnerships between governments, research and development institutions, academia, international organizations, private sector and civil society for innovation, transfer, adoption and diffusion of technologies for achievement of the Sustainable Development Goals in the Asia-Pacific Region.
- 4. The activities of the Centre contribute towards Goal 7 (Ensure access to affordable, reliable sustainable and modern energy for all), Goal 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation), Goal 11 (Make cities and human settlements inclusive, safe and resilient and sustainable), Goal 13 (Take urgent action to combat climate

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\* ESCAP/APCTT/GC/2022/L.1

<sup>&</sup>lt;sup>1</sup> Resolution adopted by the Economic and Social Commission for Asia and the Pacific 72/3, Statute of the Asia and Pacific Centre for Transfer of Technology (E/ESCAP/RES/72/3) dated 19 May 2016.

change and its impacts), and Goal 17 (Strengthen the means of implementation and revitalize the global partnership for sustainable development).

- 5. This report covers the activities carried out by the Centre since the Eighteenth session of the Governing Council held in December 2022 till November 2023, and presents the current financial status of the Centre. The Centre carried out demand-driven activities for regional cooperation and capacity building based on the proposals received from member States in the Eighteenth session of the Governing Council held on 7-8 December 2022.
- 6. The Centre commenced the implementation of its Strategic Plan (2023-2027) with a vision for 'enhanced regional cooperation for innovation, adoption, diffusion and transfer of innovative and emerging technologies in the Asia-Pacific region for addressing climate change and achieving SDGs'.
- 7. The Centre's primary focus areas in the reporting period were as follows:
- (a) Strengthening regional technology cooperation, transfer and strategic partnerships for advancing climate mitigation and adaptation and air pollution control technologies;
- (b) Capacity building and enhanced knowledge on innovative technologies for climate resilience, disaster risk reduction, control of air pollution, and technology cooperation with focus on green innovations and fourth industrial revolution technologies; and
- (c) Enhancing technology intelligence through production and dissemination of knowledge products on new and innovative technologies for climate change and sustainable development.
- 8. During the reporting period, the Centre delivered and actively contributed to 19 demand-driven activities (hosted by Bangladesh, China, India, Thailand and Uzbekistan) in cooperation with 71 partner institutions. The activities included regional consultation meetings, expert group meetings, international conferences, capacity building workshops, national stakeholder consultations, and knowledge products including periodicals and analytical reports. The list of partner institutions, who worked with the Centre in delivering various activities, is provided as Annex I.
- 9. The Centre's demand driven activities benefitted nearly 1000 participants comprising representatives from governments, technology promotion agencies, technology transfer intermediaries, academia, research and development institutions, city authorities, industrial enterprises, technology-based start-ups and financial institutions.
- 10. The Centre benefited from participation of experts and participants from 20 Asia-Pacific member States namely Australia, Bangladesh, China, Fiji, India, Indonesia, Japan, Nepal, Pakistan, Palau, Philippines, Sri Lanka, Samoa, Tonga, the Republic of Korea, Russian Federation, Singapore, Thailand, Uzbekistan and Viet Nam. The experts shared their knowledge, experiences, and best practices with the target participants. The Centre's activities also benefited from participation of experts from international organizations including Asian Infrastructure Investment Bank, Asian Institute of Technology, Economic Research Institute for ASEAN and East Asia, Secretariat of the Pacific Regional Environment Programme, and United Nations' Ten-Member Group supporting Technology Facilitation Mechanism for Sustainable Development Goals.

- 11. The Centre's online periodical 'Asia-Pacific Tech Monitor' provided latest information on technology trends and developments, technology and innovation policies, technology market, technology transfer and adoption, intellectual property management, fourth industrial revolution technologies, innovative technologies for air pollution control, and regional technology cooperation and transfer. The 4 special issues of the Asia-Pacific Tech Monitor focussed on themes such as: (1) Affordable and sustainable clean energy technologies, (2) Technologies for decarbonizing transport systems, (3) Innovative technologies for disaster risk reduction, and (4) Partnerships and regional collaborations with integrating climate finance with the technology mechanism for climate change. (Annex II).
- 12. The Centre entered a formal partnership with Climate Technology Centre and Network through Letter of Exchange to jointly support member States in the development and transfer of climate technologies for energy-efficient, low-carbon and climate-resilient development in the Asia-Pacific region.
- 13. The Centre contributed to strengthening the capabilities of stakeholders from countries with special needs such as Cook Islands, Fiji, Nepal, Palau, Samoa, Tonga and Tuvalu.
- 14. The Centre continued to receive voluntary contributions from host country and other member States. These contributions are used for funding the Centre's capacity-building programmes and activities as well as administrative expenses.

# II. Activities carried out by the Centre during the reporting period (December 2022 – November 2023)

#### A. Regional technology cooperation strengthened

- 15. The Centre facilitated 3 regional consultative meetings to strengthen technology cooperation among member States in key areas. Following are the key activities carried out and/or contributed by the Centre:
- (a) Pacific Perspectives on Accelerating Climate Action, 15 May 2023, Bangkok, Thailand (Hybrid): The Centre organized this event, jointly with the Governments of the Cook Islands and Tuvalu, the Secretariat of the Pacific Regional Environment Programme, and ESCAP Subregional Office for the Pacific, on the sidelines of the seventy-ninth session of ESCAP. It brought together participants and speakers from the Pacific Small Island Developing States, the Council of Regional Organizations of the Pacific and other agencies. The event deliberated on climate action related policy conversations, including key linkages across various dimensions of climate policy, especially in the context of connectivity, finance and capacity building. Key recommendations are strengthening regional policy support for national development priorities; and providing increased assistance for the implementation of climate action.
- (b) Scaling up climate change adaptation technology applications for a resilient future in Asia and the Pacific, 19 May 2023, Bangkok, Thailand (hybrid) (side event of CS79): The Centre jointly organized this event with the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India on the sidelines of the seventy-ninth session of ESCAP. The event brought together 34 participants from China, India, Indonesia, Malaysia, Pakistan, Philippines, the Republic of Korea, Thailand, and Uzbekistan. The participants included representatives from the Centre's Governing Council members, national climate change

offices, national hydrometeorological services, relevant sub-regional organizations, policymakers and experts involved in climate change adaptation in the Asia-Pacific region. Solutions and good practices in technologies and their applications for climate adaptation and resilience including hazard monitoring were discussed along with the opportunities to enhance regional cooperation to upscale them in Asia and the Pacific.

(c) Expert Group Meeting on Innovative Technologies and Applications for Urban Air Pollution Control in Asia and the Pacific, 25 May 2023 (virtual): The Centre organized this meeting to discuss innovative technologies and their applications to control air pollution in cities across the Asia-Pacific region. The meeting was attended by 20 participants including policymakers, technical experts and relevant stakeholders involved in city air pollution control from Bangladesh, China, India, Nepal, Philippines, the Republic of Korea, Thailand and Uzbekistan. The experts shared their experience and good practices in scaling up and adoption of innovative technologies for air pollution control in cities. Key recommendations include rational planning of urban industries, adopting multiple technology interventions such as electric vehicles and bioethanol, and conducting evaluation of air pollution control technologies for their efficiency, economic viability and suitability for local conditions.

#### B. Innovation and technology transfer capacity enhanced

- 16. The Centre organized 5 capacity building activities to enhance the knowledge and skills of stakeholders on innovation, transfer, adoption and diffusion of technologies with focus on climate resilience, air pollution control, and fourth industrial revolution and green technologies.
- (a) Advancing Climate Action and Resilience of Cities in the Asia-Pacific Region - renewable energy and air pollution control, 30 March 2023, Bangkok, Thailand: The Centre jointly organized this panel discussion as a side event of the 10th Asia Pacific Forum on Sustainable Development, with the Sustainable Urban Development Section of ESCAP. The event brought together experts and participants from the Asia-Pacific region to share insights and discuss strategies and actions for climate resilient cities through adoption of innovative and affordable technology solutions for renewable energy and air pollution control. The participants comprised of policymakers and relevant stakeholders involved in urban governance, renewable energy applications, control of city air pollution, and climate resilient cities. The participants deliberated and shared perspectives and good practices of innovative and affordable technologies for renewable energy transition and air pollution control in urban space. Key recommendations include conducting technology needs assessment, aligning needs of countries with availability of their energy resources, identifying innovative and affordable solutions for scaling up and large-scale application in cities, capacity building and training for measurement of emissions data.
- (b) Building the resilience agenda through technology, 27 July 2023, Bangkok, Thailand (hybrid): The Centre organised this session to generate actionable recommendations and strategies by leveraging technologies for disaster risk reduction contributing to the resilience of communities. This was a collaborative effort of the United Nations Satellite Centre and the Asian and Pacific Training Centre for Information and Communication Technology for Development of ESCAP. The participants identified technology innovations including those in artificial intelligence, satellite imagery, machine learning, and earth observation data for building resilience to disasters and climate

change. The experts discussed strategies and best practices to strengthen the use of technology for effective reduction in the impact of disasters and climate hazards. The session was attended by government officials, experts, researchers, and private sector stakeholders involved in technology for disaster risk reduction and climate change adaptation.

- (c) International Conference on Air Pollution, Perspective, Prediction, Prevention, and Control, 31 August 2023, Bangkok, Thailand: The conference was jointly organized with Thailand Institute of Scientific and Technological Research in conjunction with ASEAN Sustainable Energy Week 2023. International and national experts shared experiences, success stories and challenges of prediction, prevention and control of air pollution. Experts from Indonesia, Thailand and Viet Nam presented country perspectives on policy and good practices to address air pollution. They also discussed strengths and challenges of city level action plans for adopting technologies for air pollution control in Bangkok. The conference brought together 95 participants from 5 member States (namely Indonesia, Malaysia, Sri Lanka, Thailand and Viet Nam). They included policymakers, experts, representatives from international organizations, research and development institutions, private sector and civil society organizations. recommendations are developing stricter emission standards, monitoring systems and enforcement mechanisms, providing incentives (e.g., tax breaks, subsidies, and grants) to encourage cleaner technologies and practices, facilitating collaboration between government and businesses to find practical solutions, and engaging citizens in air quality monitoring and control efforts.
- (d) International Conference on Scaling Up and Adoption of Fourth Industrial Revolution Technologies for Climate Resilience, 15 September 2023, Guangzhou, China (virtual): The Center organized this conference in cooperation with the Asia-Pacific Regional Innovation Knowledge Network for Fourth Industrial Revolution Technologies, Guangzhou University, People's Republic of China. The conference brought together 78 participants from twelve member States namely China, India, Indonesia, Japan, Malaysia, Pakistan, Russian Federation, Singapore, Thailand, the United Kingdom, the United States and Viet Nam. The participants included policymakers and government officials, representatives from the academia, national laboratories, research and development institutions, industrial and research organizations and enterprises. The experts deliberated on the priorities, strategies and good practices for scaling up and adoption of fourth industrial revolution technologies for addressing climate change, and explore potential opportunities and modalities of cross-border collaboration. Key recommendations are assessing the readiness and requirements of countries to adapt Industry 4.0, facilitating skill development workshops and Public-Private-Partnerships to promote fourth industrial revolution technologies for climate resilience, and providing policy and technical support to member States.
- (e) International Conference on Green Technologies for Climate Action and Resilience, 05 December 2023, Tashkent, Uzbekistan (hybrid): This international conference is organized to explore and promote the ways to scale up green technologies to address climate change and enhance resilience. The conference is jointly organized with Agency for Innovative Development, Ministry of Higher Education, Science and Innovations, Republic of Uzbekistan. It brings together over 100 participants from Bangladesh, China, India, Indonesia, Malaysia, Nepal, Pakistan, Philippines, Republic of Iran, Republic of Korea, Russian Federation, Tajikistan, Thailand, Uzbekistan, and Viet Nam. The participants are from the Centre's Governing Council members

and other member States of ESCAP, including policymakers, government officials, international experts, researchers, industry leaders and professionals, academia and civil society organisations. The conference deliberates on the interface between green technologies and climate change, frontier innovation pathways for green technology development, and cross-sector collaboration across sectors, industries, and governments to drive sustainable and green technologies to combat climate change.

- 17. During the reporting period, the Centre provided substantive contributions to 3 capacity building activities organized by external institutions.
- (a) Strategic Planning Meeting of Regional Alliance of Technology Transfer and Adoption Centers under South-South and Triangular Collaboration Programme on Science, Technology and Innovation among Cambodia, Lao PDR, Thailand and Viet Nam, 9 February 2023, Hanoi, Viet Nam: The Centre contributed to this meeting by sharing information about the Centre's mandate, work programme and activities in technology cooperation and transfer in support of member States of the region. Based on its regional experience, the Centre provided guidance to the development of strategic plan, including theory of change and action plan for the proposed Regional Alliance of Technology Transfer and Adoption Centers. The meeting was attended by 15 participants from Cambodia, Lao People's Democratic Republic, Thailand and Viet Nam. The meeting was jointly organized by the Ministry of Science and Technology of Viet Nam and the Trade Investment and Innovation Division of ESCAP.
- (b) The 9<sup>th</sup> East Asia Summit New Energy Forum, 29-30 June 2023, Kunming, China (hybrid): The Centre contributed to this event through a keynote presentation and shared its regional perspectives and experience in promoting innovative and emerging technologies for sustainable development with focus on energy and climate resilience. The Centre highlighted key considerations for creating efficient and balanced innovation ecosystems including translation of low innovation inputs into higher innovation outputs, and increasing the efficiency of processes in national innovation systems. The forum was jointly organized by the Department of International Cooperation, Ministry of Science and Technology of China and the Yunnan Province Science and Technology Department of China.
- (c) 4th Forum on China-South Asia Technology Transfer and Collaborative Innovation, 15-19 August 2023, Kunming, China: The Centre contributed to this forum through a keynote presentation on regional technology cooperation and transfer to achieve the Sustainable Development Goals in Asia and the Pacific. The Centre shared its regional experience and modalities for facilitating cross-border technology cooperation and transfer. The forum was organized by the Department of International Cooperation of the Ministry of Science and Technology of China, Yunnan Province Science and Technology Department, and China-South Asia Technology Transfer Center.
- C. Project: Enhanced capabilities to adopt innovative technologies for city air pollution control in select countries of the Asia-Pacific (Funded by Korea-ESCAP Cooperation Fund)
  - 18. Under this project, the Centre implemented planned activities to achieve two major outputs such as (i) improved availability of technical knowledge

regarding technologies, innovations and good practices, and better understanding of technology needs and gaps for air pollution control in the selected cities, and (ii) increased awareness and capacity of city officials and stakeholders to strengthen action plans for adoption of innovative technologies to control air pollution in three selected cities, namely Dhaka (Bangladesh), Gurugram (India), and Bangkok (Thailand).

#### (i) Improved availability of technical knowledge

- 19. The Centre implemented 3 activities towards improved availability of technical knowledge for city officials and stakeholders regarding technologies, innovations and good practices for control of air pollution.
- (a) Compendium of air pollution control technologies: The Centre developed a compendium of good cases of innovative technologies for air pollution control implemented at city level in Asia. The compendium provides examples of best cases around the world so that cities can implement these technologies for meeting their clean air targets. It is expected to enhance the knowledge and understanding of stakeholders of target cities and help them to adopt relevant technologies for air pollution control. The compendium would be used by city planners and officials, policymakers and stakeholders to increase their knowledge and awareness of innovative technologies for air pollution control in cities.
- (b) City-level assessment studies on air pollution control: The Centre conducted city level studies in Dhaka, Gurugram and Bangkok on assessment of (1) the technological interventions and gaps/needs for air pollution control; and (2) city level action plan (and its alignment with the national plan), and the strengths and challenges related to the strategies for adopting technologies for air pollution control. Based on the studies, assessment reports have been prepared for the three target cities. The reports recommend relevant technologies and approaches to reduce air pollution as well as policy gaps, challenges and supports needed for adopting air pollution control technologies in the identified sectors such as transportation, building construction, industry including brick kilns, agriculture among others.
- (c) Comparative study on city level air pollution control: The Centre conducted a comparative study between the three city level assessment outcomes for Dhaka, Gurugram and Bangkok. The study was carried out to draw lessons and understand opportunities and good practices for technology adoption to control air pollution. The outcomes and recommendations of the study would support in improving the availability of technical knowledge regarding air pollution mitigation technologies, innovations, and good practices from different cities across Asia and the Pacific; and to better understand the technological needs and gaps for air pollution control in the three cities. The report draws lessons from the city-level technological interventions and action plans and recommends future opportunities that can be explored to address the gaps and requirements in the adoption of innovative technologies for air pollution control.

#### (ii) Increased awareness and capacity

- 20. The Centre organized 8 capacity building events including a study tour to the Republic of Korea for enhancing the knowledge and awareness of city officials on innovative technologies and city action plans and strategies for air pollution control.
  - (a) Technical Consultation Meeting on Air Pollution Control

Studies in Dhaka City, 27 March 2023 (virtual): This consultation meeting was jointly organized with Ministry of Science and Technology of Bangladesh, Local Government Division of Ministry of Local Government, Rural Development and Cooperatives, Bangladesh, Dhaka North City Corporation, and Dhaka South City Corporation, Bangladesh. The meeting was organized to seek suggestions from relevant stakeholders for city level assessment studies in Dhaka on technological interventions and gaps/needs for air pollution control, city level action plan and its alignment with the national plan of Bangladesh, and strengths and challenges related to the strategies for adopting air pollution control technologies. The meeting was attended by 12 experts and government officials from Bangladesh who provided valuable suggestions for the assessment studies.

Key recommendations include focusing on air pollution from brick kilns, road transport and municipality waste, conducting source apportionment study to develop appropriate policies and actions, and setting up air purifier technology to reduce air pollution in the Dhaka city.

- (b) Project Inception Meeting Sharing Session: perspectives towards the air pollution control for the good quality of life, 25 April 2023, Bangkok, Thailand (virtual): The inception meeting was jointly organized with the Ministry of Higher Education, Science, Research and Innovation, Thailand, and Thailand Institute of Scientific and Technological Research which is implementing the project activities in Bangkok city. The meeting was attended by 38 experts and participants from Thailand and international. The experts shared perspectives on air pollution control in Bangkok and assessment of gap between policies and practice, and need of technologies to be developed for sustainable pollution control and management. Key recommendations are developing innovative technologies to control air pollution, achieving efficient and effective technologies for air pollution control, adopting supportive and preventive measures to minimize air pollution, and raising participation of communities and stockholders to achieve positive results.
- (c) Consultation meeting with stakeholders (Gurugram), 7 June 2023, New Delhi, India: The meeting was jointly organized with the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India to seek suggestions from experts and stakeholders for conducting the city level assessment studies in Gurugram on technological interventions and gaps/needs for air pollution control, city level action plan and its alignment with the national plan of India, and strengths and challenges related to the strategies for adopting air pollution control technologies. The meeting was attended by 16 participants including experts and government officials from city authority, pollution control boards, Ministry of Environment, Forest & Climate Change, and Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India. The experts brainstormed and provided key suggestions for consideration under the assessment studies. Key recommendations include identifying technology-based solutions to mitigate air pollution, introducing stringent air quality standards, and district level mapping of hot spots of air pollution.
- (d) Study Tour on Innovative Technologies and Good Practices for Air Pollution Control for City Officials to the Republic of Korea, 18-21 September 2023: The study tour was jointly organized with ESCAP Subregional Office for East and North-East Asia for 10 city officials from Bangkok (Thailand), Dhaka (Bangladesh) and Gurugram (India). The Centre facilitated technical sessions and site visits to relevant organizations and air pollution control facilities in Incheon and Seoul, including: Incheon and Seoul

Metropolitan Councils; Environmental Satellite Monitoring Centre at National Institute of Environmental Research; Sudokwon Landfill site, Incheon and Resource recovery facility of Seoul Metropolitan Government in Gangnan; Transportation Pollution Research Center, Incheon; Korea Environment Corporation, Incheon; and Incheon Free Economic Zone Control Room. Key learnings for participants include the Republic of Korea's approach to monitor and control air pollution, through innovative strategies, urban planning techniques, city action plans, and advanced technologies for air pollution control. The participants learned about innovative technologies such as pollutant removal systems for gas turbines using catalysts, satellite-based monitoring of air pollutants, real-time automobile management system for tracking polluting vehicles, vehicle emission testing and treatment systems, landfill designs, waste management techniques.

- (e) Training Workshop for City Officials of Gurugram for Capacity Building on Air Pollution Control, 19 October 2023, Gurugram, India: The workshop was jointly organized with Gurugram Metropolitan Development Authority, India. The workshop was attended by over 125 city officials including field staff responsible for air pollution monitoring and control and waste management. The outcomes of the two city-level assessment studies were shared with participants including technical presentations on the status, measurement and actions, understanding dispersed sources of air pollution and role of urban local bodies in fighting air pollution in Gurugram city. Key lessons learned from the study tour to the Republic of Korea were also shared with city officials. The participating officials and stakeholders shared their perspectives, challenges and suggestions which would be valuable inputs to the assessment reports on Gurugram.
- (f) The KECF Air Pollution Control: A Multi-stakeholder Consultation Workshop, 26 October 2023, Bangkok, Thailand: The workshop was jointly organized with Thailand Institute of Scientific and Technological Research to discuss the outcomes of the city-level assessment studies conducted by the Centre and develop recommendations for strengthening city level action plans for the adoption of enabling mechanisms for innovative technologies. The meeting was attended by 30 participants including officials from Thailand government, Bangkok city, industries, academia and other relevant agencies and institutions. The participants shared their perspectives on air pollution issues, policies, strategy options, technologies, and good practices.
- (g) The KECF Air Pollution Control: A Training Workshop, 27 November 2023, Bangkok, Thailand: The workshop is jointly organized with the Thailand Institute of Scientific and Technological Research to increase the knowledge and understanding of Bangkok city officials and relevant stakeholders for the adoption and implementation of enabling mechanisms for innovative technologies in air pollution control, and to strengthen cooperation among participating organizations. The workshop covers key topics including review of air pollution problem in Bangkok, air quality forecast and assessment of air pollution reduction technologies for Bangkok city. The workshop brings together about 150 participants from district offices (Environment and Sanitation Section) and Department of Environment of Bangkok Metropolitan Administration, and relevant stakeholders such as policymakers, pollution control authorities, departments, and institutions involved with air pollution management and control.
- (h) Training Workshop on Air Pollution Control for City Officials, 25 Oct to 10 Nov 2023, Gurugram, India: Training Workshop comprising a series of sessions (six) across the administrative divisions of Gurugram city were jointly organized with Gurugram Metropolitan Development Authority

for capacity building of city officials on the innovative technologies and monitoring methods to control air pollution. The training sessions were attended by about 180 participants including officials, technical and field level staff of Gurugram city. The training sessions covered are topics related to air pollution including impacts, policies, technologies, actions plans and good practices.

(i) Stakeholder Consultation Workshop, November (last week), 2023, Dhaka, Bangladesh: The multistakeholder workshop is jointly organized with the Local Government Department of Government of Bangladesh, and Dhaka North and South City Corporations. The workshop aims at building capacities and discussing the outcomes of the city-level assessment studies conducted by the Centre and developing recommendations for strengthening city level action plans for the adoption of enabling mechanisms for innovative technologies. The participants including officials from national government, Dhaka North and South City Corporations, civil society and academic institutions will attend the workshop.

# D. Technology intelligence enhanced through knowledge products

- 21. The Centre brings out knowledge products including periodicals, reports and publications to enhance the knowledge and awareness of stakeholders from member states on relevant areas and issues covered by its work programme. The list of the Centre's periodicals and publications during the reporting period is provided as Annex II.
- 22. The Centre disseminated information on recent technological trends and developments through its online periodical *Asia-Pacific Tech Monitor* (https://www.apctt.org/techmonitor). The Asia-Pacific Tech monitor features articles on the latest technology trends and developments, technology policies, technology market, innovation management, technology transfer and innovative technologies.
- 23. The Centre published four issues of the *Asia-Pacific Tech Monitor* focussing on special themes such as: Affordable and sustainable clean energy technologies (Oct-Dec 2022), Technologies for decarbonizing transport systems (Jan-Mar 2023), Innovative technologies for disaster risk reduction Successful cases and good practices from Asia and the Pacific (Apr-Jun 2023), and Partnerships and regional collaborations: integrating climate finance with the technology mechanism for climate change (Jul-Sep 2023).
- 24. The Centre shared its online periodicals with readers from the member countries and outside the region as well. During the reporting period, the webversion of the *Asia-Pacific Tech Monitor* was distributed to 1989 stakeholders and e-subscribers from the member States. The Centre also disseminated the e-periodicals through social media platforms such as Twitter and Facebook.
- 25. The Centre provided substantive inputs to the "Compendium of multi-hazard early warning cooperation" prepared by ESCAP as a knowledge partner of G20 Working Group on Disaster Risk Reduction under Priority 1: Early warning for all. The compendium identifies county-specific challenges and good practices of cooperation arrangements to strengthen forecasting capabilities, early warning coverage, and systems to act on them.

## E. Support to inter-governmental meetings of ESCAP

- 26. **Seventy-ninth session of ESCAP, 15-19 May 2023, Bangkok, Thailand:** The Centre provided substantive support and submitted the report on the eighteenth session of its Governing Council, held in Bangkok, Thailand. The following are the outcomes of the 79<sup>th</sup> Commission session on the Centre's work programme:
- (a) The Commission endorsed the report of the Governing Council of the Asian and Pacific Centre for Transfer of Technology on its eighteenth session (ESCAP/79/15). (Decision 79/4)
- **(b)** The Commission took note of the overview of partnerships, extrabudgetary contributions and capacity development (ESCAP/79/22) and expressed its appreciation for the following contributions pledged by members and associate members for 2023. They are Bangladesh \$7,000, India \$870,000, Macao, China \$5,000, Malaysia 6,000; People's Republic of China \$27,000, and Republic of Korea \$22,431, Thailand \$15,000. (Decision 79/10)
- 27. Committee on Trade, Investment, Enterprise and Business Innovation, First session, 22–24 February 2023, Bangkok, Thailand: The Centre provided substantive support to the session, and presented the agenda item 6 document titled 'Promoting regional cooperation in new and emerging technologies to achieve sustainable development' (ESCAP/CTIEBI(1)/7). The following are the outcomes of the deliberations of agenda item 6.
- (a) The Committee Trade, Investment, Enterprise and Business Innovation, recognizing the importance of new and emerging technologies for the achievement of the Sustainable Development Goals, recommends that the secretariat enhance its provision of support to members and associate members through policy and analytical support, capacity-building and technical assistance, technology demonstration and market intelligence for the scaling up of innovations and adoption of technologies, as appropriate. It also calls for enhancing cooperation for the development, diffusion and scaling up of new and emerging technologies in the region. (Recommendation 6)

# F. Cooperation with international organizations and other partners

- 28. The Centre entered into a formal partnership with Climate Technology Centre and Network through Letter of Exchange to jointly support member States in the development and transfer of climate technologies for energy-efficient, low-carbon and climate-resilient development in the Asia-Pacific region.
- 29. During this reporting period, the Centre invited resource persons and speakers from key international organizations including Asian Infrastructure Investment Bank, Asian Institute of Technology, Economic Research Institute for ASEAN and East Asia, South Pacific Regional Environment Programme, and the United Nations' Ten-Member Group supporting Technology Facilitation Mechanism for SDGs for the regional consultations, expert group meetings, capacity-building activities such as conferences and workshops.

### G. Digital outreach

30. The Centre continued to extend its outreach to stakeholders, policy makers and institutions through digital tools (e.g., website, technology

databases), and social media including Facebook (facebook.com/UNAPCTT), Twitter (@UNAPCTT) / Twitter) and LinkedIn (Asian and Pacific Centre for Transfer of Technology/ LinkedIn). APCTT has posted over 50 social media posts with an engagement of over 2000 followers. The Centre developed its inaugural half yearly newsletter on activities and developments undertaken by APCTT disseminated among member States, UN agencies, partners institutions and stakeholders in the region. With the advisory and technical support from the Communications and Knowledge Management Section of ESCAP, the Centre's enhanced its brand, reputation, and outreach through adoption of new digital tools and media approaches.

# **Annex I** – List of Partner Institutions

- 1. Agency for Innovative Development, Ministry of Higher Education, Science and Innovations, Republic of Uzbekistan
- 2. Asia-Pacific Regional Innovation Knowledge Network for 4th Industrial Revolution Technologies, Guangzhou University, People's Republic of China
- 3. Asian Infrastructure Investment Bank, Beijing, China
- 4. Asian Institute of Technology, Thailand
- 5. Asian and Pacific Training Centre for Information and Communication Technology for Development, ESCAP
- 6. Atmospheric, Geophysical and Astronomical Services Administration, Department of Science and Technology, Philippines
- 7. Bangkok Metropolitan Administration
- 8. Centre for Atmospheric Sciences, Indian Institute of Technology Delhi, India
- 9. China Agricultural University
- 10. China-South Asia Technology Transfer Center, People's Republic of China
- 11. Climate Technology Centre & Network
- 12. Council of Regional Organizations of the Pacific
- 13. Department of Environment, Ministry of Environment Forest and Climate Change, Bangladesh
- 14. Department of International Cooperation, Ministry of Science and Technology, People's Republic of China
- 15. Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India
- 16. Dhaka North City Corporation, Bangladesh
- 17. Dhaka South City Corporation, Bangladesh
- 18. East China Normal University, China
- 19. Economic Research Institute for ASEAN and East Asia, Jakarta, Indonesia
- 20. ESCAP Subregional Office for East and North-East Asia
- 21. ESCAP Subregional Office for the Pacific
- 22. Faculty of Engineering, Naresuan University, Thailand
- 23. Gansu Natural Energy Research Institute, China
- 24. GeoInformatics and Space Technology Development Agency, Thailand
- 25. German Agency for International Cooperation
- 26. Government of the Cook Islands
- 27. Gurugram Metropolitan Development Authority, India
- 28. Hangzhou Fast and Network Technology Co., Ltd., China
- 29. India-China Technology Transfer Center, India
- 30. Indian Institute of Technology Mumbai, India
- 31. Industrial Technology Institute, Sri Lanka
- 32. Institute of Atmospheric Physics, Chinese Academy of Sciences, China
- 33. Institute of Karst Geology, Ministry of Natural Resources, China
- 34. Institute of Tibetan Plateau Research, Chinese Academy of Sciences
- 35. Local Government Division of Ministry of Local Government, Rural Development and Cooperatives, Government of Bangladesh
- 36. Ministry of Education, Science and Technology, Nepal
- 37. Ministry of Finance, Government of Tuvalu
- 38. Ministry for Foreign Affairs and Trade, Samoa
- 39. Ministry of Higher Education, Science, Research and Innovation, Thailand
- 40. Ministry of Natural Resources, China
- 41. Ministry of Natural Resources and Environment, Viet Nam
- 42. Ministry of Science and Technology, Government of Bangladesh
- 43. Ministry of Science and Technology, Government of Pakistan
- 44. Ministry of Science and Technology, Government of Viet Nam
- 45. Ministry of Technology, Sri Lanka
- 46. National Institute of Disaster Management, Ministry of Home Affairs, Government of India

- 47. National Institutes of Natural Sciences, Japan
- 48. National Metal and Materials Technology Center, National Science and Technology Development Agency, Thailand
- 49. National Science and Technology Development Agency, Thailand
- 50. Nepal Academy of Science and Technology, Nepal
- 51. Northwest Clean Air Agency, the United States
- 52. Pacific Islands Forum
- 53. Pacific Oceanological Institute, Far Eastern Branch Russian Academy of Sciences, Russian Federation
- 54. Pakistan Council of Scientific and Industrial Research, Pakistan
- 55. Philippine Council for Industry, Energy and Emerging Technology Research and Development, Department of Science and Technology, Philippines
- 56. Pollution Control Department, Thailand
- 57. Research Center for Carbon Neutrality in Agriculture and Rural Areas, College of Technology of the College of Engineering, China Agricultural University, China
- 58. Research Center for Environmental and Clean Technology, National Research and Innovation Agency, Indonesia
- 59. Secretariat of the Pacific Regional Environment Programme
- 60. Singapore National University
- 61. Sustainable Urban Development Section, ESCAP
- 62. Tencent Technology (Shenzhen) Co., Ltd, China
- 63. Thailand Institute of Scientific and Technological Research
- 64. Trade Investment and Innovation Division, ESCAP
- 65. United Nations' Ten-Member Group supporting Technology Facilitation Mechanism for SDGs
- 66. United Nations Satellite Centre
- 67. University of Science and Technology, Republic of Korea
- 68. Vietnam Clean Air Partnership
- 69. WAYTOUS, China
- 70. World Agroforestry Centre, Kenya
- 71. Yunnan Province Science and Technology Department, China

# $Annex \ II-List \ of \ Publications \ of \ the \ Centre \ (December \ 2022-November \ 2023)$

Publication title	Focus area	Periodicity	Target audience
Asia-Pacific Tech Monitor	Affordable and sustainable clean energy technologies (Oct-Dec 2022)	Quarterly	Science technology and innovation policymakers, small and medium enterprises, research and development institutions, academia, technology transfer intermediaries
	Technologies for decarbonizing transport systems (Jan-Mar 2023) in support to the theme of the 79 <sup>th</sup> ESCAP Commission Session held in May 2023	Quarterly	
	Innovative technologies for disaster risk reduction – successful cases and good practices from Asia and the Pacific (Apr- Jun 2023)	Quarterly	
	Partnerships and regional collaborations: integrating climate finance with the technology mechanism for climate change (Jul-Sep 2023) [In press]	Quarterly	
Compendium of good cases of innovative technologies for air pollutions control in cities	Air pollution control	One-time report	Policymakers, pollution control authorities/departments, city municipal authorities and the private sector
City-level assessment reports for Dhaka, Bangladesh	Air pollution control	One-time publication	Policymakers, pollution control authorities/departments, city municipal authorities and the private sector
City-level assessment reports for Gurugram, India	Air pollution control	One-time reports	Policymakers, pollution control authorities/departments, city municipal authorities and the private sector
City-level assessment reports for Bangkok, Thailand	Air pollution control		Policymakers, pollution control authorities/departments, city municipal authorities and the private sector
Comparative study report between the selected cities	Air pollution control		Policymakers, pollution control authorities/departments, city municipal authorities and the private sector