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Activities of the Asian and Pacific Centre for Transfer of Technology during the period from December 2023 to November 2024

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Note by the secretariat

I. Introduction

1. The Asian and Pacific Centre for Transfer of Technology promotes an enabling environment for innovation, diffusion and transfer of technologies in the member States for achieving the Sustainable Development Goals in the Asia- Pacific region.

2. As per the revised statute adopted by the 72nd session of ESCAP held in 2016[1], the Centre assists the members and associate members of ESCAP through strengthening their capabilities to develop and manage national innovation systems; develop, transfer, adapt and apply technology; improve the terms of transfer of technology; and identify and promote the development and transfer of technologies relevant to the region.

3. The activities of the Centre contribute towards achieving the Sustainable Development Goals in particular 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 12 (Responsible Consumption and Production), Goal 13 (Take urgent action to combat climate change and its

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[1] 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.

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

4. The Centre's activities are aligned with 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 Sustainable Development Goals'. The Centre's strategies include

(a) Technology innovation and scale-up of innovative and emerging technologies;

(b) Enabling policies and linkages (including with technology & financing mechanisms); and

(c) Enhance cross-border cooperation and networking for technology transfer.

5. This report covers the activities carried out by the Centre since the Nineteenth session of the Governing Council held in December 2023 till November 2024 and presents the current administrative and 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 Nineteenth session of the Governing Council held on 6-7 December 2023.

6. During the reporting period, the Centre delivered its activities under the following modalities as per the Strategic Plan (2023-2027).

(a) Capacity building of stakeholders in innovation, adoption and scaling-up of emerging technologies with focus on climate resilient infrastructure, municipal solid waste management, air pollution control, green hydrogen and energy storage, and innovations for carbon neutrality, technology cooperation and market assessment;

(b) Enhancing cross-border cooperation and networking for technology transfer through technology facilitation and partnerships focussing on digital public infrastructure, digital finance technologies, digital platforms on climate technologies, water-energy-food nexus, and digital technologies and data for climate-resilient development; and

(c) Knowledge management for enhancing technology intelligence through production and dissemination of knowledge products on digital innovations, green hydrogen technologies, artificial intelligence for climate resilience, climate resilience infrastructure, and air pollution control technologies among others.

7. The Centre delivered and actively contributed to 21 demand-driven capacity building and regional cooperation activities. The Centre delivered

joint activities with partner institutions from India, Islamic Republic of Iran, Philippines, the Republic of Korea, and Thailand. The activities were organized in cooperation with 73 partner institutions and included regional forums, 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 the activities is provided as Annex I.

8. The Centre's activities benefitted over 1000 participants comprising government policymakers, representatives from public research, technology promotion and transfer institutions, private sector enterprises, academia, city authorities, technology-based start-ups and financial institutions.

9. The Centre benefited from participation of experts and participants from 18 member States namely Bangladesh, Cambodia, China, India, Indonesia, Islamic Republic of Iran, Malayasia, Nepal, Philippines, Pakistan, the Republic of Korea, Russian Federation, Sri Lanka, Switzerland, Thailand, Uzbekistan, Viet Nam and the United States of America. The experts shared their knowledge, experience, and best practices with the target participants. The activities also benefited from participation of experts from international organizations including Asian Development Bank, Climate Technology Centre and Network, Coalition for Disaster Resilient Infrastructure, United States Agency for International Development, United Nations Office for South-South Cooperation, World Economic Forum, and World Intellectual Property Organization.

10. The Centre launched a Community of Practice on Climate Technologies which would enhance access to critical knowledge and foster innovation, transfer and adoption of these technologies in the region. Under the ESCAP Visiting Fellows Programme, the Centre created fellowship opportunities for young policymakers to contribute towards strengthening national innovation systems and supporting technology development and transfer in the Asia-Pacific region.

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, innovative and emerging technologies including the fourth industrial revolution technologies, and regional technology cooperation and transfer. The 4 special issues of Asia-Pacific Tech Monitor focused on themes such as: (1) Innovative technologies for air pollution control, (2) Digital innovations for sustainable development in Asia and the Pacific, (3) Green hydrogen technologies: opportunities and challenges for the Asia-Pacific region, and (4) Artificial Intelligence for climate change mitigation and adaptation. The Centre disseminated its knowledge products on innovative technologies for city air pollution control (Annex II).

12. The Centre continued to receive voluntary contributions from the 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 2023 – November 2024)

A. Capacity of stakeholders in adoption and scale up of innovative and emerging technologies enhanced

13. The Centre organized 8 capacity building activities to enhance the technical knowledge and capacity of stakeholders (e.g., innovators, governments, institutions and industries) on innovation, adoption and scaling up of innovative and emerging technologies in climate resilient infrastructure, municipal solid waste management, air pollution control, green hydrogen and energy storage. The Centre also contributed to 4 capacity building events organized by external organizations and partners.

a) **Stakeholder Meeting between the Centre and Technology Agencies of Thailand for Promoting Regional Cooperation, 21 February 2024, Bangkok, Thailand**: The meeting was jointly organized with the Ministry of Higher Education, Science, Research and Innovation of the Government of Thailand, and Thailand Institute of Scientific and Technological Research. It provided a platform to understand the priorities, identify potential areas of collaboration, and explore strategies for regional cooperation between key technology and innovation agencies of Thailand and other member States. The event brought together 19 participants including senior policymakers and experts representing 7 key science technology and innovation related ministries, departments and national agencies and universities of Thailand. The deliberations highlighted the importance of cross-border collaboration and capacity building in sustainable municipal solid waste management, sustainable technology solutions for rural areas, youth, entrepreneurs and innovative startups, space technology value chain, technology commercialization (e.g., intellectual property protection, technology licensing and spin-offs), precision farming, smart city, clean energy (e.g., battery, hydrogen), health and wellness, and space technology applications (e.g., drones).

b) **International Innovation Forum on Solidarity and Cooperation for Carbon Neutrality, 16-18 April 2024, Jeju Island, the Republic of Korea**: The forum was jointly organized with the Asian Society for Innovation and Policy, Korea Environment Institute, National Institute of Green Technology of the Republic of Korea, and Korea Institute of Civil Engineering and Building Technology, to exchange experiences and knowledge on climate technology and innovation. The Centre contributed to the forum by delivering a lead presentation titled "Innovative technologies for achieving carbon neutrality in the Asia-Pacific" focussing on energy transition,

low-carbon mobility, decarbonization of industry, and the importance of regional technology cooperation in Asia and the Pacific. The event brought together 29 participants including international experts from Indonesia, the Republic of Korea, Uzbekistan and Viet Nam deliberated on policies, incentives, innovations, and regional cooperation for promoting carbon neutrality, circular economy, and climate adaptation.

c) **Workshop on Sustainable Municipal Solid Waste Management within the Circular Economy Concept, 25-26 April 2024, Bangkok and Saraburi Province of Thailand**: The workshop was jointly organized with the Ministry of Higher Education, Science, Research and Innovation of Government of Thailand, and Thailand Institute of Scientific and Technological Research. It aimed at strengthening regional cooperation among members States, sharing successful models of sustainable municipal solid waste management, with focus on 'Tan Diao Model'. 28 participants from 8 countries (namely Bangladesh, China, India, Islamic Republic of Iran, Nepal, Pakistan, Russian Federation, Thailand) attended the workshop. They represented government bodies, local communities, academic institutes, entrepreneurs, small and medium enterprises, and civil society organizations. Policymakers and experts shared experience, case studies and good practices in waste-to-wealth and waste-to-energy technologies, technology transfer and capacity building of stakeholders. A field visit was also organized to a municipal solid waste management demonstration plant in Saraburi Province of Thailand. Key recommendations include: fostering multistakeholder collaboration for effective waste management; developing innovative solutions and technologies tailored to the needs of cities; managing organic waste across the value chain (e.g., generation, collection and transportation, recovery and disposal); and developing online platforms for the recycling of waste materials.

d) **Demonstration of Solar Bus and Interactive Session, 7 June 2024, New Delhi, India**: The Centre organized an interactive session with a renowned Professor from the Department of Energy Science and Engineering at Indian Institute of Technology Bombay, India on energy efficiency and solar power. He demonstrated his "Solar Bus", in which he travels across India and delivered a presentation on the importance of climate change prevention, energy conservation and utilization of solar energy. The presentation was attended by representatives of the Department of Scientific and Industrial Research of Government of India, ESCAP Subregional Office for South and South-West Asia and the Centre.

e) **Regional Forum on Innovative and Emerging Technologies to Address Climate Change, 3-4 September 2024, Manila, Philippines**: The forum was jointly organized with the Technology Application and Promotion Institute of the Department of Science and Technology, Government of Philippines. It provided a platform for knowledge sharing and collaboration among member States in addressing the pressing issues of climate change using innovative and emerging technologies. The forum was attended by 82 participants including government officials and policymakers, industry and business representatives, climate change experts and consultants, scientists and

researchers from various institutions and organizations. The forum deliberated on the role of innovative technologies for addressing climate change, policies and frameworks, technology transfer and collaboration, financing and investment, and creating a roadmap for future collaboration and action for climate change mitigation and adaptation. An innovation exhibition was organized with participation of nine innovators from the Philippines showcasing their innovations and technologies to address climate change. The discussions highlighted the need for collective action, strategic innovation, and collaboration in fighting the climate crisis and building a sustainable and resilient future for the Philippines and the region. Key recommendations include: strengthening of partnerships among government, academia and private sector; ensuring proper funding channels for climate technologies; and continuing education and awareness initiatives on climate change impacts and solutions.

f) **Workshop on Strategic Approaches to Assessing Market Potential for Technology Innovations, 5 September 2024, Manila, Philippines**: The workshop was jointly organized with the Technology Application and Promotion Institute of the Department of Science and Technology, Government of Philippines. It provided a platform for enhancing knowledge and awareness of stakeholders on strategic approaches to assessing market potential for technology innovations, focusing on methodologies, tools, and best practices. The participants deliberated on market potential assessment, market research techniques and trend analysis for technology innovations. The Centre showcased the role of its flagship periodical Asia-Pacific Tech Monitor in providing market intelligence for innovations and technology transfer to stakeholders in the region. The workshop brought together 63 participants from the Philippines including government officials and policymakers, industry and business representatives, research and development institutes, technology developers and innovators from the region.

g) **Technology and Innovation Conclave 1.0, 24-26 September 2024, New Delhi, India**: The conclave was jointly organized with the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India. It provided a platform for stakeholders from member States to exchange expereinces, discuss challenges and opportunities for start-ups, and review policies and strategies related to the innovative technologies in the Asia-Pacific region, with a focus on energy storage and green hydrogen technologies. The event brought together 88 participants from 11 member States namely Bangladesh, China, India, Islamic Republic of Iran, Malaysia, Nepal, the Philippines, the Republic of Korea, Russian Federation, Thailand, and Viet Nam. The participants included policymakers, technical experts, researchers, and representatives from the private sector. Two study visits were organized for international participants to premiere research and development institutions of India namely Institute of Genomics and Integrative Biology and National Physical Laboratory. Key recommendations from the conclave include: adopting supportive policy roadmaps and regulatory frameworks; enhancing research and development for innovations with scale-

up, testing and validation; fostering multistakeholder partnerships between government, private sector, research and development institutions to promote innovation; provision of subsidies for technology development and commercialization of green hydrogen; scaling up green hydrogen technologies, increasing fuel stations, storage facilities and pipelines, and securing domestic supply; and economic-environmental modeling of energy storage applications.

An international exhibition featuring technological innovations from 14 young innovators from 10 member States (including India) was hosted during the Technological and Innovation Conclave 1.0.

h) **Regional Knowledge Sharing Workshop on Innovative Technologies and City Action Plans, 21 December 2023 (virtual)**: The workshop was organized for sharing the findings, experiences, and learnings of the Centre's project titled "Enhanced capabilities to adopt innovative technologies for city air pollution control in select countries of the Asia-Pacific" with policymakers and stakeholders from member States for wider dissemination and adoption. The project was supported by the Korea-ESCAP Cooperation Fund. The event brought together 52 participants from 25 member States including Bangladesh, India, Indonesia, Philippines, Thailand and Viet Nam. The workshop deliberated on the key learnings from various project activities and outcomes such as the compendium of technologies for air pollution control, city-level assessments in Dhaka, Gurugram and Bangkok, comparative assessment between the target cities, technical and stakeholder consultations, study tour and capacity building workshops. The workshop recommended exploring opportunities to develop a second phase of this project to provide additional support to the target cities, and strengthening cross-border technology cooperation and transfer for air pollution control between stakeholders across member States.

14. The Centre collaborated/participated in the following events of external organizations and partners.

(a) **37th Khwarizmi International Award and Khwarizmi International Conference on Science and Technology, 25-27 February 2024, Tehran, Islamic Republic of Iran:** In collaboration with the Iranian Research Organization for Science and Technology, the Centre supported the 37th Khwarizmi International Award and Khwarizmi International Conference on Science and Technology, by providing commendation certificates to three Laureates for their innovations in ultra-low NOx burner, wind turbine and green catalysts, a keynote address at the conference, and a message for the event newsletter. During the international conference, 38 speakers from the Islamic Republic of Iran, Germany, South Africa, Türkiye, Egypt, India, Pakistan, and the United States of America delivered specialized lectures. Through a keynote address, the Centre shared its experience in strengthening regional technology cooperation in Asia and the Pacific. An exhibition and specialized workshops were held during the event, showcasing the achievements of the Laureates and knowledge-based companies. Over 390

participants including researchers, industrialists, faculty members, and students attended the conference.

(b) **Climate Conscious Cities: New approaches to smart city strategy, digital transformation and Artificial Intelligence for climate planning and action, 28 August 2024** (virtual): The Centre moderated this webinar organized by Environment and Development Division of ESCAP. The participants included experts from Shanghai University, China; Khon Kaen Municipal Corporation, Thailand; and Digital Futures Lab in New Delhi, India

(c) **World Telecommunication Standardization Assembly, 15-24 October 2024, New Delhi, India:** The Centre participated in the World Telecommunication Standardization Assembly organized by the International Telecommunication Union. The Centre contributed to this event by setting up an exhibition booth showcasing its efforts in technology transfer, innovation, climate-resilient infrastructure, climate technologies, fourth industrial revolution technologies, digital platforms, and artificial intelligence. The Assembly, coinciding with the United Nations Day celebrations, offered a strategic opportunity for the Centre to present its role, initiatives and plans in promoting regional cooperation for the adoption and transfer of innovative technologies to support Sustainable Development Goals across the Asia-Pacific region.

(d) **Eighth South and South-West Asia Subregional Forum on Sustainable Development, 12-14 November 2024, New Delhi, India:** The Centre actively participated and contributed to this forum co-hosted by the National Institution for Transforming India of Government of India, and ESCAP South and South-West Asia Office in collaboration with the UN Resident Coordinator and the Research and Information System for Developing Countries, India. The forum offered opportunity among multiple stakeholders (e.g., government officials, civil society, think-tanks, private sector, experts and development partners) to exchange information and reflections on Sustainable Development Goals implementation efforts in countries and to draw common priorities and issues across the South and South-West Asia subregion. The Centre moderated a session on Goal 14 (Life below water) progress review and compiled and presented the outcomes of the discussion in the forum. The final outcomes and recommendations from the forum will feed into the regional and global processes.

(e) **Tengchong Scientists Forum, 6-8 December 2024, Tengchong, China:** The Centre has collaborated with Yunnan Academy of Scientific and Technical Information, China to participate in this international forum. The forum will provide a platform to exchange ideas on technological innovation and industrial development, thereby promoting international scientific and technological cooperation, as well as sustainable economic and social development. The target participants include scientists, academicians, young scientists, innovators, entrepreneurs, and financiers. The Centre will share its regional perspectives and experience with participants from the international scientific and innovation community.

B. Cross-border cooperation and networking for technology transfer enhanced

15. The Centre facilitated nine activities including conferences, regional consultations and expert group meetings to strengthen cross-border technology cooperation mechanisms, and capacity of government of officials to engage in regional cooperation for transfer of technology. The following activities were carried out and/or contributed by the Centre.

(a) **Harnessing Technology, Data and Capacity for Climate Resilient Development", 20 February 2024 (virtual) (side event of 11th APFSD):** The side event was jointly organized with four regional institutions of ESCAP, namely Asian and Pacific Centre for the Development of Disaster Information Management, Asian and Pacific Training Centre for Information and Communication Technology for Development, Centre for Sustainable Agricultural Mechanization, and Statistical Institute for Asia and the Pacific. Speakers from China, India, the Pacific and ESCAP provided insights on integrating data and new technologies into climate resilient agricultural mechanization, harnessing artificial intelligence and other fourth industrial revolution technologies for climate resilience, integrating data and statistics into climate policies and actionable insights, and human and institutional capacity building for a deeper understanding and more effective action against climate change. The event was attended by 23 participants from member States. Key recommendations include: subsidizing the purchase of smart agricultural machinery; using artificial intelligence and machine learning to convert local language to English and vice versa for farmers; providing capacity building support to countries through national statistical offices in collecting, analyzing and utilizing the data to help them better manage their policy frameworks; conducting country-level institutional capacity needs assessments; and commitment of international support to Pacific countries for meeting their capacity building needs to address climate change.

(b) **Expert Group Meeting on Community of Practice on Climate Technologies, 3 April 2024 (virtual):** As a run-up to the launch of the Community of Practice, the Centre organized an expert group meeting to seek inputs and advice on the design and functions of the proposed Community of Practice. The meeting gathered expertise and experiences from member States and international organizations regarding knowledge sharing platforms and good practices in promoting the adoption of climate technologies. The experts discussed examples of communities of practice from member States, as well as the challenges and strategies for stakeholder engagement. The meeting was attended by 34 participants including policymakers, technical experts and relevant stakeholders from 12 member States namely Bangladesh, Cambodia, India, Indonesia, Nepal, Philippines, the Republic of Korea, Russian Federation, Sri Lanka, Switzerland, Thailand, and the United States of America. Key recommendations are: ensuring participation of multistakeholder organizations such as government, non-governmental organizations, academic institutes, private sector, UN entities, bilateral and

multilateral donors; building a robust communication platform for the Community of Practice; training and capacity building; fostering partnerships and networks; tracking and monitoring of activities/performances, resources; partnering with professional associations for sustainability; and addressing intellectual property issues through prior agreement among the community members.

(c) **Digital Public Infrastructure for Accelerating Implementation of SDGs in Asia-Pacific, 22 April 2024 (side event of CS80):** The side event was jointly organized with the Embassy of India in Thailand and Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India during the eightieth session of ESCAP. The session deliberated on mature and emerging digital public infrastructure systems in the region, and the need to scale up these systems using innovative digital technologies, enabling policy and regulatory frameworks, capacity building, technical assistance, and financing. The session was attended by 32 participants including policymakers, government officials and delegates from national agencies, research organizations and enterprises engaged in the development and deployment of digital technologies from ESCAP member States. Speakers from India, Bangladesh, United States Agency for International Development, International Telecommunication Union, and private sector shared experience and good practices on innovative models and tools of inclusive public digital infrastructure. Key recommendations include: strengthening cross-border collaboration through knowledge-sharing, cross-learning and collective decision-making related to technology choice, cyber-security, interoperability, and data portability; developing robust policies and regulations to safeguard data privacy and ensure security of digital transactions and interactions; increasing investment in infrastructure improvements and digital literacy programmes; strengthening legal frameworks to ensure data privacy and cybersecurity defenses; establishing interoperable standards and protocols for seamless integration of digital infrastructure components and platforms; and fostering public-private partnerships.

(d) **Digital Platforms for Knowledge Sharing and Cooperation in Climate Technologies, 23 April 2024 (virtual) (side event of CS80):** The Centre organized this side event during the eightieth session of ESCAP. The session brought together 18 participants from nine member States (namely Bangladesh, China, India, Islamic Republic of Iran, Nepal, the Republic of Korea, Russian Federation, Sri Lanka and Thailand) and included policymakers and government officials, members of national research agencies, and enterprises engaged in knowledge management. Policymakers and experts from India, Nepal, the Republic of Korea, Russian Federation, the United States of America, World Intellectual Property Organization and private sector shared experiences and models of digital platforms for knowledge sharing and capacity building. The meeting noted the transformative potential of digital platforms in bridging knowledge gaps, connecting technology providers with users and promoting collaborative endeavours in the Asia-Pacific region. During the side event, the Centre launched its Community of Practice on

Climate Technologies which is dedicated to addressing the multifaceted challenges posed by climate change through technology solutions in the Asia-Pacific region.

(e) **Digital Financial Technologies for Sustainable Development in the Asia Pacific, 24 April 2024 (side event of CS80):** The session was jointly organized with the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India during the eightieth session of ESCAP. It provided a platform to member States for sharing national perspectives and experiences on the existing digital public finance platforms using innovative digital tools and systems. The session helped to enhance understanding of the technological dimensions of digital inclusion; exchange learnings and good lessons on the developments, challenges, and opportunities for digital financial innovations and technologies; and discuss potential opportunities for regional technology cooperation in the field of inclusive digital finance in the region. Policymakers and experts from Bangladesh, India and Russian Federation shared their country experience, initiatives and case studies on digital financial tools and platforms. The event was attended by 20 participants from 6 member States (namely China, India, the Republic of Korea, Nepal, Thailand, Russian Federation) including policymakers, government officials and representatives from national agencies, research organizations and enterprises engaged in the digital finance sector. Key recommendations include: providing the infrastructure for banking and payments; setting consumer protection rules; enabling market-based solutions with focus on the needs of the poor; planning digital finance based on local-level characteristics including demographics, penetration of digital infrastructure, digital literacy and gender inclusion; promoting cross-border interoperability, knowledge-sharing, capacity building and collaboration.

(f) **Digital Innovations for Enhancing Sustainable Local Livelihoods in the Mekong Subregion based on the Water-Energy-Food Nexus approach, 24 April 2024 (side event of CS80):** The side event was jointly organized with the Embassy of the Republic of Korea in Thailand, Science and Technology Policy Institute of the Republic of Korea, the United States Agency for International Development, and United Nations Office for South-South Cooperation during the eightieth session of ESCAP. The event facilitated sharing of innovative digital solutions for better access to and management of water, energy and food for vulnerable communities, and discussed the critical role of digital innovations as an effective means in the Water-Energy-Food Nexus application in line with the 2030 Agenda for Sustainable Development. Ideas and experiences along with good practices, lessons learnt, and success stories were exchanged during the deliberation. Experts from the Republic of Korea, Thailand, UN Office for South-South Cooperation, United States Agency for International Development / Regional Development Mission for Asia, International Water Management Institute, and Water Energy for Food participated in the deliberations. The session brought together 17 participants from member States attending the Commission session.

(g) **Conclave on Policy Deliberations for Strengthening South-South Cooperation, 11 September 2024 (virtual):** As a prelude to the Science Summit at the 79th session of the UN General Assembly, this conclave was jointly organized with the Council of Scientific and Industrial Research, and National Institute of Science, Technology and Development Studies of India, and the World Association of Industrial and Technological Research Organizations. The session deliberated on strengthening South-South cooperation with a focus on enabling policies to enhance inclusivity in the domain of science, technology and innovation. Over 40 participants including policymakers and experts from India, Indonesia, Jordan, South Africa, the United States of America and international organizations discussed issues and challenges related to responsible governance with focus on Sustainable Development Goals 4, 5 and 10, funding mechanisms and capacity-building for research and development cooperation. The Centre shared its regional experience to strengthen cross-border technology cooperation among the participating countries. Key recommendations include: designing responsible research and innovation systems to address inequality, poverty and gender disparity; sharing of resources among countries; developing national open science platforms; promoting collaborative research; enabling women's participation in science technology engineering and mathematics education though scholarships, fellowships, incentives, academic exchange programmes, investment; and technical skills and capacity building.

(h) **Strengthening South-South Cooperation for achieving SDGs, 19 September 2024 (virtual) (side event of SS UNGA79)** In conjunction with the Science Summit at the 79th session of the UN General Assembly, this session was jointly organized with the Council of Scientific and Industrial Research of India, and the World Association of Industrial and Technological Research Organizations. The session deliberated on strengthening South-South cooperation for achieving the Sustainable Development Goals 5, 8, 10 and 17. Experts from Dominican Republic, Ethiopia, India, Indonesia, Nepal, Nigeria, Thailand and international organizations deliberated on the opportunities and challenges related to responsible governance for research and innovation in science, inclusivity of women in science technology and innovation, and regional technology cooperation for achieving Sustainable Development Goals in Asia and the Pacific. The Centre shared its perspectives on the importance of women in decision-making, research, innovation, and entrepreneurship, and presented its experience and good practices in strengthening regional technology cooperation in the region.

(i) **International Conference on Technologies for Strengthening Climate Resilient Infrastructure, 26 November 2024, Tehran, Islamic Republic of Iran:** This international conference will be organized to enhance knowledge and awareness about technologies and best practices in climate-resilient infrastructure, and explore innovative strategies for collaboration among governments, academia, non-governmental organizations to integrate climate resilience into infrastructure planning and investment. The conference will be jointly organized with the Iranian Research Organization for Science

and Technology, Ministry of Science, Research and Technology of the Government of Islamic Republic of Iran. The conference is expected to bring 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 will be 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 organizations. The conference will deliberate on climate resilience landscape, predictive modelling, early warning and preparedness for climate resilient infrastructure, technologies for energy resilience and urban planning. A dedicated session of the conference will focus on living labs approach for integrating technologies for climate resilience, and regional cooperation.

16. The Centre launched a 'Community of Practice on Climate Technologies' at the eightieth session of ESCAP. The aim is to foster networking and cross-border collaboration among stakeholders in the member States on climate technologies to address climate change in the Asia-Pacific region. By leveraging the region's rich innovation capacities and good practices, the platform would support enhancing access to knowledge, fostering innovation, transfer and adoption of climate technologies. The Community will connect professionals from government and other stakeholders including research and development institutions, private sector, civil society engaged in delivering technological solutions to climate change.

17. The Centre also created fellowship opportunities for technology transfer as part of the ESCAP Visiting Fellows Programme. The Centre invited young policymakers from member States to be nominated as Visiting Fellows to work in areas related to adoption, diffusion and transfer of emerging technologies for sustainable development, including understanding the policy landscape and developing strategies to promote technology cooperation in the region. The Programme is aimed to promote sharing of experiences across the region through use of national expertise from the beneficiary countries and building of knowledge networks to facilitate continued exchange and assistance and promote sustainability.

C. Technology intelligence enhanced through knowledge management

18. The Centre carried out knowledge management activities through developing and disseminating knowledge products such as periodicals, study reports and publications to increase access and cross-border sharing of regional knowledge on innovative technologies. The list of the Centre's periodicals and publications during the reporting period is provided as Annex II.

19. The Centre disseminated information on recent technological trends and developments through its online periodical *Asia-Pacific Tech Monitor* (https://apctt.org/techmonitor). The Asia-Pacific Tech Monitor features articles on the latest technology trends and developments, innovation and technology

policies, technology market, innovation management, technology transfer and innovative technologies.

20. The Centre published four issues of the *Asia-Pacific Tech Monitor* focusing on special themes such as: Innovative technologies for air pollution control (Oct-Dec 2023), Digital Innovations for Sustainable Development in Asia and the Pacific (Jan-Mar 2024), Green hydrogen technologies: opportunities and challenges for the Asia pacific region (Apr-Jun 2024), and Artificial Intelligence for climate change mitigation and adaptation (Jul-Sep 2024).

21. The Centre shared its online periodicals with readers from the member States and outside the region as well. During the reporting period, the web-version of the *Asia-Pacific Tech Monitor* was distributed to 1946 stakeholders and e-subscribers from the member States. The Centre also disseminated the e-periodicals through social media platforms such as X and Facebook.

22. The Centre collaborated with the Trade Investment and Innovation Division of ESCAP for bringing out a joint research paper on technology transfer, regulatory and intellectual property related issues and solutions to improve access to essential health products. The study was conducted towards supporting of ESCAP's efforts in facilitating regional integration and cooperation to promote affordable and equitable access to vaccines, diagnostics and therapeutics in Asia and the Pacific.

23. The Centre disseminated the knowledge products on air pollution control such as: 1) A compendium of technologies for air pollution control, and six city level assessment reports on 1) technological interventions and gaps in air pollution control, 2) city action plans and technology adoption strategies in Dhaka, Gurugram and Bangkok, and 3) comparative analysis of technology gaps and city action plans and policies in the three target cities.

24. The Centre regularly publishes a quarterly newsletter disseminating the latest news and achievements.

D. Support to inter-governmental meetings of ESCAP

25. **Eightieth session of ESCAP, 22-26 April 2024, Bangkok, Thailand:** The Centre provided substantive support and submitted the report on the nineteenth session of its Governing Council, held in Tashkent, Uzbekistan. The following are the outcomes of the 80th 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/80/15).

(b) Several representatives noted the importance of capacity-building and technology transfer for sustainable development, including in addressing key societal issues, such as climate change and waste management.

(c) Several representatives expressed support for the Asian and Pacific Centre for Transfer of Technology. They expressed their appreciation to the Centre for its contributions to strengthening regional cooperation in new and emerging technologies, advancing technology transfer, supporting capacity building and fostering cooperation on issues relating to technology. They also expressed their appreciation to the Centre for its commitment to nurturing diverse forms of collaboration in the field of science, technology and innovation to achieve the Sustainable Development Goals in the Asia-Pacific region. Representatives also encouraged member States to play a more active role and to collaborate in the activities of the Centre.

(d) The Commission took note of the recommendations contained in the note by the secretariat on the evaluation of the Asian and Pacific Centre for Transfer of Technology (ESCAP/80/24) and of the information document on the same topic (ESCAP/80/INF/2).

(e) The evaluation report ranked the Centre's performance as satisfactory to highly satisfactory in all six indicators including impact, effectiveness, relevance, efficiency, sustainability, and gender.

(f) The report offers five action-oriented recommendations for the Centre.

i. Develop novel and creative strategies to secure funding, develop partnerships, and prioritize implementation of the initiatives identified in the Strategic Plan 2023-2027.

ii. Give top priority to developing and implementing online capacity building courses on technology transfer and commercialization as well as in selected areas identified in the Centre's Strategic Plan (2023-2027).

iii. Develop and implement a multi-year, donor-funded project comprising, among others, of a series of knowledge-sharing workshops in each of the Asia-Pacific subregions on research and development and innovation to address social and technological issues related to energy transition and renewable technologies, climate resilient infrastructure in cities, and digital and fourth industrial revolution technologies.

iv. Exert greater effort and put more emphasis on enhancing the visibility of the Centre.

v. Consider possible amendment of the Centre's statute by proposing to delete the phrase "no fewer than" from the statute to make GC membership uniform among all regional institutes.

(g) The representative of India noted the evaluation findings that underscored the contribution the Centre was making in some member States in the areas of science, technology and innovation; technology cooperation; and the technology transfer ecosystem. The representative also stressed that, as the host country of the Centre, the Government of India remained committed to supporting the Centre in the implementation of the recommendations contained in the evaluation.

(h) The representative of the Russian Federation emphasized the role of the Centre in fostering digital cooperation. On behalf of her government, which is a member of the Governing Council of the Centre, she expressed appreciation to the Centre for its work.[2]

26. **Eleventh Asia Pacific Forum on Sustainable Development, 20-23 February 2024, Bangkok, Thailand:** The Centre attended and supported the the Eleventh Asia-Pacific Forum on Sustainable Development by jointly organizing a side event entitled "Harnessing technology, data and capacity for climate resilient development" on 20 February 2024, with other regional institutions of ESCAP.

E. Cooperation with international organizations and other partners

27. During this reporting period, the Centre invited resource persons and speakers from key international organizations to its regional forums, consultations, expert group meetings, and capacity-building events such as conferences and workshops. The international organizations include Asian Development Bank, Climate Technology Centre and Network, Coalition for Disaster Resilient Infrastructure, United States Agency for International Development, United Nations Office for South-South Cooperation, World Economic Forum, and World Intellectual Property Organization. In addition, the Centre collaborated with many key institutions from member States (Annex I).

28. As part of the United Nations Country Team India, the Centre collaborated with International Telecommunication Union to participate in the exhibition at World Telecommunication Standardization Assembly held from 15 to 24 October 2024, New Delhi, India. The Centre showcased its regional experience and outcomes with participants of the event.

29. The Centre held high level consultations with its national focal point the Department of Scientific and Industrial Research of the Ministry of Science

[2] Account of Proceedings (ESCAP/80/28). https://www.unescap.org/sites/default/d8files/event-documents/ESCAP_80_28_2400222E_2nd.pdf

and Technology, Government of India during the official visit of Executive Secretary of ESCAP to New Delhi on 30 August 2024.

30. The Centre in collaboration with the Department of Scientific and Industrial Research of Government of India hosted an exhibition on the Foundation Day of the Council for Scientific and Industrial Research at New Delhi on 26 September 2024. The exhibition highlighted the projects undertaken by the Centre, the strategic plan, the fellowship program, flagship publications, and recent releases.

F. Internship programme

31. Internships have been an important mechanism for engaging young minds in the Centre's focus areas. During the reporting period, five interns worked with the Centre on topics such as urban heat reduction technologies, green hydrogen, Artificial Intelligence for climate change, transfer of technology capacity building modules, and the community of practice on climate technologies. Additionally, in partnership with UN Volunteers. the Kalinga Institute of Industrial Technology in India will be placing two fully funded interns for six months.

G. Digital outreach

32. 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), X (X.com/UNAPCTT) and LinkedIn Asian and Pacific Centre for Transfer of Technology | LinkedIn). The Centre has posted 133 social media posts with an engagement of 2276 followers. The Centre disseminated two issues of its half yearly newsletter on activities and developments among member States, UN agencies, partners institutions and stakeholders in the region.

III. Administrative and financial status

33. The Centre's capacity-building programmes and activities as well as institutional support are funded through voluntary contributions received from ESCAP member States and associate members.

34. The Government of India, as the host of the Centre, provides an annual contribution for institutional support equivalent to $870,000. This fund is used for the salaries, entitlements, and benefits of internationally and locally recruited personnel, costs including utility services, editing and printing of the Centre's periodicals, and operation and maintenance costs.

35. The Government of India also provides in-kind contributions, in the form of office premises for the Centre, and for the maintenance and upgradation of the premises provided as per the Host Country Agreement.

36. The Centre received contributions from Bangladesh, People's Republic of China, India, Macao China, Malaysia, Pakistan, the Philippines, the Republic of Korea and Thailand during the ten- month period ending on 31 October 2024.

37. During the financial year 2023, the Centre received a total contribution of USD 1,005,402. For 2024, as of 31 October 2024, the Centre received contributions of USD 1,003,461 as listed in Table 3.

38. For 2024, as of 31 October 2024, the Centre has incurred a total expenditure of USD 791,114. Table 2 presents the financial statement by project component of the Centre. Table 3 presents the contributions received from member countries during the period ended 31 October 2024.

39. The indicative levels of the annual contribution are $30,000 for developing countries and $5,000 for least developed countries. To enhance the level and coverage of the Centre's capacity-building activities, member States could consider financing new technical cooperation projects or providing in-kind support to the Centre.

40. Member States could also consider contributing national experts in the mandated fields to work at the Centre as Non-Reimbursable Loans. This arrangement would enable the experts to build their capacity from their experience at the Centre, which could be beneficial upon return to their home countries and could also foster South-South cooperation.

Annex I

List of partner institutions

1. Asian Society for Innovation and Policy
2. Carbon Neutral Cities Alliance
3. Center for Rural Development and Technology, Indian Institute of Technology Delhi, India
4. Central Building Research Institute, India
5. Central Building Research Institute, Roorkee, India
6. Centre for Atmospheric Sciences, Indian Institute of Technology Delhi, India
7. Centre for High Energy Physics, Indian Institute of Science, India
8. Centre for Science & Technology of the Non-Aligned and Other Developing Countries
9. Coalition for Disaster Resilient Infrastructure
10. Council of Scientific and Industrial Research, Government of India
11. Department of Agriculture Research and Education
12. Department of Chemical Engineering, Bangladesh University of Engineering and Technology, Bangladesh
13. Department of Computer Science, University of Delhi, India
14. Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India
15. Embassy of India in Thailand
16. Embassy of the Republic of Korea in Thailand
17. Energy Swaraj Foundation, India
18. Faculty of Management Sciences, Durban University of Technology, South Africa
19. Geo-Informatics and Space Technology Development Agency, Thailand
20. Global Solutions Alliance, the United States
21. Gurugram Metropolitan Development Authority, India
22. Indian Institute of Chemical Technology, India
23. Indian Institute of Technology Jodhpur, India
24. Institute of Circular Economy, Beijing University of Technology, China
25. Institute of Genomics and Integrative Biology, India
26. Intellect Design Arena Ltd
27. International Science Technology and Innovation Centre for South-South Cooperation under UNESCO, Malaysia
28. International Telecommunication Union
29. International Water Management Institute, Sri Lanka
30. Iranian Research Organization for Science and Technology
31. Kasetsart University, Thailand
32. King Mongkut's University of Technology Thonburi, Thailand
33. Korea Environment Institute, Republic of Korea
34. Korea Institute of Civil Engineering and Building Technology
35. Local Government Division, Bangladesh Secretariat, Dhaka, Bangladesh
36. Local Governments for Sustainability South Asia
37. Ministry of Higher Education, Science, Research and Innovation, Government of Thailand
38. Ministry of New and Renewable Energy, Government of India
39. Ministry of Science and Technology, Government of Bangladesh
40. Nanjing Institute of Agricultural Mechanization, Ministry of Agriculture and Rural Affairs, China

41. National Chemical Laboratory, Pune, India
42. National Innovation Agency, Thailand
43. National Institute for Interdisciplinary Science and Technology, India
44. National Institute of Green Technology, Republic of Korea
45. National Institute of Science, Technology and Development Studies, India
46. National Research and Innovation Agency, Indonesia
47. National Science and Technology Development Agency, Thailand
48. Nepal Academy of Science and Technology, Nepal
49. Pacific Oceanological Institute, Russian Federation
50. Partnership Pacific
51. Peerconnect
52. Plastics Institute of Thailand
53. Program Management Unit for Competitiveness, Government of Thailand
54. Russian House of International Scientific Technical Cooperation
55. School of Environment, Resources and Development, Asian Institute of Technology, Thailand
56. Science and Technology Policy Institute, Republic of Korea
57. Technology Application and Promotion Institute of the Department of Science and Technology, Government of Philippines
58. Thai Ocean Plastic Recycling, Thailand
59. Thailand Institute of Scientific and Technological Research
60. The Energy and Resources Institute, India
61. The Indian Council of Agricultural Research
62. Tshwane University of Technology, South Africa
63. United Nations Environment Programme, Regional Office for Asia and the Pacific.
64. United Nations Office for South-South Cooperation
65. United States Agency for International Development
66. University of Nebraska-Lincoln, the United States
67. West Asia-North Africa Institute, Amman, Jordan
68. Wits Business School, South Africa
69. Wongpanit International Co.Ltd., Thailand
70. World Association of Industrial and Technological Research Organizations
71. World Economic Forum
72. World Intellectual Property Organization
73. Yunnan Academy of Scientific and Technical Information, China

Annex II

List of publications of the Centre (December 2023-November 2024)

Publication title	Focus area	Periodicity	Target audience
Asia-Pacific Tech Monitor	Innovative technologies for air pollution control 2023)	Quarterly	Science technology and innovation policymakers, small and medium enterprises, research and development institutions, academia, technology transfer intermediaries
	Digital Innovations for Sustainable Development in Asia and the Pacific (Jan-Mar 2024) in support to the theme of the 80th ESCAP Commission Session held in April 2024	Quarterly	
	Green Hydrogen technologies: opportunities and challenges for the Asia pacific region (Apr- Jun 2024)	Quarterly	
	Artificial Intelligence for climate change mitigation and adaptation (Jul-Sep 2024) [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

Annex III

Financial status of the Centre (till October 31, 2024)

Table 1 – Financial statement for the ten-month ending 31 October 2024

APCTT

Financial Statement for the period ended 31 October 2024

(In United States Dollars)

Income	
Contributions	1,003,461
Interest Income	-
Sale fixed asset	-
Gain/Loss on Exchange, Contributions	677
	1,004,138
Less: Expenditures	(791,114)
Net Income over Expenditures	213,024
Fund Balance as at 1 January 2024	3,268,951
Refunds to Donors/Fund transfer	(22,005)
Fund Balance as at 31 October 2024	**3,459,970**

Table 2 – Financial statement by project component

APCTT
Financial Statement for the period ended 31 October 2024
By Project Components
(In United States Dollars)

	Multi-donor funded institutional support 1/	Government of India funded institutional support 2/	Enhanced capabilities to adopt innovative technologies for city air pollution control in select countries of the Asia-Pacific	Total
Income				
Contributions	135,384	868,077	-	1,003,461
Interest Income	-	-	-	-
Sale fixed asset	-	-	-	-
Gain on Exchange, Contributions	-	-	677	677
	135,384	868,077	677	1,004,138
Less: Expenditures	(9,464)	(787,057)	5,407	(791,114)
Net Income over Expenditures	125,920	81,020	6,084	213,024
Fund Balance as at 1 January 2024	1,938,515	1,314,515	15,921	3,268,951
Refunds to Donors/Fund transfer	-	-	(22,005)	(22,005)
Fund Balance as at 31 October 2024	**2,064,435**	**1,395,535**	**-**	**3,459,970**

1/ In the past the Multi-donor funded institutional support was reported as "Joint Contribution - Capacity Development Project" as per ESCAP internal terminology

2/ In the past the Government of India funded institutional support was reported as "Government of India - Capacity Development Project" as per ESCAP internal terminology

Table 3 – Cash contributions received during the period ended 31 October 2024

APCTT
Contributions received during the period ended 31 October 2024
(In United States Dollars)

Country/Area	For the period ended 31 October 2024	For the period ended 31 December 2023
Host Country		
India	868,077.41	874,872
Other Member Countries		
Bangladesh	7,000.00	-
China	26,940.13	27,555
Indonesia		10,000
Iran		-
Macao, China	5,000.00	5,000
Malaysia	6,000.00	5,974
Pakistan	22,516.72	-
Philippines	30,000.00	30,000
Republic of Korea	22,927.02	23,027
Sri Lanka		-
Thailand	15,000	15,000
Uzbekistan		13,974
Vietnam	-	-
Total	**1,003,461**	**1,005,402**