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**Economic and Social Commission for Asia and the Pacific****Eightieth session**

Bangkok, 22–26 April 2024

Item 4 (h) of the provisional agenda \*

**Review of the implementation of the 2030 Agenda for Sustainable Development in Asia and the Pacific and issues pertinent to the subsidiary structure of the Commission: trade, investment, enterprise and business innovation****Report of the Governing Council of the Asian and Pacific Centre for Transfer of Technology on its nineteenth session***Summary*

The Governing Council of the Asian and Pacific Centre for Transfer of Technology held its nineteenth session in Tashkent and online on 6 and 7 December 2023.

At its nineteenth session, the Governing Council reviewed the activities carried out and the results achieved by the Centre during the period from December 2022 to November 2023. It took note with appreciation of the draft report on the evaluation of the Centre for the period 2019–2023. Furthermore, it considered the proposed programme of work for 2024, which was focused on meeting the priorities and needs of its member States. Member States requested the Centre's support and presented concrete proposals for joint activities to be carried out in 2024. The Governing Council adopted the proposed programme of work for 2024.

The Governing Council requested that the Centre continue to provide demand-driven policy advice and analytical and capacity-building support to strengthen national innovation systems and to promote regional technology cooperation and transfer, with a focus on innovative and emerging technologies, to address climate change and support sustainable development in Asia and the Pacific.

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\* ESCAP/80/1.

## **I. Matters calling for action by the Commission or brought to its attention**

1. The following decisions adopted by the Governing Council of the Asian and Pacific Centre for Transfer of Technology are brought to the attention of the Economic and Social Commission for Asia and the Pacific (ESCAP):

### **Decision 1**

The Governing Council requests the Asian and Pacific Centre for Transfer of Technology to continue to provide demand-driven policy advice and analytical and capacity-building support to strengthen national innovation systems and to promote regional technology cooperation and transfer, with a focus on innovative and emerging technologies, to address climate change and support sustainable development in Asia and the Pacific.

### **Decision 2**

The Governing Council invites its non-contributing members to consider providing voluntary contributions to the Asian and Pacific Centre for Transfer of Technology. Other members may consider enhancing their level of support to strengthen the Centre's activities and its long-term sustainability. The indicative levels of the annual contribution are \$30,000 for developing countries and \$5,000 for least developed countries.

### **Decision 3**

The Governing Council invites members and associate members of the Economic and Social Commission for Asia and the Pacific to consider supporting joint projects, financing new technical cooperation projects or providing in-kind support to the Asian and Pacific Centre for Transfer of Technology to enhance the level and coverage of its capacity-building activities.

### **Decision 4**

The Governing Council invites members and associate members of the Economic and Social Commission for Asia and the Pacific to consider contributing national experts in the mandated fields to work at the Asian and Pacific Centre for Transfer of Technology as non-reimbursable loans or as fellows under its fellowship programme. The arrangement could foster South-South cooperation.

### **Decision 5**

The Governing Council adopts the proposed programme of work of the Asian and Pacific Centre for Transfer of Technology for 2024.

### **Decision 6**

The Governing Council requests the Asian and Pacific Centre for Transfer of Technology to include the concrete proposals on areas of cooperation with the Centre presented by the members and observers in the report on its nineteenth session.

### **Decision 7**

The Governing Council requests the Asian and Pacific Centre for Transfer of Technology to take into account the recommendations of the International Conference on Green Technologies for Climate Action and Resilience when designing its future activities.

### **Decision 8**

The Governing Council decides that its twentieth session will be held in Tehran on 27 and 28 November 2024 and that its twenty-first session will be held in Moscow on 4 and 5 December 2025.

## **II. Proceedings**

### **A. Activities of the Asian and Pacific Centre for Transfer of Technology during the period from December 2022 to November 2023 (agenda item 2)**

2. The Governing Council had before it the report on the activities of the Centre during the period from December 2022 to November 2023.

3. The Governing Council expressed appreciation to the member States that had provided annual voluntary contributions to the Centre.

4. The representatives of China, India, Iran (Islamic Republic of), Malaysia and the Republic of Korea expressed appreciation to the Centre for its cooperation and for the activities it had carried out during the reporting period on capacity-building and on technology cooperation and transfer for sustainable development in the region, with a focus on climate change mitigation.

5. The representatives of Bangladesh, India and Thailand expressed appreciation to the Centre for the activities conducted, the output produced and the lessons learned as part of its air pollution control project. The representative of Nepal suggested that the knowledge and lessons learned from the air pollution control project could be shared with stakeholders in Nepal and that those stakeholders could be invited to participate in such activities in the future.

6. The representative of the Islamic Republic of Iran expressed appreciation for the wide range of activities undertaken by the Centre during the reporting period. The representative of Malaysia expressed appreciation for the Centre's strategic plan (2023–2027) and suggested that the Centre promote the use of climate technologies, biotechnology, nanotechnology and advanced materials for sustainable development.

7. The representative of the Republic of Korea offered to provide in-kind support to the Centre for organizing joint events.

### **B. Presentation and discussion on the evaluation of the Asian and Pacific Centre for Transfer of Technology (agenda item 3)**

8. The Governing Council had before it the draft report on the evaluation of the Centre for the period 2019–2023, which had been prepared by an independent external consultant.

9. The Governing Council took note of the draft report, including its conclusions and recommendations.

10. The representatives of Iran (Islamic Republic of), Nepal, the Philippines, the Republic of Korea, Thailand and Uzbekistan expressed appreciation for the efforts of the Centre as reflected in the evaluation and for the recommendations in the draft report.

11. The representative of the Republic of Korea suggested that the Centre develop a series of online courses with a focus on research and development and technology transfer for building the capacity of stakeholders in member States.

12. The representative of India expressed appreciation for the efforts involved in preparing the draft report and offered support to the Centre in implementing the recommendations.

13. The Governing Council requested the evaluation consultant to consider incorporating its suggestions and recommendations into the final version of the report, to be submitted to ESCAP at its eightieth session.

### **C. Proposed programme of work for 2024 (agenda item 4)**

14. The Governing Council had before it the proposed programme of work of the Centre for 2024.

15. Representatives of the member States of the Governing Council and observers highlighted their priorities relating to technology and innovation, areas for potential cooperation and concrete proposals for regional events, projects and activities for the consideration of the Centre in 2024, subject to their conformity with the Centre's mandate and the availability of resources.

16. The representative of Bangladesh highlighted critical areas of cooperation, such as: research and development on energy efficiency for energy security and carbon neutrality; municipal solid waste management systems; optimization of waste management through reduction, reuse and recycling; and sustainable e-waste strategies. There was a need to develop, implement and transfer intelligent agricultural technologies aimed at promoting climate-resilient farming practices, enhancing crop productivity and conserving water resources, as well as sustainable transportation solutions to mitigate air pollution in urban areas.

17. The representative of China proposed collaborating with the Centre for a conference on technology transfer during the China-South Asia Expo, tentatively scheduled to be held in Kunming, China, in June or July 2024, and to be hosted by the Province of Yunnan. The collaboration would enhance the Centre's visibility in China. Potential areas of collaboration between China and the Centre included capacity-building programmes, enhanced capacity for the adoption of new and emerging energy storage technologies and other aspects of sustainable development.

18. The representative of India proposed that the Centre further strengthen its focus on enhancing the capacity of institutions and enterprises to identify and scale up innovative and affordable technology solutions available in the region to address specific challenges. He noted that the Government of India valued the support provided by the Centre to member States with a focus on mainstreaming new and emerging technologies for addressing climate change and other challenges faced by the Asia-Pacific region. He affirmed the continuing strong support of the Government of India for the Centre's programme of work.

19. The representative of the Islamic Republic of Iran requested the support of the Centre for the thirty-seventh Khwarizmi International Award. He proposed inviting the Head of the Centre to attend the ceremony, having the Centre provide certificates and medals to three distinguished laureates and including a message from the Centre in the Khwarizmi International Award newsletter. He also requested that the Centre contribute to the Khwarizmi International Conference on Science and Technology by inviting experts to send abstracts or deliver speeches during the Conference, covering the travel expenses of keynote speakers from the Centre and allowing the logo of the Centre to be used to identify it as an international sponsor of the Conference. The representative encouraged the member States of the Governing Council to participate in joint research projects on key aspects of biotechnology and food security. He also proposed hosting the twentieth session of the Governing Council, to be held in November 2024, in Tehran.

20. The representative of Malaysia stated that the country had undertaken many green technology initiatives, including in areas such as the hydrogen economy, smart green cities, public transport and connectivity, renewable energy, forest connectivity and nature-based solutions for low-carbon growth. The representative proposed that the Centre focus on capacity-building programmes to enhance resilience in terms of food security, address climate change and water security issues through sustainable practices, accelerate green technology, and raise and enhance awareness of environmental, social and governance issues through technology applications. She suggested that the Centre collaborate with the International Science, Technology and Innovation Centre for South-South Cooperation under the auspices of the United Nations Educational, Scientific and Cultural Organization, as well as the Academy of Sciences Malaysia, which offered sustainability programming, such as climate change education workshops.

21. The representative of Nepal spoke about the necessity of studying biofuel production in the context of the sustainability of effluent treatment plants, as the country faced issues with industrial waste management. The city of Kathmandu would benefit from the sharing of lessons from the Centre's project on air pollution control technologies. The representative proposed that the Centre organize a high-level workshop for national policymakers on various aspects of fourth industrial revolution tools and techniques, possible industry incentives for technology transfer and adoption, and other necessary components of an ecosystem of fourth industrial revolution technologies. This would help Nepal to embrace fourth industrial revolution technologies in future industrial policy. The representative suggested that the country would benefit from capacity-building for officials on process optimization and waste heat recovery systems.

22. The representative of the Philippines proposed potential areas of cooperation such as cross-border sharing of information on technologies available for possible adoption, with the possibility of linking to the technology hub website of the Department of Science and Technology on the website of

the Centre or other digital platforms such as the one for the proposed community of practice on climate change technologies (see annex II). The aim would be to promote local technologies for international adoption through licensing, sales or partnerships with international investors. The representative raised the possibility of the Centre or its member States co-funding an international exhibition in conjunction with the 2024 National Invention Contest and Exhibits. Co-funders could participate in the process for the awards to be presented during the event. For capacity-building, the Centre could send international experts and speakers on the commercialization of research to the event, as well as to a regional forum on strategic approaches to gain access to potential markets for technology innovations.

23. The representative of the Republic of Korea underscored the importance of enhancing regional technological cooperation in Asia and the Pacific to drive progress in science, technology and innovation. She stated that the country would be interested in actively exchanging experiences and knowledge on science, technology and innovation policy and technological innovation across borders and engaging in developing capacity-building programmes for member States of the Governing Council. The representative proposed collaborating with member States on green technology solutions to address climate and environmental issues and on research and development for social problem-solving with a living labs approach.

24. The representative of the Russian Federation proposed leveraging the country's approaches, experience and technology to jointly build an information technology platform that the Centre could use to carry out its plans and strategies. The platform would be multifunctional and enable activities such as: interaction with technology stakeholders; interaction with science, technology and innovation institutes; implementation and creation of new technologies; organization of legal support and intellectual property protection; interaction with investment funds for the technology transfer process; organization of expert support for the transfer and use of technology; organization and implementation of educational programmes for technology transfer market participants; and international scientific and technical cooperation. As a first step, the representative proposed forming a working group to create a road map and discuss potential cooperation between member States on the topic.

25. The representative of Thailand proposed jointly organizing a workshop with the Centre on the topic of sustainable municipal solid waste management using circular economy principles and sharing lessons learned by Thailand with other member States in the Asia-Pacific region. The project would involve conducting a specialized training session on municipal solid waste management in order to strengthen the science, technology and innovation capabilities of member States in municipal solid waste management, waste-to-wealth and waste-to-energy approaches, and promoting innovative and emerging technologies to address climate change and support the achievement of the Sustainable Development Goals in the Asia-Pacific region. The project, scheduled for 2024, would include activities such as seminars and knowledge- and experience-sharing events, in particular on municipal solid waste management, technologies for climate mitigation, the establishment of a platform for knowledge exchange and cross-border collaboration to support the adoption and scaling up of municipal solid waste management technologies. It would also include a one-day site visit to a municipal solid waste management demonstration plant.

26. The representative of Uzbekistan proposed introducing capacity-building initiatives and developing joint training programmes and workshops aimed at enhancing the skills of the workforce to harness the full potential of fourth industrial revolution technologies. The Centre could facilitate technology transfer and commercialization to bridge gaps between research and application and commercialization of technologies. The Centre could support collaboration and strengthen partnerships to harness the transformative power of technology for the greater good through innovations in the region. The representative also expressed appreciation to the Centre for its fellowship programme, which would provide an opportunity to young policymakers to work as fellows at the Centre.

27. The representative of Viet Nam stated that the country was promoting technology transfer in specific sectors, such as information technology, engineering, high-tech agriculture, construction, transportation, climate change, health and industry. He provided an overview of two proposals to solve common problems in the region: a regional alliance of technology transfer and adoption centres and an innovation platform for closed-loop plastics packaging. Those proposals were collaborations between Cambodia, the Lao People's Democratic Republic, Thailand and Viet Nam. The representative proposed that the Governing Council take note of the proposals and lend support for them, either by allocating funding from its budget for the implementation of projects or by helping to find other funding resources.

**D. Main conclusions of the International Conference on Green Technologies for Climate Action and Resilience, held in Tashkent and online on 5 December 2023 (agenda item 5)**

28. In his summary, the Chair presented the main conclusions of the discussions held at the International Conference on Green Technologies for Climate Action and Resilience on 5 December 2023 (see annex III).

29. The Governing Council took note of the main conclusions of the discussions held at the Conference.

**E. Dates and venue of the twentieth session of the Governing Council (agenda item 6)**

30. The Governing Council welcomed the offer made by the Islamic Republic of Iran to host its twentieth session in Tehran on 27 and 28 November 2024. It also welcomed the offer made by the Government of the Russian Federation to host its twenty-first session in Moscow on 4 and 5 December 2025.

**F. Other matters (agenda item 7)**

31. The Head of the Centre informed the Governing Council that the report on its nineteenth session would be presented by the Chair to ESCAP at its eightieth session, to be held in Bangkok from 22 to 26 April 2024.

32. During the eightieth session, the Centre planned to organize a high-level side event on a theme related to its programme of work and to the theme topic of the session, which was "Leveraging digital innovation for sustainable development in Asia and the Pacific". National focal points were invited to participate in the organization of the side event.

33. Furthermore, representatives of the Centre also planned to attend the Eleventh Asia-Pacific Forum on Sustainable Development, to be held in Bangkok and online from 20 to 23 February 2024 to support the follow-up and review of progress towards achieving the 2030 Agenda for Sustainable Development and the Sustainable Development Goals at the regional level. The Centre planned to organize a high-level side event at the Eleventh Forum, in which national focal points were invited to participate.

34. She noted that, in 2023, the Centre had continued to regularly and proactively engage with national focal points on programmatic matters. The process had been largely institutionalized, with active participation and support from the national focal points.

35. She further informed the Governing Council that renovations were being undertaken at the premises of the Centre, with support from the host country, India, through its national focal point, the Department of Scientific and Industrial Research at the Ministry of Science and Technology.

#### **G. Adoption of the report of the Governing Council on its nineteenth session (agenda item 8)**

36. The Governing Council adopted the present report on 7 December 2023.

### **III. Organization**

#### **A. Opening, duration and organization of the session**

37. The Governing Council held its nineteenth session in Tashkent and online on 6 and 7 December 2023. The Head of the Centre delivered the welcome address and the Chair of the Governing Council and Director of the Agency for Innovative Development of the Ministry of Higher Education, Science and Innovation of Uzbekistan, Mr. Olimjon Alijonovich Tuychiev, delivered welcome remarks. The Executive Secretary of ESCAP delivered special remarks at the opening session.

38. The Head of the Centre welcomed the representatives to the nineteenth session of the Governing Council. She noted that technology and innovation remained critical considerations for addressing sustainable development challenges, including challenges presented by climate change. The Centre could play a catalytic role in supporting member States to enhance their capacity for innovation and for the scaling up, diffusion and adoption of innovative and emerging technologies, by facilitating regional cooperation, policy support, capacity-building and knowledge-sharing among stakeholders. She looked forward to receiving recommendations and suggestions from the Governing Council for facilitating stronger cooperation on technology in Asia and the Pacific.

39. In his opening remarks, the Chair of the Governing Council and Director of the Agency for Innovative Development of the Ministry of Higher Education, Science and Innovation of Uzbekistan expressed the readiness of the Government of Uzbekistan to support the Centre in strengthening regional cooperation and achieving the Sustainable Development Goals.



40. The Executive Secretary of ESCAP noted that emerging and green technologies, including fourth industrial revolution technologies, were becoming necessities in the battle against climate change. There was a need to accelerate efforts to adopt innovative and green technologies through regional policy dialogues, technical cooperation and cross-border collaboration as part of a low-carbon, climate-resilient transition. She urged member States to explore innovative ways of collaborating to adopt and scale up green technologies to support climate resilience. The pace of adoption of green technologies needed to be accelerated for the region to effectively transition to net-zero economies.

41. The Deputy Executive Secretary of ESCAP delivered remarks during the discussion of agenda item 4 (proposed programme of work for 2024). She underlined the critical importance of technology in addressing the impacts of climate change across various sectors. The success of technology transfer would depend on policy incentives, institutional support, finance, costs and capacity-building, among other factors. She called upon member States to recognize the challenges they faced at various stages of innovation and technology transfer and to identify the actions and support they would require to address those challenges. Priorities included actions to deliver clean and renewable energy technologies for the energy transition (such as smart grids, energy storage systems, electric vehicles and green hydrogen), innovative applications of emerging technologies (such as artificial intelligence, the Internet of things, blockchain, robotics, big data and machine learning) for climate action and resilience, and innovative technological options and capabilities for controlling air pollution.

## **B. Attendance**

42. The session was attended by the representatives of nine members of the Governing Council: Bangladesh, China, India, Iran (Islamic Republic of), Philippines, Republic of Korea, Russian Federation, Thailand and Uzbekistan. In addition, the representatives of Malaysia, Nepal and Viet Nam attended as observers.

## **C. Election of officers**

43. The Governing Council elected the following officers:

Chair: Mr. Olimjon Alijonovich Tuychiev (Uzbekistan)

Vice-Chair: Ms. Marion Ivy De La Cruz Decena (Philippines)

## **D. Agenda**

44. The Governing Council adopted the following agenda:

1. Opening of the session:
  - (a) Opening addresses;
  - (b) Election of officers;
  - (c) Adoption of the agenda.

2. Activities of the Asian and Pacific Centre for Transfer of Technology during the period from December 2022 to November 2023.
3. Presentation and discussion on the evaluation of the Asian and Pacific Centre for Transfer of Technology.
4. Proposed programme of work for 2024.
5. Main conclusions of the International Conference on Green Technologies for Climate Action and Resilience, held in Tashkent and online on 5 December 2023.
6. Dates and venue of the twentieth session of the Governing Council.
7. Other matters.
8. Adoption of the report of the Governing Council on its nineteenth session.

## Annex I

### List of documents

<i>Symbol</i>	<i>Title</i>	<i>Agenda item</i>
<i>General series</i>		
ESCAP/APCTT/GC(19)/1	Annotated provisional agenda	1 (c)
ESCAP/APCTT/GC(19)/2	Report of the Governing Council of the Asian and Pacific Centre for Transfer of Technology on its nineteenth session	
	Report on the activities of the Asian and Pacific Centre for Transfer of Technology during the period from December 2022 to November 2023	2
	Report on the evaluation of the Asian and Pacific Centre for Transfer of Technology	3
	Proposed programme of work of the Asian and Pacific Centre for Transfer of Technology for 2024	4
<i>Information available online</i>		
www.apctt.org/events/nineteenth-session-apctts-governing-council	Information for participants	
	Tentative programme	

## Annex II

### Proposed programme of work for 2024

#### I. Introduction

1. The programme of work for the Asian and Pacific Centre for Transfer of Technology is aligned with the work programme of subprogramme 2 on trade, investment and innovation of the Economic and Social Commission for Asia and the Pacific (ESCAP). The following projects are proposed for implementation in 2024.

#### II. Project on strengthening regional technology cooperation for promoting innovative and emerging technologies to address climate change and support sustainable development in the Asia-Pacific region

2. This is an ongoing project funded through the annual contributions received from the member States of the Governing Council for the biennium 2023–2024. It is aimed at enhancing the capacities of technology and innovation policymakers and key stakeholders of ESCAP member States to facilitate regional technology cooperation and transfer for addressing climate change and supporting sustainable development in alignment with the Centre’s strategic plan (2023–2027).

3. The Centre will conduct demand-driven capacity-building and technology cooperation activities based on the needs expressed by the member States during the nineteenth session of the Governing Council. The activities will be implemented jointly with the Centre’s national focal points and key nodal institutions in the member States. For 2024, member States may propose concrete activities, including capacity-building, analytical work, the development of knowledge products, joint projects and regional cooperation, for discussion at the nineteenth session of the Governing Council, in alignment with the strategic plan.

4. The project includes the establishment of a community of practice on climate change technologies for the Asia-Pacific region. As a platform for knowledge exchange, capacity-building and cross-border collaboration, the goal of the community of practice will be to foster technology cooperation and transfer in the region.

5. Within the framework of the ESCAP visiting fellows programme being launched on a pilot basis, the Centre proposes to offer opportunities for member States to host fellows from other countries to benefit from the sharing of knowledge and experience, particularly on climate technologies. The fellows will contribute to supporting their countries in adopting and scaling up climate technologies.

6. The project will support the development and dissemination of the Centre’s analytical work and knowledge products, such as the online periodical *Asia-Pacific Tech Monitor*, thematic papers, publications and other knowledge products on topics related to the focus areas. It is proposed that the *Asia-Pacific Tech Monitor* be digitized to enhance its visibility and ensure an optimal reading experience on various devices, including smartphones and tablets. The social media presence of the Centre should also be strengthened to increase its follower base, enhance engagement, improve content quality and visibility and foster collaborations with stakeholders.

**III. New capacity-building projects in line with the strategic plan of the Centre**

7. The Centre will pursue new capacity-building projects on themes in line with the strategic plan of the Centre and the recommendations made by the Governing Council at its nineteenth session, the details of which are to be determined based on funding proposals made by donors and/or member States.

## Annex III

### Chair's summary

#### **Main conclusions of the International Conference on Green Technologies for Climate Action and Resilience, held in Tashkent and online on 5 December 2023**

#### **I. Introduction**

1. The International Conference on Green Technologies for Climate Action and Resilience brought together 135 participants from the States members of the Governing Council and other States members of the Economic and Social Commission for Asia and the Pacific, including government officials, policymakers, industry leaders, professionals, researchers and representatives of academia and civil society, as well as students and researchers from Uzbekistan.

2. The Conference featured four technical sessions on: (a) understanding the interface between green technologies and climate change; (b) case studies on frontier innovations and green technologies; (c) research and development for social problem-solving through the living labs approach; and (d) cultivating cross-border knowledge-sharing to drive sustainable and green technology solutions for enhancing climate resilience.

#### **II. Summary of discussions**

3. The participants in the Conference noted that green technologies offered many advantages, such as economic opportunities, jobs, resource conservation, public health and well-being, and a harmonious balance between economic development and environmental protection.

4. It was underscored that reducing emissions would require holistic and inclusive solutions in key sectors, such as energy, agriculture, water and waste management. Private and public enterprises, small and medium-sized enterprises and local communities all had their own unique requirements for technological solutions, which needed to be feasible and affordable. Locally available green and sustainable technologies could meet many of those requirements. Towards that objective, online marketplaces and databases were highlighted as useful platforms to facilitate connections between providers and users of technologies.

5. Green technologies offered promising solutions for critical infrastructure, in areas such as transportation, water, power and communications. Countries could start investing in green technologies to make their systems resilient to future disruptions, whether natural or human-made.

6. Fourth industrial revolution technologies offered innovative solutions for climate mitigation and adaptation in key sectors, such as renewable energy, sustainable agriculture, green transportation and carbon capture. Artificial intelligence-based early warning systems could provide farmers with advisories for pest management practices.

7. Thanks to advanced research and development, the use of hydrogen as a clean energy source was becoming more widespread. Innovative solutions were being developed by researchers in Uzbekistan to address the major challenges of cost, safe storage and ease of use.

8. Nature-based solutions were highlighted as another promising opportunity for enhancing resilience and sustainability in various fields. However, good practices needed to be developed for their implementation and stronger evidence of their benefits needed to be shown for wider adoption. Planning of nature-based solutions required a framework that considered the specific context and challenges. It was essential to engage with stakeholders to ensure that the visions of local communities, governments and other partners were integrated into all stages of a project.

9. Many innovative green technologies and their applications were highlighted. Bio-inspired design offered many innovative solutions. Microalgae were presented as a promising climate-resilient and sustainable plant-based option for ensuring carbon dioxide fixation, biomass valorization and circular economy. Other examples included solar home systems, animal-dung biodigesters, forest conservation programmes and improved cooking stoves.

10. The participants in the Conference discussed the living labs approach being promoted by the Republic of Korea, wherein a multi-stakeholder platform was used to facilitate joint participation in user-centred research and development, from initial research to the demonstration and dissemination stages. The approach, which encompassed pre-planning, developing and applying technologies, was proving to be a successful model for social problem-solving.

11. With coastal areas urbanizing at a rapid pace, management of marine waste was becoming increasingly essential for environmental protection. Integrated waste management systems for ocean and river debris and sustainable solutions for the recycling of marine debris were suggested as key approaches.

12. The Asia-Pacific region offered comparative advantages for adopting green technologies, particularly clean energy solutions such as solar, wind and biomass energy. However, challenges included high initial investment, low energy efficiency and a lack of energy infrastructure. Many countries were adopting policy measures to facilitate the transition to clean sources of energy. For example, Bangladesh was implementing policy measures such as net metering, renewable energy power purchase agreements, renewable energy certificates and the use of wetlands for solar energy production. Policies should also encourage private sector participation in renewable energy projects.

13. It was noted that energy security required research and development in renewable energy, energy management, regional databanks for information-sharing, cross-border collaboration through technology matchmaking, online platforms, capacity-building and knowledge-sharing. Examples from India of mission-oriented approaches for promoting green technologies were also shared.

14. For promoting green technologies, it was suggested that it was imperative for countries to: facilitate exports; increase the availability of financing for green technology initiatives; build technology transfer capacity through training and knowledge-sharing; encourage the development of innovative green technologies and policy initiatives; establish mechanisms to monitor and evaluate green technology initiatives; promote public-private partnerships to facilitate the adoption and diffusion of green technologies; and strengthen international collaboration and dialogue on green technology initiatives in the Asia-Pacific region. In that regard, Thailand had been

promoting a bio-circular-green model through public-private partnerships for the adoption of green technologies at the local level.

### **III. Recommendations for the Asian and Pacific Centre for Transfer of Technology**

15. The Asian and Pacific Centre for Transfer of Technology was requested to organize more meetings, conferences and events for sharing knowledge on policies, collaboration, investment and the transfer and adoption of green and fourth industrial revolution technologies for climate resilience.

16. The Centre could support countries in strengthening their research and development capabilities and in utilizing common financial and technical resources, which were necessary prerequisites for green technologies.

17. The Centre could establish a knowledge-sharing forum for member States to facilitate international collaboration, financing and public-private partnerships, and to establish monitoring and evaluation mechanisms for activities related to green technologies.

18. The Centre was requested to support countries in strengthening their capacity to adopt green technologies in several areas, including: conducting studies for the development of green hydrogen projects and the optimization of energy systems; identifying and prioritizing green technologies; mapping fourth industrial revolution technologies; enhancing the manufacturing capabilities of micro-, small and medium-sized enterprises; promoting venture funding for fourth industrial revolution innovation and start-up ecosystems; identifying common problems faced by countries in developing collaborative programmes; identifying technology demands; facilitating the integration of science, education and industry through cooperation; promoting research-based companies; providing support and facilitating collaboration on energy efficiency, innovation and technology transfer; promoting green technologies in communities; and designing and executing cross-border cooperation programmes between countries and international organizations.

19. The Centre was requested to organize an international seminar on fourth industrial revolution technologies.

20. It was suggested that the Centre identify the needs and demands of member States and facilitate leveraging opportunities for technology cooperation.

21. It was suggested that the Centre enhance its focus on alternative energy technologies.

22. It was suggested that the Centre identify and prioritize fourth industrial revolution applications for green technologies and promote cooperation among the scientific community for greater innovation.



## Annex IV

### Financial statement of the Asian and Pacific Centre for Transfer of Technology for the year ended 31 December 2023 (United States dollars)

<i>Income</i>	
Contributions	1 005 403
Interest income	145 193
<b>Total income</b>	<b>1 150 596</b>
<i>Less: Expenditure</i>	
	(1 130 143)
<b>Net income over expenditure</b>	<b>20 453</b>
Fund balance as at 1 January 2023	3 248 498
Refunds to donors/fund transfer	—
<b>Fund balance as at 31 December 2023</b>	<b>3 268 951</b>

## Annex V

**Financial statement of the Asian and Pacific Centre for Transfer of Technology for the year ended 31 December 2023, by project component**  
(United States dollars)

	<i>Institutional support (multi-donor)</i>	<i>Institutional support funded by the Government of India</i>	<i>Support for the project on enhancing capabilities to adopt innovative technologies for city air pollution control in selected countries in the Asia-Pacific region</i>	<i>Total</i>
<i>Income</i>				
Contributions	130 531	874 872	–	1 005 403
Interest income	78 658	66 535	–	145 193
<b>Total income</b>	<b>209 189</b>	<b>941 407</b>	<b>–</b>	<b>1 150 596</b>
<i>Less: Expenditure</i>	4 514	(956 218)	(178 439)	(1 130 143)
<b>Net income over expenditure</b>	<b>213 703</b>	<b>(14 811)</b>	<b>(178 439)</b>	<b>20 453</b>
Fund balance as at 1 January 2023	1 724 812	1 329 326	194 360	3 248 498
Refunds to donors/fund transfer	–	–	–	–
<b>Fund balance as at 31 December 2023</b>	<b>1 938 515</b>	<b>1 314 515</b>	<b>15 921</b>	<b>3 268 951</b>

## Annex VI

**Cash contributions to the Asian and Pacific Centre for Transfer of  
Technology for the years ended 31 December 2022 and 31 December 2023**  
(United States dollars)

<i>Country/area</i>	<i>Year ended 31 December 2022</i>	<i>Year ended 31 December 2023</i>
<b>Host country</b>		
India	857 127	874 872
<b>Other countries/areas</b>		
Bangladesh	7 000	–
China	27 395	27 555
Indonesia	30 000	10 000
Iran (Islamic Republic of)	–	–
Macao, China	5 000	5 000
Malaysia	15 000	5 974
Pakistan	–	–
Philippines	30 000	30 000
Republic of Korea	23 188	23 027
	194 360 <sup>a</sup>	–
Sri Lanka	–	–
Thailand	15 000	15 000
Uzbekistan	–	13 974
Viet Nam	10 000	–
<b>Total</b>	<b>1 214 070</b>	<b>1 005 402</b>

<sup>a</sup> This contribution, made in support of a project, was transferred from the Korea-ESCAP Cooperation Fund (global account).