

**Economic and Social Commission for Asia and the Pacific**Committee on Information and Communications Technology,
Science, Technology and Innovation**Third session**

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Item 5 (c) of the provisional agenda*

**Inclusive technology and innovation for the decade of
action for the Sustainable Development Goals:
supporting countries on inclusive technology and
innovation through capacity-building and technical
assistance****Technology and innovation capacity-building and
technical assistance provided to member States from
2018 to 2020****Note by the secretariat***Summary*

The present document contains an overview of science, technology and innovation capacity-building and technical assistance provided to member States by the Asian and Pacific Centre for Transfer of Technology and the secretariat of the Economic and Social Commission for Asia and the Pacific.

The Committee may wish to indicate the support – in the form of research, training and advisory services – that may be required in the fields of science, technology and innovation and to suggest areas of future focus to guide the work of the Centre and the secretariat going forward.

I. Introduction

1. The present document contains an overview of the science, technology and innovation capacity-building and technical assistance provided to member States by the Asian and Pacific Centre for Transfer of Technology and the secretariat of the Economic and Social Commission for Asia and the Pacific (ESCAP).

2. It contains a review of activities undertaken by the secretariat since the second session of the Committee on Information and Communications Technology, Science, Technology and Innovation, which was held in Bangkok from 29 to 31 August 2018. The activities are organized around three focus areas of work namely:

* ESCAP/CICTSTI/2020/L.1.

- (a) Inclusive technology and innovation policies for sustainable development;
 - (b) Business innovation for inclusive and sustainable development;
 - (c) Women’s entrepreneurship.
3. The present document also contains activities undertaken by the Centre within the same period.

II. Activities undertaken by the secretariat since the second session of the Committee on Information and Communications Technology, Science, Technology and Innovation

A. Inclusive technology and innovation policies for sustainable development

1. Policy impact and future plans

4. In 2019, the secretariat collaborated with the Pathways for Prosperity Commission on Technology and Inclusive Development to support the Government of Mongolia in designing an inclusive national development strategy called “Mongolia in a Digital Age”. The collaboration included research on national readiness assessment, organization of multi-stakeholder dialogues and contributions to the National Digital Strategy Primer for Mongolia. Also, in 2019, the secretariat supported the Government of the Philippines in developing and adopting a grassroots innovation for inclusive development framework plan.

5. In 2020, the secretariat supported the development of the national science, technology and innovation policy and strategy in Myanmar. The Science, Technology and Innovation Law (No. 22/2018) was enacted on 25 June 2018. In order to implement the aims of the law, a national-level policy on science, technology and innovation is being developed to support inclusive and sustainable development.

6. At the request of the General Secretariat of the National Science and Technology Council, Ministry of Planning, the secretariat is providing advisory services to Cambodia in developing an action plan to support the implementation of country’s National Policy on Science, Technology and Innovation 2020–2030 for sustainable and inclusive development.

7. The secretariat, in partnership with the Economic Commission for Europe, is also supporting the development of an innovation strategy for the United Nations Special Programme for the Economies of Central Asia.

2. Establishment of the Asia-Pacific Research and Training Network on Science, Technology and Innovation Policy

8. To inform evidence-based policymaking, in 2018, the secretariat launched the Asia-Pacific Research and Training Network (ARTNeT) on Science, Technology and Innovation Policy (<https://artnet.unescap.org/sti>) – the Asia-Pacific knowledge platform on science, technology and innovation policies – to provide guidance on science, technology and innovation policies to researchers and policymakers in the Asia-Pacific region through research, information dissemination and capacity-building.

9. The founding members and partners of the platform are ESCAP, the Science and Technology Policy Institute of the Republic of Korea, the National Science, Technology and Innovation Policy Office of Thailand (now the Office of the National Higher Education, Science, Research and Innovation Policy Council), Google and the Association of Pacific Rim Universities.

10. The platform currently provides information on the following key policy areas: inclusive technology and innovation; frontier technologies; social enterprises and impact investment; technology, trade and investment; technology transfer; and inclusive businesses.

11. Under the Asia-Pacific Research and Training Network (ARTNeT) on Science, Technology and Innovation Policy umbrella, a range of research and training activities have been conducted. These include a research project on artificial intelligence for social good, conducted in collaboration with Google and the Association of Pacific Rim Universities, supporting eight research teams across Asia and the Pacific, the development of a community of practice on inclusive technology and innovation policies, and the organization of several workshops and preparation of reports on science, technology and innovation for the Sustainable Development Goals and on frontier technologies.

12. Moving forward, the Asia-Pacific Research and Training Network (ARTNeT) on Science, Technology and Innovation Policy will seek to support other research projects that can help inform decisions on promoting science, technology and innovation in the Asia-Pacific region, to develop online training courses and materials on science, technology and innovation policies, and to consolidate its work as a platform and invite other institutions to become members.

3. Linking the global and regional science, technology and innovation agendas

13. The secretariat has aligned its regional capacity-building activities with global initiatives, to allow policymakers in the Asia-Pacific region to benefit from global expertise, and for expertise in the region to benefit the global science, technology and innovation community.

14. In this context, the secretariat and the Department of Economic and Social Affairs of the Secretariat of the United Nations, in collaboration with the Ministry of Science and Technology of China, jointly organized a capacity-building workshop on science, technology and innovation for sustainable development, which was held in Guilin, China, from 9 to 17 December 2019. Furthermore, the secretariat and the Technology Bank for the Least Developed Countries jointly organized a regional consultation on strengthening national academies of science in the least developed countries in support of the 2030 Agenda for Sustainable Development, held in Bangkok on 3 and 4 February 2020. The secretariat also cooperated with the World Intellectual Property Organization to organize a workshop on partnership for innovation and technological capacity-building in the least developed countries of Asia and the Pacific. Held in Bangkok from 16 to 18 July 2019, the workshop was meant to enable the participants from the least developed countries in the region to understand the critical issues related to intellectual property and innovation.

4. The Asia-Pacific Innovation Forum

15. The inaugural Asia-Pacific Innovation Forum was held in Tehran from 10 to 12 June 2019. Under the theme “Technology Start-ups for Sustainable Development”, discussions during the Forum focused on government policies to promote technology start-ups, women in innovation and technology, innovation and technology investment, grassroots innovation, technology parks and incubators, and South-South cooperation on science, technology and innovation. The Forum was part of the implementation of Commission resolution 72/12 on harnessing science, technology and innovation for inclusive and sustainable development in Asia and the Pacific, in which the Commission invited member States to work towards convening an Asia-Pacific Innovation Forum, as a means to enhance and facilitate knowledge-sharing and collaboration among member States, the United Nations system and relevant stakeholders.

16. Participants from 22 countries attended the Forum. Representatives of United Nations agencies and other international organizations also participated. The Forum was regarded as very successful by the participants. Analysis of the feedback from the participants showed that 96.9 per cent of respondents found the theme of the Forum relevant to their country situations, and 90.9 per cent of respondents said they were very satisfied with the overall organization of the Forum.

B. Business innovation for inclusive and sustainable development

17. The secretariat has supported several countries in the region in developing social enterprise policies, including Bangladesh, Cambodia, Indonesia, Malaysia, Myanmar, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam.

18. At the request of the countries, the secretariat is further supporting Sri Lanka, Pakistan, Indonesia and Malaysia to conduct analysis for social enterprise policy development and is supporting Bangladesh to develop the national action plan for the national advisory board for social enterprises. Additional policy advisory services are being provided to the Government of Indonesia on promoting inclusive business in wellness tourism, as well as for the drafting of an inclusive business bill in the Philippines.

19. With regard to inclusive business, the secretariat conducted landscape studies in Cambodia, Malaysia and Viet Nam to inform the design of strategies to support inclusive business and has provided policy advice to the Governments of Indonesia and the Philippines. The support included the organization of national workshops, research and the drafting of analytical studies.

20. As a result of the support provided by the secretariat: (a) the ASEAN Coordinating Committee on Micro, Small and Medium Enterprises of the Association of Southeast Asian Nations (ASEAN) has included as a priority deliverable for 2020 the development of regional guidelines for inclusive business to guide policy development in ASEAN Member States; and (b) ASEAN leaders have also encouraged Governments and private sector actors to continue promoting inclusive business in the ASEAN Leaders’ Vision

Statement on Partnership for Sustainability and in the Chairman's Statement of the 35th ASEAN Summit.

C. Women's entrepreneurship

21. Under the secretariat's "Catalyzing Women's Entrepreneurship" programme, national consultations on "Enabling Environment for Women's Entrepreneurship" served as forums for policy dialogue, capacity-building and networking for key stakeholders across the public and private sectors to discuss the needs, constraints and actions to foster women's entrepreneurship in the respective countries of implementation. These national-level consultations brought together over 400 stakeholders from multiple ministries, private sector organizations, development partners and representatives of women entrepreneurs and resulted in a rich dialogue on providing an enabling environment for women entrepreneurs. In that regard, the following country-level events have been held:

- (a) Fiji project launch and national consultation, 24 to 25 July 2019, Suva;
- (b) Samoa national consultation and launch, 30 July 2019, Apia;
- (c) Nepal national consultation, 25 August 2019, Kathmandu;
- (d) Bangladesh stakeholder consultation, 10 December 2019, Dhaka;
- (e) Viet Nam national launch and consultation, 17 February 2020, Hanoi.

III. Activities undertaken by the Asian and Pacific Centre for Transfer of Technology since the second session of the Committee on Information and Communications Technology, Science, Technology and Innovation

A. Policy impact

22. Following a request by the Ministry of Science and Technology of Thailand and the Thailand Institute of Scientific and Technological Research, the Centre organized the International Conference on Inclusive Science, Technology and Innovation Policies for Promoting the Transfer of New and Emerging Technologies in Water and Energy Sectors in Bangkok on 27 November 2018. The Centre developed recommendations on innovative policy options, strategies and technological solutions for sustainable water management and sustainable energy technologies. The recommendations were presented and further discussed among the member States at the fourteenth session of the Governing Council of the Centre.

23. The Centre's activities to promote technology transfer in the region using its online Technology4SME database and related capacity-building resulted in a policy change in Bhutan. Following a request by the Department of Cottage and Small Industry of the Ministry of Economic Affairs of Bhutan, the Centre provided advice and the blueprint to develop a technology requests database for catering the needs for inclusive innovation and technologies for cottage and small industries through a technology transfer workshop. The work resulted in the inclusion of a technology database for cottage and small industries in the Cottage and Small Industry Policy of Bhutan, 2019 (section 6.5.2) released in July 2019 and launched during the Bhutan Economic Forum for Innovative Transformation 2019, held in Thimphu from 16 to 18 July 2019.

24. Following a request from the Ministry of Energy, Science, Technology, Environment and Climate Change of Malaysia, the Centre organized the International Conference on Emerging Technologies for Achieving the Sustainable Development Goals, held in Kuala Lumpur on 5 November 2019, and developed policy recommendations to promote emerging technologies (for example, Internet of things, artificial intelligence, big data analytics, additive manufacturing, nanotechnology and renewable energy) in the region. The recommendations were presented and further discussed among the member States at the fifteenth session of the Governing Council of the Centre.

B. Research highlights

25. The Centre produced six issues of the *Asia-Pacific Tech Monitor*, a practical and specialized quarterly publication (annex I). This publication, particularly the issues produced within the period, supported policymakers to deepen their understanding of new technologies as well as technology-related policymaking.

26. The Centre is currently developing two new publications as guides for policymakers on: intellectual property management and technology licensing; and innovation and technology transfer for clean energy for Asia and the Pacific. These publications will be transformed into e-learning training materials in 2020. This is one of the responses of the Centre to promote distance learning, adapting with restrictions imposed by the coronavirus disease (COVID-19).

C. Capacity-building highlights

27. As mandated by the revised statute adopted at the seventy-second session of the Commission in 2016, the Centre either implemented or contributed to capacity-building activities for the targeted beneficiaries of member States. Through 13 capacity-building activities organized in seven countries (namely, Bhutan, China, India, Indonesia, Malaysia, Thailand and Uzbekistan), the Centre increased knowledge, skill and capabilities of 1,937 participants from the region.

28. The Centre's capacity-building activities were in areas of national innovation systems, technology transfer and commercialization, intellectual property management, technology-based enterprise development, renewable energy technologies, nanotechnology and fourth industrial revolution technologies (annex II).

29. The feedback from survey questionnaires indicated that more than 80 per cent of participants found the outcomes of the Centre's capacity-building events beneficial in terms of: increased awareness and knowledge; increased understanding of policies and strategies; overall usefulness; and relevance of the programme to their job.

30. The external evaluator's report on the evaluation of the Centre (ESCAP/75/INF/3), which was conducted in 2018, confirmed that the Centre's capacity-building programmes and activities were very much relevant to the needs of the member States and that such programmes and activities were delivered effectively and efficiently.

IV. Issues for consideration by the Committee

31. The Committee may wish to indicate the support – in the form of research, training, and advisory services – that may be required in the fields of science, technology and innovation, and to suggest areas of future focus to guide the work of the Centre and the secretariat going forward.

32. The Committee may also wish to recommend to member States to consider providing extra-budgetary financial support to the Centre as well as financing new technical cooperation projects to ensure the sustainability of the Centre's capacity-building, research and technical assistance work.

Annex I

Quarterly publications issued by the Asian and Pacific Centre for Transfer of Technology: *Asia-Pacific Tech Monitor*

“Financing innovation in Asia and the Pacific”, vol. 35, No. 3, July–September 2018

“Biotechnology commercialization and transfer in Asia and the Pacific”, vol. 35, No. 4, October–December 2018

“Technologies for inclusiveness and equality”, vol. 36, No. 1, January–March 2019

“Fourth industrial revolution technologies for inclusive and sustainable development”, vol. 36, No. 2, April–June 2019

“Promoting green technologies: innovative mechanisms and partnerships”, vol. 36, No. 3, July–September 2019

“Promotion of technology-based startups in the Asia-Pacific: policies and strategies”, vol. 36, No. 4, October–December 2019

Annex II

Capacity-building activities carried out/contributed by the Asian and Pacific Centre for Transfer of Technology

Regional consultation on achieving Sustainable Development Goals through sector-focused science, technology and innovation policies, Bangkok, 27–28 August 2018

Contributed to the 6th Forum on China–ASEAN Technology Transfer and Collaborative Innovation, Nanning, China, 11 September 2018

Contributed to an international training programme on skill development and employment generation, New Delhi, 25 September 2018

Training on innovation, technology transfer and technology-based entrepreneurship for senior officials from the Government of Bhutan, New Delhi, 26 September 2018

Fourth Industrial Revolution Conference 2018: “New and Emerging Technologies in Achieving Sustainable Development Goals”, Putrajaya, Malaysia, 23 and 24 October 2018

Innovation Summit and International Conference on Technology Transfer and Internationalization of Technology-based Businesses, Tangerang, Indonesia, 1 and 2 November 2018

Contributed to the 2019 South and Southeast Asia Technology Transfer Matchmaking Conference, Kunming, China, 13 and 14 June 2019

International Workshop on Intellectual Property Management and Technology Licensing, Bangkok, 18–20 June 2019

Organized in partnership with the Council of Scientific and Industrial Research-Human Resource Development Centre, Regional Workshop on New Paradigm in Technology Transfer and Commercialization, Ghaziabad, India, 8–10 July 2019

Contributed to the Training programme on skill, technology and future of work, Noida, India, 8–12 July 2019

Regional Workshop on Planning and Managing Technology Transfer for Inclusive Development, Thimphu, 16–18 July 2019

Contributed to the International Training Programme on Skill Development and Employment Generation, Noida, India, 2–20 September 2019

Regional Workshop on Innovation and Technology Transfer: Role of Intellectual Property, Tashkent, 30 and 31 October 2019
