

Brainstorming Session between STI Agencies of India and APCTT for Promoting Regional Technology Cooperation

19 April 2022, New Delhi, India

Jointly organized by

- Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India
- Asian and Pacific Centre for Transfer of Technology (APCTT) of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

Meeting Report

A. Overview

1. The brainstorming meeting brought together 12 senior policymakers and experts. They represented 6 key STI-related ministries, departments and national agencies of Government of India including Department of Scientific and Industrial Research (DSIR), Council of Scientific and Industrial Research (CSIR), Department of Science and Technology (DST), Ministry of New and Renewable Energy (MNRE), Ministry of Electronics and Information Technology (MeitY), Ministry of Environment, Forest and Climate Change (MOEFCC), Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), and Research and Information System for Developing Countries (RIS).
2. The event was jointly organized by Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India and the Asian and Pacific Centre for Transfer of Technology (APCTT) of ESCAP .
3. The participants shared the perspectives and priorities of their respective organizations for regional technology cooperation. The meeting provided a platform to identify potential areas of collaboration with APCTT, and explore strategies and modalities for regional cooperation using APCTT's platform.
4. The meeting began with welcome remarks by Mr. Surinder Pal Singh, Joint Secretary, DSIR & National Focal Point, India for APCTT, and Dr. Preeti Soni, Head of APCTT and a round of introduction by the participating experts and officials. D. Shekhar C Mande, Secretary of DSIR delivered his special remarks highlighting the need for key STI-related ministries and agencies of Government of India to expand their activities to support the Asia-Pacific region through APCTT's regional platform. The representatives presented the priorities and capacities of their agencies for potential collaboration.

B. Suggestions/recommendations

Research and Information System for Developing Countries (RIS)

5. APCTT could strengthen its regional connect to address socio-economic challenges through supporting key SDGs such as 2, 3, 5, 6, 7, 9. Health and food can be considered as priority sectors to support member States.
6. Institutional connect of the Centre can be strengthened and expanded, particularly with various ministries of the Government of India which are dealing with key aspects related to science technology and innovation.
7. SDG-wise mapping of relevant actors and stakeholders in India could be undertaken to identify opportunities for collaboration with APCTT.
8. APCTT's strategy could go beyond G2G approach to reach out to civil society organizations (CSOs), community organizations, self-help groups (SHGs) to promote utilization of low-cost technologies.
9. Listing of technologies from India could be undertaken and linked with United Nations Technology Facilitation Mechanism (TFM) for wider dissemination among countries and APCTT can play an important role in this exercise.

Department of Science and Technology (DST)

- 9 Technology demand survey in countries of the Asia-Pacific region would be helpful to understand the needs of member States for technology transfer and cooperation.
- 10 The focus could also be on identifying and promote innovative technology solutions that are available in the region to address specific challenges.
- 11 Good case studies can be prepared to show how demand for specific technology solutions are generated in different countries.

Ministry of Electronics and Information Technology (MeitY)

12. Digital technologies are overarching on all Sustainable Development Goals and hence these technologies could be prioritized for supporting and strengthening the capacity of countries.
13. Digital inclusion should be the key objective to bridge the digital gap in the region through appropriately designed programmes and activities as per the needs of countries. Prominent examples from India are COWIN, UPI and Aadhar which have been successfully used to reach out to wider segments of the population.
14. It is necessary to identify and pick up specific problems being faced by member countries and offer digital technology-based solutions to address the challenges.

15. In the emerging economic scenario, startups are a key component of digital ecosystems of countries and could be the focus of strengthening their capacity for accelerated economic development.
16. Inclusion of new generation technologies in the emerging economic systems could be considered on priority basis by countries in the region.

Indian Council of Medical Research (ICMR)

17. It is imperative to focus on promoting innovative applications of emerging technologies which play a critical role in the healthcare sector. For example, drones have been used for delivery of vaccines in remote areas of Manipur and Nagaland. Such technology applications can be promoted for adoption by other countries in the region.
18. APCTT as a regional platform could collaborate with ICMR to help member countries in training, capacity building and developing tailor-made courses for stakeholders to enhance research capacity, and promote good clinical practices.
19. ICMR has established research platforms which can be leveraged to enhance capacities of member States, particularly the Southeast Asian countries, in the area of infectious diseases.

Indian Council of Agricultural Research (ICAR)

20. The regional activities already done in the Asia-Pacific under Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), South Asian Association for Regional Cooperation (SAARC), and Asia-Pacific Association of Agricultural Research Institution (APAARI) should be studied for designing appropriate technology interventions in the agriculture sector.
21. Key ideas can be picked up from the Summit statements made by Heads of States on global and regional platforms.
22. There are good models in India which could be upscaled for adoption in other Asia-Pacific countries. For example, 'climate-resilient villages' is an innovative model successfully implemented in India.
23. APCTT's regional platform can be used for trade of technologies through G2G and G2B approaches in the Asia-Pacific.
24. Blue economy is an important area for the Asia-Pacific region. Many countries would require capacity building in areas such as aquaculture, marine culture, etc.
25. Digital agriculture is another area which need to be prioritized for supporting the Asia-Pacific countries. Key issues in this area are utilization of digital devices in agriculture, data safety and security where caution needs to be exercised by countries.

Ministry of New and Renewable Energy (MNRE)

26. India is a global player in the renewable energy field through actively promoting and engaging with intergovernmental organizations such as International Solar Alliance (ISA) and International Renewable Energy Agency (IRENA). MNRE can explore engagements with APCTT to promote renewable energy in the Asia-Pacific region.
27. India's key requirements of technology in the renewable energy sector include hydrogen energy, battery storage, offshore energy among others.
28. Potential areas of collaboration in the renewable energy field are training and capacity building, research and cross-learning of good practices between stakeholders from member countries in the region.

Areas of collaboration and next steps

29. Some of the potential areas of collaboration emerging out the brainstorming session are listed in the following table.

Gol Ministries / Agencies	Potential areas of collaboration
Research and Information System for Developing Countries (RIS)	<ol style="list-style-type: none">1. Conduct SDG-wise mapping of relevant actors and stakeholders in India to identify opportunities for collaboration with APCTT2. Collaborate with civil society organizations (CSOs), community organizations, self-help groups (SHGs) to promote utilization of low-cost technologies3. Listing of technologies from India for linking with United Nations Technology Facilitation Mechanism (TFM)
Department of Science and Technology (DST)	<ol style="list-style-type: none">4. Conduct technology demand survey in countries of the Asia-Pacific region5. Identify and promote innovative technology solutions that are available in the region to address specific challenges6. Prepare good case studies to show how demand for specific technology solutions are generated in different countries
Ministry of Electronics and Information Technology (MeitY)	<ol style="list-style-type: none">7. Strengthen capacity of digital startups (MeitY)8. Identify specific problems being faced by member countries and offer digital technology-based solutions to address the challenges (MeitY)
Indian Council of Medical Research (ICMR)	<ol style="list-style-type: none">9. Leverage ICMR's research platforms to enhance capacities of member States in the area of infectious diseases

	<p>10. Training, capacity building and developing tailor-made courses for stakeholders to enhance research capacity, and promote good clinical practices</p> <p>11. Promote innovative applications of emerging technologies which play a critical role in the healthcare sector such as drones for delivery of vaccines in the remote areas</p>
Indian Council of Agricultural Research (ICAR)	<p>12. Promote India's 'climate-resilient villages' model in the Asia-Pacific</p> <p>13. Capacity building in capacity building in blue economy areas such as aquaculture, marine culture, etc.</p> <p>14. Promote digital agriculture in Asia-Pacific with India's examples and models</p>
Ministry of New and Renewable Energy (MNRE)	<p>15. Support meeting technology needs in the renewable energy sector such as hydrogen energy, battery storage, offshore energy</p> <p>16. Capacity building, research and cross-learning of good practices in renewable energy</p>

30. Conduct a follow-up meeting with DSIR to identify and shortlist priority areas of cooperation in line with the scope of APCTT's mandate and current focus.
31. Conduct bilateral meetings with participating agencies of the Government of India to discuss and identify specific activity-level partnerships and operational modality.
32. Discuss with cooperating agencies to identify roles, responsibilities and resources
33. Prepare a work plan of selected activities to be implemented in collaboration with Gol ministries and agencies