International Knowledge Sharing Workshop on Cross-border Innovation, Acceleration and Challenges in International Transfer of Technologies

14 - 15 November, 2022
Ghaziabad, India (Hybrid Mode)

Jointly Organized by

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

Venue:

- CSIR-Human Resource Development Centre (HRDC), Sector -19, Central Govt. Enclave, Kamla Nehru Nagar, Ghaziabad- 201002 (UP) India

Invited countries:

- Bangladesh, China, Fiji, India, Indonesia, Islamic Republic of Iran, Kazakhstan, Malaysia, Republic of Korea, Nepal, Pakistan, The Philippines, Sri Lanka, Thailand, Uzbekistan, Vietnam.

BACKGROUND

Developing countries, globally and in the Asia Pacific, are keenly interested in transfer of technologies for integration into the global economy, and to create viable and sound technological bases to meet their national development goals. Additionally, transfer of new, clean and emerging technologies is increasingly being emphasised across the region, given the urgency to build climate and disaster resilience. Markets for clean technologies are therefore projected to grow rapidly in the coming years, at an estimated growth rate of 24.6% CAGR[1]. In addition to market mechanisms, Asia Pacific nations are also exploring South-South mechanisms to access new and innovative technologies[2].

In the above context, this international workshop is being organized to deliberate on the challenges and share knowledge, experience and good practices on innovation and cross-border transfer of technologies in the Asia-Pacific region.

The Department of Scientific and Industrial Research (DSIR) of the Government of India and its autonomous agencies such as Council Scientific and Industrial Research (CSIR) and National Research Development Corporation (NRDC) provide linkages between scientific laboratories and industrial establishments in India for transfer of technologies nationally and internationally. The CSIR covers a wide spectrum of science and technology – from oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology. It provides significant technological intervention in many areas concerning societal efforts, which include environment, health, drinking water, food, housing, energy, farm and non-farm sectors. CSIR covers a wide spectrum of science and technology – from oceanography, geophysics, chemicals, drugs, genomics, biotechnology and

[1] Asia Pacific Green Technology and Sustainability Market By Technology, By Application, By Country, Opportunity Analysis and Industry Forecast, 2021 – 2027, https://www.researchandmarkets.com/reports/5514496/asia-pacific-green-technology-and-sustainability

[2] ADB, UNEP, GEF, *The Pilot Asia-Pacific Climate Technology Network and Finance Center*, https://www.adb.org/sites/default/files/publication/29975/pilot-asia-pacific-climate-technology-flyer.pdf

nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology. It provides significant technological intervention in many areas concerning societal efforts, which include environment, health, drinking water, food, housing, energy, farm and non-farm sectors.

This international workshop envisages to strengthen capacity of innovators and promote regional cooperation between innovators from India and member States of APCTT through cross-learning from experience and good practices, identifying potential collaboration opportunities and strategies for cross-border technology transfer.

OBJECTIVES

- Increase knowledge and awareness on the challenges, mechanisms and good practices of innovation, transfer and diffusion of technologies in the Asia-Pacific Region.
- Explore innovative strategies and modalities to strengthen regional cooperation for cross-border transfer and diffusion of technologies.
- Provide recommendations on addressing the critical challenges for strengthening regional cooperation for innovation and technology transfer.

PARTICIPANTS

Policymakers and innovators from member States engaged in development of policies and/or innovation, development or deployment of technologies in any of the following four thematic areas:

- Emerging technologies for climate-resilient agriculture, animal husbandry to support SDG 2
- Green, low-carbon technologies in energy to support SDG 7
- The process and key constraints in innovation, technology promotion and commercialisation to support SDG 9
- Pathways and constraints in techno-commercial value assessment, marketability and affordability of innovative technologies

TENTATIVE PROGRAMME

Day 1: 14th November 2022
Focus: Overview of emerging technologies in agriculture & animal husbandry, energy, innovation& technology commercialization, techno economics, pathways and challenges
(India Time: GMT+5:30)

10.00-10.30	**Registration of participants**
10.30-11.05	**OPENING SESSION**
10.30-10.35	**Welcome Address:** Dr. R. K. Sinha, Head, Human Resource Development Centre, CSIR-HRDC, Ghaziabad, India
	Opening Remarks
10.35-10.45	Mr. Surinder Pal Singh, Joint Secretary, Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India
10.45-10.55	Dr. Rama Swami Bansal, Chief Scientist and Head, International S&T Affairs Directorate (ISTAD), Council of Scientific and Industrial Research (CSIR), Government of India
10.55-11.05	Dr. Preeti Soni, Head, Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)
	Group Photo

11:05-11.30	**Tea-Coffee Break**	
11:30-13.00	**SESSION I:**	**Emerging technologies for climate-resilient agriculture and animal husbandry to support SDG 2** Indicative areas of presentation would be: Productive agriculture and animal husbandry through integrating emerging technologies like Internet of Things (IOT), robotics, drones, energy resilient preservation and biotechnology for better selection, yield improvement, disease resistance, precision farming, precision nutrient deliveries, Innovation and Policy perspectives
	11.30-11.40	CSIR, India (**TBC**) (Topic: An overview on emerging technologies for smart and climate-resilient agriculture and animal husbandry: India Policy perspectives)
	11.40-11.50	Mr. Konda Reddy Chavva, Officer-In-charge, Food and Agriculture Organization (FAO), India (Topic: Global perspectives on emerging technologies for climate-resilient agriculture)
	11.50-12.00	Mr. Ashwin Kashikar, Director, M/s Ankur Seeds Pvt. Ltd., Nagpur, India (Topic: An Industry perspective on integrating emerging technologies like IOT, robotics, drones, energy resilient preservation and biotechnology in agriculture for better selection, yield improvement and disease resistance)
	12.00-12.15	Dr. Habibar Rahman, International Livestock Research Institute (ILRI) Regional Representative, South Asia (Topic: Global perspectives on emerging technologies for smart and climate-resilient animal husbandry)
	12.15-12.30	Mr Rajendra Barwale, CMD & Mr. Aashish R Barwale, Director, M/s Mahyco Pvt. Ltd., Jalna, India (Topic: An industry perspective on emerging crop breeding technology for productive agriculture, precision farming, precision nutrient deliveries, innovation and policy perspectives)
12:30-13.00	**Country perspectives and open discussion**	
13.00-14.00	**Lunch**	
14.00-15.30	**SESSION II:**	**Green and low-carbon emerging technologies in energy to support SDG 7** Indicative areas for presentation could be Material research & innovation, production technology, power electronics, energy storage and management for alternate energy (solar, offshore, wind etc), green hydrogen, carbon-negative technologies, ocean biomass, biofuel, 5G-based smart grids, climate protection, sustainability etc. and innovation and policy perspectives.
	14.00-14.15	Dr. Ajay Mathur, Director General, International Solar Alliances, (ISA) (A global perspective on green & low-carbon technologies in energy sector)

	14.15-14.30	CSIR, India (**TBC**) (Topic: Green hydrogen, carbon-negative technologies, ocean biomass, biofuel, 5G-based smart grids, climate protection, sustainability, . and innovation and policy perspectives).
	14.30-14.45	Prof. (Dr.) Sukumar Mishra, Department of Electrical Engineering, Indian Institute of Delhi (IIT), Delhi, India (Topic: Power electronics, energy storage and management for alternate energy like solar, offshore, wind etc)
	14.45-15.00	Mr. Dhananjay Sahoo, Deputy General Manager, India Oil Corporation Ltd (IOCL), New Delhi, India (Topic: Industrial perspective on future energy technologies via-vis economic feasibility**)**
15.00-15.30	**Country perspectives open discussion**	
15:30-16.00	**Tea-Coffee**	
16.00-19.00	**Site visit / Educational tour**	

Day 2: 15th November 2022
Focus: Moving from technology innovations to commercialisation

10.00-11.00	**SESSION III:**	**The process and key constraints in innovation, technology promotion and commercialization to support SDG 9** This session will deliberate on the opportunities, challenges, and guidance on how countries can accelerate the technology formulation and adoption cycles.
	10.00-10.15	Prof. (Dr.) Jamuna Duvvuru, Vice-Chancellor, SPMVV, Tirupati, India (Topic: Techno commercial and socio-economic perspective of Innovation: An engine for economic empowerment of India)
	10.15-10.30	Dr. Katja Lasch, Director, DAAD Regional Office New Delhi and Director, DWIH New Delhi, India (Topic: Innovation ecosystems of Germany, sharing opportunities, challenges, and guidance to accelerate the technology formulation and adoption cycles)
	10.30-10.45	Dr. Preeti Banzal, Scientist-G / Adviser, Office of PSA, Govt. of India (Topic: Innovation ecosystem in India: Recent initiatives and policy perspectives) **(TBC)**
	10.45-11.00	Ms. Rebecca Fairbairn**,** Head of Science and Innovation, UK Research & Innovation (UKRI), UK Government (Topic: UKRI model of Innovation: Opportunities, challenges, and guidance to translate innovation towards commercialization)
11.00-11.30	**Country perspectives and open discussion**	

11.30-12.00	**Tea-Coffee**	
12.00-13.00 **12.00-12.10**	**SESSION IV:**	**PANEL DISCUSSION: PATHWAYS and constraints in techno-commercial value assessment, techno-economics, marketability, and affordability of innovative technologies** This session will allow policy makers and innovators from member States to share the constraints they face in moving along the technology life cycle from capturing innovative ideas to prototype development to standardization and commercialization Moderator: Prof. Sachin Chaturvedi, Director General, Research and Information System for Developing Countries (RIS), New Delhi, India
1210-1220	Panelist	Mr. Kishan Kumar Tewari, President & CTO, M/s International Tractor (Sonalika) Limited, India (Topic: Capturing innovative ideas to prototype development to standardization and commercialization)
1220-1230	Panelists	Dr. Abhay Jere, Chief Innovation Office, Ministry of Education, India (Topic: Culture of innovation in all Higher Education Institutions (HEIs) across pan-India: constraints faced by the innovators and indicative solutions)
1230-1330	Panelists	Successful innovators nominated from member States (one from each country) [India, China, Malaysia, Thailand, Uzbekistan, Republic of Korea] - **TBC**
13:30-14:30	**Lunch**	
14:30-15.00	**VALEDICTORY SESSION**	
14:30-14.45	**Address by Chief Guest:** Dr. N Kalaiselvi, Secretary, DSIR and Director General, CSIR, Ministry of Science and Technology, Government of India	
14:45-1455	**Closing remarks:** Dr. Preeti Soni, Head of APCTT-ESCAP Dr. Ramanuj Banerjee, Scientist F, DSIR, Ministry of Science & Technology, Govt. of India	
14:55-15.00	**Vote of Thanks** Mr. Vinay Kumar, Principal Scientist, CSIR-HRDC, Ghaziabad	

Registration Link and QR Code (Please use any one)

Registration link :
https://forms.office.com/r/drVtEgAU14

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Contact for any issue in joining the meeting:
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3. CSIR (for Local Logistics & Offline Joining)