

**Main conclusions of the discussions held at the International
Conference on Green Technologies for Climate Action and
Resilience
5 December 2023, Tashkent, Uzbekistan**

A. Introduction

1. The International Conference brought together about 135 participants from the Centre's Governing Council members and other member States of ESCAP, including Government officials, policymakers and research institutions, industry leaders and professionals, academia and researchers and civil society organisations and local students and researchers from Uzbekistan.

2. The main discussions during the international conference focused on: understanding the interface between green technologies and climate change; case Studies on frontier innovations and green technologies; research and development for social problem solving through the living labs approach; and cross-sector collaboration to drive green technology for enhancing climate action and resilience.

B. Summary of discussions

3. The conference noted that green technologies offer many advantages such as economic opportunities, jobs, resource conservation, public health and wellbeing, and harmonious balance between economic development and environmental protection.

4. It was underscored that emissions reduction requires holistic and inclusive solutions in key sectors such as energy, agriculture, water, waste management among others. The private and public enterprises, SMEs and local communities have their unique requirements of technological solutions which need to be feasible and affordable. Locally available green and sustainable technologies could meet many of these requirements. Towards this objective, online marketplaces and databases are useful platforms to facilitate connection between technology providers and seekers.

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

6. The fourth industrial revolution technologies offer 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 system could provide smart farm-based advisories for pest management practices.

7. With advanced research and development, hydrogen energy is being increasingly adopted as a clean energy source. Innovative solutions are being developed by researchers in Uzbekistan

to address the major challenges of high cost, difficulty of safe storage and difficulty of using hydrogen.

8. Nature-based solutions are another promising approach to enhance resilience and sustainability in various fields and their implementation requires good practices and stronger evidence of their benefits for wider adoption. Planning of nature-based solutions requires a framework that considers the specific context and challenges. It is essential to engage with stakeholders to ensure that the visions of local communities, governments, and other partners are integrated into all stages of a project.

9. The conference highlighted many innovative green technologies and their applications. Bio-inspired design offers many innovative solutions. Microalga is another promising climate-resilient sustainable alternative of plants for ensuring CO₂ fixation, biomass valorization and circular economy. Other examples include Solar Home Systems, animal-dung biodigesters, programme for conservation of forests and improved cooking stoves.

10. The conference deliberated on The Living Labs Approach being promoted by the Republic of Korea. This is a multistakeholder platform where different stakeholders jointly participate in user-centered research and development from initial research to demonstration and dissemination stage. The process involves preplanning, technology development and subsequent application of the technology. This approach is proving to be a successful model for social problem-solving.

11. With rapid urbanization of coastal areas, managing marine waste is becoming increasingly essential for countries to protect their environment. Integrated waste management system for ocean and river debris as well as sustainable solutions for the recycling of marine debris are suggested as key approaches.

12. The conference noted that the Asia-Pacific region offers comparative advantages for adopting green technologies, particularly clean energy solutions such as solar, wind, biomass energy, etc. However, there are challenges such as high initial investment, low energy efficiency, and lack of energy infrastructure. Many countries are adopting enabling policy measures for transitioning to clean energy. For example, Bangladesh is implementing policy measures such as net metering, renewable energy power purchase agreements, renewable energy certificates, and usage of wetlands for solar energy production. Enabling policies should also encourage participation of private sector in renewable energy projects.

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

14. For promoting green technologies, the conference suggested that it is imperative for countries to facilitate the export sector, 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 this

regard, Thailand has been promoting Bio-Circular-Green (BCG) model through Public-Private partnerships for adoption of green technologies for local area development.

C. Recommendations for the Asian and Pacific Centre for Transfer of Technology:

15. The Centre was requested to organize more meetings, conferences and events for knowledge-sharing on policies, collaboration, investment, transfer and adoption of green and 4IR technologies for climate resilience.

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

17. The Centre could act as a knowledge-sharing platform for member States to facilitate international collaboration, financing, public-private partnerships, and 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. These include: conducting studies for establishment of green hydrogen and optimization of energy systems; identification and prioritization of green technologies; mapping of industry 4.0 technologies; enhancing MSME manufacturing capability; promoting venture funding for 4IR innovation and start-up ecosystems; identifying common problems of countries to develop collaborative programmes; identifying technology demands; facilitating integration of science, education and industry through cooperation; promoting research-based companies; providing support and 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. The panel requested the Centre to organize an International Seminar on Industry 4.0. The panel suggested that APCTT identifies the needs and demands of member states and facilitates leveraging the opportunities for technology cooperation. The panel also suggested to enhance the focus on alternate energy. The panel suggested identification and prioritisation of 4IR applications in green technologies and cooperation among scientific community for greater innovations.

Annexures: Photographs of the Conference



