

II-C. INTERNATIONAL COOPERATION

1. PREAMBLE

The DSIR maintains effective coordination and cooperation with various international organizations such as UNCTAD, WIPO, UNIDO, UNESCAP and UNESCO at different levels and in association with other concerned Ministries on various issues related to Technology development and technology transfer. Matters pertaining to the APCTT under UN-ESCAP are dealt with the cooperation of the Ministry of Commerce and Industry and the Ministry of External Affairs, DSIR also plays an active role in APCTT's functioning, particularly relating to its programmes and policies.

India, being the host country for the centre, has been providing institutional support. During the period under report, institutional support of US\$ 2,00,000 equivalent in Indian Rupees was provided to APCTT for meeting local costs. In addition, funding for building repairs, renovation work, and municipal taxes was also provided. DSIR has extended programme support towards the APCTT project entitled, "Promotion of National Innovation Systems (NIS) in Countries of the Asia-Pacific Region - Phase II" and the Ministry of New and Renewable Energy Sources has funded another APCTT project entitled, "Establishing an Institutional Cooperation Mechanism to Promote Renewable Energy."

The revised Statute of the APCTT, adopted by the Commission at its Sixty-first session in May 2005, through its resolution 61/4, stipulates, among other things, that the Centre shall have a Technical Committee consisting of experts from members and associate members of ESCAP and from inter-

governmental and non-governmental organizations. Members of the Technical Committee shall be appointed by the Head of APCTT in consultation with the Executive Secretary of ESCAP. The Technical Committee shall be responsible for advising on the formulation of the programme of work and on technical matters concerning the operations of APCTT. The Centre shall have a Governing Council consisting of a representative designated by the Government of India and no fewer than eight representatives nominated by other members and associate members of ESCAP elected by the Commission. The members and associate members elected by the Commission shall be elected for a period of three years but shall be eligible for re-election.

2. ACTIVITIES OF APCTT

During the period under report, the Centre endeavored to assist the countries of the region in responding to the challenges of integrating into the global economy by focusing on technology transfer support services for SMEs, the promotion of national innovation systems, promotion of renewable energy technologies and the provision of information, networking and sharing of experiences relating to the management of technology. Under these thrust areas, the Centre undertook a range of programmes of immediate relevance to the region.

Technology Transfer Network for SMEs

APCTT is continuing to facilitate cross-border business cooperation among SMEs in countries in the Asia-Pacific region through its networks and

platforms. APCTT uses these networks and partnerships to expand its geographical coverage of programmes in the Asia-Pacific region and to deliver its services to a much larger group of SMEs.

Under the Technology Transfer Network for SMEs, APCTT has developed a comprehensive web-based tool called Technology4sme (www.technology4sme.net) to facilitate technology transfer in the Asia-Pacific region. A companion website called Business Asia (www.business-asia.net) has been developed to serve as a network to bring together ideas, information and resources concerning technology-based businesses, particularly for SMEs. The Centre had also developed the Asia-Pacific Technology Information Tracking and Unified Data Extraction (APTITUDE), a search engine known as APTITUDE, to enable buyers and sellers of technology to reach not only the APCTT database but also related databases from member countries that were in the public domain.

APCTT, through its networks of technology transfer intermediaries as well as its technology transfer portal (www.technology4sme.net) serviced queries related to 255 technology offers and 192 technology requests from SMEs and entrepreneurs across the Asia-Pacific region during the period from September 2009 to September 2010. The Centre's technology transfer portal, www.technology4sme.net, continues to serve as an active platform for information exchange between APCTT, SMEs and business firms in the Asia-Pacific region.

Technology Transfer Capacity-building Activities

(a) Iran Biotech 2010

APCTT facilitated the participation of 8 experts from APCTT member countries namely, Bangladesh, China, India, Indonesia, Nepal, Pakistan, Philippines, and Thailand to participate in the Iran Biotech 2010 organized by the Iran Biotechnology Development Council (IBDC) and the Indian Ocean Rim for Regional Cooperation (IOR-ARC) - Regional Centre for Science &

Technology Transfer (RCSTT) of the Islamic Republic of Iran held from 13-15 April 2010 in Tehran, Islamic Republic of Iran. The IOR-ARC Regional Centre for Science & Technology Transfer (RCSTT) supported the costs for local hospitality of the participants from these member countries.

(b) Seminar on Asia-Pacific Building Integrated with Solar Energy Technology System

APCTT in partnership with the Yunnan Academy of Scientific and Technical Information (YASTI) organized a three-day programme from 19-21 April 2010 in Kunming, China on the theme of Building Integrated with Solar Energy Technology Systems: Research and Applications. The Government of China covered all the local costs and provided resource persons. APCTT facilitated the participation of 15 experts from APCTT member countries including one each from India, Mongolia, and the Philippines, two each from Thailand and Viet Nam, and four each from Nepal and the Republic of Korea. YASTI supported the costs for local hospitality of the participants from these member countries.

(c) Workshop and Field Trip to Promote Commercialization of Technology in the Areas of Jatropha Oil and Wood Pellet Machines and Tools

The Ministry of Science and Technology (MOST) of the Royal Thai Government and the Thai Machinery Association, in collaboration with APCTT, organized a "Workshop and Field Trip to Promote Commercialization of Technology in the Areas of Jatropha Oil and Wood Pellet Machines and Tools" during 28-30 April 2010 in Bangkok with field trips to the Chai Nat, Lampang and Chiang Mai provinces of Thailand to study demonstration projects. The main focus of this workshop was to explore the possibilities of cooperation among APCTT member countries in commercializing technologies related to Jatropha oil manufacturing and wood pellet machines and tools. The Royal Thai Government covered all the local costs and provided resource persons. APCTT

facilitated the participation of four experts from APCTT member countries including three from Indonesia and one from Nepal.

Promotion of national innovation systems in the Asia-Pacific region

Under the DSIR funded project entitled, "Promotion of National Innovation Systems (NIS) in Countries of the Asia-Pacific Region - Phase II" the following programmes were organized:

(a) Consultative Workshop on Promotion of National Innovation Systems in Countries with Special Needs (CSN) for Senior Policy-Makers

CSN face complex and specific problems in developing and deploying their technological capabilities to promote sustained and inclusive economic development. One of the prerequisites for addressing these problems is the design and implementation of a NIS that can help the development and utilization of a nation's science and technology resources and capabilities. The NIS-based development approach would also provide these countries with the opportunity to participate and benefit from the globalization of business and technology. Moreover, it would also assist them in identifying their capabilities and weaknesses, and competitive advantages and challenges in the domain of science and technology. CSN also need to strengthen their capability to leapfrog with respect to the development of a NIS policy framework by building on the experiences and best practices of other more economically advanced participating countries from the Asia - Pacific region.

APCTT, in cooperation with the Ministry of Science and Technology (MOST) of Thailand organized the above workshop on 19 and 20 October 2010 in Bangkok. This Consultative Workshop enabled senior policy makers from Bangladesh, Bhutan, Lao PDR, Myanmar and Nepal to understand the concept of NIS, its importance, key components and organic-linkages with sub-national and sectoral innovation systems. The workshop also focused on best practices with respect to policy measures, support

mechanisms and services of other economically advanced participating countries from the region. Resource persons from China, India, Republic of Korea and Thailand were invited to share their country experiences.

(b) Asia-Pacific Forum on Strengthening the Governance of National Innovation Systems

The Forum was organized from 24 - 25 November 2010, in Jakarta, Indonesia. The theme of the Asia-Pacific NIS Forum was, "Strengthening the Governance of National Innovation Systems" and aimed at enabling high-level policy-makers from member countries to share knowledge, experiences and best practices in the following areas: (i) Identification of nationally relevant key-components of a national innovation ecosystem and their strengths and challenges; (ii) strengthening of national policy and market driven approaches to develop linkages and partnerships among R&D institutions, academia, and enterprises for fostering technology innovation; (iii) formulation of national policies and facilitating mechanisms to foster networking of public R&D institutions within and across borders; and (iv) the development of methodologies that can be used for periodic performance evaluation of innovation policies, institutional mechanisms and support measures of an NIS.

High-level policy-makers from China, India, Indonesia, the Islamic Republic of Iran, Mongolia, Malaysia, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Sri Lanka, Thailand and Viet Nam participated and presented their country papers dealing with their experiences in the four areas listed above. At the forum, resource persons from APCTT and invited experts focused on conceptual issues and best practices of important components of NIS governance. Background papers were prepared and presented by consultants on: national governance of innovation policy/NIS with special emphasis on policy and market-driven linkages and partnerships among enterprises, R&D institutions and academia/universities; performance evaluation of NIS; and networking of R&D institutions for promoting

technology innovation and transfer of technology.

(c) National workshop on linkages and partnerships among enterprises, R&D institutions and academia/ universities to foster innovation and transfer of technology

APCTT in association with the Vietnam Centre for Technology Information Exchange of the National Agency for Science and Technology Information (NASATI) organized a national workshop on 22 and 23 December 2010 in Hanoi entitled, "Linkages and partnerships among enterprises, R&D Institutions and Academia/Universities to foster innovation and technology transfer." The workshop was organized to share knowledge, experiences and best practices in the theme area given in the title of the workshop. Resource persons from APCTT and invited experts from China, India and Korea made presentations on the following topics: (a) The key components of National Innovation Systems; (b) Policy and market driven linkages and partnerships among key actors of NIS - best practices; (c) Commercialization of public R&D outputs - best practices; and (d) evaluation of technology and acquisition capability of SMEs.

Renewable Energy Cooperation Network for Asia and the Pacific

APCTT initiated a project in 2009, with support from ESCAP, entitled "Supporting the development of an institutional cooperation mechanism to promote renewable energy in Asia and the Pacific". The project focused on laying the groundwork for establishing an institutional cooperation mechanism for strengthening the capacity of member countries to adopt multiple approaches for promoting the utilization of renewable energy resources to meet their energy needs and foster sustainable development.

In July 2010, APCTT was able to obtain US\$250,000, for the period July 2010 - June 2012, from the Ministry of New and Renewable Energy (MNRE) of the Government of India to build on the gains made in the preparatory stage and develop an institutional cooperation mechanism. This follow-

up project is entitled, "Establishing an Institutional Cooperation Mechanism to Promote Renewable Energy". While the main objective of the first stage in 2009 was the creation of an information infrastructure to support the institutional cooperation mechanism, the present project aims at establishing the institutional cooperation mechanism. Under this project, the following activities were organized:

(a) Consultative Meeting on Establishing a Regional Institutional Cooperation Mechanism to Promote Renewable Energy in Asia and the Pacific

APCTT organized a Consultative Meeting on 7 and 8 October 2010 at the Asian Institute of Technology (AIT), Thailand to gain insights into the structure and possible mode of operation of a network of participating member countries facilitated by APCTT that would perform four major functions, namely: (1) collection and dissemination of information on renewable energy technologies (RET); (2) sharing of best practices on renewable energy (RE) promotion and utilization; (3) facilitate the planning and implementation of RET transfer projects; and (4) promoting research and development (R&D) collaboration among member countries in renewable energy technologies. Representatives from China, Fiji, India, Indonesia, Malaysia, Mongolia, Nepal, Pakistan, Sri Lanka and Thailand participated in this programme.

(b) Business to Business Forum on "Regional Cooperation in the Renewable Energy Sector - Challenges and Opportunities for Business Firms in the Asia-Pacific Region"

APCTT in cooperation with the Nanjing International Technology Transfer Centre (NITTC) organized a B2B forum on 14 November 2010 in Nanjing, China. The B2B Forum was aimed at facilitating discussion among renewable energy technology stakeholders in member countries such as business firms, research and development (R&D) institutions, and technology transfer intermediaries to discuss options for strengthening cooperation in technology transfer, business partnerships and collaborative R&D. Representatives from business and national agencies

involved in promotion RET from China, Indonesia, Mongolia, Nepal, Philippines, Sri Lanka and Thailand participated in this forum and shared their country experiences. Resource persons from APCTT and invited experts from China, Hong Kong - China, and India made presentations dealing with opportunities and challenges in such cooperation.

Technology information services

APCTT's periodicals continue to play an essential role in dissemination of technological information. Over the past three decades, the Centre has provided technology information services to national policymakers, SMEs and technology transfer intermediaries. During this period, the APCTT information services had evolved to focus on current issues while meeting the overarching goal of fostering balanced and environmentally sustainable growth of SMEs in the Asia-Pacific region. The Asia-Pacific Tech Monitor and the Value Added Technology Information Services (VATIS) Update series, periodicals published by the Centre, disseminated a range of technological information on latest technological innovations, technology policies, innovation management, technology transfer and events. As recommended by the Governing Council of APCTT in 2007, effective from the September-October 2008 issues, both the Tech Monitor and VATIS Update series have become completely web-based and may be accessed and downloaded for free from www.techmonitor.net.

Normative and analytical work

To foster cooperation between its members in the promotion of economic and social development in the Asian and Pacific region, ESCAP undertakes a combination of normative, analytical and technical cooperation work. Regional-level analysis included review of the socio-economic performance in the region to identify trends, highlight good practices and foster regional cooperation. To assist ESCAP in this endeavour, APCTT had given priority to normative and analytical work with a regional perspective that would serve as a basis for operational activities.

In accordance with its programme of work for the biennium 2010-2011, APCTT commenced work in the following areas in 2010. These reports will be finalized in 2011.

- (a) Best practices for the utilization of research and development results by SMEs and the private sector;
- (b) Effective management of technology transfer, in particular of clean and renewable technologies, for enhancing the competitiveness of SMEs, including its gender dimension;
- (c) Facilitating entrepreneurship by prioritizing the commercialization of R&D outputs, in particular of clean and renewable technologies.

APCTT is also developing a training manual on "Planning and Implementing Technology Transfer" that could be used to train trainers in member states so that a critical mass of skills could be created in member countries to support and guide the technology transfer efforts of small and medium enterprises (SMEs) in the Asia-Pacific region. After pilot testing, review and finalization, the manual would be placed on APCTT's website for free access by agencies, in member countries, which are involved in technology transfer capacity building of SMEs.

APCTT Technical Committee and Governing Council

The Sixth meeting of the Technical Committee (TC) of the Asian and Pacific Centre for Transfer of Technology (APCTT) was held on 22 and 23 November 2010 in Jakarta, Indonesia. The Sixth session of the Governing Council (GC) of APCTT was held on 13 December 2010 in Bangkok, Thailand.

During the period under report, the Centre received contributions from China, Indonesia, Iran (Islamic Republic of), Malaysia, Macao (China), Pakistan, the Philippines, the Republic of Korea, Thailand and Viet Nam in varying amounts ranging from US\$ 5,000 to US\$20,000 totaling US\$ 1,16,065 excluding the support received from Government

of India. An amount of US\$ 2,00,000 in Indian Rupee equivalent was contributed by India towards institutional support of the Centre.

3. PARTICIPATION IN INTERNATIONAL EVENTS

Senior Officers of DSIR were deputed as Resource Persons/Participants to various events as below:

- ◆ Consultative Meeting on Regional Cooperation for Establishing an Institutional Cooperation Mechanism to Promote Renewable Energy in Asia and the Pacific, 7-8 October 2010, Asian Institute of Technology (AIT), Thailand
- ◆ Consultative Workshop on Promotion of National Innovation Systems in the Countries with Special Needs (CSNs) of the Asia-Pacific Region, 19-20 October 2010, Bangkok, Thailand.
- ◆ Sixth meeting of the Technical Committee (TC) of the Asian and Pacific Centre for Transfer of Technology (APCTT), 22-23 November 2010, Jakarta, Indonesia.
- ◆ Asia-Pacific Forum on Governance of National Innovation Systems for High-level Policy-makers, 24-25 November 2010, Jakarta, Indonesia.
- ◆ Sixth session of the Governing Council of the Asian and Pacific Centre for Transfer of Technology (APCTT), 13 December 2010, Bangkok, Thailand