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ASIAN AND PACIFIC CENTRE FOR TRANSFER OF TECHNOLOGY

SUMMARY

The present report briefly describes the activities of the Asian and Pacific Centre for Transfer of Technology in 2006, which were focused on technology information services, subregional and regional networking, technology capacity-building and the promotion and management of innovation.

In 2006, the Centre promoted cross-border business cooperation among small and medium-sized enterprises through subregional and regional networks: the Technology Transfer Network for Small and Medium-sized Enterprises in the Asia-Pacific Region; the Biotechnology Information Network for Asia; the Asia-Pacific Traditional Medicine and Herbal Technology Network; and the International Network for Transfer of Environmentally Sound Technologies for Asia.

Through its periodicals, publications and web-based resources, the Centre provided policymakers and private sector (small and medium-sized enterprises) with the latest information on development, and the transfer and acquisition of technologies.

The Centre also implemented a project funded by the Government of India to promote and manage innovation. In a related activity, the Centre is enhancing the capacity of Governments and other stakeholders in exploiting grass-roots innovations in Asia and the Pacific.

In 2006, the major donors of the Centre were the Governments of India, Germany and the Republic of Korea.

The post of Senior Economic Affairs Officer was filled in October 2006. In the absence of extrabudgetary resources for the post of Director, the Senior Economic Affairs Officer has been designated as officer-in-charge of the Centre, in addition to carrying out the regular functions of the post. The restructuring of the Centre that commenced in January 2006 has been completed. The total number of General Service posts has been reduced from 14 to 9.

* Reissued for technical reasons.

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INTRODUCTION

1. The Asian and Pacific Centre for Transfer of Technology is a subsidiary body of ESCAP that was established on 16 July 1977 with a mandate to assist the members and associate members of ESCAP by strengthening their capabilities to develop and manage national innovation systems; to develop, transfer, adapt and apply technology; to improve the terms of transfer of technology; and to identify and promote the development and transfer of technologies relevant to the region. The Centre is located in New Delhi with host facilities provided by the Government of India.
2. The Centre works to achieve the above objectives by undertaking the following functions:
 - (a) Research and analysis of trends, conditions and opportunities;
 - (b) Advisory services;
 - (c) Dissemination of technology information and information on good practices;
 - (d) Networking of key stakeholders;
 - (e) Training of national personnel, particularly national scientists and policy analysts.

I. MAJOR DEVELOPMENTS AND RESULTS IN 2006

3. In 2006, the Centre focused its activities on technology information services, regional and subregional networking, technology capacity-building and the promotion and management of innovation.
4. The work programme of the Centre covers four key areas: (a) technology innovation; (b) new and emerging technologies; (c) traditional technologies; and (d) technology information. The Centre's programmes are provided through networking on technology transfer, establishing partnerships with technology transfer intermediaries, organizing technology transfer events, such as seminars, workshops, training programmes, business meetings and direct contacts with entrepreneurs; and the publication of technical periodicals and other publications in both print and electronic format (Internet). Further details about the work of the Centre may be found in annex I.
5. To promote cross-border business cooperation among small and medium-sized enterprises, the Centre has established the following networks:
 - (a) Technology Transfer Network for Small and Medium-sized Enterprises in the Asia-Pacific Region
 - (b) Biotechnology Information Network for Asia
 - (c) Asia-Pacific Traditional Medicine and Herbal Technology Network
 - (d) International Network for Transfer of Environmentally Sound Technologies for Asia.
6. Under the project entitled, "Promotion of the Technology Transfer Network for Small and Medium-sized Enterprises in the Asia-Pacific Region", which is funded by the Government of

Germany, the Centre is working towards enhancing the capacity of institutions and intermediaries in member States so that they could deliver technology transfer services to boost the competitiveness of small and medium-sized enterprises. For this purpose, the Centre has developed two websites <www.technology4sme.net> and <www.business-asia.net>. The first of these websites facilitates the online transfer of technology. The main target beneficiaries include enterprises, especially small and medium-sized enterprises; technology transfer intermediaries; technology and business “infomediaries” and promotional organizations; research and development (R and D) institutions and universities; consultants; and venture capitalists, financial institutions and investors. The second website, Business-Asia, is designed to help business start-ups and joint ventures and facilitate foreign direct investment across borders in the Asian and Pacific region as well as provide information on new technologies and products.

7. Partnership is crucial to the sustainability of the Centre’s regional and decentralized online technology transfer and business information services. To this end, the Centre has planned a training programme to enhance the capacity and ensure the commitment of the network partners to maintain their respective parts of the two previously mentioned online portals. In 2006, the Centre carried out promotional and marketing activities aimed at attracting a critical mass of users to build the content of the portals and ensure their sustainability.

8. In a related activity, the Centre provides a technology trade platform to seekers and providers of technologies and renders technology exchange and transfer services with a view to promoting technology cooperation and trade among organizations and enterprises in the Asian and Pacific region.

9. To promote international cooperation in the area of biotechnology, the Centre implemented a project on the establishment of the Biotechnology Information Network in Asia (BINASIA) in cooperation with the Korea Research Institute of Bioscience and Biotechnology and with support from the Ministry of Science and Technology of the Republic of Korea. Also members of the network are 13 member countries of the Centre; they have designated national focal points.

10. Under the project, an expert group meeting was held in Bangkok on 24 and 25 January 2006 to discuss new and emerging issues related to biotechnology, review contributions to BINASIA made by member States and develop an action plan to promote the network in those countries. The meeting was attended by representatives of 13 members and associate members of ESCAP, the Centre, the Korea Research Institute of Bioscience and Biotechnology, the National Centre for Genetic Engineering and Biotechnology of Thailand, and the Ministry of Science and Technology of Thailand. The Centre and the Korea Research Institute of Bioscience and Biotechnology were requested to continue to maintain the BINASIA portal even after the completion of the project and to further strengthen the network by organizing hands-on national training workshops. Three national workshops were held in Nepal, Pakistan and the Philippines between March and April 2006.

11. In the area of traditional medicine and herbal technology, the Centre and various member States established the Asia-Pacific Traditional Medicine and Herbal Technology Network (APTMNET), linking 14 countries of the region and addressing issues related to biodiversity, protection of traditional knowledge, sustainable industrial utilization of natural resources and the promotion of sound agronomic practices at the grass-roots level. The International Conclave for Traditional Medicine and a meeting of members of the network were organized in New Delhi, on 16 and 17 November 2006, in collaboration with the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy of the Ministry of Health and Family Welfare, Government of India, the National Institute of Science, Communication and Information Resources, the World Intellectual Property Organization and the World Health Organization, India.

12. With funding from the Government of India, the Centre implemented a project entitled, "Promotion of national innovation systems in countries of the Asia-Pacific region". The purpose of the project was to enhance the awareness of policymakers about the relevance and importance of national innovation systems and to build their capacity in developing policy frameworks to enable the key actors, such as industry, R and D institutions and universities to adopt and participate in such systems. In 2006, the Centre organized seven national workshops for key actors in innovation systems in China, India, Indonesia, the Islamic Republic of Iran, Pakistan and the Philippines. More than 1,150 participants from various government ministries, industry, academia and R and D institutes were trained in the concept of a policy framework for a national innovation system and its linkages with sectoral and subnational innovation systems. The Centre is developing a web-based resource centre on national innovation systems to facilitate the sharing of experiences and to provide information on innovation and national innovation systems, trends in national innovation system policies, news and good practices in member States.

13. Through its periodicals and publications, the Centre provided policymakers and small and medium-sized enterprises with the latest information on new and emerging issues associated with the development, transfer and acquisition of technologies. The publications are important tools for bringing together providers and seekers of technology. The web version of the Centre's technology-oriented periodicals may be accessed at <www.techmonitor.net>.

II. SECOND SESSION OF THE GOVERNING COUNCIL AND SECOND MEETING OF THE TECHNICAL COMMITTEE

14. The second session of the Governing Council of the Asian and Pacific Centre for Transfer of Technology (APCTT) was held on 13 December 2006 in Lahore, Pakistan. The session was attended by representatives of 10 member States: Bangladesh, China, India, Indonesia, the Iran (Islamic Republic of), Malaysia, Pakistan, the Republic of Korea, Sri Lanka and Thailand. Observers from Nepal, the Philippines and Viet Nam also participated.

15. The Council unanimously elected Dato' Abdul Hanan Alang Endut (Malaysia) as Chairperson and Ms. Sreedevi Ravindran (India) Vice-Chairperson.

16. The Council adopted the following agenda:

1. Opening of the session.
2. Election of officers.
3. Adoption of the agenda and rules of procedure.
4. Report on the activities of APCTT during the period from December 2005 to November 2006 and presentation of the programme of work for the biennium 2006-2007.
5. Report of the Technical Committee on its second meeting.
6. Proposed future projects and the work programme for the biennium 2008-2009.
7. Date and venue for the third session of the Governing Council.
8. Other matters.
9. Adoption of the report.

17. The second meeting of the Technical Committee was held on 11 and 12 December 2006 in Lahore, Pakistan, and was attended by experts from 13 countries: Bangladesh, China, India, Indonesia, Iran (Islamic Republic of), Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand and Viet Nam.

III. ADMINISTRATION AND PROGRAMME OF WORK

18. The Governing Council of the Centre reviewed a report on the activities of the Centre for 2006, as summarized in the present report and described in annex I, and approved the programme of activities for 2007, as contained in annex II to the present report. Details of the Centre's programme of work for 2006 -2007 are provided in annex III.

IV. DECISIONS AND RECOMMENDATIONS

19. The report of the Technical Committee on its second meeting was endorsed by the Governing Council at its second session. The Council advised the Centre to develop further the project concepts proposed by the Committee in collaboration with the member countries concerned and seek financial resources for their implementation. With regard to future projects, the Council stressed the importance of partnership for improved efficiency and sustainability and suggested that the member countries should play a leading role in developing the projects and providing, where possible, the necessary expertise and in-kind contributions. The Council advised the Centre to link its activities with related projects in member countries in order to benefit from their expertise and experience.

20. The Council made the following observations and recommendations:

(a) The Council placed on record its appreciation to Mr. Se-Jun Yoon, who had served as the Director for two years until June 2006, for his service to the Centre;

(b) The Council noted the appointment of Mr. Krishnamurthy Ramanathan as Senior Economic Affairs Officer, effective 28 October 2006. The post has been established in the programme budget for the biennium 2006-2007 in order to strengthen the research and analytical capacities of the Centre;

(c) The Council noted the activities carried out by the Centre in 2006 and their linkages with the programme of work for the biennium 2006-2007, and expressed its support for the activities planned for 2007. The Council also took note of the administrative and financial status of the Centre, in particular with regard to its financial and human resources. The Council deliberated at length on the proposal to increase the level of contributions from member countries from US\$ 20,000 to US\$ 30,000 for developing countries, and from US\$ 5,000 to US\$ 7,000 for least developed countries;

(d) The Council supported the ongoing restructuring of the Centre that had been started in response to a recommendation of the Governing Board at its nineteenth session. The Council urged the Centre to complete the process as soon as possible;

(e) The members of the Council supported the initiatives to enhance institutional support resources and advised the Centre to seek funds for technical cooperation projects with a view to improving the financial situation of the Centre. The members requested the ESCAP secretariat to provide detailed information on the placement of non-reimbursable loan experts at the Centre;

(f) The Council noted with interest the future projects suggested by the Technical Committee and endorsed the work programme proposed for the biennium 2008-2009.

V. CONTRIBUTIONS

21. The Centre received contributions from Bangladesh, China, Malaysia, Pakistan, the Philippines, the Republic of Korea, Sri Lanka, Thailand and Viet Nam in varying amounts ranging from US\$ 4,000 to US\$ 20,000 in 2006. A total US\$ 203,183 was received from the Government of India for institutional support of the Centre. The Council expressed its thanks to the member States and organizations that had supported the Centre's programme of work for 2006 (see annex IV).

Annex I

IMPLEMENTATION OF THE PROGRAMME OF WORK IN 2006

Expected accomplishment: Improved application and promotion of information, communication and space technology by Governments and stakeholders in planning and implementing socio-economic development policies and programmes, towards the achievement of internationally agreed development goals, including those contained in the Millennium Declaration.

Details of activities in 2006

A. Technology transfer through regional and subregional networking

Details of activities carried out under each of the Centre's four networks for technology transfer are provided below.

1. Technology Transfer Network for Small and Medium-sized Enterprises in the Asia-Pacific Region

Under the project entitled, "Promotion of the Technology Transfer Network for Small and Medium-sized Enterprises in the Asia-Pacific Region", which is funded by the Government of Germany, the Centre is working towards enhancing the capacity of institutions and intermediaries in member States to deliver technology transfer services in order to boost the competitiveness of small and medium-sized enterprises. In March 2006, the project organized a combined training and consultative meeting with network partners for the web-portals Technology4sme.net and Business-Asia.net; the meeting was held in Seoul, in conjunction with the Asia Conference on Technology Transfer. The meeting was attended by 15 participants from 11 member countries. The meeting was organized first to inform and train representatives of the network partners so that they could implement operational web management procedures and second to consult with the partners on pending issues regarding the development of the websites. The Centre distributed guidelines on how partners could contribute to the training and implementation efforts.

The Centre also provides a technology trade platform to seekers and providers of technologies, and renders technology exchange and transfer services with a view to promoting technology cooperation and trade among organizations and enterprises in the Asian and Pacific region. The Centre receives technology offers from research institutions, universities and companies, including large-scale companies and intermediaries, especially for small and medium-sized enterprises, and offers "partner search" services to technology providers by approaching prospective technology buyers directly or through various established channels.

The Centre participated in the ServinXpo 2006, held in New Delhi from 4 to 6 October 2006, to showcase the Centre's technology transfer services, particularly its technology transfer websites, Technology4sme and Business-Asia. The Centre's participation included bringing in resource persons from the Philippines and Sri Lanka for the International Congress on Trade in Services and

also setting up a booth at the ServinXpo 2006 exhibition, which was organized as an international business exposition to showcase the best of outsourcing and service exports. The event was organized by the Federation of Indian Export Organizations and co-organized by United Nations Conference on Trade and Development, and the National Research and Development Corporation of India; it was sponsored by the Department of Commerce, Ministry of Commerce and Industry, Government of India.

2. Biotechnology Information Network for Asia

The Centre implemented a project for the establishment of the Biotechnology Information Network in Asia (BINASIA) in cooperation with the Korea Research Institute of Bioscience and Biotechnology and supported by the Ministry of Science and Technology of the Republic of Korea. The network has 13 members, each of which has designated national focal points for BINASIA (see box below).

| National focal points of BINASIA | |
|---|---|
| Bangladesh | National Institute of Biotechnology |
| India | Department of Biotechnology |
| Indonesia | Research Centre for Chemistry, Indonesian Institute of Sciences |
| Iran (Islamic Republic of) | National Institute for Genetic Engineering and Biotechnology |
| Malaysia | National Directorate of Biotechnology |
| Mongolia | Center for Biotechnology, Institute of Biology |
| Nepal | Research Centre for Applied Science and Technology |
| Pakistan | Centre for Applied Molecular Biology |
| Philippines | Biotechnology Information Center |
| Republic of Korea | Korea Research Institute of Bioscience and Biotechnology |
| Sri Lanka | National Science Foundation |
| Thailand | National Centre for Genetic Engineering and Biotechnology |
| Viet Nam | National Institute of Agricultural Genetics and Biotechnology |

The following activities were carried out under this project in 2006.

(a) BINASIA Expert Group Meeting – The second BINASIA Expert Group Meeting, held in Bangkok on 24 and 25 January 2006, was hosted by the National Centre for Genetic Engineering and Biotechnology, Thailand. During this meeting, the Centre underlined the importance and role of member countries in the development of credible contents for the BINASIA portal. The Centre and the Korea Research Institute of Bioscience and Biotechnology were requested to continue to maintain the BINASIA portal even after the completion of the project and to further strengthen the network by organizing hands-on national training workshops. The Korea Research Institute offered to host or mirror the portal on its server at no cost to the Centre. The National Genome Information Centre of the Korea Research Institute of Bioscience and Biotechnology announced that it might be possible to support BINASIA from 2007;

(b) **BINASIA Pakistan National Workshop:** The workshop was held on 11 and 12 March 2006 at the National Centre of Excellence in Molecular Biology in Lahore, Pakistan. More than 70 delegates participated in the workshop. The deliberations focused on opportunities and challenges faced in the development of biotechnology and the commercialization of R and D results. The Lahore Bio-Forum 2006 was organized back-to-back with the workshop. More than 35 public R and D institutions and private industries exhibited their products and services;

(c) **BINASIA Nepal National Workshop:** The BINASIA national focal point in Nepal organized that national workshop, which was held on 30 and 31 March 2006. More than 60 participants attended, representing R and D institutions, academia, government ministries and industrial associations. During the deliberations, they recognized that there was an urgent need for the Government of Nepal to act on the following issues: biotechnology policy, commercialization of R and D and the development of human resources;

(d) **BINASIA Philippines Forum:** The Centre, in cooperation with the Department of Science and Technology, Philippines Council for Advanced Science and Technology Research and Development, and the Philippines Council for Industry and Energy Research and Development, with support from the Korea Research Institute of Bioscience and Biotechnology, organized the BINASIA Philippines Forum on 27 and 28 April 2006 in Manila; it was attended by more than 150 experts. The topics covered at the technical sessions included the following: international cooperation and partnerships, research highlights and potential for collaboration, and the role of Government in the development and commercialization of biotechnology.

3. Asia-Pacific Traditional Medicine and Herbal Technology Network

The Asia-Pacific Traditional Medicine and Herbal Technology Network (APTMNET) was initiated by the Centre and its member countries for the development of traditional medicine and the promotion of information dissemination and industrial and technical cooperation concerning traditional medicine in the Asian and Pacific region. Under this network, the Centre collaborated with the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy of the Ministry of Health and Family Welfare, Government of India, the National Institute of Science, Communication and Information Resources, World Intellectual Property Organization and WHO India to organize the International Conclave for Traditional Medicine and a meeting of network members in New Delhi, from 16 to 18 November 2006. During the conclave, various issues were discussed concerning the acceptability and marketability of traditional medicine and ways to enhance its market presence at the international level. The conclave was attended by participants from countries in the South Asian Association for Regional Cooperation (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka), the India-Brazil-South Africa Dialogue Forum, the Bay of Bengal Initiative for Multisectoral Technical and Economic Cooperation, (Bangladesh, India, Myanmar, Sri Lanka and Thailand) and the member countries of APTMNET.

Asia-Pacific Traditional Medicine and Herbal Technology Network: Nodal Stations

Bangladesh – Bangladesh Council of Scientific and Industrial Research

China – The APTMNET Centre and Hubei Academy of Scientific and Technical Information fulfill the tasks of managing the Network’s main station and the China nodal station

India – National Botanical Research Institute acts as the nodal station for India under the supervision of the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy, Ministry of Health and Family Welfare, Government of India

Indonesia – Research Centre for Chemistry, Indonesian Institute of Sciences

Iran (Islamic Republic of) – Iranian Research Organization for Science and Technology

Malaysia – Herbal Medicine Research Centre, Institute for Medical Research

Mongolia – Institute of Chemistry and Chemical Technology, Mongolian Academy of Sciences

Nepal – Singhadurbar Vaidyakhana Vikas Samiti

Pakistan – H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi

Philippines – Philippines Council for Health Research and Development

Republic of Korea – Korea Institute of Oriental Medicine

Sri Lanka – Industrial Technology Institute

Thailand – Thailand Institute of Scientific and Technological Research

Viet Nam – Institute of Materia Medica

4. International Network for Transfer of Environmentally Sound Technologies for Asia

The International Network for Transfer of Environmentally Sound Technologies for Asia (INTET Asia) facilitates the transfer to small and medium-sized enterprises of environmentally sound technologies for manufacturing and cleaning. This network is beneficial for innovative enterprises and technology transfer intermediaries interested in identifying new technology and collaboration opportunities for themselves or their clients with a particular focus on environmentally sound technologies.

B. Technology capacity-building and promotion and management of innovation

1. Promotion of national innovation systems in countries of the Asian and Pacific region

The Centre implemented a project entitled, “Promotion of National Innovation Systems in Countries of the Asia Pacific Region”, which was funded by the Government of India. The project was designed to enhance the awareness of policymakers about the relevance and importance of national innovation systems, and to build their capacity in developing policy frameworks that would enable the key actors, such as industry, R and D institutions and universities, to adopt and participate in such a system. As part of the implementation of this project, the Centre provided advisory services

and organized expert group meetings and national workshops for key actors in national innovation systems. Networking and the sharing of knowledge on national innovation systems among member countries were facilitated through Internet-based mechanisms. The following are some of the activities organized in 2006:

(a) **Forum on National Innovation Systems for the Philippines: Industry and Energy Innovations within Reach** – This national workshop, held in Manila, on 6 and 7 March 2006, was attended by more than 150 senior policymakers from various departments and agencies of the Government of the Philippines, representatives of public R and D institutions, private industry and academia. National stakeholders of national innovation systems shared their views and experiences in the area of industry and energy innovations. The participants held parallel group discussions on the identification and promotion of national, strategic R and D, and the creation of a sound science and technology infrastructure; the creation of linkages between R and D institutions, academia and industry, and the commercialization of R and D results; and the promotion of venture businesses and the establishment of business parks and business clusters;

(b) **Workshop on National Innovation Systems in the Islamic Republic of Iran** – About 200 participants attended the workshop that was organized in Tehran, on 20 and 21 June 2006. Five resource persons presented papers on various topics concerning national innovation systems, including concepts and elements of a policy framework, subnational innovation systems, governance of innovation systems, national innovation systems practices in the Republic of Korea and policies for hi-tech start-up promotion. The presentations of the findings of the recently concluded UNCTAD Science, Technology and Innovation Policy Review of the Islamic Republic of Iran provided fertile material for brainstorming at the group discussions;

(c) **Seminar on National Innovation Systems in Indonesia: Public Policy to Enhance Industrial Innovation Capacity** – More than 200 participants from the Government, R and D institutions and academia participated in the seminar, which was held in Jakarta, on 19 and 20 July 2006. The three parallel sessions focused on public policy and industrial innovation, science and technology studies and innovation technology-based industrial development. The proceedings were in the Indonesian language, except for presentations by the Centre and invited experts;

(d) **Consultative Meeting on National Innovation Systems of India** – This meeting was held in New Delhi, on 19 and 20 September 2006. It was organized to deliberate on major policy measures and mechanisms to promote innovation that had been taken by ministries and departments of the Government of India, its affiliated institutions and autonomous bodies; and to elicit feedback on the content developed by the Centre on national innovation systems in India. More than 50 participants attended the meeting. The meeting discussed issues such as national innovation systems practices in selected countries; national innovation systems policy framework and support mechanisms in India; and government-academia, R and D institutions and industry linkages;

(e) **National Seminar on Biotechnology Innovation Systems of India: Policy Measures and Support Mechanisms** – This national seminar was held in Nainital, India, on 6 and 7 October 2006; it was sponsored by the Centre and the Department of Biotechnology and organized by the Department of Biotechnology, Kumaun University. The seminar, which was attended by about 100 participants, discussed issues such as biotechnology innovation in agriculture, the environment and energy, and human resources development programmes and infrastructure, biotechnology industries in India, biotechnology parks and technology transfer, and biotechnology information systems and services in Asia;

(f) **National Workshop on Subnational Innovation Systems and Technology Capacity-building Policies to Enhance the Competitiveness of Small and Medium-sized Enterprises** – This workshop, held in Beijing from 27 to 30 October 2006, was organized by ESCAP in collaboration with the China Council for the Promotion of International Trade, the Centre and the United Nations Asian and Pacific Centre for Agricultural Engineering and Machinery. The workshop was attended by some 40 participants from Governments, research institutions, commercial and industrial associations, international organizations and academia. Participants in the workshop discussed various issues, including the policy framework of a subnational innovation system approach, policy frameworks and practices for national innovation systems, public-private partnership for national innovation systems and subnational innovation systems, policy approaches and supporting mechanisms for the innovation of small and medium-sized enterprises, and building their capacity via clusters and networking, the commercialization of public R and D, and the role of the Government, the private sector and technology intermediaries in subnational innovation systems;

(g) **Workshop on National Innovation Systems in Pakistan** – This workshop was held in Lahore, Pakistan, on 14 and 15 December 2006 concurrently with the second session of the Technical Committee and Governing Council Meetings of the Centre. Participating in the workshop were 16 international experts and 50 national participants from various ministries and departments of the Government of Pakistan, affiliated institutions, autonomous bodies, academia and R and D institutions;

(h) **Development of the Website on National Innovation Systems** – the Centre is in the process of building up a web-based resource centre on national innovation systems. The following will be the main topics covered under this website: innovation and national innovation systems; the Asia-Pacific Forum on National Innovation Systems for High-level Policy Makers; workshops and seminars on national innovation systems; national innovation systems and the case of India; and web resources.

2. Promotion of grass-roots innovation in countries of the Asian and Pacific region

With funding support from the Government of India, the Centre is implementing a collaborative project on the promotion of grass-roots innovation in countries of the Asian and Pacific region. The

Centre works closely with non-governmental organizations and government agencies in India and the Asia-Pacific region to (a) document existing institutional arrangements for scouting and documenting grass-roots innovation through desk research and exploratory visits to selected countries; (b) organize a regional workshop to discuss conceptual issues in scouting and documentation, database development and dissemination of green grass-roots innovations; and (c) organize four national workshops on specific issues, such as scouting, database development, protection of intellectual property rights, and the concept of prior informed consent.

C. Technology information services

Through its periodicals, publications and web-based resources, the Centre has kept small and medium-sized enterprises and policymakers up-to-date on the latest technological developments and new and emerging issues associated with the development, transfer and acquisition of technologies.

Asia Pacific Tech Monitor, the Centre's prime periodical, with an annual circulation of nearly 6,000 copies in about 70 countries, is published on a bimonthly basis and serves as a guide to the new innovation-driven economy. The "Yellow Pages" business section of the *Asia Pacific Tech Monitor* contains a section entitled the "Business Coach", which contains "how-to" guides for innovative firms. It covers topics such as start-up venture creation, venture financing, managing innovation, technology transfer and green productivity. That section also provides information on technology opportunities under headings such as "Tech offers and requests", "Investment opportunities" and "Strategic alliances and joint ventures".

Under the Value Added Technology Information Service, the Centre brings out five bimonthly periodicals, namely *Non-Conventional Energy*, *Waste Management* (formerly *Waste Technology*), *Biotechnology*, *Food Processing* and *Ozone Layer Protection*. The key feature of the Service is the packaging of information in capsule form and facilitating direct access to information sources.

The web version of the Centre's technology-oriented periodicals is available at <www.techmonitor.net>. The information available in various publications of the Centre is provided free of cost on this website to cater to a wider audience.

Annex II

PROGRAMME OF ACTIVITIES FOR 2006-2007

Expected accomplishment of related ESCAP subprogramme

Improved application and promotion of information, communication and space technology by Governments and stakeholders in planning and implementing socio-economic development policies and programmes, towards the achievement of internationally agreed development goals, including those contained in the Millennium Declaration.

Output A: Policymakers are able to provide an enabling environment for technology innovation.

| <u>Description of activity</u> | <u>Cost</u> | <u>Anticipated sources of funds</u> |
|--|--------------|-------------------------------------|
| Build capacity and share good practices in national policy formulation for national innovation systems through the organization of meetings and training workshops, and establishing an online resource network. | US\$ 100,000 | Government of India |

Output B: Small and medium-sized enterprises are knowledgeable about and able to apply new and emerging technologies, including environmentally sound technologies.

| <u>Description of activity</u> | <u>Cost</u> | <u>Anticipated sources of funds</u> |
|---|---------------|-------------------------------------|
| Promote venture entrepreneurship through the establishment and updating of the Business-Asia Internet portal. | Euros 430,000 | Government of Germany |
| Develop web-based technology transfer services and web-based technology transfer networks by streamlining and expanding the technology4sme website. | | Government of Germany |
| Develop ICT-enabled integrated technology transfer services and strengthen INTET Asia. | | Government of Germany |
| Provide proactive services to tech providers and tech seekers and build up technology transfer database on the technology4sme website. | | Government of Germany |
| Expand and promote the Biotechnology Information Network for Asia (BINASIA) and its portal. | US\$ 30,000 | Republic of Korea |

Output C: Target group has improved skills in managing traditional technologies and industrial clusters.

| | | |
|--|--------------|-----------------------|
| Strengthen the Asia-Pacific Traditional Medicine and Herbal Technology Network (APTMNET). | | Government of Germany |
| Build capacity for development and dissemination of green grass-roots innovation in the Asia-Pacific region. | US\$ 126,140 | Government of India |

Output D: Target group has improved skills in managing traditional technologies and industrial clusters.

| <u>Description of activity</u> | <u>Cost</u> | <u>Anticipated sources of funds</u> |
|---|-------------|--|
| Disseminate latest information through Asia Pacific Tech Monitor, Value-added Technology Information Services and other publications and periodicals, using print and Internet media. | | Asian and Pacific Centre for Transfer of Technology Joint Contribution Account |
| Develop e-archive of the Centre's publications and periodicals. | | Asian and Pacific Centre for Transfer of Technology Joint Contribution Account |

Other:

Centre administrative costs:

Estimated cost: US\$ 385,587.05

Anticipated source of funds:

- Government of India Institutional Support Contribution
- Asian and Pacific Centre for Transfer of Technology Joint Contribution Account

Governing Council and Technical Committee Meetings

Estimated cost: US\$ 40,000

Anticipated source of funds:

- Asian and Pacific Centre for Transfer of Technology Joint Contribution Account

Annex III

PROGRAMME OF WORK, 2006-2007

| | |
|---------------------------------|--|
| Subprogramme objective: | To improve access to, and the development, transfer and application of, information, communication and space technology in order to maximize the benefits of globalization. |
| Expected accomplishment: | (b) Enhanced national capacities to apply information, communication and space technology in planning and implementing socio-economic development programmes, including for the promotion of gender equality. |
| Intermediate result: | Small and medium-sized enterprises in member countries are able to access and use technologies through the Centre's networks (Tech4sme, APTMNET and BINASIA). |
| Output (a): | <p>Servicing of intergovernmental and expert bodies (regular budget and extrabudgetary funding):</p> <ul style="list-style-type: none"> (i) Economic and Social Commission for Asia and the Pacific <ul style="list-style-type: none"> a. Parliamentary documentation: report on activities of the Asian and Pacific Centre for Transfer of Technology (2) (2006, 2007) (ii) Assistance to representatives, rapporteurs: Governing Board of the Centre (2) (2006, 2007). |
| Output (b): | <p>Other substantive activities (extrabudgetary funding):</p> <ul style="list-style-type: none"> (i) Recurrent publications: Tech Monitor (2) (6 issues in 2006, 6 issues in 2007); Value-added Technology Information Services (<i>Waste Management, Non-conventional Energy, Food Technology, Biotechnology and Ozone Layer Protection</i>) (2) (30 issues in 2006, 30 issues in 2007); (ii) Booklets, fact sheets, wall charts, information kits: technology transfer guidelines (1) (2006-2007); special booklets: national innovation systems, science and technology and research and development institutions in the Asia-Pacific region (1) (2006-2007); guidebook on business start-up and operations in countries of the Asia-Pacific region (1) (2006-2007); (iii) Audio-visual resources: ESCAP webpage on the Asian and Pacific Centre for Transfer of Technology <www.apctt.org> (2) continuous updating (2006, 2007); Business e-Coach CD-ROM (2) (2006, 2007). |
| Output (c): | <p>Technical cooperation (regular budget/extrabudgetary funding):</p> <ul style="list-style-type: none"> (i) Advisory services: advisory service on technology transfer for small and medium-sized enterprises and national innovation systems (1) (2006-2007) (extrabudgetary); (ii) Training courses, seminars and workshops: regional seminars and workshops related to technology transfer (1) (40 participants) (2 seminars in 2006, 2 seminars in 2007) (extrabudgetary); (iii) Field projects: national seminars on national innovation systems (1) (2 seminars in 2006, 2 seminars in 2007) (extrabudgetary). |

Annex IV

CONTRIBUTIONS, 2006

Global fund for institutional support - APCTT/IND (I006)

(Funds received as of 31 December 2006)

(in United States dollars)

| Country | 2006 |
|----------------|-------------------|
| India | 203 183.02 |
| Total | 203 183.02 |

Global fund for institutional support - APCTT/JCE (I004)

(Funds received as of 31 December 2006)

(in United States dollars)

| Country | 2006 |
|-------------------|------------------|
| Bangladesh | 5 000.00 |
| China | 19 980.00 |
| Malaysia | 15 000.00 |
| Pakistan | 4 968.53 |
| Philippines | 5 628.83 |
| Republic of Korea | 10 000.00 |
| Sri Lanka | 4 973.00 |
| Thailand | 15 000.00 |
| Viet Nam | 3 970.70 |
| Total | 84 521.06 |

Annex V

STATEMENT OF ACCOUNT AS OF 31 DECEMBER 2006

(in United States dollars)

| | Donor | Balance carried over from 31 Dec 2005 | Contributions (2006) | Expenditure (2006) | Interest earned (2006) | Return to donors (2006) | Balance at 31 Dec 2006 |
|---------------------------------------|--|---------------------------------------|----------------------|--------------------|------------------------|-------------------------|------------------------|
| Institutional support | Institutional support: JCE | 210 794.95 | 84 521.06 | 70 948.17 | 11 802.19 | 0.00 | 236 170.03 |
| | Institutional support: Government of India | 222 350.16 | 203 183.02 | 235 254.29 | 13 854.47 | 0.00 | 204 133.36 |
| Subtotal | | 433 145.11 | 287 704.08 | 306 202.46 | 25 656.66 | 0.00 | 440 303.39 |
| Technical cooperation projects | Government of India | 63 823.12 | 106 844.44 | 59 421.13 | 3 474.94 | 0.00 | 114 721.37 |
| | German Agency for Technical Cooperation | 83 087.86 | 137 307.34 | 41 680.90 | 5 907.69 | 0.00 | 184 621.99 |
| | Republic of Korea - Strengthening of Asian and Pacific Centre for Transfer of Technology | 115 290.70 | 0.00 | 54 659.84 | 0.00 | 60 630.86 | 0.00 |
| | Republic of Korea - BINASIA | 15 042.24 | 15 000.00 | 24 008.04 | 394.75 | 6 428.95 | 0.00 |
| Subtotal | | 277 243.92 | 259 151.78 | 179 769.91 | 9 777.38 | 67 059.81 | 299 343.36 |
| Total | | 710 389.03 | 546 855.86 | 485 972.37 | 35 434.04 | 67 059.81 | 739 646.75 |

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