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**EMERGING ISSUES AND DEVELOPMENTS AT THE REGIONAL LEVEL:
REGIONAL ECONOMIC COOPERATION**

(Item 6 (a) of the provisional agenda)

REPORT ON THE ASIAN AND PACIFIC CENTRE FOR TRANSFER OF TECHNOLOGY

Note by the secretariat

SUMMARY

The report presents information on the activities and institutional status of the Asian and Pacific Centre for Transfer of Technology (APCTT), and the various recommendations related to its programme of work.

In pursuance of its objectives to assist the members and associate members of ESCAP through strengthening their capability to develop, transfer, adapt and apply technology, improve the terms of transfer of technology and identify and promote the development and transfer of technologies relevant to the region, and to give a more definite focus to its programme of work, the Centre has formulated a planning matrix. The Centre's activities are geared towards strengthening the structures and capabilities of technology-related institutions, intermediaries and enterprises in the member countries of the Asian and Pacific region and to the dissemination and transfer of environmentally sound technologies to small and medium-scale enterprises. These activities include: (a) promotion of environmentally sound technologies; (b) promotion of technology information and utilization; (c) technology management; and (d) participation of women in the field of technology. The Governing Board and Technical Advisory Committee appreciated the initiatives taken by the Centre in 1996 to orient its technology transfer programmes on practical lines and commended particularly the inclusion of the private sector and development institutions in the implementation of its activities.

The Centre has been able to carry out its activities, with the generous funds provided by the Government of Germany for both programme support and the post of a Director. This support was provided initially for a period of three years from November 1993 and extended for another three years to November 1999. The Government of the Netherlands and the United Nations Development Programme (UNDP) have also provided financial support for specific programme activities. With regard to institutional support, the Government of India continues to provide generous support for both host facilities and local posts. With the inclusion of two more member countries, the Islamic Republic of Iran and Mongolia, a total of 14 member countries are contributing towards the institutional support of the Centre. The Governing Board has urged all member countries to provide institutional support to the Centre at the required threshold level and has expressed appreciation to the Republic of Korea for increasing its annual contribution.

To ensure the long-term sustainability of the Centre, the Governing Board recommended that APCTT continue fee-based services and the generation of revenue from the provision of technical assistance and the sale of publications. The Board also requested ESCAP to build up the Trust Fund for the Centre utilizing a part of the institutional support received from member countries, income generated through APCTT technology transfer services and half of the programme support costs derived from projects executed by APCTT. It was suggested that concerted action be taken to make the endowment fund a reality and that the possibilities be explored of receiving donations or contributions from the private sector or other foundations.

A. Report on the activities of the Asian and Pacific Centre for Transfer of Technology

1. APCTT has been playing an important role in strengthening the technology development, transfer and utilization capabilities of the developing countries of the ESCAP region for close to 18 years. To enable the Centre to continue to play this role, particularly as the countries of the Asian and Pacific region respond to the challenge of integrating rapidly with the new global economy, the Centre has embarked on a pragmatic range of programmes of immediate relevance to the region. A conceptual framework (a planning matrix) was designed at the end of 1995 with a clear perspective of the role of APCTT as an agent of regional and interregional cooperation in technology development and transfer.

2. In accordance with the planning matrix, the Centre's activities have been grouped under four main thrust areas: (i) promotion of environmentally sound technologies; (ii) promotion of technology information and utilization; (iii) technology management; and (iv) participation of women in the field of technology. The plan targets most of the activities of the Centre at small and medium-scale enterprises with a view to assisting them in technology upgrading and modernization. These specific, focused activities have resulted in not only greater awareness but also a sharp increase in the average number of technology transfer negotiations facilitated by APCTT per month, from 50 to 250. Out of the 3,250 negotiations facilitated in 1996, 51 per cent were between partners in the Asian and Pacific region. Technology transfer from the most advanced to the less advanced countries contributed about 38 per cent.

3. The Governing Board and Technical Advisory Committee of APCTT, while reviewing the work of the Centre in November 1996, commended the activities undertaken to strengthen national capabilities and promote regional cooperation. The Commission may wish to note that in 1996 the Centre had organized and co-organized the following events: 12 regional workshops; 11 training programmes; 4 major exhibitions; 5 seminars; 7 expert group meetings; and 700 business meetings in diverse countries of the region - Bangladesh, China, India, Indonesia, Iran (Islamic Republic of), Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Russian Federation, Sri Lanka, Thailand and Viet Nam - with the active participation of several experts.

4. The APCTT strategy for the effective transfer, adaptation and adoption of environmentally sound technologies by small and medium-scale enterprises includes a broad spectrum of initiatives: (i) development of a complete technology transfer service package, including technology information, support services, finance syndication and marketing assistance; (ii) strengthening of information networks/services for environmentally sound technologies and (iii) diffusion of such technologies through transnational commercial networks.

5. To facilitate the transfer of environmentally sound technologies among small and medium-scale enterprises, APCTT has been working successfully towards the establishment of a self-sustainable

network in Asia and the Pacific in cooperation with participating member countries, Bangladesh, China, India, Indonesia, Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Russian Federation, Sri Lanka, Thailand and Viet Nam under the second phase of the Mechanism for Exchange of Technology Information (METI) project. APCTT has also established a model sub-network, the International Network for Transfer of Environmentally Sound Technologies (INTET) for small and medium-scale enterprises. INTET members comprise both public and private technology transfer intermediaries and consultants and the Network is self-sustained through annual membership and service fees. Similar networks will be set up in METI participating countries.

6. The Centre's publications, the bimonthly *Asia-Pacific TechMonitor*, periodical *Value Added Technology Information Services* (VATIS) updates in the areas of ozone layer protection, waste technology, biotechnology, food processing and non-conventional energy and catalogues and lists of international technology and business opportunities in 15 sectors, are a vital element of the promotion of technology information and utilization. The translation of these publications into other languages has helped further to enhance the reach of these publications.

7. To strengthen national capabilities and promote regional cooperation in specific areas such as technology acquisition, adoption, monitoring and assessment, evaluation and pricing, and environmental management issues relating to small and medium-scale enterprises, the Centre has been continuously refining its technology management programmes. The spearhead in the past two years has been on the promotion of R & D community-enterprise cooperation in technological research and commercialization of results at both the national and regional levels.

8. APCTT has also been encouraging entrepreneurship development among women at the micro, small and medium-scale level through women entrepreneurship development programmes and the creation of active technology-sharing networks among women's groups.

9. In 1996, emphasis was placed on strengthening the personnel and institutional infrastructure of the Centre to meet the requirements of its enhanced activities. Efforts were made to secure the services of experts on a non-reimbursable loan basis; in this connection, the Commission may note that the Government of China placed an expert at the Centre for a short period in 1996. The placement of such experts at APCTT, besides helping to cement regional ties in the field of technology transfer, also benefits the sponsoring country by providing it with ready access to APCTT expertise and worldwide connections. The Commission may note that the Centre would like to request the member countries to assign experts to work at APCTT on a non-reimbursable loan basis.

10. The Commission may wish to acknowledge the substantial programme support received from the Government of Germany and also from the Government of the Netherlands and the United Nations Development Programme (UNDP). Similarly, the Commission may wish to acknowledge the generous institutional support and host facilities provided to APCTT over the years by the Government of India. It may also wish to record the Centre's appreciation for the excellent cooperation received from the member countries and to note that two more countries of the region, the Islamic Republic of Iran and Mongolia, are now providing institutional support to the Centre.

B. Sustainability of APCTT

11. While the assistance provided currently by the Governments of Germany, India and the Netherlands and UNDP is highly appreciated, the Commission may note that it is imperative to devise measures for the long-term sustainability of APCTT. To function effectively, the Centre requires a basic core of Professional staff members, as distinct from project personnel. For the maintenance of this core group, the Centre requires an amount of US\$ 350,000 on an annual basis. The institutional support received from the member countries falls short of this. The Governing Board of APCTT, at its annual session in November 1996, discussed this situation in depth and made the following recommendations:

- (1) That the Centre continue with fee-based services and generation of revenue from the provision of technical assistance and the sale of publications. The Board requested ESCAP to explore the possibility of allocating funds generated in this manner to the general Trust Fund of APCTT.
- (2) That ESCAP arrange for a portion of the programme support costs received from APCTT projects to be allocated to the general Trust Fund of APCTT.
- (3) That concerted action be initiated to make the endowment fund a reality and efforts be made to enlist the participation of the private sector in the mobilization of the fund.
- (4) That member countries make contributions to APCTT at least at the threshold level (US\$ 15,000 for developing countries and US\$ 1,000 for least developed countries) and that the assistance of APCTT focal points be sought in this regard.
- (5) That the Centre continue to make efforts to secure the services of experts from the member countries to work at the Centre on a non-reimbursable loan basis. The Centre was requested to prepare a list of the experts required for circulation among the member countries.

12. The Commission may wish to consider and endorse the following report of the Governing Board, as well as provide further guidance on the substantive work of APCTT. The Commission may further wish to consider the part of the report containing recommendations presented for its consideration and adoption, and to provide guidance to the secretariat on their implementation.

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**REPORT OF THE GOVERNING BOARD OF THE ASIAN AND PACIFIC
CENTRE FOR TRANSFER OF TECHNOLOGY**

SUMMARY

The eleventh session of the Governing Board of APCTT was held at Kathmandu on 28 and 29 November 1996.

The following three documents presented information respectively on the activities, financial situation and various recommendations related to the programme of work of APCTT for review by the Governing Board: (i) "Report of the activities of the Centre"; (ii) "Report of the Technical Advisory Committee of APCTT on its twelfth meeting"; and (iii) "Long-term sustainability of APCTT".

The Board expressed appreciation of the initiatives taken by APCTT in the past year to orient its technology transfer programmes on practical lines on the basis of the planning matrix evolved in August 1994 and updated in 1995. The Board was also appreciative of the progress made by the Centre in relation to the work planned. It commended the work of the Centre in strengthening the national capability of member countries by undertaking activities in areas relating to the promotion of environmentally sound technologies, the promotion of technology information and utilization, technology management and the participation of women in the field of technology. The Board appreciated the inclusion of the private sector and development institutions in the implementation of its activities. APCTT activities to promote environmentally sound technologies for adoption and use by small and medium-scale enterprises, the creation of a databank on technology opportunities, experts to be made available on-line via the Internet, and technology valuation, marketing, finance and legal advice through service syndication, were highly appreciated. It endorsed the implementation of a project on the promotion of solar-diesel hybrid systems. The Board also appreciated the work carried out under the METI project which, under the current phase, had endeavoured to upgrade various METI tools for the dissemination of information and to train about 300 network members. It noted that the ultimate goal of METI was to assist the network partners in establishing self-sustainable localized sub-networks. The Board noted with appreciation the sharpening of the focus on technology management especially for the promotion of R & D community-enterprise cooperation in technological research and commercialization of results at both the national and regional levels, and directed the Centre to operationalize the Regional Association for Commercialization of R & D Results (RACORD) as early as possible. The Board expressed its full appreciation of the implementation of the programme on women in the field of technology, especially for the development of entrepreneurial skills, and directed the expansion of that programme, including the conduct of surveys of industries best suited to women and also the development of mechanisms to provide economically active and professional women with training in technology upgrading.

The Board discussed in detail the report on the twelfth meeting of the Technical Advisory Committee and endorsed the specific suggestions made by its members. It fully appreciated the technical input provided for the development of the work programme of APCTT. In that context, the Board advised the Centre to conduct a planning exercise to detail the work programme based on the decisions reached during the 1996 annual board meetings.

With regard to the long-term sustainability of APCTT, the Board, while appreciating the efforts of ESCAP and APCTT in enhancing the level of institutional support, noted with concern the shortfall in institutional costs. After considerable deliberations on the matter, the Board suggested several remedial measures, including concerted efforts for operationalizing the endowment fund. It suggested that APCTT should include the private sector in the capacity of associate members of the Centre. It reiterated that the Centre should continue providing fee-based services to the member countries, the income of which could possibly be used for institutional support.

The representatives of the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Industrial Development Organization (UNIDO) expressed the readiness of their respective organizations to cooperate with APCTT and also with other cooperating partners.

I. RECOMMENDATIONS TO THE COMMISSION FOR CONSIDERATION AND ADOPTION

1. The following major recommendations, conclusions and decisions were made:
 - (1) The Regional Association for Commercialization of R & D Results (RACORD) should be operationalized by strengthening mechanisms to commercialize R & D results.
 - (2) Human resources development programmes should be developed on: technology assessment, valuation, negotiation and licensing; technology forecasting; intellectual property rights and technology marketing.
 - (3) Workshops and training programmes should be conducted on the best R & D management practices, curriculum development for technology management, ISO 9000, etc.
 - (4) Information should be collected on institutions and experts involved with the transfer of environmentally sound technologies.
 - (5) Training should be conducted on solid waste management.
 - (6) Surveys should be conducted on the information and technology needs of small and medium-scale enterprises.
 - (7) Indigenous technologies with high transfer or commercial potential should be promoted.
 - (8) Training programmes on women entrepreneurship and appropriate technology should be expanded.
 - (9) Surveys of industries best suited for women should be conducted and focused programmes developed.
 - (10) Strategies and mechanisms should be developed to provide economically active and professional women with training in technology upgrading.
 - (11) Fee-based services, information exchange and provision of other technical assistance should be continued.
 - (12) The generation of revenue from the sale of publications should be continued.
 - (13) The greater participation of member countries in the activities of the Centre should be encouraged and at the same time they should be requested to provide the threshold level of institutional support.
 - (14) Member countries should be solicited to place experts in various fields to work in the Centre on a non-reimbursable loan basis.
 - (15) ESCAP should be requested to arrange for a portion of the programme support costs to be allocated to the general Trust Fund of APCTT.

- (16) Concerted action should be continued to make the endowment fund a reality. In order to raise the stipulated total of US\$ 5 million, the possibilities of receiving donations or contributions from the private sector or other foundations should be explored.
- (17) Associate membership should be solicited from the private sector.
- (18) ESCAP should be requested to explore the possibilities of the allocation of funds generated from the sale of services to institutional support.

II. SUMMARY OF THE DELIBERATIONS

2. The Board had before it the following three documents: (i) "Report of the activities of the Centre" (item 4 of the agenda); (ii) "Report of the Technical Advisory Committee of APCTT on its twelfth meeting" (item 5 of the agenda); and (iii) "Long-term sustainability of APCTT" (item 6 of the agenda).

A. Report of the activities of the Centre during the period November 1995 to November 1996 and presentation of the programme of work

(Item 4 of the agenda)

3. The Director of APCTT welcomed the representatives of 14 member countries and the International Labour Organization (ILO), UNCTAD, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and UNIDO.

4. Introducing agenda item 4, on the report of the activities of the Centre, the Director said that the relevant document would give a broad idea of the Centre's core programme and, in particular, the specific activities in 1996. The Centre was following a conceptual framework (planning matrix) in its work programme which had been formulated with the help of representatives of APCTT focal points, United Nations agencies, and industry and development institutions. The planning matrix had put the policy agenda of APCTT in clear perspective by grouping its activities under four main thrust areas: (i) promotion of environmentally sound technologies; (ii) promotion of technology information and utilization; (iii) technology management; and (iv) participation of women in the field of technology. The plan targeted most of the activities of the Centre at small and medium-scale enterprises with a view to assisting them in technology upgrading and modernization. Those specific focused activities had resulted not only in greater awareness but also in a sharp increase in the average number of technology transfer negotiations facilitated by APCTT per month, from 50 to 250.

5. As in previous years, cooperation with the focal points and national institutions had been strengthened through involvement in joint programmes and activities. In 1996, 12 regional workshops, 11 training programmes, 4 major exhibitions, 5 seminars, 7 expert group meetings and 700 business meetings had been held in many countries of the region - Bangladesh, China, India, Indonesia, Iran

(Islamic Republic of), Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Russian Federation, Sri Lanka, Thailand and Viet Nam - with the active participation of experts in the respective fields of focus.

6. Increasing attention had been paid in 1996 to the identification, promotion and transfer of environmentally sound technologies and to energy conservation in small and medium-scale enterprises. APCTT had also promoted actively the use of renewable energy technologies. The databank on technology opportunities and experts was now available on-line via the Internet. To facilitate the adoption of environmentally sound technologies, APCTT had been assisting small and medium-scale enterprises since early 1995 in technology evaluation, marketing, finance and legal advice through service syndication. Collaborative efforts since 1995 between APCTT and the Small Industries Development Bank of India (SIDBI) had led to the formation of the Technology Bureau for Small Enterprises, which had commenced operations in January 1996.

7. In January 1996, the Centre had organized the Expert Group Meeting on Transfer of Environmentally Sound Technologies among Small and Medium-scale Enterprises. The recommendations of the Meeting had been provided as an input into the fourth session of the Commission on Sustainable Development concerning chapter 34, on transfer of environmentally sound technologies, cooperation and capacity-building, of Agenda 21 adopted at the United Nations Conference on Environment held at Rio de Janeiro, Brazil, in June 1992. The Meeting was held to coincide with an exhibition of environmentally sound technologies-cum-business meeting at which about 500 business meetings were prearranged between technology sellers and potential buyers from around 20 countries.

8. As part of its drive towards wider adoption of environmentally sound technologies by small and medium-scale enterprises, APCTT was implementing a project to promote solar-diesel hybrid systems.

9. In the area of technology information and within the framework of the METI project, APCTT, in cooperation with the participating member countries, was working towards establishing a self-sustainable network in Asia and the Pacific to exchange technology information and business opportunities. Under the second phase of the project, the concept of an integrated technology transfer package had been introduced to the member countries. About 300 network members had been trained in developing, marketing and commercializing METI services. The ultimate goal of METI was to assist the network partners in establishing self-sustainable localized sub-networks.

10. A model sub-network of that nature, the International Network for Transfer of Environmentally Sound Technologies (INTET) for Small and Medium-scale Enterprises, had been established by APCTT in 1994. Working on an annual membership and service fee basis, the Network had achieved self-sustainability after one year of operation. It had so far attracted 152 members from Bangladesh, Cameroon, India, Malaysia, Mauritius, Nepal, Netherlands, Philippines, Russian Federation, Singapore, United Republic of Tanzania, Thailand, Turkey and the United Kingdom of Great Britain and Northern

Ireland.

11. A vital element of the promotion by APCTT of technology information and utilization was contributed by the bimonthly publication, *Asia-Pacific TechMonitor*, and the periodical updates brought out under the *Value Added Technology Information Services (VATIS)* in the areas of ozone layer protection, waste technology, biotechnology, food processing and non-conventional energy. Subscriptions and advertisements financed the cost of editing, printing and dissemination. Catalogues and lists of international technology and business opportunities in 15 sectors were published on a quarterly basis. The growing interest in the Centre's publications had also resulted in their translation into other languages.

12. APCTT had been sharpening its technology management focus over the past two years. The spearhead in those years had been the promotion of R & D community-enterprise cooperation in technological research and commercialization of results at both the national and regional levels and strengthening of national capabilities in technology management, tools and practices, technology evaluation, assessment and marketing through special events. Among the wide range of APCTT activities to strengthen technology management were the following: the expert assistance provided to the Technology Evaluation and Assessment Centre in Chongqing, China in March 1996; the exhibition - Chinese technology showcase for South Asian Association for Regional Cooperation (SAARC) countries, held in New Delhi in April 1996; the national workshop on commercialization of R & D results held in Sri Lanka in September 1996; and the expert assistance provided to the Islamic Republic of Iran and Pakistan in formulating technology management programmes.

13. A distinctive niche in the APCTT agenda of work was reserved for women's empowerment. Its programmes in that direction sought to emancipate the female labour force from the traditional business boundaries by providing opportunities for the development of entrepreneurial skills through women entrepreneurship development programmes.

14. In 1996, emphasis had also been placed on strengthening the personnel and institutional infrastructure to meet the requirements of the enhanced activities of the Centre. The Director thanked the Government of China for placing an expert at the Centre for a short period. The placement of such experts at APCTT not only helped cement regional ties in the field of technology transfer but also benefited the sponsoring country by providing it with ready access to APCTT expertise and worldwide connections. That mutually beneficial practice encouraged him to request the member countries to provide the Centre with the services of experts on a non-reimbursable loan basis in specialized areas of work.

15. The Director expressed gratitude to all the member countries for the institutional support provided to the Centre and the excellent cooperation received. He stated that two more countries of the region (the Islamic Republic of Iran and Mongolia) had commenced providing institutional support to the Centre.

16. The Board thanked the Director for presenting the activities of the Centre in 1996 and commended the work done in the main thrust areas; it directed the Centre to continue to strengthen its work in assisting the member countries.

B. Report of the Technical Advisory Committee on its twelfth meeting

(Item 5 of the agenda)

17. The Chairperson of the Technical Advisory Committee presented the highlights of the report of the Committee on its twelfth meeting, held on 26 and 27 November 1996. The meeting had been attended by representatives of 15 member countries, Bangladesh, China, India, Indonesia, Iran (Islamic Republic of), Malaysia, Mongolia, Nepal, Pakistan, Philippines, Republic of Korea, Russian Federation, Sri Lanka, Thailand and Viet Nam and three United Nations organizations, ESCAP, UNCTAD and UNIDO.

18. The report of the Director of APCTT presented to the Committee included the accomplishments and work programmes of the Centre in the four main thrust areas referred to earlier: (i) promotion of environmentally sound technologies; (ii) promotion of technology information and utilization; (iii) technology management; and (iv) participation of women in the field of technology.

19. The representatives of the participating member countries highlighted recent developments in science and technology infrastructure, policies and programmes, technology transfer mechanisms and commercialization efforts in their respective countries. Possible collaborative work with APCTT was also identified. The members also offered specific technologies, science and technology services and programmes to APCTT and other member countries. The representatives, while emphasizing the importance of APCTT, expressed appreciation of the efforts of APCTT *vis-à-vis* the technology transfer activities of their respective countries.

20. The representatives of UNCTAD and UNIDO discussed major developments and thrusts in their organizations and indicated some issues and concerns in technology transfer and commercialization. They offered services, programmes and other facilities to APCTT and the member countries.

21. Following the discussions on the work programmes of the Centre, the Committee as a whole agreed with the general directions and programmes pursued by the Centre. Some new projects and programmes were identified that could be taken up by APCTT. The Committee also solicited commitment from the focal points to play a more active role in implementing APCTT-sponsored activities in their countries in providing data and other information for the APCTT database and for the promotion and endorsement of APCTT programmes. The most common areas for collaboration with APCTT included training, technical assistance/consultancy, database development, and curricula and course material development. The following were the main recommendations of the Technical Advisory

Committee in the four main thrust areas.

22. *Promotion of environmentally sound technologies.* It was suggested that APCTT initiate collection of information on institutions and experts involved with the transfer of environmentally sound technologies. APCTT was also requested to collect information on such technologies that were developed and commercialized, or ready for commercialization, in the Asian and Pacific region. Training on solid waste management was cited as another activity that APCTT could initiate.

23. *Promotion of technology information and utilization.* To further enhance the activities of the Centre, it was recommended that it initiate the conduct of surveys on the information and technology needs of small and medium-scale enterprises. APCTT was invited to establish a homepage at the UNIDO Web Site. The same offer was made to the member countries. The Committee also suggested that APCTT initiate activities to promote indigenous technologies with high transfer and commercial potential. A request was made to include Mongolia in the METI network.

24. *Technology management.* The Committee suggested that the Centre strengthen mechanisms to commercialize R & D results, especially with the operationalization of RACORD. The Committee felt that human resources development programmes on technology assessment, valuation, negotiation and licensing, technology forecasting, intellectual property rights and technology marketing could be developed by the Centre. It was recommended that APCTT organize a workshop on best R & D management practices, drawing from the experiences of both public and private sectors. The Committee also stressed the importance of curriculum development at the regional level for technology management and the organization of training programmes on ISO 9000. The Committee urged the Centre to develop course materials for technology transfer and R & D management.

25. *Participation of women in the field of technology.* The Committee, while appreciating the work undertaken by the Centre in that area, recommended that it actively pursue the expansion of training in entrepreneurship development and appropriate technology. It was suggested that a survey of industries best suited to women be conducted and the training programmes focused in such a way that women could benefit from that information. The Committee also proposed that the Centre develop strategies and mechanisms to access economically active and professional women and provide them with training in technology upgrading.

26. The Board deliberated on the recommendations of the Technical Advisory Committee at its twelfth meeting and endorsed the report.

C. Long-term sustainability of APCTT

(Item 6 of the agenda)

27. The Director of the Industry and Technology Division of ESCAP introduced agenda item 6, "Long-term sustainability of APCTT". In spite of the successful programme implementation and

accomplishments of APCTT and the substantial amount of programme funds, the Centre was not able to generate the requisite amount of institutional support and there remained a gap between the country contributions and the minimum requirements for the Centre to maintain a core group of Professional staff. In spite of various efforts on the part of ESCAP and APCTT, the Centre had difficulties in raising the necessary institutional costs. In an effort to resolve the situation, the Governing Board, at its tenth session, had suggested the mounting of missions by ESCAP and APCTT to inform member countries of the situation. However, only one mission, to the Republic of Korea, had materialized and had been regarded as successful. Other missions could therefore be undertaken in 1997. The activities and financial situation of APCTT had also been reported to the ESCAP Advisory Committee of Permanent Representatives and Other Representatives Designated by Members of the Commission. The members of the Advisory Committee had been appreciative of the activities of APCTT and had agreed to inform their Governments of the need for strengthening the long-term sustainability of the Centre. He urged the members of the Board to propose some concrete and feasible measures to ensure its sustainability.

28. The Board was informed that, for various reasons, the informal working group constituted to work out the practical modalities for the establishment of an endowment fund had been unable to meet.

29. The Board discussed the long-term sustainability of APCTT in depth and, after some very positive interaction, the following recommendations were made.

30. The Board, while noting with appreciation that two member countries, the Islamic Republic of Iran and Mongolia, had commenced contributing towards the institutional support of the Centre, and also appreciating the announcement made by the representative of the Republic of Korea that his country would increase its annual contribution of US\$ 15,000 to US\$ 20,000, urged all the member countries to provide institutional support at the required threshold level; it suggested that APCTT should ensure the participation of a greater number of ESCAP members in the activities of the Centre, and secure contributions for institutional support from those countries.

31. The Board recommended that fee-based services, information exchange and provision of other technical assistance and the generation of revenue from sales of publications be continued.

32. It also recommended securing the services of experts from the member countries in various fields to work in the Centre on a non-reimbursable loan basis. In that context, it noted with appreciation the offer of the Republic of Korea to provide an expert on a non-reimbursable loan basis to APCTT and that the search for a suitable candidate was currently in progress. Similarly, it noted with appreciation the placement of an expert from China at the Centre for three months and the offer to provide another such expert for six months. It also noted with appreciation that the expert from India on non-reimbursable loan would join the Centre shortly and expressed its gratitude to the Government of the Netherlands for the provision of an expert on non-reimbursable loan through United Nations Headquarters in New York.

33. While appreciating the assistance being provided by UNDP and donor countries, Germany and the Netherlands, the Board requested UNDP and those countries to continue providing programme support for the Centre's activities. It also expressed gratitude to the Government of India for the generous financial support and host facilities provided to the Centre.

34. The Board requested ESCAP to arrange for a portion of the programme support cost to be allocated to the general Trust Fund of APCTT.

35. The Board recommended continuing concerted action to make the endowment fund a reality. In order to raise the stipulated total of US\$ 5 million, the possibilities of receiving donations or contributions from the private sector or other foundations should be explored. In that context, the representative of India reiterated his Government's support in principle for the creation of an endowment fund and the efforts towards its realization. The representative of the Republic of Korea said that his Government was also in agreement with the establishment of an endowment fund in principle. However, the extent and modality of payment were being considered and a decision in that regard would be communicated at a later date.

36. The Board requested ESCAP to explore the possibilities for the allocation of funds generated from sales of services to institutional support.

37. The Board directed APCTT to strengthen further working relationships with UNCTAD, UNESCO, UNIDO and other United Nations and international organizations, as well as with institutions in member countries. It also recognized the crucial role of the focal points and requested them to inform relevant departments and agencies in the country about the work of the Centre. APCTT was requested to inform the focal points well in advance about its activities so that proper coordination and, if necessary, assistance, could be provided. That would assist the focal points in approaching various government agencies to ensure successful implementation of the programmes. The Board requested ESCAP/APCTT to inform the focal points and other relevant agencies of the work being done by APCTT in a particular country so that representation could be made to the concerned department for enhanced contributions to the Centre.

D. Date and venue of the twelfth session of the Governing Board

(Item 7 of the agenda)

38. The Board proposed that the twelfth session of the Governing Board of APCTT be held in late November or early December 1997. It also noted the kind offer of the representatives of the Islamic Republic of Iran and Sri Lanka to host the session.

39. The Board adopted the report on 29 November 1996.

III. ORGANIZATION OF THE SESSION

A. Opening of the session

40. The eleventh session of the Governing Board of APCTT was held at Kathmandu on 28 and 29 November 1996.

41. The inaugural session of the Board was chaired by the Hon. Mr Prithvi Raj Ligal, Vice-Chairman of the National Planning Commission. Ms Dilli Devi Shakya, Member Secretary, National Council for Science and Technology (NCST) and Executive Director, Research Centre for Applied Science and Technology, extended a warm welcome to the distinguished guests attending the inaugural session and to the representatives of the member countries and United Nations agencies. The Government of Nepal was honoured to host the annual Board meetings of APCTT. She expressed gratitude to the Hon. Mr Ram Krishna Acharya, Minister for Science and Technology, for accepting the invitation to inaugurate the eleventh session of the Governing Board despite pressing duties of State, and also to the Executive Secretary of ESCAP for attending the session personally. During the past two days, the Technical Advisory Committee of APCTT had had fruitful discussions regarding the work programmes of the Centre and she hoped that during the eleventh session the Governing Board would endorse the proposals of the Committee and suggest measures for strengthening the Centre.

42. In his statement, the Hon. Mr Prithvi Raj Ligal, Vice-Chairman of the Planning Commission and Chairperson of the inaugural session, stated that, although the Asian and Pacific region had emerged as the most dynamic part of the world economy, countries differed in their experiences relating to the development of industrial and technological capabilities as well as to issues relating to technology transfer. The pressure was mounting on countries to depend more on domestic demand and to open up their domestic markets for foreign goods and remove export subsidies. In that process, however, the least developed countries faced serious developmental problems in upgrading their industrial and technological capabilities to satisfactory levels. It was necessary, therefore, for the developing countries of the region to adopt an integrated approach in creating a favourable climate to cater for their requirements. National governments also had an important role to play in providing orientation, direction and other support services in that transformation process. Technology transfer and promotional agencies working at national, regional and international levels had to come together to share and disseminate information as well as implement programmes related to technology development, transfer and utilization. Centres such as APCTT, which were actively engaged in promoting regional cooperation by strengthening technology transfer mechanisms and capabilities, had a crucial role to play; he expressed the hope that APCTT would continue to provide the necessary assistance to the Government of Nepal and that the Board at its eleventh session would succeed in suggesting innovative measures for technology transfer to be pursued by APCTT.

43. The Executive Secretary of ESCAP, in his statement, expressed gratitude to the Hon. Mr Ram Krishna Acharya, Minister for Science and Technology, for accepting the invitation to inaugurate the

session of the Governing Board and hoped that, in his address, the Minister would provide new directions for the attainment of the long-term goals of technology transfer, development and adaptation. Technology was an important strategic variable in development. The gap between the level of technology in the developing countries of the region and the developed countries of the world was significant. It was necessary, therefore, for the countries of the region to create a national technology climate for the rapid mastery of high technology. That would require charting an appropriate course for technology-based development. To achieve complementarity in technology development and transfer, it was necessary to take some corrective measures, including the formulation of policies and plans, the building of institutions and the development of skilled manpower. The role of government in that challenging task was to foster an environment in which the creative potential of the country's best scientists, technologists, technocrats and skilled persons could be realized. Expanded regional cooperation for that purpose was both desirable and necessary.

44. ESCAP and its regional institution, the Asian and Pacific Centre for Transfer of Technology, had contributed significantly in assisting developing countries in technology transfer and utilization. In providing assistance, APCTT had accorded priority to small and medium-scale enterprises and to the transfer of clean technologies. However, APCTT had not been able to generate sufficient institutional support from the member countries in spite of its successful programmes, accomplishments and activities. In order to function effectively, the Centre needed a basic core of Professional staff, as distinct from project personnel. To maintain that core group the Centre required an amount of US\$ 350,000 on an annual basis. The institutional support received from the member countries fell short of that. In an effort to resolve the problem, the Governing Board, at its tenth session, had adopted a two-pronged course of action: missions to be sent by ESCAP and APCTT to selected member countries to ensure their support to institutional costs; and the establishment of an endowment fund of US\$ 5 million. The challenge of overcoming the financial and operational problems of APCTT was not easy to meet. It required concerted and extensive efforts by various parties. In those circumstances, the Governing Board of APCTT would need to consider a number of actions and direct APCTT to undertake appropriate activities. Finally, APCTT would need to adapt its programmes continually to meet such practical needs as awareness creation in sustainable development, the upgrading of skills and development of management and marketing capabilities in the developing countries. He expressed gratitude to the donor countries and United Nations agencies for the programme support provide to the Centre.

45. In his inaugural speech, the Hon. Mr Ram Krishna Acharya, Minister for Science and Technology, stated that the Government of Nepal, realizing the importance of science and technology for development and the alleviation of poverty, had recently established a ministry for that purpose. As poverty was the basic problem of Nepal, it had become imperative to integrate science and technology with the social and economic activities of Nepal. Underdeveloped nations such as Nepal lacked the

resources for the development of science and technology and therefore looked for cooperation to obtain resources and for the sharing of knowledge and skills. It was important for underdeveloped countries to adopt appropriate technologies for their economic and social development. He expressed the hope that centres like APCTT would produce guidelines to enable those countries to frame suitable policies.

46. The Director of the Industry and Technology Division of ESCAP expressed gratitude to the Minister for Science and Technology and the Vice-Chairman of the Planning Commission for honouring the session with their presence. As technology went hand-in-hand with development, it was necessary to nurture centres like APCTT, which were assisting the member countries in technology development and transfer. To enable the Centre to maintain a core group of personnel to carry out its mandate, it was essential that it be fully supported. In concluding, he expressed gratitude to the Government of Nepal for the excellent manner in which the meeting had been organized, and to the Director and staff of the Centre.

B. Attendance

47. The session was attended by representatives of the following members of the Board: Bangladesh, China, India, Indonesia, Iran (Islamic Republic of), Mongolia, Nepal, Pakistan, Philippines, Russian Federation, Sri Lanka, Thailand and Viet Nam.

48. Representatives of the following United Nations bodies and agencies also participated: International Labour Organization (ILO), United Nations Conference on Trade and Development (UNCTAD), United Nations Educational, Scientific and Cultural Organization (UNESCO), and United Nations Industrial Development Organization (UNIDO).

C. Election of officers

49. The session unanimously elected Ms Dilli Devi Shakya (Nepal) Chairperson, Mr Woo-Geun Song (Republic of Korea) Vice-Chairperson and Mr Nabil Lutfi (Pakistan) Rapporteur.

D. Agenda

50. The session adopted the following agenda:

1. Opening of the session.
2. Election of officers.
3. Adoption of the agenda.
4. Report of the activities of APCTT during the period November 1995 to November 1996 and presentation of the programme of work.
5. Report of the Technical Advisory Committee on its twelfth meeting.
6. Long-term sustainability of APCTT.

7. Date and venue of the twelfth session of the Governing Board.
8. Other matters.
9. Adoption of the report.