

**International Conference on  
'South-South Cooperation for Technology Transfer and  
Development of Small and Medium Enterprises (SMEs)',  
Negombo, Sri Lanka, 18-22 August 2008**

***PARTICIPATING COUNTRIES:*** 17 Countries (Including 16 Member Countries and 2 S&T-Industry Network Members of the NAM S&T Centre

***NUMBER OF PARTICIPANTS:*** The Conference was attended by 72 senior experts and professionals from 17 countries including the host country Sri Lanka as well as the representatives of a number of inter-governmental organisations. viz., UNESCAP Asian and Pacific Centre for Transfer of Technology (APCTT); UNDP Regional Centre in Bangkok; Commission on Science and Technology for Sustainable Development in the South (COMSATS); and NAM S&T Centre.

It is evident that the value of any newly generated technology considerably shrinks unless it can be transferred to a user who can apply the technology to create a tangible benefit. 'Technology Transfer' is the process by which existing knowledge, facilities and capabilities are utilised and marketed to fulfil public and private needs. It involves a range of formal and informal collaborations between technology developers and technology seekers. To facilitate technology transfer in the existing technology driven global era many governmental bodies, academic and R&D institutions and companies have opened with them an 'Office of Technology Transfer', which basically dedicates itself to identifying research with potential commercial interest and evolving strategies to exploit the same. In recent years, there has been marked increase in technology transfer intermediaries specialized in their fields. They are often multidisciplinary in nature and include the economists, engineers, lawyers, marketers and scientists who work on behalf of the research institutions, governments and even large multinationals.

The promotion of small and medium enterprises (SMEs) is considered as a prominent approach to sustainable development, alleviation of poverty and raising the standard of living. This sector mobilizes scarce resources and caters to the needs of fragmented domestic market particularly in the emerging economies. SMEs are one of the most vital segments of a nation that contributes significantly to the gross domestic product (GDP), creates employment and earns foreign currency through export. As the studies indicate, SMEs contribute nearly 40-60 percent of the total output or value addition to the national economy. Their importance is even more reinforced if we think of the huge unemployment in the developing countries. Globalisation has distorted the terrain for SMEs. Currently the governments of the industrialized nations have accredited the importance of SMEs in industrial economic systems. Due to the limited resources and relative inability to absorb the costs and risks associated with domestic technology development, SMEs must often utilize the process of technology transfer to take advantage of the benefits gained by technology and innovation.

From a modern optimistic viewpoint, SMEs can be easily assisted and facilitated to grow, multiply and replicate into a sufficient mass across industries and sectors leading to proper proliferation and application of technology. In this process the coordinating unit of an R&D organization for technology transfer process will advance the strategic implementation by facilitating the sharing of information, national and international experiences and technical know-how, dissemination of information on best practices, data collection and networking.

In order to share the knowledge, approaches and experiences regarding the problems and prospects on the development of SMEs and the transfer of technology to improve technological competitiveness of SMEs for their national economic development, the Centre for Science & Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre) in association with the National Science Foundation (NSF), Sri Lanka and National Science and Technology Commission (NASTEC), Sri Lanka jointly organised an International Conference on 'South-South Cooperation for Technology Transfer and Development of Small and Medium Enterprises (SMEs)' at Negombo, Sri Lanka during 18-22 August 2008. This conference brought together various stakeholders, viz. experts, policy makers, researchers, technologists and entrepreneurs to share knowledge and experiences on SMEs and issues related to technology transfer in the developing world.

The proceedings of the Inaugural Session were conducted by Dr. M.C.N. Jayasuriya, Director NSF. After lighting of the traditional oil lamp, Prof. Sirimali Fernando, Chairperson, NSF made the welcome remarks and Prof. Arun P. Kulshreshtha, Director, NAM S&T Centre gave introductory address highlighting the background of the Conference. This was followed by the release of the NAM S&T Centre's publication on 'Science and Technology Policy and Indicators for Development: Perspectives from Developing Countries' by H.E. Prof. Tissa Vitarana, Minister of Science and Technology of Sri Lanka and the inaugural speech by the Honourable Minister. Other distinguished persons seated on the podium were Prof. Nalini Ratnasiri, Chairperson NASTEC and Mrs. Beatrice Ekanayake, Additional Secretary, Ministry of Science & Technology of Sri Lanka. An important highlight of the Inaugural Session was the keynote address by Dr. K. Ramanathan, Head of the UNESCAP Asian and Pacific Centre for Transfer of Technology (APCTT). The Session concluded with the presentation of the Vote of Thanks by Dr. Ranil Guneratne, Director NASTEC.

The Conference was attended by 72 senior experts and professionals from 17 countries including the host country Sri Lanka as well as the representatives of a number of inter-governmental organisations, viz., Dr. K. Ramanathan, Head, APCTT; Dr. Denis Nkala, Chief, South-South Unit (Asia & Pacific), UNDP Regional Centre in Bangkok; Mr. Tajammul Hussain, Director General (International Affairs), Commission on Science and Technology for Sustainable Development in the South (COMSATS); and Dr. Ved Kharbanda, Publications Adviser, NAM S&T Centre. The other overseas participants were from Belarus [Dr. Alexander A. Uspenskiy, Director, Republican Centre for Technology Transfer, Minsk]; Colombia [H.E. Juan Alfredo Pinto Saavedra, Ambassador of Colombia in India]; Egypt [Mrs. Janet Ibrahim Youseef, President, Invention & Innovation Agency, Academy of Scientific Research Technology (ASRT), Cairo]; India [Dr. Purnima Sharma, Managing Director, Biotech Consortium India Limited; Prof. D. P. Kothari, Vice Chancellor, VIT University (VITU), Vellore; Mr. A. Balachandran, Manager, Technology Business Incubator, VITU; Mr. K.G. Ramani, Chief Executive Officer, PatInt Solutions India Pvt. Ltd, New Delhi; and Mr. Arun Seetharaman, Scientist 'B', International Advanced Research Centre for Powder Metallurgy and New Materials

(ARCI), Hyderabad]; Indonesia [Ms. Anteng Setia Ningsih, Member, Business Technology Center Network Team, Ministry of Research and Technology, Jakarta]; Iraq [Mr. Abdulilah Mohammed Saleh, Senior Chief Chemist, Ministry of Planning & Development Cooperation, Central Organization for Standardization & Quality Control (COSQC)]; Kenya [Dr. Roselyn Gakure, Chairman, Entrepreneurship & Procurement Department, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Nairobi]; Malawi [Mr. Lyson John Kampira, Chief Science & Technology Officer, Department of Science and Technology, Lilongwe]; Nepal [Dr. Dilip Subba., Secretary, Nepal Academy of Science and Technology (NAST), Kathmandu]; Nigeria [Mr. Issac Madueke Nwaedozie, Chief Technology Officer, National Office for Technology Acquisition and Promotion (NOTAP), Abuja]; Pakistan [Dr. Nighat Afza, CSO/Director (Planning and Development), PCSIR Laboratories Complex, Karachi]; South Africa [Prof. Keith Jacobs, Assistant Dean, Cape Peninsula University of Technology, Bellville; Ms. Corlette Molefe, HR Manager, and Mrs. Esther S. Siluma, PRO, Tshumisano Trust, Department of Science and Technology, Pretoria]; Tanzania [Dr. Matheo L. Raphael, Centre for the Development and Transfer of Technology, COSTECH, Dar-es-salaam]; Uganda [Dr. Charles Guy Kwesiga, Executive Director, Uganda Industrial Research Institute, Kampala and Mr. Bashir Rajab Kagere, Science Officer (Policy), Uganda National Council for Science & Technology, Kampala]; Vietnam [Ms. Ngo Thi Loan, Vice Head of Project Department, Centre for Regional Research and Development, Ministry of Science & Technology, Hanoi]; and Zambia [Mr. Clement M. Malisawa, Technology Analyst, National Technology Business Centre, Lusaka].

The Conference was conducted in 11 technical sessions broadly categorised under the themes ‘Technology Transfer in the Global Context’, ‘Technology Transfer from Around the World: Case Studies’, ‘Implementation of Technology Transfer: Laws and Policies and Market Development’, ‘Implementation of Technology Transfer: Partnership Development and IPR Issues’, ‘Strengths and Barriers for Effective Technology Development and Transfer’, ‘Technology Assimilation and Networking’ and ‘Entrepreneurship Development and Quality Assurance of the Product Standardization for Effective Technology Transfer’. The overall technical programme of the conference was coordinated by Dr. M.C.N. Jayasuriya, Director, NSF, Dr. R. Guneratne, Director, NASTEC and Prof. A.P. Kulshreshtha, Director, NAM S&T Centre. The technical sessions were co-chaired, respectively, by Prof. Nalini Ratnasiri, Chairperson, NASTEC; Dr. R. Guneratne, Director, NASTEC; Prof. Tuley De Silva, Former Special Technical Advisor, UNIDO; Eng. Jayantha Ranatunga, Chairman, NERD Centre; Dr. M. Mubarak, Director ITI; Prof. Ananda Jayawardene, Dean, University of Moratuwa; Dr. D.M. Karunaratne, Director General, National Intellectual Property Office (NIPO); Dr. Sarath Abeyawardana, Consultant, Technical Education Development Project, Ministry of Vocational & Technical Training; and Dr. K.P. Hemalal, Director, Hemas Manufacturing (Pvt.) Ltd. from Sri Lanka and Prof. Keith Jacobs; Dr. K. Ramanathan; Dr. Purnima Sharma; Ms. Corlette Molefe; Mr. Bashir Rajab Kagere; Dr. T. Hussain; Dr. Ved Kharbanda; Prof. D.P. Kothari and Mr. K.G. Ramani from among overseas participants.

A session was devoted to Panel Discussion on ‘Strengths & Barriers for Effective Technology Development & Transfer: Experience from Sri Lanka & Way Forward’, which was led by Dr. A.T. Ariyaratne, Founder - President, Sarvodaya Shramadana Movement, Moratuwa, Sri Lanka. The other panellists were, namely, Mr. Gerry Suraweera, Project Consultant of the Ceylon Chamber of Commerce; Dr. Wasantha Ameradasa, Manager/Planning of National

Enterprise Development Authority (NEDA); and Dr. Ranjani Peries, Head of Vegetable Research Division of Horticulture Crop Research & Development Institute (HCRDI), Peradeniya.

The participants from Sri Lanka, who made presentations during the Conference were Mr. A.R. Ameratunga, Secretary, Ministry of Science and Technology (on 'the Vidatha Programme'), Mr. Titus Jayawardene, Additional Secretary, Ministry of Industrial Development (on 'Industrial Policy Initiatives and Technology Transfer'), Prof. Vijaya Kumar, Chairman, Industrial Technology Institute, Colombo (on 'Technology Transfer - Challenges to Developing Countries like Sri Lanka'), Eng. Jayantha Ranatunga, Chairman, NERD Centre (on 'Technology as a Package for Effective Technology Transfer: Engineering Technologies'), Dr. A.R.L. Wijesekera, Chairman, Sri Lanka Standards Institution (SLSI), Colombo (on 'Standardization for Quality Assurance and Technology Transfer'), Mr. B.R.L. Fernando, Chairman, CIC Agribusiness, Colombo (on 'Technology as a Package for Effective Technology Transfer: Agro-Industry in the Corporate Sector'), Dr. C. Kudagamage, DG, Department of Agriculture (on 'Technology as a Package for Effective Technology Transfer: Agro-culture in the State Sector'), Dr. D.M. Karunaratne, DG, NIPO (on 'IP: Its Role in Facilitating Technology Transfer'), Mr. Lakshman Wijewardene, DG, Industrial Service Bureau (ISB), Kurunegala (on 'Role of Business Development Service Providers - Implementation of Technology Transfer'), Dr. Sarath Abeywardene of the Ministry of Vocational & Technical Training (on 'Technology Transfer and Transfer Models: The Sri Lankan Perspective'), Prof. Ananda Jayawardene of the University of Moratuwa (on 'Public-Private Sector Partnership') and Dr. Muditha Liyyanagedera of NASTEC (on 'Factors Governing the Success or Failure of Technology Transfer: State Sector Experience of Sri Lanka').

Among the foreign participants, Dr. K. Ramanathan (APCTT) made presentation on 'An Overview of Technology Transfer and Technology Transfer Models'; Dr. Denis Nkala (UNDP Bangkok) on 'South-South Global Assets and Technology Exchange Systems (GATES)'; Mr. Tajammul Hussain (COMSATS) on 'South-South Cooperation for Development of Small and Medium Enterprises (SMEs)'; Dr. A.A. Uspenskiy (Belarus) on 'Cooperation of the Republican Centre for Technology Transfer with International Technology Transfer Networks'; Colombian Ambassador H.E. Mr. Saavedra on 'South-South Cooperation for Technology Transfer and Development of SME'S: How Can It Be Possible?'; Mrs. Janet I. Youseef (Egypt) on 'Strategy of Egypt in enhancing the Small and Medium Enterprises'; Dr. Purnima Sharma (India) on 'National Experiences in Transfer of Biotechnologies'; Prof. D.P. Kothari (India) on 'South-South Cooperation for Technology Transfer and Development of Small and Medium Enterprises: VIT Experiences'; Mr. A. Balachandran (India) on 'Role of Business Incubation Systems to facilitating Technology Transfer and Development'; Mr. K.G. Ramani (India) on 'Observations on Patent Related Intelligence'; Mr. Arun Seetharaman (India) on "ARCI"- 'Translating Research into Technology'; Ms. A.S. Ningsih (Indonesia) on 'Business Technology Centre Network In Indonesia'; Mr. A.M. Saleh (Iraq) on 'Participation of COSQC in Technology Transfer and Development of IRAQI Enterprises'; Dr. Roselyn Gakure (Kenya) on 'Factors Affecting Utilization of Information Technology in Organizations'; Mr. L.J. Kampira (Malawi) on 'Technology Transfer and Related Policies for the SME Sector Development in Malawi'; Dr. Dilip Subba (Nepal) on 'SMEs and Technology Transfer in Nepal'; Dr. Nighat Afza (Pakistan) on 'Status of SMEs in Pakistan and its Possible Uplift by PCSIR'; Mr. Keith Jacobs (South Africa) on 'The Effect of Information Channels and Networks on Knowledge Creation and Technology Transfer in Small and Medium Enterprises'; Ms. Corlette Molefe (South Africa) on

‘The Efficacy of Technology Diffusion Initiatives from South African Universities to enhance the Competitiveness and Sustainability of Small and Medium Sized Universities’; Dr. Matheo L. Raphael (Tanzania) on ‘Technology Transfer: Tanzania Experience’; Dr. Charles Guy Kwesiga (Uganda) on ‘Investment in Value Addition & Technology Transfer’; Mr. B.R. Kagere (Uganda) on ‘The Challenges of Integrating the “*Jua Kalis*” into the National Science and Technology System in Uganda’; Ms. Ngo Thi Loan (Vietnam) on ‘Technological Renovation in Vietnam’s SMEs’; Mr. C.M. Malisawa (Zambia) on ‘The Small and Medium Enterprises (SMEs) – Zambian Scenario’; Dr. V.P. Kharbanda (NAM S&T Centre) on ‘Technology Innovation in Indian Small and Medium Enterprises (SMEs) – The Role of Clusters and R&D Alliances’; and Prof. A.P. Kulshreshtha (NAM S&T Centre) on ‘NAM S&T Centre and Its Support for Developing Countries’.

The Concluding Session on ‘Recommendations and Sri Lanka Declaration on South – South Cooperation for Technology Transfer and Development of Small and Medium Enterprises’ was chaired by Prof. Sirimali Fernando, Chairperson, NSF when a Colombo Declaration was adopted (copy **appended**). The conference ended with the distribution of the Certificate of Participation to the participants.

The participants also had an opportunity to go for a study tour to a Vidatha Center and Two rural SME’s as well as Pinnawela Elephant Orphanage, which brought immense joy to the participants after the hectic schedule of the conference. The participants thanked the organizers of the Conference and unanimously hoped that more similar events will be held in future with a focus on South-South cooperation for technology transfer and development of SMEs.

**COLOMBO DECLARATION**  
**On South-South Cooperation for Technology Transfer**  
**and Development of Small and Medium Enterprises (SMEs)**

**WHILE EXPRESSING** gratitude to the Government of the Democratic Socialist Republic of Sri Lanka, the hosts of the International Conference on 'South-South Cooperation for Technology Transfer and Development for Small and Medium Enterprises (SME's), jointly organised by the National Science Foundation and the National Science and Technology Commission of Sri Lanka and the Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre) during 18-22 August 2008,

**HAVING DELIBERATED** on various issues related to knowledge, approaches and experiences related to the problems and prospects on the development and transfer of SME's,

**THE SPECIFIC ISSUES** encompassing:

- ✍ Implementation of Technology Transfer, Laws and Policies and Market Development
- ✍ Implementation of Technology Transfer, Partnership Development, IPR Issues and Quality Assurance
- ✍ Strengths and Barriers for Effective Technology Development and Transfer
- ✍ Technology Assimilation and Networking

**THE PARTICIPANTS EXPRESSED** unanimity that the Conference has been a resounding success in coming out with focused recommendations and actions as below, that would help NAM and other developing countries in formulating their plans for the strengthening of the existing SME's and equivalent structures as well as in the creation of new entities to promote the adoption of technologies developed within their countries by the concerned users and industries aimed at their economic growth;

- It is desirable that every country should establish a National Technology Transfer Centre (or an equivalent body) to act as a bridge between technology developers (transferors) and users/investors (transferees), maintain databases of technology offers and technology requests and provide necessary services to manage the process of technology transfer, including technical and managerial consultancy, IP services, assistance with obtaining credit, etc.
- The persons engaged in technology transfer, including Technology Transfer (TT) managers, developers and users should be trained in the necessary managerial techniques, as well as the best practices in the field of TT, based on the experience of successful examples from various countries.

- Countries should streamline their laws and regulations to facilitate all aspects of SME development, thereby bringing their regulations into compliance with SME friendly policies, and eliminating contradictions between such policies and actual regulations governing the availability of credit, customs, standards, taxation, etc.
- Persons who have participated in successfully transferring technologies in R&D institutions, universities, etc. should be given appropriate incentives (e.g. promotions).
- Countries should set up financial institutions (e.g. the Grameen Bank in Bangladesh) to assist poor communities in technology transfer.
- Governments should fund R&D organizations for improvement, modernization and refurbishment of infrastructure that enable them to help SMEs.
- Governments should initiate the development of Technology/Business Incubators, where not available. For capacity building the resources available with infoDev of World Bank could be utilized. IDISC.net portal could be linked with the proposed national technology transfer facility.
- The developing countries having SME's and those desirous of establishing SME's shall network among each other with expertise of UNESCAP-APCTT.
- A database on technology offers and requests, training institutions, R&D institutions, machinery, consultancies etc., shall be facilitated through the expertise available with the Department of Science and Technology of the Republic of South Africa, Belarus Republican Centre for Technology Transfer and the National Office for Technology Acquisition and Promotion (NOTAP) of Nigeria.
- A quarterly electronic newsletter providing information on the available technologies developed within the developing countries, the available experts and any technical requirements that may be met through interactions among the developing countries themselves shall be brought out by VIT University, Vellore, India with the facilitation of the NAM S&T Centre.
- Fellowship scheme of the NAM S&T Centre shall be made use of for training of personnel in technology development and transfer from one member country to the scientific institutions and industry in another member country of the Centre.
- Workshops and training courses in the areas related to the issues concerning technology transfer and SME's, as well as other areas, shall be considered for organisation by COMSATS in consultation with the NAM S&T Centre.

**THUS DECLARED AND ADOPTED IN NEGOMBO, SRI LANKA ON THIS DAY, 21<sup>st</sup> AUGUST 2008.**