

**INTERNATIONAL WORKSHOP ON SCIENCE AND TECHNOLOGY  
POLICY AND SUSTAINABLE DEVELOPMENT,  
TEHRAN, IRAN,  
5–7 JANUARY 2011**

***PARTICIPATING COUNTRIES:*** 14 Developing Countries (Including 10 Member Countries, 4 Non-member Countries of the NAM S&T Centre).

***NUMBER OF PARTICIPANTS:*** The Workshop was attended by 237 senior professionals & research workers of 13 countries and 216 participants from the host country Iran.

Developing countries greatly suffer from the absence of a meaningful S&T policy for stimulating the process of economic development by appropriate use of the S&T resources. They also lack suitable human resources with adequate expertise in S&T policy formulation and implementation. In order to correct these imbalances, the S&T policy in a developing country should be determined through consultation between the governments, institutions and industry by taking into account the specific technological needs and resources of the country. The decision makers in developing countries are in need of more and better information for the formulation and implementation of S&T policies including data on S&T statistics, human resources devoted to R&D, education of R&D personnel, measurement of technological innovation, and S&T outputs like publications, patents, technologies developed and commercialized etc so that the required modifications in the present policies can be made in order to ensure the sustainable growth of the countries without compromising on their present resources and keeping them prepared to face the future challenges. These countries should recognise the central role played by S&T in raising the quality of life of the people through many ways, particularly, by creating wealth for all, by making the country globally competitive, by utilising natural resources in a sustainable manner, and in protecting the environment and ensuring national security. The national S&T policies and their implementation should adjust to the new global realities and also satisfy social and economic goals in order to making them sustainable.

In order to deliberate on these issues, the Centre for Science & Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre) jointly with National Research Institute for Science Policy (NRISP), Ministry of Science, Research and Technology of Iran organised a 3-days International Workshop on “Science and Technology Policy and Sustainable Development” at Tehran, Iran, during 5<sup>th</sup>–7<sup>th</sup> January 2011.

The Inaugural Ceremony commenced with the traditional recitation of Holy Quran, and Hymn which was followed by the welcome address by the Secretary of the Workshop, Dr. Mohammad Hassanzadeh, Faculty Member, Tarbiat Modares University and Director, Department of Science popularization at the National Research Institute of Science Policy (NRISP), Iran. After the introductory address and background of the Workshop presented by Prof. Arun P. Kulshreshtha, Director, NAM S&T Centre; Dr. Seyed Hassan Ghodsypour, President of NRISP; Dr. Mohammad-Javad Larijani, President of the Institute for Studies in Theoretical Physics and Mathematics (IPM); Mr. Esfandiar Ekhtiari, the Zoroastrian M.P. Education & Research Commission; and Dr. Mohammad Mehdi Nejad Nouri, Deputy Minister for Science, Research and Technology of Iran gave their individual remarks.

The Workshop was attended by 237 senior professionals and research workers of 14 countries, including Brunei, Cambodia, Croatia, India, Indonesia, Iraq, Kenya, Malawi, Oman, Pakistan, Sri Lanka, Sudan, Zambia and the host country Iran (216 Participants), and from the NAM S&T Centre. The overseas participants were from Brunei [Prof. Tan Kha Sheng, Dean of Graduate Studies and Research and Dr. Saiful Azmi Husain, Lecturer in the University of Brunei Darussalam, and Dr. Pg Mohd Esa Al-Islam Pg Hj Md Yunus, Acting Deputy Dean, Postgraduate Studies and Research and Dr. Pg Saiful Baharun Pg Duraman, Lecturer, Faculty of Engineering in Institut Teknologi Brunei, Gadong]; Cambodia [Dr. Sopheap Seng, Head of Department, Institute of Technology of Cambodia, Phnom Penh]; Croatia [Prof. Dragan Šoljan, Director, S&T Project Croatia, Ministry of Science Education and Sports, Zagreb]; India [Prof. (Dr.) Palpu Pushpangadan, Director General, Amity Institute for Herbal and Biotech Products Development, Kerala; Prof.. Dr. Parmod Kanwar Gupta, Secretary General and Principal Management Consultant, National Foundation of Indian Engineers (NAFEN), New Delhi; and Dr. (Mrs.) Purnima Rupal, Scientist E-II, International S&T Affairs Directorate, Council of Scientific & Industrial Research

(CSIR), New Delhi]; Indonesia [Prof. Dr. Otto S. R. Ongkosongo, Senior Research Professor on Coastal Environment Research Centre for Oceanography, Indonesian Institute of Sciences (LIPI), Jakarta]; Iraq [Mr. Hadi Obaid Ali, Director General and Dr. Sabah Azeez Hasan, Deputy Director General, Ministry of Science and Technology, Baghdad]; Kenya [Mr. Frank Ndaks Sawanga Ndakala, Directorate of Research Management and Development, Ministry of Higher Education, Science and Technology, Nairobi]; Malawi [Mr. Patrick J.J. Mphadzula, Principal Science and Technology Officer, Ministry of Education, Science and Technology, Department of Science & Technology, Lilongwe]; Oman [Mr. Khalid Ali Salim, Financial Analyst, Ministry of National Economy, Muscat]; Pakistan [Mr. Muhammad Zafar Iqbal, Deputy Scientific Advisor, Ministry of Science and Technology, Islamabad]; Sri Lanka [Prof. Nalini Beatrice Ratnasiri, Chairperson, National Science and Technology Commission (NASTEC), Colombo]; Sudan [Prof Dr. El tayeb Edris Eisa Ebrahim, President, Sudan Academy of Sciences, Khartoum]; and Zambia [Mr. Ernest Peter Shamano, Technology Audit and Validation Specialist, National Technology Business Centre, Lusaka]. From the NAM S&T Centre, Mr. M. Bandyopadhyay, Senior Expert & Administrative Officer and Prof. Arun P. Kulshreshtha, Director attended the event.

Overall programme of the Workshop was conducted at the National Library of Iran at Tehran in seven technical sessions. These sessions were respectively co-chaired by (i) Prof. Nalini Ratnasiri of Sri Lanka and Mr. Dragan Šoljan of Croatia; (ii) Prof Dr. El Tayeb Edris Eisa Ebrahim of Sudan and Prof. Dr. Jafar Mehrad of Iran; (iii) Prof. Dr. P. Pushpangadan of India and Prof. Tan Kha Sheng of Brunei; (iv) Dr. Pg Mohd Esa Al-Islam Yunus of Brunei and Mr. M. Bandyopadhyay of the NAM S&T Centre; (v) Prof. Dr. Arun P. Kulshreshtha of the NAM S&T Centre and Mr. Muhammad Zafar Iqbal of Pakistan; (vi) Dr. M. Molanejad of Iran and Mr. Hadi Obaid Ali of Iraq; and (vii) Dr. Ernest Peter Shamano of Zambia and Prof. P. K. Gupta of India..

The scientific papers presented during the Workshop were on ‘SC: A New Bibliometric Citation System Applied to Research Journals in Islamic Countries’ by Prof. Ja’far Mehrad (President, Islamic World Science Citation Center, Iran); ‘Foresight of the Most Appropriate Technologies for Iran 2025 – Pilot Stage - (PAMFA)’ by Dr. Aria Alasty (NRISP, Iran); ‘SEMAT, National Current Research Information System for Iran’ by Dr. Omid Fatemi (IRANDOC, Iran); ‘Technologies

for Sustainable Development’ by Prof. Dr. El Tayeb Idris Eisa (Sudan); ‘Keys to Success for the Sustainable Development of Modeling & Simulation Research Cluster’ by Dr. Saiful Azmi Hussain (Brunei); ‘How to Prepare the Action Plan for Implementing the National Science & Technology Policy’ by Mr. Dragan Šoljan (Croatia); ‘The Role of Science and Technology in Biodiversity Based Sustainable Development’ by Dr. P. Pushpangadan (India); ‘Forging International S&T Cooperation for Sustainable Development: Lessons from CSIR’ by Dr. Purnima Rupal (India); ‘Science and Technology Policy and Sustainable Development’ by Mr. Ernest Peter Shamano (Zambia); ‘Developing Science & Technology Research in the Institute of Technology of Cambodia’ by Dr. Sopheap Seng (Cambodia); ‘Energy Efficiency and Conservation for Sustainable Development: a Brunei Darussalam and Institute Technology Brunei Perspective’ by Dr. Pg Saiful Baharun Pg Duraman (Brunei); ‘The National Science and Technology Policy of Sri Lanka’ by Prof. Nalini Beatrice Ratnasiri (Sri Lanka); ‘CO<sub>2</sub> Capture and Sustainable Development of Micro-Algae Based Fuel’ by Prof. Nasrin Moazami (Director, Institute of Advanced Technology, Iran); ‘S&T Statistics of Pakistan: a Country Report’ by Mr. Muhammadd Zafar Iqbal (Pakistan); ‘Overview of the Science and Technology Institutional and Regulatory System in Malawi’ by Mr. Patrick J. J. Mphadzula (Malawi); ‘Evolution of Science & Technology Policy for Developing an Innovation Ecosystem and Promotion of Knowledge-Based Industries in India’ by Mr. M. Bandyopadhyay (India); ‘Towards Science and Technology Policy in Oman’ by Mr. Khalid Ali Salim Al Senadi (Oman); ‘Science and Technology in Brunei Darussalam’ by Dr. Pg Mohd Esa Al-Islam Yunus (Brunei); ‘The 50 Principles for Sustainable Development’ by Prof. Dr. Otto. S. R. Ongkosongo (Indonesia); ‘Women Empowerment through Science and Technology Education’ by Dr. P. K. Gupta (India); ‘University Brunei Darussalam Research Strategies and Management’ by Prof. Tan Kha Sheng (Brunei); ‘The Impact of Educational Tourism on Sustainable Economic Development’ by Dr. Mohammad Hossein Karim, Science & Education Director of Iran in India and Ms. Malihe Esmaili, Ph.D. Scholar, University of Pune (India), presented by Ms. Esmaili; ‘Using Stakeholder Engagement to Bridge the Gap Between Science, Technology and Innovation (STI) Policies in Implementing the Kenya Vision 2030 for National Development’ by Mr. Frank Ndaks Sawanga Ndakala (Kenya); ‘The Role of Science and Technology in Managerial Development’ by Dr. Sabah Aziz Hassan and Mr. Hadi Obaid Ali (Iraq) presented by Dr. Hassan;

‘Science & Technology Park – Bridge between University & Industry’ by Assoc. Prof. Dr. Mahmood Torabi-Angaji (Adviser to Dean on International Affairs, Tehran University, Iran); ‘Public Understanding of Science and Technology: a National Prototype for Popularization of Science, Policy and Actions in Islamic Republic of Iran’ by Dr. Mohammad Hassanzadeh (Tarbiat Modares University, Iran) and Ms. Azadeh Heidari (Islamic Azad University, Iran), presented by Ms. Heidari; ‘Science and Technology Policy in Islamic Republic of Iran’ by Dr. Amir Ali Seifoddin (Office of S&T Development, Vice- presidency of Iran for Strategic Planning & Control) and Prof. M. Hasan Sadeghi Moghadam (Sharif University of Technology, Tehran, Iran), presented by Dr. Seifoddin; ‘Role of the NAM S&T Centre for South – South Cooperation in Science and Technology’ by Prof. Arun P. Kulshreshtha (NAM S&T Centre); ‘Chemical Coatings’ by Mr. Ali Mohamad; ‘Solar Cells Unmanned Aerial Vehicles’ by Mr. Milad Hajikhan, ‘Autopilot Hovercraft’ by Mr. Adel Kerami; ‘Gold from Anodic Copper’ by Mr. Reza Ranjbar; and ‘Gas Nanosensors’ by Ms. Nafees Hassanzadeh, all from Amir Kabir University of Technology, Tehran, Iran .

A special Participants’ Forum was also organised during the workshop, which was moderated by Prof. Arun P. Kulshreshtha. The discussion was highly interactive in nature and specific suggestions and comments were invited from the participants

In the Concluding session, a set of recommendations titled ‘Tehran Resolution on S&T Policy and Sustainable Development’ was adopted after considerable deliberations and debate.

The outcome of the Workshop was summarised with a vote of thanks by Dr. Mohammad Hassanzadeh the Certificate of Participation were distributed to the participants. The concluding remarks were presented by Dr. M. Molanejad, Director of International Cooperation, IROST and Focal Point of the NAM S&T Centre in Iran.

Field Trips for the participants were organised to the National Museum of Jewellery, Museum of Contemporary Arts, Sadabad Palace and University of Tehran.

The participants thanked the organizers of the Workshop for the successful and fruitful organisation of the Conference and for excellent hospitality and arrangements made for the delegates, and unanimously hoped that more similar events will be held in future with a focus on South-South cooperation for the development and successful implementation of S&T Policies in developing countries.