

ISLAMIC WORLD ACADEMY OF SCIENCES 2009
SELANGOR CONFERENCE ON
TOWARDS THE KNOWLEDGE SOCIETY
IN THE ISLAMIC WORLD:
KNOWLEDGE PRODUCTION, APPLICATION AND DISSEMINATION

Shah Alam/Selangor, Malaysia

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17 December 2009

CONFERENCE REPORT

Under the patronage of His Royal Highness Sharafuddin Idris Shah, the Sultan of the State of Selangor, Malaysia; the Islamic World Academy of Sciences convened its seventeenth science conference in Shah Alam, the capital of Selangor, from 14 to 17 December 2009.

The conference was under the title; *Towards the Knowledge Society in the Islamic World: Knowledge Production, Application and Dissemination*.

Held mainly at the Concorde Hotel in Shah Alam, the conference was preceded by a 'Science Youth Forum,' which was held at the University of Industry of Selangor (UNISEL), Shah Alam.

Over 150 participants representing over 25 countries participated in the conference including the representatives of no less than 15 academies of sciences; IAS, TWAS, Arab Academy of Sciences, Pakistan Academy of Sciences, Bangladesh Academy of Sciences, Bosnian Academy of Sciences, Academy of Sciences of South Africa, American Academy of Sciences, Academy of Sciences Malaysia, Egyptian Academy of Sciences, Tatarstan Academy of Sciences, Iranian Academy of Sciences, Sudan National Academy of Sciences, Indian National Science Academy and the Indonesian Academy of Sciences.

Alongside the conference, meetings of the IAS Council, IAS General Assembly, and the General Assembly of the Network of Academies of Sciences in Islamic Countries (NASIC) were also convened.

The conference was organised and sponsored by the following organisations:

- Islamic World Academy of Sciences (IAS), Amman, Jordan;

- International Islamic Academy of Life Sciences and Biotechnology (IIALSB), Shah Alam, Malaysia;
- University of Industry Selangor (UNISEL), Shah Alam, Malaysia;
- OPEC Fund for International Development (OFID), Vienna, Austria;
- Islamic Development Bank (IDB), Jeddah, Saudi Arabia;
- OIC Ministerial Committee on Scientific and Technological Co-operation (COMSTECH), Islamabad, Pakistan;
- Jordan Phosphate Mines Company, Amman, Jordan;
- Arab Potash Company, Jordan;
- United Nations Educational, Scientific and Cultural Organisation (UNESCO), Paris, France; and
- Perdana Leadership Foundation, Putrajaya, Malaysia.

The aim of the conference was to promote the watchword that knowledge was becoming a major component in production processes, and that a new economic paradigm was emerging in which the most important factor was not the availability of capital, labour, raw materials or energy, but the intensive use of knowledge and information.

The conference also aimed to highlight that knowledge has become a pillar of the wealth and power of nations.

At the OIC level, the conference re-examined the actions that were required to invigorate; (a) Knowledge production, (b) Knowledge application and (c) Knowledge dissemination; in order to help OIC countries build knowledge societies and achieve rapid socioeconomic development.

The 17th IAS Conference of 2009 was organised around the above three themes, and aimed to achieve the following main objectives:

- a) To engender the awareness of the public and decision makers of the concept of knowledge society;
- b) To assess the role of women as knowledge producers in science and the scientific enterprise in OIC and developing countries;
- c) To highlight the hurdles facing R&D in OIC countries (knowledge workers' views);
- d) To strengthen private sector science linkages (knowledge application);
- e) To strengthen the linkages between science and the scientific community and the media (knowledge dissemination); and
- f) To engage the youth of OIC countries in science, technology and innovation (STI) (knowledge for the future).

Prior to the conference, the IAS and UNISEL organised a special session for the youth at UNISEL, which was called the 'Science Youth Forum.' Over 150 young science students were invited to what turned out to be an interactive session during which students listened to informal talks by some of the young scientists participating in the conference as well as other senior Fellows of the IAS on the value of science and why some of them had taken up careers in science.

In the first session, and in addition to a memorable invited address entitled; *The Leadership and Policy Components for the Knowledge Society: A Proposed Best Practice for OIC Countries*, by the former Prime Minister of Malaysia Tun Dr Mahathir Mohamad Hon. FIAS; Professor Wolfgang Schürer (Switzerland), Vice-President of the Council for Lindau Nobel Laureate Meetings, presented a keynote address entitled; *Educate, Inspire and Connect: The Lindau Nobel Laureates Meetings as a Cross-fertilising Platform*. This was followed by a presentation by Prof. Atta-ur-Rahman FIAS, Co-ordinator General COMSTECH on; *Building a Knowledge Society in the Islamic World: Challenges and Opportunities*.

The afternoon session of the first day was devoted to the subject of 'Women and Science.'

The IAS has long realised that women scientists form an important constituent of the knowledge production community, a constituent that is undervalued and underutilised. It is for this purpose that this session was organised. The fact that the session included a keynote by Tan Sri Prof. Omar Ibn Abdul Rahman FIAS; Former Science Advisor to the Prime Minister of Malaysia; and Founding President, Academy of Sciences; on *Human Capital Development for the Knowledge (Innovation) Economy*, represented a rare opportunity for the participants to appreciate the role of women scientists in the context national human capital that societies have/need to build in order to bring about the innovation economy.

The OIC Secretariat is collaborating with *Demos* and *Nature* to produce a study of science and technology-based innovation across the Islamic world. This project will gauge the changing landscape of science and innovation across many OIC countries with help and support of partner organisations in each country. An overview of this project was presented in a special session that was organised on the morning of the second day. That was followed by an exciting session in which two private-sector entrepreneurs participated; Mr Qusai Sarraf, Chief Executive Officer, IVIS Group, UK; who presented a paper entitled; *Opportunities and Challenges in Creating a Knowledge-Based Economy: A Viewpoint from the International Private Sector*, and Michael Grimes, of EnvironTeq in Thailand, who presented a paper entitled; *Knowledge*

Workers in a Globalised World: From America to South East Asia. This session concluded with a talk by the Chief Minister of Selangor who outlined his plans to turn the state of Selangor into high-tech and education hub.

Knowledge Society: The Policy Aspects, was the title of a major session on the second day in which Prof. Adnan Badran FIAS, Former Prime Minister of Jordan presented a quantitative overview paper on; *Science and Technology Landscape of the OIC: The Arab States in Focus*. In the same session, Mr Mehmet Fatih Serenli of the Statistical Economic and Social Research and Training Centre for Islamic Countries in Turkey presented a paper on: *R&D and KE Performance of OIC Member Countries*. That was followed by presentations by Dr Mustafa El-Tayeb of UNESCO on *Science and the Information Society*; Dr John Boright of the US National Academy of Sciences on the *Role of Academies of Sciences in Building the Knowledge Society: The Approach of the US National Academy of Sciences*; and the youngest speaker in the 17th IAS, Dr Hussam Salama who talked about; *Hubs of Knowledge and Information Flows in Islamic Countries: Challenges and Potentials*.

After a one-day break, the conference resumed on the morning of Thursday 17 December 2009 with two ‘Open Science Fora.’ These were sessions in which IAS Fellows and other participants presented papers on general science topics or research findings. A total of twelve papers were presented in two parallel sessions.

A lot of interest was shown in the session that followed which was dedicated to ‘Science and the Media.’ It started with an exciting presentation by Prof. Maqsudul Alam, Chief Executive Director, Centre for Chemical Biology, Universiti Sains Malaysia on; *Genome-based Discovery Platform Uncovers Biotechnology Potential of Papaya and Rubber Genomes*. That was followed by a number of statements by IAS Fellows on the importance of developing an OIC stance on Genetically Modified Organisms (GMOs).

The Least Developed Countries (LDCs) of the OIC were represented in this session by Prof. Muhammadou M. O. Kah, Professor of Information Technology and Communications, Vice Chancellor of University of the Gambia; who presented a comprehensive paper entitled; *Towards the Knowledge Society: The Gambia as an OIC Country Starting-up*.

The aim of this session was to highlight to the media in the OIC some science-related success stories as well stories of LDCs that are just starting up on the long road of development through S&T.

The ultimate session of the conference which was entitled; *Knowledge Production for Development*, was devoted to a number of top research

scientists in the OIC who were eager to share their ideas on scientific publishing.

At the conclusion of the four-day conference, which also included a number of specialised meetings and site visits, the IAS adopted the IAS 2009 Selangor Declaration on *Towards the Knowledge Society in the Islamic World: Knowledge Production, Application and Dissemination*.

The declaration emphasized that the quest for knowledge is a pillar of the Islamic Code of Belief and that knowledge and its pursuit have assumed augmented importance in an increasingly knowledge driven world economy. It reiterated that Science, Technology and Innovation (STI) represented the primary force behind the advancement of human civilisation and that productivity gains and achievements of humankind have been derived chiefly from innovation based on scientific exploration as well as extensive application of S&T in the social life of humankind.

In responding to the growing demands of the knowledge-based or K-economy, the declaration suggested that a fresh-look is needed to re-examine the infrastructure and delivery of higher education in OIC and developing countries in terms of quality and relevance.

Furthermore, the obstacles to science and technology in OIC-Countries, including, *inter alia*, lack of comprehensive Science, Technology and Innovation (STI) policies should be addressed.

The declaration appealed to OIC decision makers to implement specific actions such as sizeably increasing R&D expenditure, promoting the central role of the university as originator of scientific output, and promoting scientific and technological cooperation among developing countries. Moreover, it called for the creation of links between knowledge generation and enterprise development and for prompt action to ensure that young scientists cultivate a sense of hope and purpose so that they may contribute to shaping a sustainable future. It added that “future generations in OIC countries must be **educated and not indoctrinated, they must learn – and not be taught** – to work hard and learn to work together as teams rather than as individuals.”

The IAS also called for measures to help the sizeable women science community of the OIC to contribute to the development of the *Ummah*.

At the university level, the IAS reiterated, attempts should be made to **integrate rather segregate** students especially from the science and literary streams so that all future leaders appreciate the value of science as a means of socioeconomic advancement.

The Declaration also addressed the question of science advisory structures in the various countries and stated that the advisory processes should be able to gauge public opinion about science, technology, and innovation and that appropriate mechanisms should be worked out by the

IAS to provide advice to OIC heads of state, parliamentarians and other decision-makers with sound science-based advice.

The Declaration concluded by expressing its concern for the safety and well-being of all Iraqi scientists, academics and educationalists both inside and outside Iraq.

The IAS moreover extended its appreciation to the His Royal Highness the Sultan of the State of Selangor and the State of Selangor for hosting the conference; to the University of Industry of Selangor (UNISEL) and the International Islamic Academy of Life Sciences and Biotechnology (IIALSB) for the local arrangements; the Islamic Development Bank, COMSTECH, OPEC Fund for International Development (OFID), Perdana Leadership Foundation, United Nations Educational, Scientific and Cultural Organisation (UNESCO), Arab Potash Company, and the Jordan Phosphate Mines Company for generously sponsoring this international scientific congregation.

As part of the follow-up action to the conference, the Academy will circulate the IAS 2009 Selangor Declaration to concerned individuals and relevant agencies throughout OIC and developing countries, so that measures are taken to put into action the ideas proposed at the conference.

The Academy will also publish the complete proceedings of the conference in a quality volume that will be distributed internationally.

Through IAS Fellows, personal contact and correspondence, the IAS will promote the concepts promulgated at the conference among the decision making circles of the Islamic world, and will provide whatever help it can to get the various recommendations implemented.