



ISLAMIC WORLD ACADEMY OF SCIENCES (IAS)

International NGO active in Science and Technology for Development
Founded in Amman, Jordan, 1986.

OVERVIEW 2007

www.ias-worldwide.org

Prepared by the IAS Secretariat, PO Box 830036, Amman, Jordan.
Chief Editor: Moneef R. Zou'bi.

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1 BACKGROUND

Sound scientific knowledge is fundamental to addressing critical issues such as economic transformation and globalization, reduction of poverty, hunger, disease, and the sustainable use of natural resources ó facing the world today. National, regional and international science academies can marshal the world's best scientists to provide expert knowledge and advice to international bodies, such as the Organisation of the Islamic Conference (OIC) and the United Nations, charged with addressing these issues. They can, more importantly, also engage decision-makers at the national level.

In response to the need for an international organisation that can play such a role and cater for the needs of the Islamic scientific community, the Islamic World Academy of Sciences (IAS) came into being in 1986 as a non-political, non-governmental organisation that represents Muslim scientists of the various parts of the world.

The establishment of the Academy was recommended by the OIC Standing Committee on Scientific and Technological Co-operation (COMSTECH), and approved by the Fourth Islamic Summit of heads of state of the OIC, held in Casablanca, Morocco, 1984.

The Academy, which commenced its activities in 1986, is an independent body that enjoys international status comparable to other international learned bodies of similar nature in the world.

Today, the IAS boasts a membership of over 100 Fellows who represent the scientific elite of OIC countries and communities worldwide. The IAS also has 3 Nobel Laureates, heads of state as well as top OIC business leaders among its select group of Honorary Fellows.

By debating scientific issues with top decision-makers and the public, the IAS tries and has managed to influence science policy in many countries. It does this while closely guarding its treasured independence, and always deriving its authoritative status from the contribution its Fellows make to the advancement of science worldwide.

The IAS has over the years grown to become a principal propagandist for science and technology among the political decision making circles. It has moreover evolved into a decision support/analysis unit, especially on matters related to science and technology, education, health and the environment; within the OIC.

The IAS has been successful in bridging the divide between the fans of science and its inimitable foes by often convincing heads of state within the OIC to pay more attention to science and technology, and education; and to divert more resources to endeavours in these domains; and indeed to empower executive decision-makers in their countries to do more to come up in the international science, technology and education ranks.

Over the years, the IAS has realised that it may not be able to secure the financial resources to fully implement its programme of action. This has never prevented the IAS from reaching out nationally, regionally and internationally; of becoming involved in the majority of international science and technology activities that affect OIC countries. Indeed the Academy has been designated by many as the voice of science and technology in the Islamic world.

The IAS has long realized that it is important to reach out, to take its message to the various countries of the OIC. This was best achieved by it almost annually convening

an international conference that addresses a major theme or themes of relevance to OIC, and developing countries in general.

Box 1. Vision

IAS's main purpose is to increase interaction among scientists from member states of the OIC, and facilitate the exchange of views on the major contemporary issues affecting the development of the Islamic world.

IAS is designed to function as the *Islamic Brain Trust* meeting periodically to help guide the Islamic world, particularly in the area of science and technology.

2 THE LAUNCH

2.1 The launch

The decision to launch the IAS was taken at the 1984 Summit Conference of the OIC. The IAS was formally founded in 1986, with the patronage and support of Jordan and Pakistan, and under the inspired and farsighted leadership of the late Prof. M. A. Kazi FIAS; IAS Founding President from Pakistan; and the late Prof. Ali Kettani FIAS; IAS Founding Secretary General from Morocco.

Thirty-eight eminent scientists and academicians from different Islamic countries were invited to Amman (Jordan) in October 1986, to lay the constitutional and academic foundation of the Islamic World Academy of Sciences, as its Founding Fellows. The Founding Conference was patronised by His Royal Highness Prince El-Hassan Ibn Talal of Jordan. HRH was kind enough to accept to be Founding Patron of the Academy together with General Zia Ul-Haq, the (late) President of Pakistan.

Box 2. Mission

IAS's mission is to provide a dynamic institutional set up that can assist in the utilisation of science and technology for the general development of Islamic countries and humanity at large.

2.2 The IAS relaunched

The Islamic Academy of Sciences (IAS) was launched, with the blessings of Jordan and Pakistan, in 1986. The IAS General Assembly at its annual meeting, held in Kuala Lumpur, Malaysia, in March 2005, decided, upon a proposal from the IAS Council and Secretariat, to change the name of the Academy so that it becomes the "Islamic World Academy of Sciences." This was done primarily for the following reasons:

- 1) To reflect more the geographic catchment area of the Islamic world which is the birth place of the world's monotheistic religions;
- 2) To further highlight the thrust area that the IAS is involved in namely accelerating socioeconomic development in the Islamic world through scientific and technological means;
- 3) To differentiate between the IAS and other renowned specialized Islamic academies in commission throughout OIC countries that focus on the study of

- the Islamic Faith and '*Aqeedah*' including the famous Islamic *Fiqh* Academy in Jeddah, Saudi Arabia; and
- 4) To facilitate the inclusion of non-Muslim scientific and scholarly talent from the OIC, as well as international personalities in IAS activities.

Since that meeting, the Academy Secretariat has taken all the legal and the constitutional steps to affect this change.

3 OBJECTIVES

The main objectives of the IAS are to:

- (i) Serve as a consultative organisation of the Muslim *Ummah* and institutions of member states of the Organisation of the Islamic Conference (OIC), on matters related to science and technology;
- (ii) Initiate scientific and technological programmes and activities in science and technology, and to encourage co-operation among research groups in the various Islamic countries on projects of common interest;
- (iii) Encourage and promote research on major problems of importance facing Islamic countries and to identify future technologies of relevance for possible adoption and utilisation; and
- (iv) Formulate standards of scientific performance and attainment, and to award prizes and honours for outstanding scientific achievements to individuals and to centres of excellence in all science and technology disciplines.

4 STRUCTURE

4.1 General

As a sovereign body, the IAS is governed by a General Assembly in which all founding and elected Fellows are member. The number of Academy Fellows was 102 on 31 August 2007. They represent more than 40 countries and many scientific disciplines. The Fellows of the Academy are eminent figures, each has in his/her field has achieved a great deal and has contributed significantly to his/her country's development and internationally.

A Council, made up of 11 IAS Fellows that is elected by the General Assembly for a 4-year term of office, oversees the management of the Academy.

4.2 General Assembly and Council

The General Assembly of the Academy normally meets once every year, in concomitance with the scientific meeting IAS convenes. The IAS Council normally holds two meetings every year, in which it draws up plans for the future activities of the Academy and evaluates implemented programmes. Administrative and financial matters are also followed up and decided upon.

4.3 IAS Secretariat

Box 3. IAS Secretariat

The Amman-based IAS Secretariat is the Academy's executive arm responsible for maintaining its institutional set-up and implementing its programmes within the guidelines set by the Council and General Assembly.

Jordan hosts the Academy Secretariat, which commenced fully its activities in April 1987.

Jordan, as well as offering the IAS an annual maintenance grant, accorded it the diplomatic immunities and privileges normally given to non-governmental organisations that are based in Jordan.

In 1987, HRH Prince El-Hassan of Jordan, Founding Patron of the Academy, graciously instructed the allocation of a plot of land to the Academy on the outskirts of Amman for the building of the permanent premises of the Academy.

5 FINANCE

The Academy receives an annual grant from the government of Jordan that covers its local general and administrative expenses.

The programmes of the Academy are financed through regular grants from COMSTECH as well as the Islamic Development Bank (IDB). The IAS also undertakes joint programmes with many UN and other international agencies foremost among which are the UNESCO, and the World Bank.

Moreover, the Academy sometimes receives donations from local and international companies as well as charities in the various countries.

Two trust funds are administrated by the IAS which support some activities in the Islamic world in some cases by prizes denoting public recognition of achievement, in others, by providing support to training workshops and other limited activities that are organised in the various countries. Furthermore, the Academy administers the Ibrahim Memorial Award and its related Fund, which was instituted by the Academy after (the late) Professor Muhammad Ibrahim, Founding Fellow of the Academy. This Award is annually awarded to outstanding scholars working in the medical field from the various OIC-member countries.

Box 4. IAS Waqf

In its efforts to raise funds for the construction of its permanent headquarters, the Academy has established an endowment fund (Waqf), and it is hoped that sufficient funds would be raised for the building of the premises as well as for undertaking new activities. See Appendix F for IAS Waqf Details.

6 PROGRAMME

6.1 General

Box 5. Programme Objective

The programme of the Islamic World Academy of Sciences is designed to be a framework of science and technology activities in the Islamic world.

The IAS programme aims to highlight the harmonious correlation between knowledge, science and technology on the one hand, and Islamic Values on the other.

The programme contains major scientific capacity building elements in science and technology that are specifically aimed at the science community in our countries, especially that which is involved in Basic Sciences research. Another portion of the programme aims at bridging the scientist decision-maker divide and focuses on promoting government action in certain S&T areas. Such action can catalyse the overall process of socio-economic development in Islamic countries. Moreover, the programme of the IAS contains a multi-form information dissemination element that aims to cultivate public interest in science and scientific activities and address the various categories of the IAS target audience.

6.2 Programme Outline

The programme defines the scope of work of the Academy and is made up of the following three major sub-programmes (*Bracketed notes show implemented activities*).

6.2.1 *Islam and Science*

The IAS through its various activities, as well as through the following programmes regularly addresses this IAS sub-programme:

(a) Publication of books on scientific Islamic Thought (Journal published, 1990-1995)

The aim of this undertaking is to provide an objective assessment of the concordant relationship that exists between the components of each of the following topics:

- (1) *Qur'an, Hadith and Science (Book published in 1999)*;
- (2) The concept of knowledge in Islam;
- (3) Modern science and the Islamic Values System; and
- (4) Islamic Thought and Modern Science (*Book published in 1997*).

(b) Publication of pamphlets on the links between Islamic practices and science

The following areas are amongst many, to be studied:

- (1) Science and the concept of *Halal* and *Haram*;
- (2) Islamic Rituals;
- (3) Lunar Calendar; and

(4) Animal Sacrifices.

(c) Publication of books on contemporary scientific issues from an Islamic perspective

The purpose of this activity is to address current scientific issues facing the Islamic *Ummah*. These include for example various aspects of research in Genetic Engineering, organs transplants, sustainable natural resources development, environmental degradation etc

6.2.2 Science and Technology Development

This is the major element of the programme of the Islamic World Academy of Sciences. It addresses the political decision-maker in some parts as well as the scientists/academic in others.

(a) Implementing capacity-building/ policy-development activities on contemporary scientific issues

Such topics include:

- (1) Materials Science (*Conference 2002*);
- (2) Culture of Science (*Conference 2002*);
- (3) Genetic Engineering and Biotechnology (*Conference 2001*);
- (4) Biomedical Technology (*Conference 2001*);
- (5) Food and Agriculture (*Conference 1987*);
- (6) Plant Genetics (*Conference 2001*);
- (7) Physical Standards;
- (8) New Materials (*Conference 1989/Conference 2002*);
- (9) Tropical Medicine (*Conference 1993*);
- (10) Computer Technology (*Conference 2000*);
- (11) Energy (*Conference 2003*);
- (12) Nuclear Technology (*Conference 2003*);
- (13) Space Sciences;
- (14) Ocean Sciences;
- (15) Microelectronics (*Conference 1989*);
- (16) Lasers and Fibre Optics (*Workshop in Tunisia, 2002*);
- (17) Robotics; and
- (18) Remote Sensing.

(b) Promotion of science and technology excellence in the Islamic world

This part of the programme aims to create an environment in which meritorious achievements, inventions and contributions in science and technology are rewarded and promulgated, through the following means:

- (1) Publication of a specialised science journal (*Journal has been published since 1988*);
- (2) Preparation of model school books (*Conference 1999*);
- (3) Research grants (*Standing activity*); and

(4) Prizes and medals (*IAS-COMSTECH Ibrahim Memorial Award*).

An effort has been directed towards providing the scientists and technologists of the Islamic world with appropriate academic fora through which they can interact with top world-class scientists and one another so that experiences could be shared and with international experts.

Thus, conferences, seminars, and lectures have been/will be organised in the following areas:

- (1) Food Security (*Conference 1987*);
- (2) Advanced Technologies (*Conference 1989*);
- (3) Pollution and Environmental Degradation (*Conference 1992*);
- (4) Nutrition (*Conference 1993*);
- (5) Water Resources Management (*Conference 1994*);
- (6) Science Education (*Conference 1999*);
- (7) Natural Resources Development;
- (8) Land Utilisation;
- (9) Desertification (*Conference 1992*);
- (10) Exploitation of Ocean Resources;
- (11) Energy (*Conference 2003*); and
- (12) Information Technology (*Conference 2000*).

(c) Co-operation with OIC-Member States in Science and Technology

IAS aims to establish academic linkages with OIC-member states, and their S&T institutions. It is hoped that, through this co-operation, wide-ranging studies could be undertaken on the themes listed below. COMSTECH has published most of the profiles mentioned hereunder. The IAS hopes that the remaining profiles, as well some others on other topics, can be published with the help and co-operation of COMSTECH.

- (1) S&T Profiles of Islamic Countries (*Conference 1988*);
- (2) Industrial and Commercial Profiles of Islamic Countries;
- (3) Resource Atlas of the Islamic World;
- (4) The Status of S&T Education in the Islamic World (*Conference 1999*);
- (5) Energy Profile of Islamic Countries (*Conference 2003*); and
- (6) Food Profile of Islamic Countries (*Conference 1987*).

(d) Co-operation with regional and international organisations

IAS has, since its launch, managed to establish links and set up a framework for co-operation with a number of regional and international organisations. This has been achieved through the following means (which are covered in some detail in other parts of the report):

- (1) Exchange of literature (*Books, Proceedings, Journals, etc...*);
- (2) Exchange of Internet Hyperlinks;
- (3) Mutual participation in activities;
- (4) Co-operation agreements that set out modalities of collaboration;
- (5) Organising joint activities such as seminars, workshops, etc...; and

- (6) Conducting other joint projects.

6.2.3 Dissemination of Information

- (1) The Academy, in pursuance of this objective, collects information on different aspects of S&T. Such information is evaluated and disseminated to scientific communities and the public at large, through the following means:

- (a) The Internet (*Web site launched in 1997*);
- (b) Data Bases (*Mini-database being developed in 2004*);
- (c) Monographs (*see 7.6.2*);
- (d) Technology information bulletins;
- (e) Newsletter (*Thirty five issues have been published*); and
- (f) Video and CD-based programmes.

- (2) The Academy Programme Review Committee studied a number of ideas and proposed the following general themes that could be addressed by the Academy. The basic idea is to publish quality monographs on the following subjects:

- (a) Materials Science and Technology (*Conference 2002*);
- (b) Electronics and Computer Sciences and Technology;
- (c) Energy (*Conference 2003*);
- (d) Biotechnology (*Conference 2001*);
- (e) Biomedical Science and Technology (*Conference 2001*);
- (f) Intellectual Property Rights (*Published in 2006*);
- (g) S&T Indicators (*A fact sheet published in 2007*); and
- (h) University Ranking in OIC-Countries (*Preliminary study published in 2007*).

6.3 IAS's Principle Action Plan

The IAS has, since 1986, managed to achieve two primary objectives that form cornerstones in its mission to assist in the development effort within OIC-member countries. As a policy-making body, it has been actively formulating and promoting science and technology policies that help countries streamline their national development effort. Secondly, the Academy has implemented important programmes that fall within its general mission, especially in the area of the provision of experts to countries, publications, specialised training and Information Technology related activities^f

The IAS has been pursuing this dual role in a focussed manner, and is constantly promoting its policies amongst OIC countries, while implementing specialised activities itself that help OIC countries. Some implemented and to be implemented activities are detailed in figures 1-4 as well as in section 7.

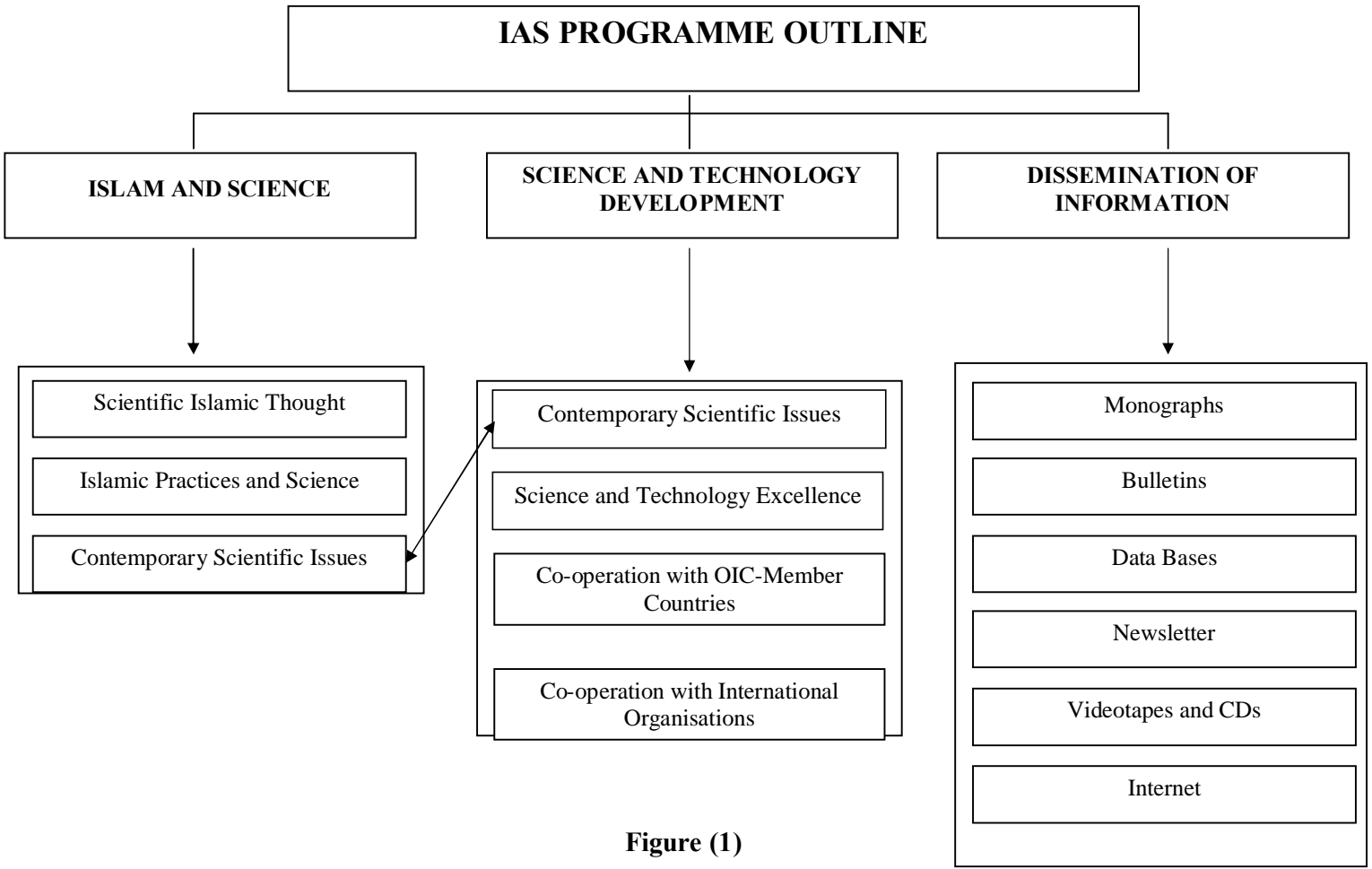


Figure (1)

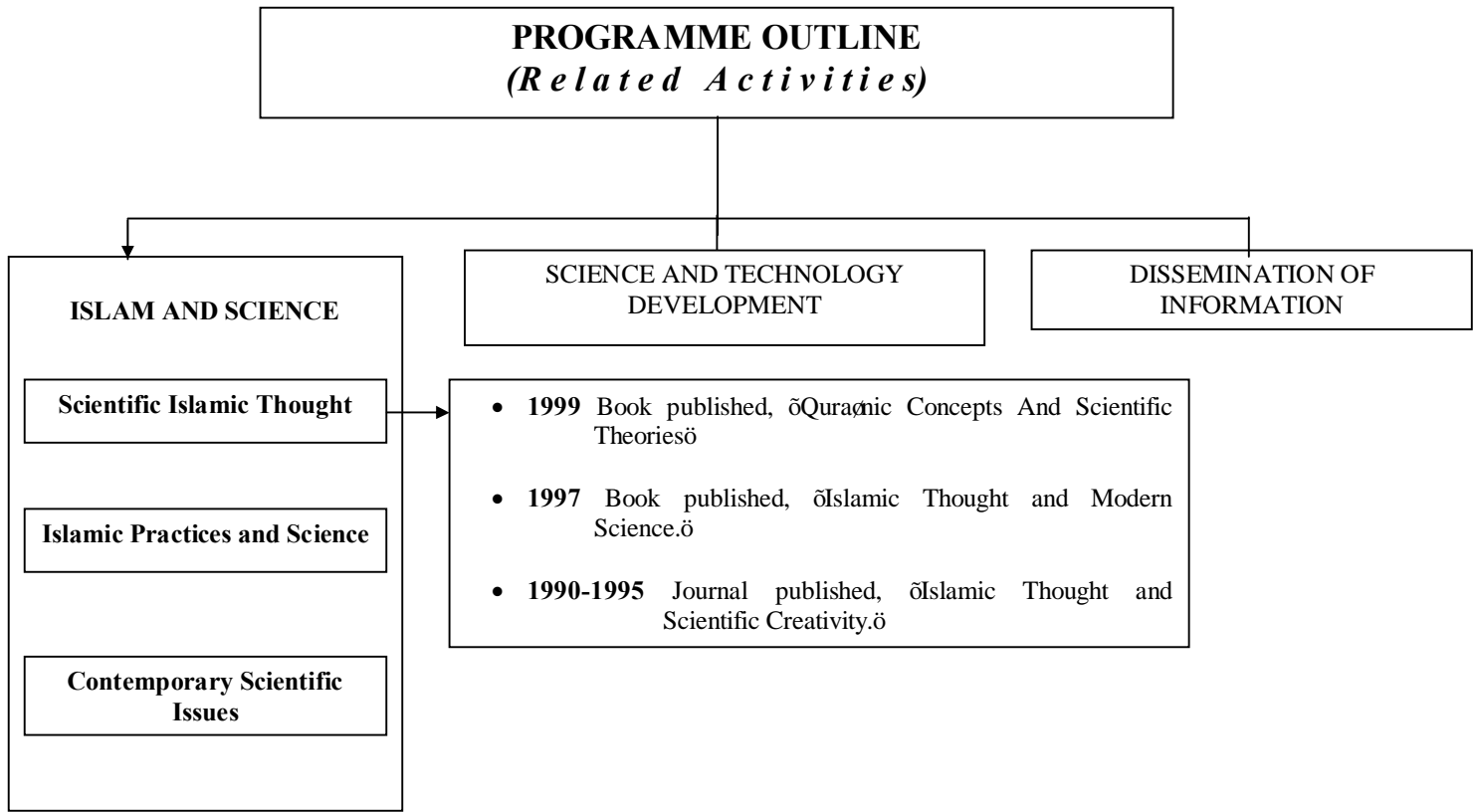
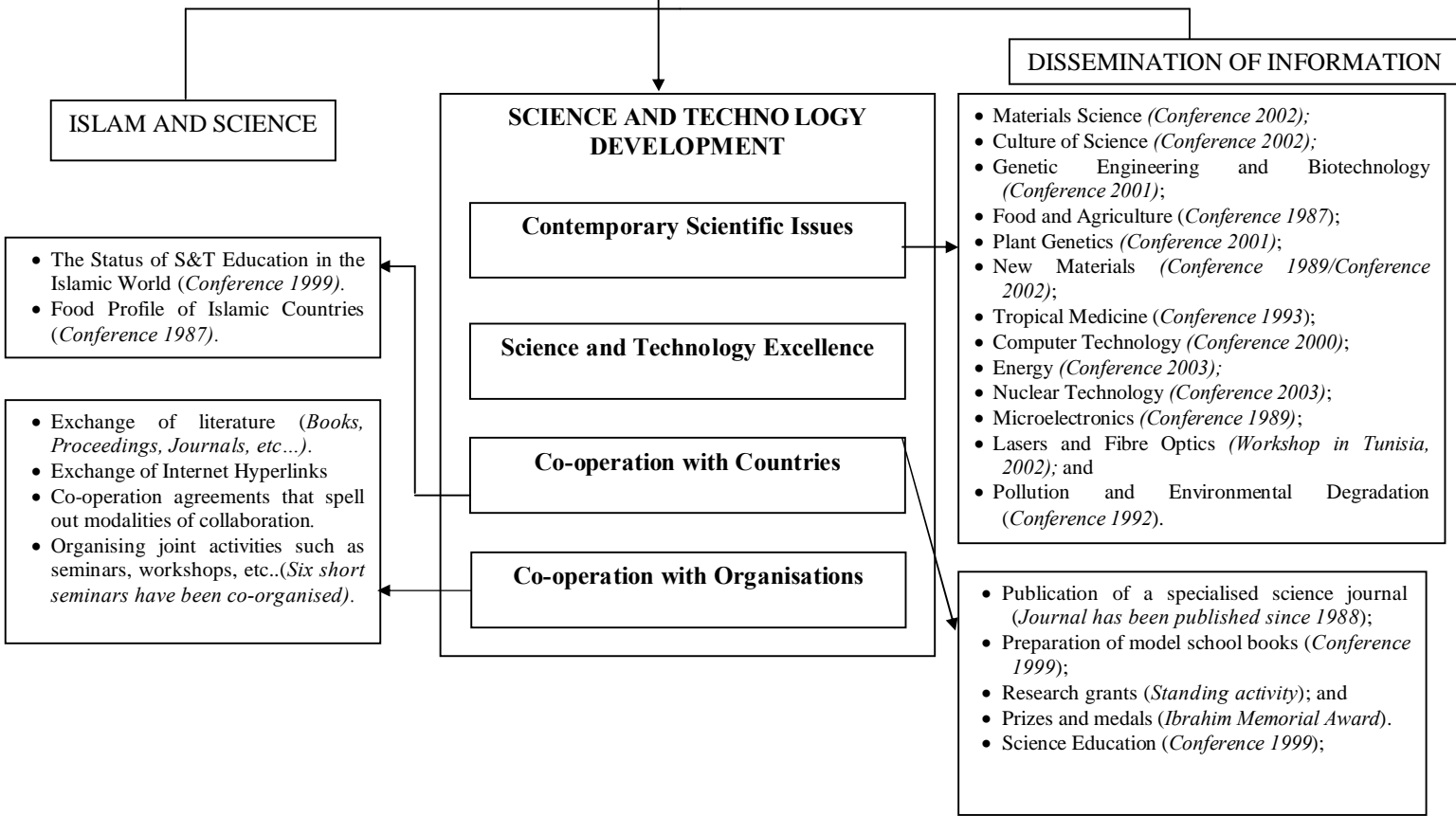


Figure (2)

**PROGRAMME OUTLINE
(Related Activities)**



Islamic World Academy of Sciences - Overview 2007

Figure (3)

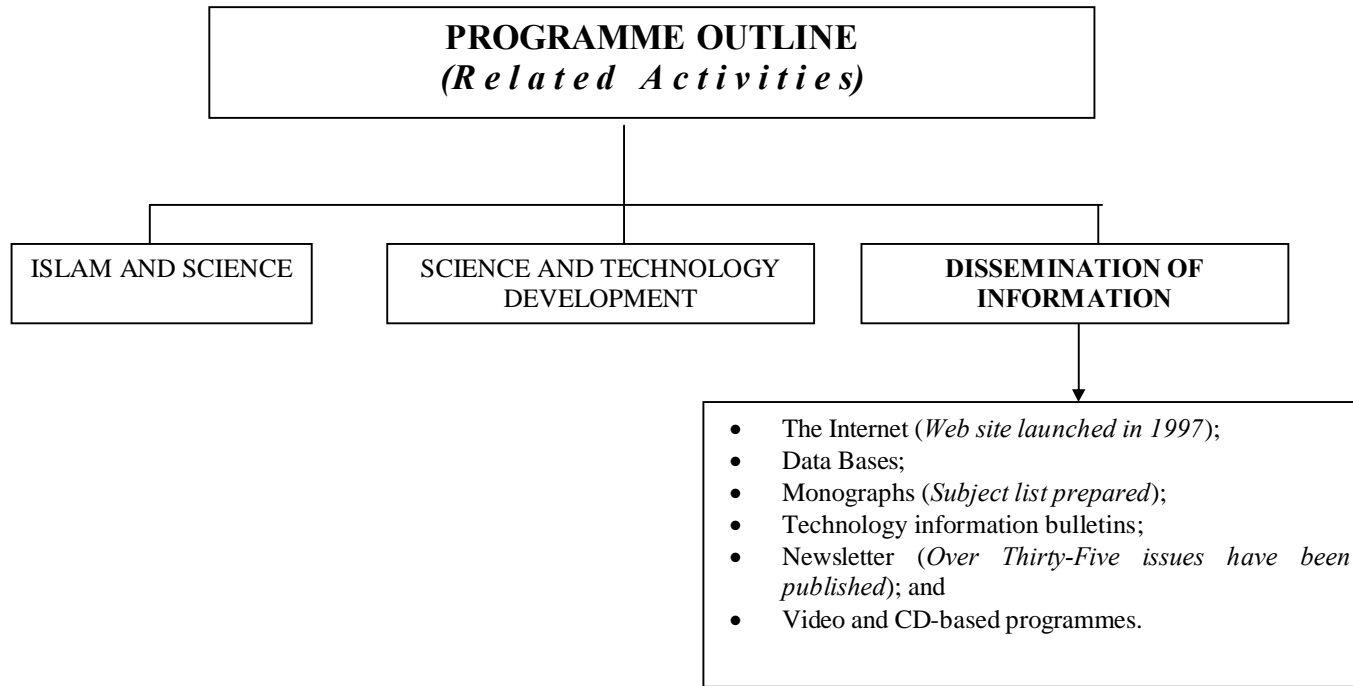


Figure (4)

7 ACTIVITIES

7.1 General

Since its inception, the Academy through the IAS Secretariat, has been implementing regular and *ad hoc* activities that are in line with its programme. The core objective of all such activities has been to advance the science and technology sector in OIC and developing countries. This, the IAS believes, can create a state of increasing interest in this sector, leading to reaping the fruits of its outputs in education, health, industry, and human welfare in general.

Box 7. What have we accomplished?

The IAS has gradually built itself as an action-oriented institution of the *Ummah* utilising most of its limited resources to activities that accelerate the pace of development of OIC-Member countries.

Operating on a year to year basis, the Academy has been promoting joint Islamic action through its specialised scientific conferences; publishing a series of Conference Proceedings (Policy Documents), journals, books, newsletters, and establishing a quality medical journal that is of an international standard; and organising a number of quality training programmes.

Most of all, the Academy has managed to define a very useful dual role for itself namely as a programme implementing and policy-making body dedicated to contributing to the development of the *Ummah* and humanity.

Moreover, the Academy has established numerous contacts with a number of international non-governmental organisations, as well as governments throughout the world.

Some activities of the Islamic World Academy of Sciences, over the last few years, are summarised within this section.

7.2 Co-operation with other organisations

As part of the Academy's continuous process of interaction with regional and international institutions, the IAS maintains contact and exchanges information with more than one hundred similar organisations all over the world. Listed below are some:

- OIC Standing Committee for Scientific and Technological Co-operation (COMSTECH), Pakistan;
- The Islamic Development Bank (IDB), Saudi Arabia;
- The United Nations Educational, Scientific and Cultural Organisation (UNESCO), Egypt and France;
- The Islamic Educational, Scientific and Cultural Organisation (ISESCO), Morocco;
- The Third World Academy of Sciences (TWAS), Italy;
- OIC General Secretariat, Jeddah, Saudi Arabia; and
- InterAcademy Panel on International Issues, Trieste, Italy.

7.3 Seminars and Conferences

The Academy Conferences are open fora that aim at developing a common understanding of a certain topic, and formulating core policies that can help developing countries overcome their related development difficulties.

The conferences are also intended to be educational for participants from the host country, and settings at which specialised organisations can forge long-term co-operation links.

Box 8. IAS Conferences

The Academy has been convening annual international conferences since its launch. Each such conference is held in a different country every year and supported by a number of international agencies. The host country normally provides local accommodation and hospitality for the participants whilst the Academy and the other co-sponsors pay for the travel of delegates and the other expenses including the publishing of proceedings. The host country is also expected to contribute to the scientific content of the conference.

The conferences aim to provide OIC heads of state with a scientific roadmap for their national development in the context of the discussed topic.

7.3.1 Food Security in the Muslim World, Amman, Jordan, 1987

Under the patronage of HRH Prince El-Hassan Ibn Talal, IAS Founding Patron, the Academy convened its first seminar in Amman during 1987 on *Food Security in the Muslim World*.

The seminar concluded with the issuing of a declaration on *Food Security in the Muslim World* that included a number of recommendations to the decision-makers, planners, and the scientific community in developing countries.

The proceedings of the seminar and a three-language summary were later published and distributed by the IAS, and copies were presented to prominent world figures, as well as ministers of agriculture throughout the Islamic world.

The seminar managed to rejuvenate interest in the issue Food Security in many countries.

7.3.2 Science and Technology Policies for Self-Reliance in the Muslim World, Islamabad, Pakistan, 1988

This was the major activity of the Academy for 1988. It was convened in Islamabad during December 1988, and sponsored by the IAS, COMSTECH, IFSTAD, as well as the government of Pakistan. It came in conformity with the Academy's programme to promote S&T concepts in the Muslim world.

The Academy issued a declaration at the end of the conference urging the *Ummah* to give the task of formulating S&T policies a high priority. The proceedings of this conference were published in a quality volume by the Academy and distributed internationally.

7.3.3 *Co-operation and Co-ordination among Islamic Institutes, Amman, Jordan, 1989*

Under the patronage of HRH Prince El-Hassan Ibn Talal, the Academy and *Al Albait* Foundation, Jordan, jointly organised a seminar during June 1989, the theme of which was *Co-operation and Co-ordination among Institutes of Research and Studies and their Applications within the Framework of Islamic Thought*.

The seminar was an important step on the course of initiating a joint institutional effort in the field of research, so that resources would be directed towards the study of contemporary problems facing Muslims throughout the world.

7.3.4 *New Technologies and the Development of the Muslim World, Kuwait City, Kuwait, 1989*

Under the patronage of HH the Emir of Kuwait and the (then) Chairman of the Organisation of the Islamic Conference, the conference on *New Technologies and Development of the Muslim World*, was held in Kuwait during December 1989. The conference was jointly organised and sponsored by the IAS and the Kuwait Foundation for the Advancement of Sciences (KFAS).

The Academy issued a declaration at the end of the conference that emphasised the widening technological gap between OIC and industrially advanced countries.

The declaration called for the acceleration of efforts to rejuvenate regional co-operation with the ultimate goal of establishing a Muslim Common Market, and the removal of barriers that constrain the movement of capital, scientific manpower and technology-based products among Islamic countries.

The proceedings of this conference have subsequently been published.

7.3.5 *Technology Transfer for Development in the Muslim World, Antalya, Turkey, 1990*

Under the patronage of HE Turgut Ozal, the (late) President of Turkey, the conference on *Technology Transfer for Development in the Muslim World*, was held in Antalya, (Turkey), during November 1990.

The conference was organised by the IAS, by the Turkish Scientific and Technical Research Council (TUBITAK), the Islamic Foundation for Science, Technology and Development (IFSTAD), the Islamic Development Bank (IDB) as well as the UNESCO.

At the end of the conference, the Academy issued a declaration that appealed to the decision-makers of the Islamic world to acquire technology from all sources and facilitate the flow of technology within OIC-Member countries.

The proceedings of this conference have subsequently been published.

7.3.6 *Science and Technology Manpower Development in the Islamic World, Amman, Jordan, 1991*

Under the patronage of HRH Prince El-Hassan Ibn Talal, the IAS convened its fifth international conference on *Science and Technology Manpower Development in the Islamic World*, in Amman (Jordan), during December 1991.

The conference was a joint activity between the Academy, the Islamic Foundation for Science, Technology and Development (IFSTAD), the Islamic Development Bank (IDB), Jordan's Royal Scientific Society (RSS), and the World Bank.

The Academy issued a declaration at the end of the conference, which summarised the courses of action that needed to be adopted by developing countries, in order to achieve an acceptable rate of human resource development. Special emphasis was laid upon education policy as well as R&D investment. The declaration further acknowledged that an incentives policy needed to be introduced by Islamic countries in order to stop the brain drain of Muslim talent.

The proceedings of this conference have subsequently been published.

7.3.7 *Environment and Development in the Islamic World, Kuala Lumpur, Malaysia, 1992*

The Islamic World Academy of Sciences convened its sixth annual conference in Kuala Lumpur, (Malaysia), 10-14 August 1992.

The conference which was entitled *Environment and Development in the Islamic World*, was patronised by the Prime Minister of Malaysia and was designed to identify the global environmental issues and their relevance to the Islamic world. It also addressed a number of Environment and Development concepts, and identified possible roles for NGOs that are active in this domain. The conference, which was co-sponsored by the Ministry of Science, Technology and Environment of Malaysia, the Islamic Foundation for Science, Technology and Development (IFSTAD), the Islamic Development Bank (IDB) as well as the United Nations Environment Programme (UNEP), concluded with the publishing of the IAS Kuala Lumpur Declaration that addressed a number of environmental issues, and proposed some courses of actions that needed to be adopted by OIC-countries in the area of environment.

The proceedings of this conference have subsequently been published.

7.3.8 *Health, Nutrition, and Development in the Islamic World, Dakar, Senegal, 1993*

HE the President of Senegal hosted the seventh annual conference of the Islamic World Academy of Sciences in Dakar, (Senegal), 22-26 November 1993.

The conference, which was entitled, *Health, Nutrition, and Development in the Islamic World*, reviewed the state of population health in the various OIC regions, highlighted the major epidemics and diseases that confront the Islamic and developing worlds, and appraised the national strategies adopted by countries in combating such diseases.

The conference was conceived as a joint activity between the Islamic World Academy of Sciences (IAS) and the University Cheikh Anta Diop of Dakar (UCAD). It was co-sponsored by the Islamic Development Bank (IDB), the World Bank, the UNESCO, the ISESCO, as well as the WHO.

7.3.9 *Water in the Islamic World: An Imminent Crisis, Khartoum, Sudan, 1994*

The IAS convened its eighth international conference in Khartoum (Sudan) during December 1994. The conference, which was entitled, *Water in the Islamic World: An Imminent Crisis*, was patronised by HE the President of Sudan.

The conference aimed to assess the water security situation in the Islamic world and develop innovative proposals for future activities in water resources management.

The conference was conceived as a joint activity between the Academy, and the National Centre for Research, Sudan. It was co-sponsored by Ministry of Education and Scientific Research, Sudan; the Islamic Development Bank (IDB); COMSTECH, UNESCO, ISESCO, United Nations Environment Programme (UNEP) and the World Bank.

The conference concluded with the publishing of the IAS Khartoum Declaration which called on the leaders and decision-makers of the Islamic world to review their national water policies in order to upgrade any shortcomings in implementation or results.

The proceedings of this conference have subsequently been published and marketed internationally, gradually becoming an extensively cited reference on water resources issues in the Middle East.

7.3.10 Science and Technology Education for Development in the Islamic World, Tehran, Iran, 1999

During July 1999, and under the patronage of HE the President of the Islamic Republic of Iran, and then chairman of the OIC Summit, the Academy convened its Ninth Conference in Tehran, under the title of *Science and Technology Education for Development in the Islamic World*.

The conference was held with the active support and participation of many Iranian institutions including the Iranian Organisation for Science and Technology (IROST), and the Academy of Sciences and the Academy of Medical Sciences of Iran. The conference was also supported by the OPEC Fund for International Development, the IDB, UNESCO, ISESCO, and the World Bank.

The conference recommended measures to be adopted by governments to rejuvenate educational policies and it identified means through which the output of the educational system could match the needs of industry and technology-based sectors.

The IAS Tehran Declaration called on the decision-makers in OIC countries to combat alphabetical illiteracy and highlighted the importance of making available science textbooks in national languages and through the Internet.

The policy document resulting from the conference in the form of the conference proceedings book was later published (ISBN 9957-412-00-7).

7.3.11 Information Technology for Development in the Islamic World, Tunis, Tunisia, 2000

During November 2000, and under the patronage of HE the President of Tunisia, the Academy convened its Tenth Conference in Tunis, Tunisia, under the title of *Information Technology for Development in the Islamic World*.

The conference appraised the status of information and communication technologies in the Islamic world, and proposed measures to be adopted by governments in order to catch up with the information age and bridge the new digital gap that was developing both between countries and within countries.

The conference concluded with the publishing of the IAS Tunis Declaration on Information Technology for Development in the Islamic World.

The declaration was subsequently presented to over 1,500 specialists and over 100 agencies throughout the Islamic world. The proceedings volume has also been published (ISBN 9957-412-03-5).

7.3.12 *Biotechnology and Genetic Engineering for Development in the Islamic World, Rabat, Morocco, 2001*

Under the patronage of HM King Muhammad VI, the Academy convened its eleventh conference in Rabat (Morocco), in October 2001. The conference addressed the theme of *Biotechnology and Genetic Engineering*. It was hosted by the Academy of Morocco. A number of Moroccan and international organisations, including the COMSTECH and the OPEC Fund for International Development as well as the IDB and the ISESCO supported this international activity in which many local specialists participated.

The conference appraised the status of Biotechnology research in a number of Islamic countries, and addressed some medical aspects of Biotechnology and Genetic Engineering. It also allocated a session to Bioethics. The Academy issued the Rabat Declaration at the conclusion of the conference which was presented to all the universities and research organisations as well as governments in OIC-member countries.

The proceedings book of this conference was published in 2004 (ISBN 9957-412-07-8).

7.3.13 *Materials Science and Technology and Culture of Science, Islamabad, Pakistan, 2002*

Under the Patronage of H E President of Pakistan, the IAS convened its twelfth international conference in Islamabad (Pakistan), during October 2002. The conference addressed the themes of *Materials Science and Technology* and *Culture of Science*.

The conference was organised and sponsored by the IAS, Pakistan Academy of Sciences, COMSTECH, Islamic Development Bank (IDB), OPEC Fund for International Development and the Islamic Organisation for Medical Sciences.

At the conclusion of the conference, the Academy adopted the IAS Islamabad Declaration on Materials Science and Technology and Culture of Science. The declaration proposed the implementation of an R&D policy that addresses the interconnection between technological advancement and societal response. It highlighted the impacts of globalisation and developments in Information Technology (IT), Biotechnology (BT), and Nanotechnology (NT) on the knowledge production systems.

On the theme of *Culture of Science*, the declaration emphasized that understanding the processes by which information about science and technology diffuses from the laboratory to the outside world is central to understanding social-transformation.

The proceedings book of this conference was published in 2004 (ISBN 9957-412-06-x).

7.3.14 *Energy for Sustainable Development and Science for the Future of the Islamic World and Humanity, Kuching, Sarawak, Malaysia, 2003*

Under the patronage of the Chief Minister of Sarawak, the IAS convened its thirteenth international conference in Kuching, during 29 September ó 2 October 2003. The conference addressed the themes of *Energy for Sustainable Development and Science for the Future of the Islamic World and Humanity*. The conference was an open scientific activity in which over 250 participants representing over 25 countries participated.

The conference attempted to define energy priorities for OIC member countries. Some Energy R&D Aspects were discussed in a session that included an outstanding paper on *Contemporary Problems and Achievements in Desulphurisation of Oil, Gas, Petroleum Products and Waste Waters*, which was presented by Prof. Akhmet Mazgarov FIAS, Tatarstan, Russia. That was followed by a visio-conference presentation on Hydrogen energy entitled, *Towards New Energy for Sustainability: The Strategy in Iceland*.

At the conclusion of the conference, the Academy adopted the IAS Kuching Declaration which emphasised the need to promote the various renewable energy resources, in terms of both the related R&D effort as well as the downstream application. It supported the call to launch an OIC energy forum, as well as an international renewable energy agency.

The proceedings volume of this conference has also been published (ISBN 9957-412-08-6).

7.3.15 *Science, Technology and Innovation for Socioeconomic Development of OIC–Member Countries: Towards Vision 1441, Kuala Lumpur, Malaysia, 2005*

Under the patronage of HE the Prime Minister of Malaysia, the Islamic World Academy of Sciences convened its fourteenth science conference in Kuala Lumpur, Malaysia, during March 2005. The conference addressed the theme of *Science, Technology and Innovation for Socio-economic Development of OIC–Member Countries: Towards Vision 1441*.

The main aim of the conference was to engender acquiescence among the political leadership of the OIC of the inextricable link between S&T advancement and socioeconomic development, and draw the attention of the OIC science community to, and promote, Vision 1441.

At the conclusion of the conference, the IAS adopted the Malaysia-IAS 2005 Kuala Lumpur Declaration on *Science, Technology and Innovation for Socio-economic Development of OIC–Member Countries: Towards Vision 1441*. The declaration reiterated its support for *Vision 1441*, and its constituent elements, and proposed a number of strategies to help OIC countries to achieve the various targets outlined in the Vision. The declaration highlighted the indifference shown by executive decision-makers in many OIC countries to the role of STI in realising national aspirations and well-being, and the fact that the majority of OIC countries lacked comprehensive STI policies that aim at achieving some level of national prosperity, security and national self-fulfilment.

In responding to the growing demands of the K-economy, the declaration stated that a fresh-look was needed to re-examine higher education in OIC and developing countries in terms of quality and relevance, to re-examine scientific development and

acquisition capacity as well as technology application in the productive sectors of the economy.

The declaration described the Asian Tsunami as the greatest humanitarian disaster in recent world history, and recommended that natural disaster monitoring mechanisms should be instituted so that OIC countries become prepared to manage such crises and the subsequent resulting human suffering.

In its operative component, the declaration invited the Chairman of the OIC and the OIC Secretary General, to initiate consultations for the establishment of a Trust Fund for the promotion and exchange of knowledge and technology in OIC-Member countries, and the establishment of an inventory of publications and documents produced by OIC STI agencies since 1981.

7.3.16 Higher Education Excellence for Development in the Islamic World, Ankara, Turkey; November 2006

Under the patronage of H E the Prime Minister of Turkey, the IAS convened its fifteenth international science conference in Ankara, Turkey, during November 2006. The conference addressed the theme of *Higher Education Excellence for Development in the Islamic World*, and was organised and sponsored by the IAS; Bilkent University; the IDB; COMSTECH; Opec Fund for International Development; ISESCO; and the International Conference on Higher Education (ICHE).

The conference, which coincided with the 20th Anniversary of the Islamic World Academy of Sciences (IAS), sought to engage the widest range of institutions and individuals involved in higher education in Turkey, the region, the OIC; as well as some international agencies.

In addition to an outstanding keynote by Prof. Richard R. Ernst Hon. FIAS, Nobel Laureate from Switzerland, entitled: *Goals of Higher Education: Knowledge and Critical Foresight, Leading to Societal Responsibility*; the founder of the host institution Prof. Ihsan Dogramaci, presented a concise history of *Higher Education in Turkey* in which he outlined some of the factors that lie behind the success of Turkey in establishing private non-profit universities.

A lot of interest was shown in the various case study lectures presented by the representatives of some universities from the region including the AUC in Egypt, the King Fahd University of Petroleum and Minerals (KFUPM) in Saudi Arabia; as well as the representatives of the UNESCO, and the ISESCO.

The IAS Ankara Declaration highlighted that very few OIC universities were ranked among the world's top 500 universities. It emphasised that to attain and sustain quality in higher education, certain components are particularly relevant; notably careful selection of staff and continuous staff development and mobility, as well as student mobility within and between countries. A special mention was made in the declaration of the Bologna Process ó adopted by many European countries ó which represents a good model for harmonizing academic degree standards and quality assurance standards.

The declaration reaffirmed the support of the participants to the science community in Iraq and urged the international community to take all possible measures to ensure the safety, security and well-being of Iraqi scientists and academics.

The IAS has circulated the IAS 2006 Ankara Declaration to concerned individuals and relevant agencies throughout OIC and developing countries, so that measures are taken to put the ideas proposed at the conference into action. The Academy will also

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

7.3.17 Future Conferences

The IAS maintains contact with many countries including Indonesia, Qatar, United Arab Emirates, Bangladesh as well as Bahrain concerning the hosting of future IAS conferences. Approaches were also made to countries such as Oman, as well as Tatarstan (Russian Federation); to secure an invitation for its 16th Science Conference. Recently, and upon an invitation from H E Mintimer Shaimiev, President of the Republic of Tatarstan; a delegation from the IAS paid a working visit to that country to evaluate the possibility of the Tatarstan Academy of Sciences hosting the 16th IAS Conference in 2008.

The Academy also plans to convene joint seminars with organisations in Egypt, Turkey, Tunisia, and Jordan.

7.4 The Medical Journal of the IAS

The *Medical Journal of the Islamic World Academy of Sciences*, which first appeared in August 1988, is a quality publication comparable to international scientific journals. The Journal has established itself as a major scientific publication in the Islamic world and has been granted an ISSN number (ISSN 1016-3360). It is a forum for scientists and technologists in developing countries through which they can get their research work published.

The Journal, which is published in Turkey and distributed internationally, was launched with the help of the Kuwait Foundation for the Advancement of Sciences (KFAS), and has since, received some grants from the Academy Secretariat and COMSTECH.

In order to strengthen the Journal, and in response to the large number of medical articles it receives, the Journal was re-launched as a primarily medical publication catering for the need of medical scientists in the Islamic world and beyond.

An electronic version of the Medical Journal of the Islamic World Academy of Sciences was subsequently launched on the web where it has the URL address of www.medicaljournal-ias.org.

The uploading of the Journal in electronic format on the Internet and the subsequent adoption of the PDF format by Chief Editor added a new spirit to the Journal, and made the scientific articles published more accessible to a wider readership; and gaining more citations.

Moreover, the Journal has witnessed a marked improvement in the quality of articles submitted for publication, and the web site thereof currently boasts a sizeable database of all previously published articles.

7.5 Worldwide Web (www) Site on the Internet

During the last decade, international information flow was streamlined into a new and exciting medium; the Internet.

The IAS, being conscious of such developments, undertook the task of constructing its own web site (<http://www.ias-worldwide.org>), which came into being in August 1997. The planning and part of the design of the site was done in-house.

The aim of this activity is to provide information about the Academy, its Fellows, activities and publications to the scientific communities, scholars and the public at large. Such a site would enable the Academy to increase its visibility, establish contact with a number of donor agencies and to interact more with scientists throughout the world.

The Academy is planning to add a number of databases to its currently established web site. The first such database has been built and contains the brief CVs (profiles) of the Fellows of the Academy.

7.6 Publications

7.6.1 Proceedings

In its efforts to disseminate scientific information, the Islamic World Academy of Sciences publishes annually the proceedings of the annual conference it organises. A process that was started with the publishing of the proceedings of the Academy's Founding Conference. Such a process ensures that the papers that are presented at the conferences are made available to the scientists and decision-makers that are concerned with Third world issues. The Academy's second publication was the proceedings of its first seminar, *Food Security in the Muslim World*, which was held in Amman during 1987.

Since then, the Academy has established a tradition of publishing the proceedings of its conferences in the form of quality volume, both in terms of content and packaging. This is done after a specialised committee completes the task of refereeing and editing the included papers from scientific, linguistic and relevance point of view.

From 1988 to 1997, the Academy published seven books, which were the proceedings volumes of the 1988-1994 Academy Conferences.

During 2000, the Academy published the proceedings of its Ninth Conference, *Science and Technology Education for Development in the Islamic World*, which was convened in Tehran (Iran) during July 1999.

That was followed by the proceedings book of the Tenth Academy Conference, *Information Technology for Development in the Islamic World*, which was held in Tunisia in 2000.

During 2004, the Academy published the proceedings volumes of its 2001 and 2002 Conferences on *Biotechnology* and *Materials Sciences* respectively. That was followed in 2006, with the publishing of the proceedings volume of the 2003 Conference which was entitled *Energy for Sustainable Development and Science for the Future of the Islamic World and Humanity*.

7.6.2 Books

(a) General

In its efforts to address important topics relevant to scholars and thinkers in OIC countries, the Academy often undertakes the publication of books by eminent Muslim scientists and intellectuals.

One such undertaking has been the publication of a book entitled, *Islamic Thought and Muslim Modern Science*, by Dr M A Kazi, IAS Founding President and Fellow. The book represents the author's view of the relationship between Islam and science in today's world.

Another book by the same author has also been published by the Academy. The book carries the title *Qur'anic Concepts and Scientific Theories*.

Back in 1983, the National Science Council of Pakistan and Hamdard Foundation published what was to become a very famous book. The name chosen by the then editor Hakim Said for the book was "Personalities Noble." The book contained brief profiles of 26 towering scholars of the golden age of Islam. Demand on the book was such that within a few years only a few rare copies were still in existence.

Realising the importance of the book, and appreciating its value as a reference, the IAS published a second revised edition of "Personalities Noble," in both English and Arabic, during 2000.

Through such an undertaking, IAS hopes to generate the interest of the readers in the great Islamic heritage in science and contribute in a small way to the long sought revival of science and technology in Islamic and developing countries.

The Academy has exhibited its various publications at the various book fairs that were organised in Jordan and the Middle East, including the Cairo, Abu Dhabi, Sharja, and the Beirut International Book Fair.

(b) Islamic World Academy of Sciences Declarations Booklet

The conferences organised by the Islamic World Academy of Sciences (formerly the Islamic Academy of Sciences) generally aim to engender acquiesce among the political leadership of the OIC of the inextricable link between advancement in S&T and socioeconomic development and to provide OIC heads of state with a scientific roadmap for their national development in the context of the discussed topics.

This publication is a compilation of the various statements (declarations) that were issued by the IAS at the end of each conference starting with the 1987 IAS Conference.

Not only are some of the statements still as valid today as when they were issued, but the tone and comprehensiveness thereof, demonstrate an action-oriented mature understanding by the OIC science community of some of the major problems that faced/face our countries.

(c) Islamic World Academy of Sciences Outreach Seminar Booklet

Some academies of sciences, such as the IAS, often organise outreach activities to which politicians, diplomats, academics and civil servants working at scientific institutions are invited. Such activities aim to expose the attendees to the latest scientific and development concepts as well as contemporary ideas on the attainment of socio-economic development. Such S&T fora often reiterate and show the value of science as a means of knowledge creation.

This publication contains the presentations that were made at an outreach seminar organised by the Islamic World Academy of Sciences at the Royal Scientific Society in Amman, Jordan, during December 2004, under the patronage of His Royal Highness Prince El-Hassan Ibn Talal, Founding Patron of the Islamic World Academy of Sciences.

(d) Intellectual Property Rights: An Introduction to Scientists and Technologists

One of the eminent Fellows of the Islamic World Academy of Sciences, and immediate past-president of the Egyptian Academy of Sciences; Prof. M. B. E. Fayez

FIAS, volunteered to prepare this specialised yet lucid document on a rather complex and topical issue; namely Intellectual Property Rights.

This subject has been high on the mind of many within the science community of the OIC, and was discussed extensively at the April 2005 meeting of the Network of Academies of Sciences in Islamic Countries (NASIC), held in Islamabad (Pakistan), where the IAS and the Egyptian Academy of Sciences decided to publish a booklet on the subject entitled, 'Intellectual Property Rights: An Introduction for Scientists and Technologists.' This booklet was published in 2006.

7.6.3 Newsletter

The Academy, through its Secretariat, regularly publishes the *Newsletter* of the Islamic World Academy of Sciences.

This widely distributed publication which goes to more than 2500 addresses worldwide aims to publicise the various activities the Academy undertakes, and to put across the Academy's short and long-term programmes. It also often contains news about the Academy, its Fellows, and staff.

7.6.4 Overview of the Islamic World Academy of Sciences

The Secretariat of the Academy publishes, every two years, an *Overview* of the Academy summarising the programme of the Academy, its activities and detailing the various Academy procedures.

This publication also provides information about the background to the founding of the Academy and lists its achievements, particularly in the area of international co-operation.

The last edition of the *Overview* in Arabic, English, and French was published in 2007.

7.6.5 Other Publications

Upon the request of COMSTECH, and under its sponsorship, the Academy published, for more than 6 years, the Arabic version of COMSTECH's *Islamic Thought and Scientific Creativity*, the high quality quarterly publication.

The IAS published a total of 20 issues over a five-year period.

The publication of this journal was undertaken with the help and support of the Amman-based Royal Academy for Islamic Civilisation Research, *Al Albait Foundation*.

7.7 S&T Manpower Development

7.7.1 General

In its endeavours to contribute to building the S&T capacity of OIC-member countries, the IAS regularly organises qualitative training programmes in the various countries, or co-sponsors such events.

The Academy is currently focussing on the following areas for such activities:

- (a) Welding Technology for Technicians and Engineers;
- (b) Corrosion of Metals and /or Non-destructive Inspection;

- (c) Wastewater Treatment and Management in Industry;
- (d) Isotope Hydrology;
- (e) Radon Monitoring in the Environment;
- (f) Laser Physics and Applications; and
- (g) Science-Based Decision-Making in OIC Countries.

The Academy adopts a dynamic policy to activities of this nature and tries to assist other organisations that undertake such programmes through the provision of experts or token financial assistance whenever possible.

7.7.2 Metal Corrosion for Engineers

In pursuance of the above detailed objective the Academy has, in the past, organised a workshop in (Ankara) Turkey, on *Industrial Corrosion and its Prevention*. The course was organised in association with the Middle East Technical University (METU), and the Turkish State Planning Organisation (SPO).

7.7.3 Laser Physics and Applications

The IAS and COMSTECH, in association with the University of Tunis El Manar, and the African Laser Atomic and Molecular Physics Network (LAM), organized the Sixth International Workshop on Laser Physics and its Applications, in Tunis, Tunisia, during December 2002. The purpose of the activity was to introduce the new applications of lasers and discuss the progress of laser physics, lasers in medicine, environment and telecommunications.

Optical scientists, physicians, researchers, engineers, and optical industrialists from more than 40 countries participated in this activity

The workshop was co-sponsored by: the Abdus Salam International Centre for Theoretical Physics (ICTP), Italy; the Swedish International Development Cooperation Agency (Sida), Sweden; and the Ministry of High Education of Tunisia.

The IAS, along with COMSTECH, helped in the convening of the *School of Molecular Physics*, which was held in Tunis (Tunisia) during December 2005, with Prof. Zohra Benlakhdar FIAS, UNESCO L'Oréal Laureate, as chief organiser.

7.8 Culture of Science Initiative (CSI)

Science cannot flower without being adequately funded by civil society institutions including the public, private and the non-governmental and inter-governmental sectors. Science in turn should better respond to the needs of society and people. Governments and NGOs such as the IAS should create innovative national and international funding mechanisms in support of science.

It is against such a backdrop that the Islamic World Academy of Sciences launched its Culture of Science Initiative or CSI. That is to achieve a gradual revival and rejuvenation of interest in science and technology in the Islamic world.

The IAS has been actively promoting this initiative, especially among decision-makers in the various OIC-Member Countries, with some success. This has often manifested itself in increased funding to science and scientific activities in some countries.

The IAS however realises that this is long-term activity, and that the Islamic world is a long way off from the stage when S&T and education budgets/issues become an

integral part of the political vernacular of parliamentarians and politicians (A case in point is the MP/Scientist interaction program, recently launched by the British Royal Society).

8 INTERNATIONAL RELATIONS

8.1 General

A primary function of the Academy is to act as a Pan-Islamic affiliating body to the relevant international organisations. Through this, Muslim scholars can have a channel of communication, through the Academy, with such international agencies as the UNESCO, the United Nations Development Programme (UNDP), the World Bank, etc.

At the level of the OIC, of the co-operation that exists between the Academy and other institutions:

8.2 Co-operation with COMSTECH

The Islamic World Academy of Sciences and COMSTECH have had solid relations, since COMSTECH helped to create the Academy in 1986, in compliance with the OIC Summit recommendations.

Over the years, COMSTECH has, along with the host country (Jordan), supported the Academy financially, and sponsored a number of S&T capacity building activities that were organised by the IAS.

Many new activities can be undertaken by the Academy that form part of COMSTECH's long-term programme, and both organisations can jointly utilise their experiences in implementing international projects.

The IAS and COMSTECH regularly exchange information on programmes and act, each within its catchment area, to promote S&T activities and encourage OIC countries to increase their S&T expenditure.

8.3 Co-operation with the IDB

The Islamic World Academy of Sciences maintains strong relations with all OIC-related organisations foremost among is the Jeddah-based Islamic Development Bank (IDB).

The IDB has been helping to finance Academy conferences since 1990. It has often delegated its own specialists to present papers describing its activities within the scope of the theme of the annual IAS Conference.

The Academy has signed a number of agreements with the IDB on co-operation in the field of Information Technology, one of which specified the financial support IDB will provide to help the academy to upgrade its computer set-up and web site on the Internet, including building databases on the Academy's web page on areas of relevance to the development of OIC member countries. Such databases would be a rich source of information for students, scientists, etc., throughout the world.

8.4 Co-operation with the UNESCO

The efforts of the Academy directed towards increasing co-operation with international organisations have resulted in UNESCO co-sponsoring, upon a joint agreement, a number of conferences organised by the IAS. UNESCO is often requested to delegate its own experts to participate in the IAS conferences and present overviews of UNESCO's work as related to the theme of the conferences.

UNESCO also supported the Academy's Information Technology Programme (ITP), and has contributed to the overall budget allocated by the Academy for that activity.

The IAS plans to implement a number of activities with UNESCO, and to collaborate with both UNESCO's International Bioethics Commission (IBC) and UNESCO's NGO association.

8.5 Co-operation with the ISESCO

In its effort to establish scientific and academic relations with similar Islamic organisations, the Academy signed a co-operation agreement with the Islamic Educational, Scientific, and Cultural Organisation (ISESCO), in 1989.

Since, the Academy has liaised extensively with the ISESCO, the participation of which was noticeable in a number of IAS Conferences, including the 1993, 1994 and 1999 Academy Conferences.

ISESCO has moreover co-sponsored the 2001 Conference of the IAS on Biotechnology, held in Rabat (Morocco), and contributed a paper at that conference on Biotechnology Research in OIC countries. Furthermore, ISESCO participated and sponsored the IAS Conference of 2006.

8.6 Co-operation with TWAS and TWNSO

The Academy signed a co-operation agreement with the Third World Academy of Sciences (TWAS) some years ago. That was a first step towards enhancing co-operation between these two international academies, which have been closely liaising their scientific activities recently. The IAS often joins TWAS at its scientific meetings and both academies exchange information in the context of G77, as well as TWNSO meetings, especially as the IAS has been a member of the Third World Network of Scientific Organisation (TWNSO) for a number of years.

8.7 Co-operation with the InterAcademy Panel (IAP)

In order to fully interact with 100 or so national and international academies of sciences the world over, the IAS joined the Inter-Academy Panel, which is a global network of science academies. The IAS was elected to join the IAP at latter's General Assembly Meeting which was held in Alexandria, Egypt, during December 2006.

A number of IAS-IAP activities could be implemented that can bring to the forefront the role of academies of sciences as independent advisory science *Think Tanks* in their various catchment areas.

8.8 Co-operation with the OIC General Secretariat

Upon a proposal from Jordan and with support of Prof. Ekmeleddin Ihsanoglu, Secretary General OIC, the Islamic Council of Foreign Ministers (ICFM) approved, at its June 2006 meeting which was held in Baku (Azerbaijan), the affiliation of the IAS into the OIC system. This newly acquired status for the IAS would provide it further direct access to OIC Summit and the heads of state of the OIC and other OIC-affiliated organizations.

It is worth noting that the establishment Islamic World Academy of Sciences (formerly the Islamic Academy of Sciences) was approved at the 1984 OIC Summit Conference of the OIC; following a proposal from COMSTECH, the OIC Ministerial Committee on Science and Technology which is based in Islamabad, Pakistan.

8.9 Co-operation with Academies of Sciences

The Academy has signed Memoranda of Understanding with the Kazakhstan, the Azerbaijan, and the Uzbekistan Academies of Sciences. Such agreements lay the foundation for long-term relationships of co-operation between OIC institutions and these republics and their scientific infrastructure.

An agreement was signed between the Academy and the Pakistan Academy of Sciences, which laid the foundation for a relationship of co-operation between the two academies. The first activity jointly organised by the two academies, it is worth noting, was the convening of the 12th IAS Conference.

Since 2003, the IAS has been liaising with the Academy of Sciences Malaysia. Both academies worked closely to convene the OIC Conference on Science and Technology, which was held in Kuala Lumpur, Malaysia, during October 2003; and have jointly worked to organise the 14th IAS Science Conference, held in the Malaysian capital during March 2005. The IAS has also supported the Academy of Sciences Malaysia in its efforts to convene the "International Symposium on Science, Technology and Innovation: Towards a Prosperous and Secure Islamic World," which was held in Kuala Lumpur, Malaysia; 9-11 August 2007.

The IAS is also pleased with the understanding it had established with the prestigious Royal Swedish Academy of Sciences which makes possible the participation of experts from that academy in IAS activities.

Contacts with the US National Academy of Sciences have been ongoing for over five years, resulting in the participation of top US NAS's top representatives in some IAS activities.

In 2005, the IAS participated in the US NAS seminar on *Science-Based Decision-Making*, held in Tunisia; and has started contacts so that similar joint programmes could be organised in the Middle East. The IAS has subsequently been involved in a number of water-related activities arranged by the US NAS including the publishing of the proceedings of the 2005 Tunisia seminar.

The IAS has been actively supporting the Palestine Academy of Science and Technology (PALAST) through facilitating the participation of PALAST officials in the various scientific activities in the Middle East, as well as providing help and advice to this sister academy on a regular bases.

The Academy has also recently started a publications exchange arrangement with the Indian National Science Academy (INSA). Moreover, the IAS has been collaborating with the Arab Science and Technology Foundation (ASTF) in a number of fields.

9 ACADEMY FELLOWSHIP

9.1 General

Box 9. IAS Fellows

The Academy Fellows (male and female members) are of more than 40 nationalities, and represent numerous educational, scientific as well as research and development institutions. The number of Fellows stood at 102, in August 2007.

The membership of the Islamic World Academy of Sciences is made up of Founding and elected Fellows. They are eminent scientists with sizeable contributions to the development of science and technology and related topics, in their countries and internationally. The Secretariat of the Academy organises an election every year through which existing Fellows nominate and then elect new members to the Academy Fellowship. Since the inception of the Academy in 1986, 78 Fellows have been elected through annual postal ballots, the results of which are announced at the end of year General Assembly.

9.2 Honorary Fellowship

The Honorary Fellowship is awarded by the Academy to eminent personalities outstanding in their fields, who have promoted science and technology in the Islamic world, and internationally. As of August 2007, the Academy had eleven Honorary Fellows who come from Kazakhstan, Turkey, Sarawak/Malaysia, Egypt, Saudi Arabia, Switzerland, North Cyprus, and the USA as well as Malaysia. Dr Hakim Said Hon. FIAS, Pakistan, who was elected as an Honorary Fellow of the IAS back in 1995, passed away in 1998.

10 VISION 1441

The 2003 OIC Summit adopted a sensible yardstick to measure development in the domain of science and technology that people can relate to; namely Vision 1441.

Vision 1441 is a set of goals, a number of targets and performance indicators relating to the state of science and technology that OIC countries would like to see achieved by the year 2020. They include:

- (1) Raising the expenditure on R&D to 1.4% of GNP by the year 2020 (1441 Hijri);
- (2) Raising the number SREs (scientists, researchers and engineers) to 1441 per million population by the 2020; and
- (3) Raising the scientific output of the Islamic world to 14% of world total.

The newness of Vision 1441 lies in two main dimensions:

- (a) By incorporating quantitative and time-bound targets, the Vision demands specificity in development actions and emphasize systematic measurement;
- (b) By defining the goals in terms of outcomes - as distinct from inputs and outputs - it draws attention to the multi-sectoral determinants of outcomes.

These new elements may warrant changes in some practices and programs adopted by countries.

Vision 1441 serves as a visionary challenge to help galvanize new energies and resources for the S&T development agenda, with a focus on outcomes. Since it is clear that many countries and regions will not achieve the parameters of the vision by 2020, the risk of disappointment and cynicism must be mitigated. And there are other challenges: customizing the Vision to local conditions, harnessing contributions from sectors without explicit interest in its goals or targets, focusing on outcomes among poor countries and population groups rather than on average outcomes, and addressing incentives for both achieving and monitoring *outcomes*.

Vision 1441 manifests a commitment by OIC-Member countries - rich and poor - to doing all they can to achieve a reasonable level of S&T advancement.

The IAS has been actively promoting Vision 1441, and has organised a number of meetings on the subject that were especially designed to encourage the various OIC countries to implement policies to achieve the parameters set out in Vision 1441, and is also actively involved in the OIC Task Force on Vision 1441.

Appendix A

Patrons of the Islamic World Academy of Sciences

**His Excellency the President of the Islamic Republic of Pakistan.
His Royal Highness Prince El-Hassan Ibn Talal of the Hashemite Kingdom of
Jordan, Founding Patron.**

Honorary Fellows of the Islamic World Academy of Sciences

(in alphabetical order)

His Excellency **Rauf Denktash**, President of the Turkish Republic of Northern Cyprus.

Prof. **Ihsan Dogramaci**, Chairman, and President of Bilkent University, Turkey

Prof. **Richard R. Ernst**, 1991 Nobel Laureate (Chemistry), Switzerland.

Sheikh **Saleh Kamel**, Chairman, Dallah Elbaraka Group, Saudi Arabia.

Datuk Patinggi Tan Sri Haji Dr **Abdul Taib Mahmud**, Chief Minister, State of Sarawak, Malaysia.

His Excellency Dato Seri Dr **Mahathir Mohamad**, Prime Minister of Malaysia.

Prof. **Ferid Murad**, 1998 Nobel Laureate (Medicine), USA.

His Excellency **Nursultan Abishevich Nazarbayev**, President of the Republic of Kazakhstan.

Dr **Enver Oren**, President and Chairman, Ihlas Gazetecilik Holding, Turkey.

Sheikh **Hamad Al-Zamil**, Chairman, Al-Zamil Group, Saudi Arabia.

Prof. **Ahmed Zewail**, 1999 Nobel Laureate (Chemistry), Egypt/USA.

List of Fellows of the Islamic World Academy of Sciences (August 2007)

1. Prof. Omar Abdul Rahman	Malaysia	Veterinary Medicine
2. Prof. Naim Afgan	Bosnia-Herzegovina	Mechanical Engineering
3. Prof. Ishfaq Ahmad	Pakistan	Physics
4. Prof. Askar Akayev	Kyrgyzstan	Computer Engineering
5. Prof. Sajjad Alam	Bangladesh/USA	Physics
6. Prof. M Shamsheer Ali	Bangladesh	Physics
7. Prof. Qurashi Mohammed Ali	Sudan	Medicine/Anatomy
8. Prof. Huda Saleh Mehdi Ammash	Iraq	Biology
9. Prof. Wiranto Arismunandar	Indonesia	Mechanical Engineering
10. Prof. Muhammad Asghar	France	Physics
11. Prof. Attia A Ashour	Egypt	Mathematics
12. Prof. Saleh A Al-Athel	Saudi Arabia	Mechanical Engineering
13. Prof. Ahmad Nawawi Ayob	Malaysia	Botany
14. Prof. Ahmad Abdullah Azad	Bangladesh/Australia	Biochemistry
15. Prof. Agadjan Babaev	Turkmenistan	Geography
16. Prof. Adnan Badran	Jordan	Biology
17. Prof. Ibrahim Gamil Badran	Egypt	Medicine
18. Prof. Kamal H. Batanouny	Egypt	Botany
19. Prof. Farouk El-Baz	USA	Geology
20. Prof. Kazem Behbehani	Kuwait	Immunology
21. Prof. Azret Yusupovich Bekkiev	Kabardino-Balkar/Russia	Physics
22. Prof. Naci Bor	Turkey	Medicine
23. Prof. Rafik Boukhris	Tunisia	Medicine

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24. Prof. Mohammad Ilyas Burney	Pakistan	Medicine
25. Prof. Noor Mohammad Butt	Pakistan	Physics
26. Prof. Muhammad Iqbal Choudhary	Pakistan	Organic Chemistry
27. Prof. Ali A Daffa'	Saudi Arabia	Mathematics
28. Prof. Mamadou Daffe	Mali/France	Biochemistry
29. Prof. Fakhruddin Daghestani	Jordan	Mechanical Engineering
30. Prof. Ramazan Demir	Turkey	Biology
31. Prof. Oussaynou Fall Dia	Senegal	Geology
32. Prof. Ugur Dilmen	Turkey	Medicine
33. Prof. Ibrahim Mar Diop	Senegal	Medicine
34. Prof. Mustafa Doruk	Turkey	Metallurgical Engineering
35. Prof. Mehmet Ergin	Turkey	Chemical Engineering
36. Prof. Mohamed B E Fayez	Egypt	Chemistry
37. Prof. Mehdi Golshani	Iran	Physics
38. Prof. Kadyr G Gulamov	Uzbekistan	Physics
39. Prof. Hashim M El-Hadi	Sudan	Veterinary Medicine
40. Prof. Mahmoud Hafez	Egypt	Entomology
41. Prof. Syed Zahir Haider	Bangladesh	Chemistry
42. Prof. Mohammad Hamdan	Jordan	Mathematics
43. Prof. Adnan Hamoui	Syria	Mathematics
44. Prof. Kemal Hanjalic	Bosnia-Herzegovina	Mechanical Engineering
45. Prof. Mohamed H A Hassan	Sudan	Mathematics
46. Prof. Ali Ali Hebeish	Egypt	Chemistry
47. Prof. Bambang Hidayat	Indonesia	Astronomy
48. Prof. Abdul Latif Ibrahim	Malaysia	Microbiology
49. Prof. Mohammad Shamim Jairajpuri	India	Zoology
50. Prof. J (Younis) Ario Katili	Indonesia	Geology
51. Prof. Hamza El-Kettani	Morocco	Physics and Chemistry
52. Prof. Pulat K Khabibullaev	Uzbekistan	Physics
53. Prof. Salambek Khadjiev	Chechnya	Chemistry
54. Prof. Idriss Khalil	Morocco	Mathematics
55. Prof. Abdul Qadeer Khan	Pakistan	Metallurgical Engineering
56. Prof. Hameed Ahmed Khan	Pakistan	Physics
57. Prof. Naeem Ahmad Khan	Pakistan	Physics
58. Prof. Mostefa Khianti	Algeria	Medicine
59. Prof. Abdelhafid Lahlaidi	Morocco	Medicine
60. Prof. Zohra Ben Lakhdar	Tunisia	Physics
61. Prof. Abdel Salam Majali	Jordan	Medicine
62. Prof. Iftikhar Ahmad Malik	Pakistan	Medicine/Pathology
63. Prof. Ahmed Marrakchi	Tunisia	Electronic Engineering
64. Prof. Akhmet Mazgarov	Tatarstan/Russia	Petrochemistry
65. Prof. Syed Qasim Mehdi	Pakistan	Molecular Biology
66. Prof. Amdoulla Mehrabov	Azerbaijan	Materials Science
67. Prof. Sami Al- Mudhaffar	Iraq	Biochemistry
68. Prof. Badri Muhammad	Malaysia	Chemistry
69. Prof. Zaghoul El-Naggar	Egypt	Geology
70. Prof. Ibrahim Saleh Al- Naimi	Qatar	Chemistry
71. Prof. Anwar Nasim	Pakistan	Genetics
72. Prof. Jamal Nazrul-Islam	Bangladesh/UK	Mathematics
73. Prof. Souleymane Niang	Senegal	Mathematics
74. Prof. Gulsen Oner	Turkey	Medicine
75. Prof. Ramdane Ouahes	Algeria	Chemistry
76. Prof. Korkut Ozal	Turkey	Civil Engineering
77. Prof. Mehmet Nimet Ozdas	Turkey	Mechanical Engineering
78. Prof. Sinasi Ozsoylu	Turkey	Medicine
79. Prof. Munir Ozturk	Turkey	Biology
80. Prof. Iqbal Parker	South Africa	Biochemistry
81. Prof. Syed Muhammad Qaim	Germany	Nuclear Chemistry
82. Prof. Subhi Qasem	Jordan	Agriculture
83. Prof. Mazhar M Qurashi	Pakistan	Physics

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84. Prof. Atta-ur- Rahman	Pakistan	Chemistry
85. Prof. Najih Khalil El-Rawi	Iraq	Civil Engineering
86. Prof. Riazuddin	Pakistan	Physics
87. Prof. Makhmud Salakhitdinov	Uzbekistan	Mathematics
88. Prof. Hussein Samir Salama	Egypt	Entomology
89. Prof. Eldar Yunisoglu Salayev	Azerbaijan	Physics /Mathematics
90. Prof. Lorenzo Savioli	Italy	Medicine
91. Prof. Misbah-Ud-Din Shami	Pakistan	Chemistry
92. Prof. Ali Al-Shamlan	Kuwait	Geology
93. Prof. Ahmad Shamsul-Islam	Bangladesh	Botany
94. Prof. Muthana Shanshal	Iraq	Chemistry
95. Prof. Ahmedou M Sow	Senegal	Medicine
96. Prof. Mahmoud Tebyani	Iran	Electronic Engineering
97. Prof. Ahmet Hikmet Ucisik	Turkey	Materials Science
98. Prof. Mohammed A Waqar	Pakistan	Biochemistry
99. Prof. Ibrahima Wone	Senegal	Medicine
100. Prof. Bekhzad Yuldashev	Uzbekistan	Physics/ Mathematics
101. Prof. A. Hamid Zakri	Malaysia	Genetics
102. Prof. Mikhael Zalikhonov	Kabardino-Balkar/Russia	Glaciology/Biology

**Deceased Fellows of the
Islamic World Academy of Sciences**

Prof. Mohammad Ibrahim	Bangladesh	(1911-1988).
Prof. Djibril Fall	Senegal	(1930-1992).
Prof. Salimuzzaman Siddiqui	Pakistan	(1897-1994).
Prof. Abdus Salam Mia	Bangladesh/USA	(1925-1995).
Prof. Suleiman Gabir Hamad	Sudan	(1937-1996).
Prof. Mohammad R Siddiqi	Pakistan	(1908-1998).
Prof. Abdullah M Sharafuddin	Bangladesh	(1930-1998).
Prof. Achmad Baiquni	Indonesia	(1923-1998).
Prof. Mumtaz Ali Kazi	Pakistan	(1928-1999).
Prof. Faramaz Maksudov	Azerbaijan	(1930-2000).
Prof. Mahjoub Obeid Taha	Sudan	(1937-2000).
Prof. Ali Kettani	Morocco	(1941-2001).
Prof. Mohamed Kamel Mahmoud	Egypt	(1926-2003).
Prof. Samaun Samadikun	Indonesia	(1931-2006) .

Appendix B

Laureate(s) of the IAS Ibrahim Memorial Award

Prof. Ugur Dilmen	1996	Turkey.
Prof. Mohammad Abdollahi	2006	Iran.

Appendix C

Council of the Islamic World Academy of Sciences (2003-2008)

President:	Prof. Abdul Salam Majali	Jordan.
Vice-President:	Prof. J Younis Katili	Indonesia.
Vice-President:	Prof. Ahmed Marrakchi	Tunisia.
Vice-President:	Prof. Misbahuddin Shami	Pakistan.
Treasurer:	Prof. Adnan Badran	Jordan.
Secretary General:	Prof. Mehmet Ergin	Turkey.
Member:	Prof. M Shamsheer Ali	Bangladesh.
Member:	Prof. Naci Bor	Turkey.
Member:	Prof. Mohamed H A Hassan	Sudan.
Member:	Prof. Anwar Nasim	Pakistan.
Member:	Prof. Muthana Shanshal	Iraq.

IAS Executive Staff

Moneef R. Zou'bi	<i>Director General.</i>
Ms Taghreed Saqer	Executive Secretary.
Ms Lina Jalal Dedan	Programme Officer.

Appendix D

Publications of the Islamic World Academy of Sciences

Conference Proceedings

- 1) *The Islamic Academy of Sciences* - Proceedings of the Founding Conference (1986) - Published by the Islamic Academy of Sciences - **Editor: A. Kettani (Morocco).**
- 2) *Food Security in the Muslim World* - Proceedings of the first international conference, Amman (Jordan) (1987) - Published by the Islamic World Academy of Sciences - **Editor: S. Qasem (Jordan).**
- 3) *Science and Technology Policy for Self-Reliance in the Muslim World* - Proceedings of the second international conference, Islamabad (Pakistan) (1988) - Published by the Islamic World Academy of Sciences - **Editors: F. Daghestani (Jordan), H. El-Mulki (Jordan), and M. Al-Halqi (Jordan).**
- 4) *New Technologies and Development of the Muslim World* - Proceedings of the third international conference, (Kuwait) (1989) - Published by the Islamic World Academy of Sciences - **Editors: F. Daghestani (Jordan), and S. Qasem (Jordan).**
- 5) *Technology Transfer for Development in the Muslim World* - Proceedings of the fourth international conference, Antalya (Turkey) (1990) - Published by the Islamic World Academy of Sciences - **Editors: F. Daghestani (Jordan), A. Altamemi (Jordan), and M. Ergin (Turkey).**
- 6) *Science and Technology Manpower Development in the Islamic World* - Proceedings of the fifth international conference, Amman (Jordan) (1991) - Published by the Islamic World Academy of Sciences - **Editors: F. Daghestani (Jordan), A. Altamemi (Jordan), and H. El-Mulki (Jordan).**
- 7) *Environment and Development in the Islamic World* - Proceedings of the sixth international conference, Kuala Lumpur (Malaysia) (1992) - Published by the Islamic World Academy of Sciences - **Editors: S. Al-Athel (Saudi Arabia), and F. Daghestani (Jordan).**
- 8) *Health, Nutrition and Development in the Islamic World* - Proceedings of the seventh international conference, Dakar (Senegal) (1993) - Published by the Islamic World Academy of Sciences - **Editors: N. Bor (Turkey), A. Kettani (Morocco), and Moneef R. Zou'bi (Jordan).**
- 9) *Water in the Islamic World: An Imminent Crisis* - Proceedings of the eighth international conference, Khartoum (Sudan) (1994) - Published by the Islamic World Academy of Sciences - **Editors: M. Ergin (Turkey), H. Dogan Altinbilek (Turkey), and Moneef R. Zou'bi (Jordan).**
- 10) *Science and Technology Education for Development in the Islamic World* - Proceedings of the ninth international conference, Tehran (Iran) (1999) - Published by the Islamic World Academy of Sciences, **Editors: M. Ergin (Turkey), M. Doruk (Turkey), and Moneef R. Zou'bi (Jordan) (ISBN 9957-412-7).**
- 11) *Information Technology for Development in the Islamic World* - Proceeding of the tenth international conference, Tunis (Tunisia) (2000) - Published by the Islamic World Academy of Sciences, **Editors: M. Ergin (Turkey), M. Doruk (Turkey), and Moneef R. Zou'bi (Jordan) (ISBN 9957-412-03-5).**

- 12) *Biotechnology and Genetic Engineering for Development in the Islamic World*- Proceedings of the eleventh international conference, Rabat (Morocco) (2001) ó Published by the Islamic World Academy of Sciences, **Editors: A. S. Majali (Jordan), M. Ergin (Turkey), and Moneef R. Zou'bi (Jordan) (ISBN 9957-412-07-8).**
- 13) *Materials Science and Technology and Culture of Science*, Proceedings of the twelfth international conference, Islamabad (Pakistan), (2002) ó Published by the Islamic World Academy of Sciences, **Editors: M. Ergin (Turkey), and Moneef R. Zou'bi (Jordan) (ISBN 9957-412-06-x).**
- 14) *Energy for Sustainable Development and Science for the Future of the Islamic World and Humanity*, Proceedings of the thirteenth International conference, Kuching, Sarawak (Malaysia), (2003) ó Published by the Islamic World Academy of Sciences, **Editors: M. Ergin (Turkey), and Moneef R. Zou'bi (Jordan) (ISBN 9957-412-08-6).**

Books

- 1) *Islamic Thought and Modern Science* - Published by the Islamic World Academy of Sciences (1997) - **Author: Mumtaz A. Kazi.**
- 2) *Qur'anic Concepts and Scientific Theories* - Published by the Islamic World Academy of Sciences (1999) ó **Author: Mumtaz A. Kazi.**
- 3) *Personalities Noble* **Editor: Hakim Mohammed Said**, Second Revised Edition, 2000, by the Islamic World Academy of Sciences, **Editor: Moneef R. Zou'bi** (Arabic-English). **(ISBN: 9957-412-01-6).**
- 4) *Declarations of the Islamic World Academy of Sciences* ó Published by the Islamic World Academy of Sciences (2005), **Editor: Moneef. R. Zou'bi (ISBN: 9957-412-09-4).**
- 5) *Islamic World Academy of Sciences Outreach*, ó Published by the Islamic World Academy of Sciences (2005), **Editor: Moneef R. Zou'bi (ISBN: 9957-412-10-8).**
- 6) *Intellectual Property Rights: An Introduction for Scientists and Technologists* ó Published by the Islamic World Academy of Sciences (2006), **Author: Mohamed B. E. Fayez (ISBN: 9957-412-15-9).**

Periodicals

- 1) *Medical Journal of the Islamic World Academy of Sciences* (ISSN 1016-3360) - quarterly - Chief Editor: **Prof. Naci Bor FIAS** (Turkey), Mithatpasa Cad. No. 66/5, Ankara, Turkey.
- 2) *Newsletter of the Islamic World Academy of Sciences* - quarterly - Editor: **Moneef R. Zou'bi.**
- 3) *Islamic Thought and Scientific Creativity* (in Arabic) - quarterly Journal of the Organisation of the Islamic Conference (OIC) Standing Committee on Scientific and Technological Co-operation (COMSTECH). Arabicised version published by IAS with the support of the Royal Academy for Islamic Civilisation Research (Al-Albait Foundation) (publication seized in 1996).

Appendix E

IAS Supporters

The Hashemite Kingdom of Jordan
The Islamic Republic of Pakistan
The State of Kuwait
The Republic of Turkey
Malaysia
The Republic of Senegal
The Republic of Sudan
The Islamic Republic of Iran
The State of Qatar
The Republic of Tunisia
The Kingdom of Morocco
The State of Sarawak/Malaysia
The Republic of Indonesia
The Republic of Tatarstan/ Russian Federation

The OIC Standing Committee on Scientific and Technological Co-operation (COMSTECH).

The Islamic Development Bank (IDB).

The OPEC Fund for International Development, Vienna, Austria.

Arab Potash Company, Jordan.

United Nations Educational Scientific and Cultural Organisation (UNESCO).

Islamic Educational Scientific and Cultural Organisation (ISESCO).

The World Bank.

The United Nations Environment Programme (UNEP).

Kuwait Foundation for the Advancement of Sciences (KFAS).

Turkish Scientific and Technical Research Council (TUBITAK).

The Royal Scientific Society (RSS), Jordan.

Pakistan Ministry of Science and Technology.

Ministry of Science, Technology and the Environment, Malaysia.

University Cheikh Anta Diop, Dakar, Senegal.

Ministry of Higher Education and Scientific Research, Sudan.

National Centre for Research, Sudan.

Ministry of Culture and Higher Education, Iran.

Iranian Research Organisation for Science and Technology (IROST).

The Academy of Sciences, Tehran, Iran.

The Academy of Medical Sciences, Tehran, Iran.

Saudi Arabian Oil Company, Saudi Arabia (ARAMCO).

Ihlas Holding, Turkey.

Arab Bank, Jordan.

Jordan Kuwait Bank, Jordan.

Rafia Industrial Company, Jordan.

Secretariat of State for Scientific Research and Technology, Tunisia.

Academy of the Kingdom of Morocco.

Petra Private University, Jordan.

Higher Council of Science and Technology (HCST), Jordan.

Pakistan Academy of Sciences.

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Majlis Islam Sarawak, Malaysia.

Tabung Baitulmal Sarawak, Malaysia.

Sasakawa Peace Foundation, Tokyo, Japan.

Perdana Leadership Foundation, Malaysia.

Royal Jordanian Airlines.

Arab Jordan Investment Bank, Amman, Jordan.

National Centre for Human Resources Development, Amman, Jordan.

Al Bukhary Foundation, Malaysia.

Bilkent University, Ankara, Turkey.

US National Academy of Sciences, USA.

Appendix F

IAS Waqf

IAS Waqf

Islamic World Academy of Sciences
Jordan Islamic Bank
Shmeisani Branch
Account No.: 809/\$91
Telephone: 5677107
Fax: +9626-5691700
PO Box 925997, Amman 11110, Jordan.

IAS Endowment Fund

Islamic World Academy of Sciences
Arab Bank
Fifth Circle Branch
Account No: 0134/034765-5/710
Telephone: 5526870
Fax: +9626-5526874
PO Box 141107, Amman, Jordan.

Appendix G

IAS Contact Address

Islamic World Academy of Sciences
PO Box 830036
Zahran
Amman 11183
JORDAN

17 Djibouti Street
Sixth Circle
Telephones: 00962-6-5522 104, 5523-385
Fax: 00962-6-5511-803

E-mail: ias@go.com.jo
secretariat@ias-worldwide.org

<http://www.ias-worldwide.org>

Comment [11]: