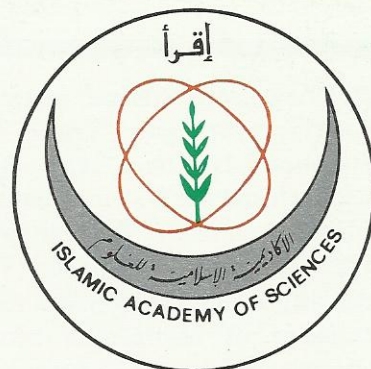


NEWSLETTER

THE ISLAMIC ACADEMY OF SCIENCES

JUNE 1988



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COMSTECH CHAIRMAN H.E. GENERAL ZIA-UL-HAQ ATTENDS THE MEETING OF THE BUREAU OF THE FIFTH ISLAMIC SUMMIT CONFERENCE AND HEAD OF PERMANENT COMMITTEES.

Chairman of the Standing Committee on Science and Technological Cooperation of The Organization of Islamic Conference (COMSTECH), H.E. General Mohammad Zia-Ul-Haq President of The Islamic Republic of Pakistan, attended the meeting of the Bureau of the Fifth Islamic Summit Conference and Head of Permanent Committees held in Kuwait on April 10th, 1988.

In its progress report COMSTECH outlined the achievements of the committee since its first meeting held in Islamabad during the period 10-13 May, 1983 under the Chairmanship of H.E. the President of Pakistan. The report also gave a short resume of the activities of COMSTECH since February 1987, the outline of which is as follows:

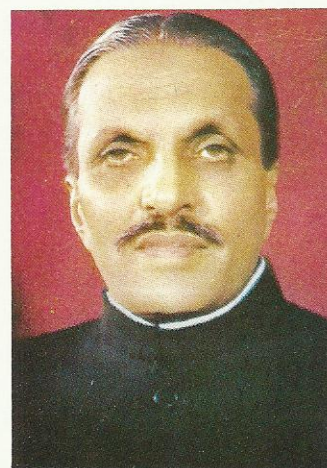
a) The establishment of the Islamic Academy of Sciences with headquarters in Amman-Jordan: The main purpose of the Academy is to increase the interaction among scientists from member states and to facilitate the exchange of views and ideas on problems connected with the

development of science and technology in the Islamic World, as well as to hopefully function as the "Islamic Brain Trust".

b) The establishment of the Islamic Federation of Research Institutes with headquarters planned in Kuching-Malaysia: The main purpose of the Federation shall be to facilitate and promote co-operation, collaboration and interaction in different fields of science and technology amongst these institutes. The Federation is expected to bring to surface the joint research potential of the Islamic World to solve its problems.

c) The establishment of Science and Technology Networks to pool the various resources of as many OIC member states as possible so as to help stimulate growth of expertise, enhance self-reliance in the Ummah and contribute to its economic and industrial development. The following networks have been established:

- Oceanography with headquarters in Turkey.
- Biotechnology with headquarter in Egypt.
- Tropical Medicine with headquarters in Malaysia.
- Water Resources with headquarters in Jordan.
- Space Research with headquarters in Pakistan.



H.E. General Mohammed Zia-Ul-Haq President of Pakistan/Chairman of COMSTECH

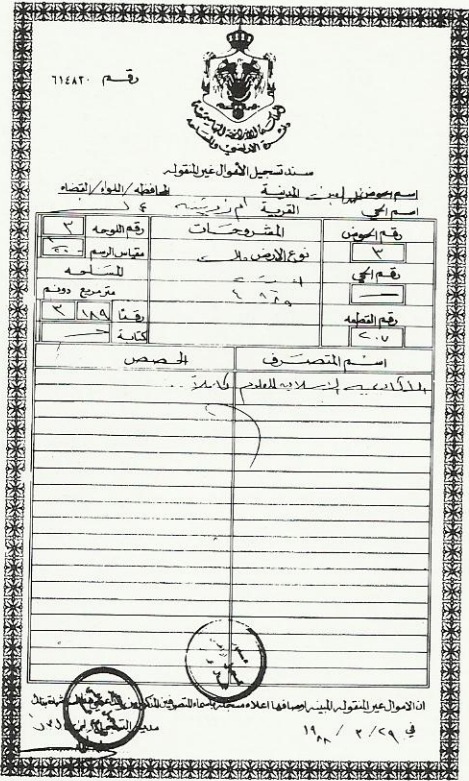
- Renewable Energy Resources with headquarters in Pakistan.

d) Undertaking the prefeasibility study on the establishment of the Islamic Countries Research Activation Agency which would ultimately when established, aim at promoting scientific research and technological development in the advanced and emerging "Hi-Tech" fields and institutionalize cooperation and coordination between interested Islamic Countries in such technologies.

e) The establishment of an Islamic Information Centre at Jeddah-Saudi Arabia in the near future by the Islamic Development Bank, the Islamic Foundation for Science Technology and Development

The progress made on the implementation of the S&T plan of action prepared by COMSTECH and approved by the Fourth Islamic Summit shall be reviewed by COMSTECH in its fourth meeting to be held at Islamabad in November-December 1988.

The allocation of land was processed and documented and an official deed



The Deed issued by Jordan Land and Surveying Department allocating 3189 sq.m for IAS.

in that respect was issued by Jordanian Authorities. In addition, the Academy was exempted from the official registration fees by a gesture from the Government of the Hashemite Kingdom of Jordan.

It is worth mentioning that IAS General Assembly decided in its first meeting to form a financial committee to find means for financing the building of the Academy's permanent headquarters.

The Academy is expected to benefit a lot from the location as it exists in the middle of a scientific community or science park comprising top Jordanian institutions involved in research, science and technology. Furthermore, the Academy shall have access to the existing facilities of these in-

stitutions such as libraries, computer facilities... etc.

Showing deep appreciation and gratitude of the Academy, the Executive Director General sent a cable of gratitude to HRH the Crown Prince and a letter of thanks to H.E. The President of RSS.

GENERAL BODY OF WATER RESOURCES NETWORK MEETS IN AMMAN

The first meeting of the general body of the Inter-Islamic Network on Water Resources Development and Management (INWARDAM), was held in Amman from 8 to 12 April to rectify the charter, approve by-laws and to prepare a three year action plan and the budget for 1988. Delegates from Algeria, Jordan, Mali, Niger, Pakistan, Turkey and Tunisia attended the meeting. The Islamic Foundation for Science, Technology and Development (IFSTAD), was represented by Dr. Ali Kettani, The Director General.

The Charter and By-laws of the network were approved after introducing the necessary amendments. A three year action plan for 1988-90 and the budget for 1988 were also approved. An advisory committee was assigned for the preparation of the projects to be part of the action plan and propose priorities for their implementation. The committee comprises Mr. Makhmour Ahmad Goheer (Pakistan), Dr. Gultechin Guany (Turkey), Mr. Amadou Tarding (Mali) and Mr. Ahmad Kelani, the Executive Director General as the committee's secretary. A meeting of the committee is scheduled in June to finalize its recommendations.

The General Body of the Network rectified in its meeting the appointment of Mr. Ahmad Kelani as the

Executive Director General of the Network for a period of four years.

The General Body also expressed its deep gratitude and appreciation for the continuous and generous financial and material support extended by the Government of the Hashemite Kingdom of Jordan to the Network.

Representing IAS, The Academy's Executive Director General attended the meeting to aid in the process of finalizing the Network's Charter and By-laws.

Its worthwhile mentioning that the Inter-Islamic Network on Water Resources is based at Amman, Jordan with Algeria, Egypt, Iran, Iraq, Jordan, Mali, Morocco, Niger, Pakistan, Qatar, Tunisia and Turkey as members. This Network is one of the various networks established by COMSTECH following the deliberations of its second meeting.

The rationale of establishing various Networks was based on the fact that no single Islamic country possesses at present all the human and material resources necessary to provide full facilities in the field of research, development and training nor does it have the information and expertise to develop particular high-technology institutes. On the other hand, the Islamic countries collectively, could reach a respectable level of capability in the development of science and technology.

The networks were established to function as high class centres of excellence in disciplines that include oceanography, biotechnology, tropical medicine, space research, renewable energy resources and water resources. These specialized networks will help stimulate growth of expertise, enhance self-reliance and contribute to the economic and

EDITORIAL LETTER

In its first meeting held in Amman last December 1987, IAS General Assembly decided to issue a scientific Journal as part of the Academy's Programme. . This matter was given priority in the list of IAS activities and the Founding Fellows of IAS were enthusiastic and supportive for the idea of the Journal.

The general consensus was that it is about time that an Islamic Journal of Sciences come to existence. Muslim scientists deserve to have such a publication so that their research, achievements and contributions are recognized, transmitted and known of. Needless to say that communication amongst muslim scientists is of high value and it is one of the major objectives of IAS to find ways and means to enhance such communication and exchange of knowledge.

The Journal is expected to be a prestigious, high quality publication comparable to other leading international scientific journals. One of its basic features is that it will be refereed by top specialized scientists of the Islamic World. The Journal accepts in addition to original research work, review articles by muslim and non-muslim scientists. Initially, the Journal shall be issued in the English language with abstracts in Arabic and French. At a later stage, full articles may be published in the three languages. The Journal shall be widely distributed to reach the scientific communities all over the world.

As we are expecting the first issue of this Journal to see light very soon, we grasp this opportunity to call upon our respected fellows and scientific community at large to utilize the Journal for the publication of their scientific contributions so that it starts and continues as planned for. It is certainly an event that should receive the attention it deserves and we are hopeful that it will-Insha Allah-fulfil the aspirations of the Islamic as well as the international scientific community and contributes to the advancement of science for the welfare of the Ummah and the International community at large. Before concluding, the editorial board wishes to express gratitude to COMSTECH for the generous financial contribution to the Journal. We should also commend Prof. Naci Bor (F.I.A.S), the assigned editor of the Journal for his persistent effort and commitment to the task of issuing the long waited for Journal.

industrial development of the Um-mah.

DIRECTOR GENERAL, NATIONAL DOCUMENTATION CENTRE, LIBRARY AND INFORMATION NETWORK ON WATER RESOURCES (NADLIN), VISITS IAS HEADQUARTERS.

During his visit to Amman in April 1988 to attend the General Body Meeting of the Inter-Islamic Network for Water Resources Development and Management, Mr. Makhmoor Ahmed Goheer Director General of NADLIN visited IAS headquarters.

Mr. Goheer and Dr. El-Mulki discussed means and possibilities for cooperation between IAS and NADLIN on topics of mutual interest.

Established under the administrative control of the Pakistani Federal Ministry of Science and Technology, NADLIN is entrusted with the collection and dissemination of information of research and development activities in water resources and other related fields with the main objectives of:

- a) Collecting, Collating and disseminating national materials related to water resources.
- b) Establishing a system for receipt of foreign journal, monographs and other material.
- c) Developing a nation-wide network of inter-library cooperation information and referral system related to water resources within Pakistan.
- d) Establishing a system linking national water resources libraries to international networks.
- e) Documenting and publishing information related to water resources.
- f) Preparing economic indicators for

planners, research, and decision makers on future development plans.

g) Working as a focal point for information linkages in water resources.

Being the National and Islamic focal point for OIC Inter Islamic Network on Water Resources Development and Management, NADLIN when fully established, shall make available to all OIC member states the following:

- Data Bank on Water Resources for all OIC Member states.
- Information Network for all linked countries.
- Training facilities on documentation information and remote services technology.
- Short term consultancies.
- Long term advisory services.
- Internships and Fellowships.
- Training programmes in related fields.
- Seminars and workshops.

NADLIN is currently located in Islamabad-Pakistan and could be communicated with through P.O. Box 2313.

STRATEGY OF S&T FOR FOOD SECURITY IN THE ISLAMIC WORLD DISCUSSED BY MUSLIM EXPERTS

Upon the recommendations of the Follow-up Committee of the OIC Ministerial Conference on Food and Agricultural Development which met in Turkey in December 1987, IAS has been requested to formulate under the supervision of (COMSTECH) a strategy of S&T for food security in the Islamic World to be submitted to the Third OIC Ministerial Conference on food security and agricultural development to be held in Pakistan, October 1988.

To pursue this objective, IAS called for a meeting of Muslim experts to discuss the issue. The Exports Committee which comprised Dr. Hassan Khedr (Egypt), Dr. Amir Muhammed (Pakistan) and Dr. Subhi Qasem (Jordan) met at IAS Headquarters during the period 16-18 April 1988. After lengthy deliberations, the Expert's Committee proposed to IAS a case for a strategy of S&T for food security in the Muslim World as the formulation of an actual strategy needs more time, preparation and the input of other experts.

The proposed strategy case which will be submitted by IAS to the third OIC Ministerial Conference on food and agricultural development comprises four major sections. The first section is an introduction stressing food security as an ultimate objective for the Islamic World. The second section deals with the significance of the technical constraints, successful initiatives in some Islamic countries and transfer of successful experiences to other Islamic countries. The third part of the proposed case identifies areas of S&T required to enhance the achievement of food security. The final part deals with immediate action, within, among and between Islamic countries and a proposal for a long-term strategy defining objective, terms of reference, time-horizon, elements, source of finance and an estimated budget to formulate such a strategy.

HIGHLIGHTS ON THE SCIENTIFIC AND TECHNOLOGICAL POTENTIAL OF INDONESIA*

In 1973, the Office of the Minister of State for Research was established to assist the President in the formulation of policies, direction and coordination of research activities. The

Minister also assisted the President in the implementation of policies on Science and Technology. In 1978, the status and name of the office of the above mentioned Minister, were changed and it became the Office of the Minister of State for Research and Technology. The Minister is given the task of coordinating all science and technology activities in Indonesia conducted by government institutions as well as by the private sector.

Presidential Decree No. 28 of 1978 further clarifies the functions for the Minister of State for Research and Technology as follows:

- a) To prepare the formulation of all government policies on research; the development and application of research and technology to support the planning and implementation of national development plans and programme.
- b) To draft the government policy of research, the development and application on research and technology into a comprehensive plan.
- c) To coordinate all research and technology activities of all government agencies to secure cooperation and synchronization in orderly manner.
- d) To coordinate operational activities of LIPI, BATAN, BAKOSURTANAL, LAPAN, and BPS in the field of research and technology according to the procedures set by the Minister of State for Research and Technology.
- e) To submit reports, information and advices on his responsibility to the President.

- INSTITUTIONAL NETWORK

Research and development institutions in Indonesia have various

organizational structures and responsibilities. There are research institutes under the Ministerial Departments, Non-Ministerial Government Agencies, Universities, State-Owned Companies and Private Research Institutes.

According to Presidential Decrees Nos. 44 and 45 of 1974 on the "General Framework of the Organizational Structure of Ministries", each Ministry has its own Research and Development Agencies or Centres oriented to the service of their sectoral and operational needs. There are Research and Development Agencies in 12 Ministries.

There are six Non-Ministerial Government Agencies for research and technology established by Presidential Decrees.

The Non-Ministerial Government Agencies undertake strategic, cross-sectoral and multi-disciplinary research and development activities.

Indonesian Institute of Sciences (LIPI) is actively engaged in providing data and information for Government use and in submitting alternative recommendations regarding the formulation of national policy on science and technology. LIPI is also responsible for the progress and advancement of science and technology in Indonesia and providing services required by the scientific communities, the educational sectors and the general public.

The main tasks of the National Atomic Energy Agency (BATAN) are the carrying-out, organizing and the supervising of research and the application of atomic energy for health and social welfare of the Indonesian people. It has the functions of coordinating the activities of the

Ministerial Departments and Non-Ministerial Government Agencies to assure proper development of atomic energy in Indonesia and establishing cooperation with international as well as foreign national bodies working in atomic energy.

The National Coordinating Body for Survey and Mapping (BAKOSURTANAL) has the task of producing base, topographical, meteorological and other thematic maps and of surveying, inventorying and evaluating natural resources.

The activities of the National Aeronautics and Space Institute (LAPAN) are concentrated on the use of space technology for resource inventory, weather forecasting and communication.

The Central Bureau of Statistics (BPS) covers the collection and analysis of national statistics.

The Agency for the Development and Application of Technology (BPPT) is an agency which explores technologies compatible to the situation and conditions in Indonesia, and by special assignment is also responsible for their application in industries, either on its own account or as a joint cooperation with other organizations. In so doing, BPPT performs the function of technological entrepreneurship for the Government of Indonesia.

Another institute that provides technical and laboratory services to science and research is the Centre for Scientific and Technological Research (PUSPIPTK) located in Serpong, near the capital city of Jakarta. The centre is established as a science town equipped with laboratories, a computer centre and other facilities.

As stipulated by the Presidential Decree No. 43 of 1976, for its establishment, the main tasks of PUSPIPTEK are: to develop infrastructure for research and technology needed for the acceleration of national development; to provide facilities needed by the scientific communities; to increase public awareness of the role of research, science and technology in development.

Universities have research and development centres oriented to support the three main tasks of the universities, i.e. education, research and community services.

Some of the state owned companies also have research institutes of their own. The activities of these research institutes are limited to servicing the operational needs of their mother companies.

Besides the above mentioned research organizations, there are also private companies, which possess research units of their own. Private independent research and development organizations also exist.

- HUMAN RESOURCES

In 1975, it was estimated that 10250 persons were working in various research institutes, while 331650 persons were actually needed. According to the same estimate, around the year 2000, 389500 researchers will be required to satisfy the needs of the country. The problem of manpower resources for research and technology will be among the strategic goals of the Minister of State for Research and Technology, so that short, medium and long term requirements could be met optimally.

Some universities in Indonesia have developed Ph.D. programmes to meet the demand for higher education and training of manpower by research institutions and universities.

Career development of researchers in Indonesia is regulated by the Decree of the Chairman of LIPI No. 419 of 1980.

- FINANCING RESOURCES

The main source of research funds in Indonesia is the government budget. The government research budget is composed of the budget for the Research and Development Sector and the budget of the corresponding Ministries (Defense, Public Works, the interior, ... etc.) provide a limited amount of funds for research activities of their corresponding R&D divisions.

Like in other developing countries, the economic sector still has the highest priority. Budget allocation for S&T in Indonesia is still limited. This was shown in the budget allocated to S&T from the National Development Programme in 1970/1971, which was about US\$ 14457831 or nearly 0.25% of GDP. The first year of the Third Five Year Development Plan (PELITA III) 1979-1984, showed a significant increase in the budget allocated to S&T; it was US\$ 155903180 or nearly 0.31% of GDP.

Text taken from: UNESCO, Science and Technology in Countries of Asia and the Pacific, Vol. No. 52, 1985.

U.N. AGENCIES JOIN FORCES AGAINST AIDS

In abid to strengthen the world-wide fight against AIDS, the World Health Organisation (WHO) signed an agreement on the 29th of March 1988 with a U.N. development group which has staff members in 112 countries. The agreement between WHO and the U.N. Development Programme (UNDP), which deals with a wide range of government departments in each country, will help develop nationwide programmes for tackling Acquired Immune Deficiency Syndrome (AIDS). The accord was signed at a news conference by WHO Director-General Halfdan Mahler and UNDP Administrator William Draper. Mahler described AIDS as not just a health problem but one with political, social, economic and cultural ramifications. WHO spent \$ 24 million on AIDS control and prevention in 1987 and has estimated it will spend \$ 66.2 million this year. UNDP has committed more than \$ 3.5 million to the fight.

INDONESIA LAUNCHES 3 SPACE ROCKETS

Indonesia, edging tentatively into the space race, launched three experimental solid fuel rockets on the 29th of March 1988. It was Indonesia's first launch of a two-stage rocket, and also its first guided rocket, according to National Institute of Aeronautics Secretary Aris Fonda. The official Antara news agency, in a report from the launch site near the Java City of Bandung, said the three rockets failed to reach the targeted hight, but all functioned well during their brief flights.

IAS NEWSLETTER

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