

Newsletter

ISLAMIC ACADEMY OF SCIENCES

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Mahathir patronises IAS Conference

Environment and Development in the Islamic World

President Khan and Prince Al-Hassan send messages

The Islamic Academy of Sciences has recently 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 Datuk Seri Dr Mahathir Mohamad, and was designed to identify the global environmental issues and their relevance to the Islamic World. Another objective of the conference was to assess the particular environmental problems of the Islamic World and identify remedies for such problems. The conference was also intended to discuss and analyse the various new developments/concepts that have come about over the last few years in the area of environment and



development and also to define the role of NGOs in the sustainable development process.

Sixteen major presentations were made over the four day duration of the activity that tackled all the major environmental issues and how these are inter-linked with the general process of development.

Particular environmental phenomena such as desertification and deforestation were also reviewed by the hundred and thirty participants, who took part therein.

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 Jeddah-based

Islamic Development Bank (IDB) as well as the United Nations Environment Programme (UNEP), concluded with the publishing of the "IAS Kuala Lumpur Declaration" which outlined to decision and policy makers in the developed and developing worlds core strategies that need to be adopted for the achievement of sustainable development.

The Academy also adopted a resolution which strongly condemned the bloody war being waged against the innocent civilians in the former Yugoslav Republic of Bosnia-Herzegovina.

The Prime Minister of Malaysia

In his inaugural address, the Malaysian Prime Minister said that the South must achieve solidarity and argue from a common standpoint if it is to be effective in ensuring that the protection of the environment will not cause development to be retarded.

Islamic countries must play their part in achieving this, he added.

The Prime Minister said the need for a continuing dialogue between

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General Assembly meets at KL

Activities reviewed, Programme discussed

The Seventh meeting of the General Assembly of the Islamic Academy of Sciences was held in Kuala Lumpur (Malaysia), on Thursday 13 August 1992, under the chairmanship of Prof. Mumtaz A Kazi, President of the Academy, and in the presence of over forty Academy Fellows.

Several important items were discussed by the House including present and future activities of the Academy, its finances as well as its relations with other international organisations.

Report of the Secretariat

Dr Anwar Bilbeisi, the Academy's Executive Director General, presented the House his report, in which he outlined the work done by the Secretariat during the months upto August 1992.

The EDG stated that the Secretariat had managed to secure additional income for the Academy and its various activities, acknowledging the help provided by some of the Academy Fellows in this respect.

Treasurer's Report

Dr Fakhrudin Daghestani firstly, presented to the House the Academy Statement of Accounts for the year ending 31 December 1991.

The General Assembly reviewed the statement presented and enquired about some of the items in it.

The Assembly approved the 1991 Statement of Accounts, as presented, and went on to review the overall financial state of affairs of the Academy including the estimated budget for 1993, and then commended the efforts of the

Treasurer and the IAS executive staff for the soundness of their management of the Academy's financial resources.

The Academy Journal

The Chief Editor, Prof. Naci Bor FIAS, of the Journal of the Islamic Academy of Sciences presented his annual report to the House in which he detailed the progress made by the Journal during its five-year existence.

Prof. Bor explained the various strategies adopted to popularise the Journal, increase the number of subscribers, improve the scientific content and generally promote the Journal as one of the leading publications in the Islamic World.

The Academy Fellows expressed satisfaction with the steady progress made by the Journal and praised the heartening efforts of Prof. Bor, the Journal's Chief Editor.

1993 Conference

The General Assembly expressed its appreciation of the initiative of His Excellency Abdou Diouf, the President of the Republic of Senegal, who had gracefully extended an invitation to the Academy to convene its 1993 Conference in his country.

Al Albait University

The General Assembly of the Academy adopted a resolution thanking HRH Prince Al-Hassan of Jordan, Patron of the Academy, for his efforts in helping to raise an endowment for the Academy and also for instructing the allocation of a building to the Academy at the Al Albait University campus for an



Academy Science Centre.

The House further expressed its willingness to help this new University academically in preparing the various curricula.

Bosnia-Herzegovina

The House adopted a resolution deploring the bloody war being waged against the people of Bosnia-Herzegovina, and appealing to the international community, United Nations and other organisations to help put an immediate end to this deliberate extermination of people, ethnic cleansing and wanton aggression against the innocent people of the Bosnia.

Visit to Muslim Central Asia

The General Assembly approved the sending of a joint IAS and COMSTECH delegation to the Muslim Republics of Uzbekistan, Kazakhstan, Kirghizistan as well as Azerbaidzhan.

The purpose of the visit would be to initiate contacts with the Academies of Sciences in these republics as well as their S&T institutions.

The visit, the General Assembly agreed, would take place during September 1992.

IAS Council convenes

The Council of the Islamic Academy of Sciences, the Academy's executive and managing body, held its fourteenth meeting at Kuala Lumpur (Malaysia), on Tuesday 11 August 1992. The thirteenth was held at IAS Secretariat in Amman, June 1992.

The Council reviewed the progress made by the Academy in 1992, discussed at some length the Academy's finances and future programmes and activities.

The Council evaluated the 1992 Academy Conference and discussed the theme of the 1993 Conference, which will be held in Dakar, the Senegal capital.

The Council also assessed the qualitative improvement made by the Journal of the Academy, which has been making superb progress, and approved measures to help the Journal maintain its quality and periodicity.

The Council further assessed the possibility of organising a pilot training programme for engineers in Turkey, during the summer of 1993.

The Academy Council is made up of the President of the Academy Prof. Mumtaz Ali Kazi FIAS, Vice-Presidents; Prof. Mehmet Ergin FIAS, Prof. Saleh Al-Athel FIAS, Prof. Mohamed Kamel Mahmoud FIAS, Secretary General; Prof. Ali Kettani FIAS and Treasurer Prof. Fakhraddin Daghestani FIAS. The other Council Members are Prof. M. Shamsheer Ali FIAS, Prof. Souleymane Niang FIAS, and Prof. Achmad Baiquni FIAS.

The Secretariat of the Academy was represented at these meetings by Dr Anwar Bilbeisi, who is the Executive Director General and Eng. Mounneef Zou'bi, the Academy Technical Affairs Director.

EDITORIAL LETTER

Environment and Development: Where balance is the goal

1. The unrelenting but just quest for development in most developing countries has been having a marked effect on the environment, whether local, regional or global.

This scenario is not, of course, unprecedented as examples exist throughout history where man-induced changes in the natural system (nature), had had an effect on the environment. These were some times disastrous.

Over the last two centuries, and as the Industrial Revolution began to bear industrial fruits for Europe, the rate of change in the environment, took a sharp turn upwards.

2. The 1972 Stockholm Conference on Environment and Development is the modern day landmark in terms of man's environmental awakening or rejuvenated appreciation of the finess of nature.

The 1992 Rio de Janeiro Conference marked a further landmark on the same path.

3. As a result, a consensus has developed that there exists a genuine awareness amongst a great many of the world's population of the grave environmental problems facing the planet, today.

The concern among developing countries seems to be for poverty, inadequate water resources and the non-existence of health care- a situation which is cornering these countries into using their natural resources in order to survive.

In developed countries, on the other hand, the concern is for global warming, ozone depletion as well as endangered biodiversity.

4. It does seem also that the scientists, technologists, some decision-makers and politicians have developed remedies, scientific as well as economic, for the environmental problems of the day. There is talk, for instance, of "Sustainable Development."

5. The only way forward therefore would be through genuine North-South, and South-South, co-operation so that this gap can be bridged.

This is perhaps due to the fact that environmental problems and their cures, virtually touch/are umbrellad by every single aspect of Man's life, i.e. are a multifaceted phenomenon (social, economic, educational, legislative,...).

6. The Islamic Academy of Sciences Kuala Lumpur Conference did represent a tangible manifestation of South-South dialogue and indeed the IAS Declaration on Environment and Development in the Islamic World was drafted so as to firstly re-iterate the great importance Islam attaches to the environment as it defines man's relationship to nature as one of mere stewardship rather than unrestricted mastery.



The Declaration systematically summarised the wide variety of environmental problems that confront the countries of the world, Third World including Islamic countries, in particular.

The Declaration further detailed a wide range of measures that need to be implemented by the international community, decision makers, scientists and technologists, educationalists and environmentalists the World over, so that the environmental degradation is halted whilst development is sustained. The Declaration also appealed to the leaders and policy and decision makers of the Islamic World to shoulder their historical responsibilities and adopt a set of measures in order to attain "Sustainable (Environment-friendly) Development."

Dakar host for '93

The Academy has recently received notice of the wish of His Excellency Abdou Diouf, President of the Republic of Senegal and Chairman of the Organisation of the Islamic Conference, that an IAS activity be organised in the Senegal capital, Dakar, during 1993.

In his letter to the Secretariat, the President, expressed his country's willingness to host the 1993 IAS Conference and meetings.

An Academy Science and Organising Committees will soon be assigned to start the necessary academic and organisational arrangements for this activity.

Delegation visits Central Asia

A joint Academy and COMSTECH (Organisation of the Islamic Conference-Ministerial Committee on Scientific and Technological Co-operation) delegation has recently concluded a 2 week visit to Muslim Central Asia.

The delegation was made up of; Prof. Mumtaz A Kazi FIAS, President of the Islamic Academy of Sciences and Co-ordinator General of COMSTECH; Prof. Mehmet Ergin FIAS, Academy Vice-President; Prof. Ali Kettani FIAS, Secretary General of the Academy; Prof. Fakhruddin Daghestani FIAS, Academy Treasurer and Prof. Salambek Khadzhiyev FIAS, Director General of the Grozny Petroleum Research Institute and Academy Fellow from the Chechen-Ingush.

The delegation visited the Academies of Sciences and other institutions in Uzbekistan, Kazakhstan, Kirghizistan as well as Azerbaidzhan.

The purpose of the visit was to document information about these newly independent republics and to assess the possibility of co-operating with their various scientific institutions.

Draft memoranda of understanding were also agreed upon with some of these institutions.

The General Assembly of the Academy as well as its Council had earlier approved plans to increase interaction with these newly independent republics of the former Soviet Union, of which some have already become fully fledged members of the various OIC organisations.

CONDOLENCES

The Fellows of the Islamic Academy of Sciences, the Academy Council and executive staff are sad to announce the untimely demise of Professor Djibril Fall, Founding Fellow of the Islamic Academy of Sciences-Director of Higher Education at the Senegalese Ministry of Education.

Professor Fall was a distinguished Muslim scholar who served his country and Academy, with devotion and dedication. He will be greatly missed by his family, friends and fellow scientists.

May Allah endow him with His *Rahma*.



(Continued from page 1)

the rich and poor, between North and South, was obvious.

"While North-South interaction and co-operation is central to the prevention of global environmental degradation and the need for sustained economic growth, the South must not ignore the many opportunities available to also enhance South-South co-operation."

"The scientists of the Islamic World have much to contribute towards South-South co-operation in the field of environment and development."

Dr Mahathir said that the IAS Conference in itself was a tangible manifestation of South-South co-operation.

There should be closer collaboration among the scientists in such areas as climate change and biological diversity. "Your research findings and technical data will also serve to strengthen the bases of our negotiators as they negotiate the various environment related conventions and protocols," he said.

Dr Mahathir went on to say that sound and verifiable data were crucial if the South was to safeguard its interests in multilateral negotiations.

"Science and technology have a critical role to play in the global endeavour to protect the environment and to promote sustainable development.

In this regard, scholars, scientists and researchers in the Muslim World must not lag behind if they wish to help the Ummah expand and consolidate their scientific and technological base, particularly in the vital area of research and development," he said.

Dr Mahathir said that Islamic countries which are in many instances very richly endowed, must improve their educational and

scientific research facilities so as to ensure the capability of the Ummah to keep up with scientific and technological advancements and to improve on them.

Dr Mahathir also said that in order to accelerate this process and to make the quantum leap that was necessary to improve the quality of life of the Ummah, it was important that Muslim scientists accumulate as much knowledge as possible so as to contribute to the development of environmentally sound technology.

"What is suitable for developed countries may not be for developing countries. It is up to the scientists in the developing countries to devise and modify the technologies of the developed countries to suit the needs of the developing countries."

Dr Mahathir said that although the basic infrastructure of science and technology was available in many Islamic countries, it was not sufficient to cope with the rapid development in this field that was taking place world-wide.

He said the importance of a strong and sound base of science and technology could not be overemphasized.

"The base underpins our efforts to solve the problems of food, defence, security, shelter, fuel and energy, health and the enhancement of agricultural and industrial production."

Dr Mahathir said Malaysia had recognised the need to develop its technological capabilities in its quest to achieve the status of a fully developed nation by the year 2020.

He said to be a developed nation did not mean merely achieving the same GNP per capita of the rich countries.

"This is important of course because national poverty tends to undermine independence. But equally important is the acquisition of knowledge that can contribute

towards national security and scientific and technological independence."

He said without this, they (developing countries) would always be supplicants, dependent on the charity of others. He also said true independence should not lead to the kind of arrogance that resulted in rash actions and acquisitiveness.

"As much as we value independence, we must respect the independence of others, and thus being developed must include the practice of good moral values within society and between societies and nations," he said.

Dr Mahathir urged Muslim scientists to adhere to good moral values.

"Their knowledge should be for the good of the Ummah in general.

The Ummah, with the help of Muslim scientists must project to the world the true meaning of human civilisation and progress, for it is enjoined upon Muslims to acquire knowledge not for evil but for the good of mankind."

He said Fellows of the Islamic Academy of Sciences had a significant role to play in promoting the development of science and technology in the Islamic World, and that they had a catalytic role in promoting growth and progress of the Islamic World in particular and the rest of the world in general.

He concluded by saying that the Academy as a non-governmental organisation had a valuable contribution to make, particularly through the morally sound application of science and technology.

His Excellency President Khan

President Ghulam Ishaq Khan, President of the Islamic Republic of Pakistan and Patron of the Islamic

Academy of Sciences, emphasised the unprecedented and dramatic environmental change that has been taking place.

In his message, which was delivered by Prof. Naeem Khan FIAS, the President noted the ever increasing rate of emission of a variety of gases, of which some are catalysing the green-house phenomenon, global warming and climate change.

The President attributed the main cause of the present global environmental crises to the fact that Man has moved away from his natural habitat and is adopting an artificial life-style and is improperly using high-tech appliances.

"In his relentless pursuit for modernisation and urbanisation he has played havoc with the very roots of his existence. He has over exploited the ecosystem already at least in some parts of the globe, and disturbed the natural balance with the result that he is facing today an impending calamity which is threatening his very survival on the globe," the President added.

President Khan went on to say that Man's desire to dominate the universe coupled with his dwindling faith have both resulted in a crisis which he is not able to manage, and therefore he has become the victim of his own wrong doings. He added that there was a realisation that an effort had to be made to protect the fragile ecosystem from destruction, which has led to increased consciousness on the part of peoples and governments, the world over, however, concrete actions had yet to come at a global level.

The President then highlighted the growing demands of the ever increasing population of the Islamic World in terms of industrialisation, excessive farming and energy which all need to be undertaken in a

regulated manner so as not to have undesirable consequences on the environment.

President Khan concluded by saying that he hoped that the conference would work out a set of recommendations and strategies for the protection and preservation of the environment and conservation of the Islamic World's valuable resources, on which future generations depend.

His Royal Highness Prince Al-Hassan

In his message to the Conference, His Royal Highness Prince Al-Hassan, Patron of the Islamic Academy of Sciences, highlighted the role that individuals, organisations and nations can play in harmonising the demands of the environment with the needs of development, in order to help, "... steer us all safely into the 21st century."

HRH further emphasised, in his message which was delivered by Prof. Abdel Salam Majali FIAS, that the world is witnessing an unprecedented change, "We stand at a threshold, the greatest that mankind has yet faced in all spheres of human activity..." Such a phenomenon, HRH added, left no room for insularity and promoted the concepts of interdependence and the stride to enrich our (the Muslim World's) common lot.

In Islam, HRH went on to say, dominion over the Earth is God's alone whilst the human status is that of stewardship and indeed the concept of balance is vital to sustainable, forward-looking policies.

The conditions prevailing at the turn of the 21st century are the result of decisions taken at the present time, and it was for this purpose that a remedial package of actions needed to be shared by the

developed and developing countries, the Prince added.

Industrialised societies needed to change their production patterns, in order to minimise waste, support developing countries. The need to ensure that only environmentally sensitive technology is transferred to the developing countries is also another duty of advanced countries, the Prince added.

The IAS Patron further addressed the question of energy pointing out that the developing world provided most of the World's energy resources. A fact on which, it was vital, the priorities of the developing countries be clearly focused.

A balance needed to be struck, the Prince added, between environmental and developmental considerations in all countries, one which would take into account global concerns, such as poverty, fresh-water resources as well as desertification.

"New vision is needed at all levels, from global to grass roots. The rapid economic development model, with its environmental strains and human alienation, must give way to a new paradigm, sensitive both to the needs of the environment and the welfare of people. The articulation of such a model is among the main challenges of our time."

The Prince went on to articulate the importance of addressing the human values towards the environment, as it is with individuals that change ultimately begins and ends.

Prince Al-Hassan concluded by saying that the Islamic World has a leading role to play in the forging of a vision for a sustainable future. "You are all part of this great enterprise; and I am confident that our knowledge and our strategies will be the richer for your (the Conferees') effort."



His Excellency Law Hieng Ding

In his statement at the opening session of the conference, the Minister of Science, Technology and the Environment of Malaysia, the Honorable Law Hieng Ding, stated that many countries seldom consider the long term impact that their developmental activities have on the environment.

The Minister went on to say how the Rio Conference marked a turning point in terms of co-operation between governments, professional bodies, non-governmental organisations, public and private sectors as well as individuals.

The Minister further emphasised the importance of co-operation in the field of information exchange saying that if a system on the technical capability and on environmental research can be improved, then organised technology transfer between the various countries can be undertaken.

His Excellency Dr Mumtaz Kazi

In his address Prof. M A Kazi, President of the IAS and Co-ordinator General of COMSTECH, thanked His Excellency Datuk Seri Dr Mahathir Mohamad, the Prime Minister of Malaysia for gracing the conference and addressing its opening session. Also, he thanked the two Patrons of the IAS, HRH Prince Al Hassan Ibn Talal and His Excellency Ghulam Ishaq Khan, President of the Islamic Republic of Pakistan for the messages they had both sent on the occasion.

Prof. Kazi firstly emphasised the importance of the ecological security which is considered as the most important element of the development process.

"Our planet is currently facing a fundamental change in climate and environment and it will be subjected to pressures unprecedented in

history," the ozone depletion, the acid rains, the concentration of chloroflourocarbons, ground water contamination, air pollution, deforestation and other environmental problems which can cause damage, he stated.

Prof. Kazi went on to say that it is a historical fact that many old civilizations perished because they mismanaged their soil and water resources, soil is being continuously damaged and spoiled and the spread of desertification is becoming more menacing in most of the developing countries.

The Islamic World is already witnessing the effect of these changes in many countries, environmental degradation is on the increase, deserts are expanding, many plant and animal species are disappearing, air and water are getting increasingly polluted, so the Islamic countries should not remain spectators to these impending changes in the world environment, Prof. Kazi added.

Muslim countries should adopt better means of management of their natural resources and their environment and should participate fully in the world crusade for protecting the global environment from further deterioration and ecological worsening, Prof. Kazi concluded.

At the end of his address, Prof. Kazi thanked the IAS Science Committee for their excellent work in organizing the conference, Islamic Foundation for Science, Technology and Development (IFSTAD), Islamic Development Bank (IDB) United Nations Environment Programme (UNEP), United Nations Educational, Scientific and Cultural Organization (UNESCO), the Ministry of Science, Technology and the Environment and the Government of Malaysia for co-sponsoring the conference alongwith the IAS.

Former EDG takes up new post

Dr Hani El-Mulki, former Executive Director General of the Academy, has recently been appointed Secretary General of the Jordan Higher Council for Science and Technology.

Dr El-Mulki, who served as EDG during 1987-1989, retains his present post as President of the Royal Scientific Society of Jordan, RSS.



Jordan pays dues to Academy

The Islamic Academy of Sciences has recently received the second instalment of the annual grant of the government of the Hashemite Kingdom of Jordan.

Dr Anwar Bilbeisi, the Academy's Executive Director General, expressed his appreciation of the initiative of the Jordanian government, and lauded the continuous support Jordan and the Academy Patron-Prince Al-Hassan accord the IAS, the Secretariat of which is based in Amman, Jordan.

Islamic Academy of Sciences
*Environment and Development in the
 Islamic World*

DECLARATION

Adopted at Kuala Lumpur (Malaysia)

15 Safar 1413

14 August 1992

PREAMBLE

WHEREAS Allah (God) Subhanahu-Wa-Ta'ala has created Man in the best of forms, and has created all kinds of things in due balance, and has made man the mere manager of the Earth and not a proprietor; a beneficiary and not a disposer or ordainer;

WHEREAS Allah has granted humankind the inheritance of all sources of life and resources of nature;

WHEREAS the doctrines of Islam are immaculately explicit and emphatic in emphasising that human relation to nature should be one of stewardship and not of unrestricted mastery;

WHEREAS Islam promotes a needed ecological balance between all living creatures and their life-sustaining environment;

WHEREAS all countries have a right to a reasonable share of social and economic development, as long as this development is not doing irreversible damage to the local, regional and global environments;

WHEREAS the global environmental change and degradation is closely linked and affected by the developmental, social and economic activities and should not be considered separately from the process of development, but should be dealt with as part of an "En-

vironment and Development" programme.

WHEREAS the Earth's natural systems of land, air and water are being damaged on a planetary scale and at previously unknown rates of change;

AND WHEREAS the achievement of sustained and equitable development was, and remains, one of the greatest challenges confronting humanity;

NOW THEREFORE the Islamic Academy of Sciences:

(a) **ACKNOWLEDGING** that "Sustainable Development" should be the target policy of all countries, and should encompass the concept of social equity between present and future generations, in line with the Quranic injunctions and the Sunnah;

(b) **ACKNOWLEDGING** that the basic pre-requisite for "Sustainable Development" has to be research in science and technology and economics, health, agriculture, etc., that aims at:

(i) Helping the poor identify their priorities and meet their human needs;

(ii) Charting new development paths that will meet the growing demands of an increasing world population, without exhausting, polluting and mis-managing the

planet's natural resources and consequently causing irreversible damage to the planet's natural systems;

(c) **TAKING INTO ACCOUNT** the Beijing Declaration of 1991, and the recent Kuala Lumpur and Rio de Janeiro Declarations on Environment and Development; and

MOREOVER the Islamic Academy of Sciences:

(a) **NOTING WITH CONCERN** the worsening global environment, which is affecting the socio-economic condition and even the very existence of man, and is a direct consequence of the lack of reasonable use of the world's natural resources, particularly the three basic elements of life: land, water and air, and does not only include the aspects of air pollution and climate change, global warming, ozone depletion and acid rain, but also incorporates the phenomenon of severe pollution in rivers, lakes and other marine environments;

(b) **NOTING** the grave mis-justice in the present international economic order, particularly in relation to commerce and finance and the North-South technology transfer, and that such a situation will only lead to the back-flow of financial resources into the developed economies of the North and to the economic and social backwardness of developing countries;

(c) **NOTING WITH CONCERN** the alarming volume and the ever increasing rate of Third World debt, which not only hampers sustainable development but is also depleting the natural resources of the Third World, and invoking

serious, potentially very damaging, environmental phenomena;

(d) **NOTING WITH CONCERN** the existence of an uncalled for double standard, particularly with regards to appraising national environmental strategies of the countries of the South and those of the North;

(e) **BEING ALARMED** at the fact that one billion human beings are living in acute poverty, without the least possible access to basic health care - a prerequisite for a better standard of living;

(f) **BEING CONCERNED** at the ever increasing rate of urbanisation, with the world's cities growing twice as fast as the world's average population growth, putting even more strain on the existing urban infrastructure;

(g) **BEING CONCERNED** at the plight of millions of refugees throughout the Third World, people fleeing from persecution, from internal conflicts, from poverty, from famine, from natural disasters, from wars, and the mass movement of labour migrants;

(h) **NOTING WITH CONCERN** the great increase in the rate of emission of "green-house" gases, a phenomenon which could result in a process of climate change and an increase in global temperature and thus affect many developing countries, low-lying countries, coastal cities and islands;

(i) **NOTING** the ever increasing rate of deforestation in tropical and northern forests alike. A phenomenon which is adversely affecting soil and water quality and flow etc..., in these areas;

(j) **NOTING WITH CONCERN** the alarming rate of desertification, affecting a large number of OIC-

member countries, particularly in the continent of Africa, the increasing frequency of flooding and drought, deterioration of the quality of water, contamination and erosion of soil;

(k) **OBSERVING WITH CONCERN** the absence of an adequate and sustainable agricultural and rural development policy in many developing countries, particularly in the area of food security, the increasing dependency on chemical pesticides and fertilizers, which is affecting soil fertility and organic balance;

(l) **NOTING WITH CONCERN** the serious degradation of mountain ecosystems, which are important for sustainable development, as more land is brought into disorganized cultivation and more trees felled;

(m) **BEING CONCERNED** at the ever endangered biodiversity in many parts of the world, not only in terms of the variety of species, but also in terms of the genetic variations of species;

(n) **BEING EXTREMELY CONCERNED** with the very serious depletion of fresh-water resources in many Islamic countries, which is not only due to the basic and natural shortage of this resource and the extensive use of water for irrigation, but also to the mis-use and mis-management of available water resources, particularly in urban centres;

(o) **BEING EXTREMELY CONCERNED** with the problem of waste disposal whether nuclear, chemical, etc..., which is becoming a serious environmental problem in the North and the South alike; and

(p) **NOTING WITH CONCERN** the lack of comprehensive and integrated policies of environmental

economics in most OIC-member states. A situation which is demoting long-term environmental concerns down many countries' lists of priorities;

CALLS UPON the international community, decision makers, scientists and technologists, educationalists and environmentalists the world over to:

(a) **RECOGNIZE** that the developed and rich countries, in the light of their responsibility for the degradation of the environment and because of their sizeable material resources, are morally and humanly required to assist developing countries in overcoming their environmental problems;

(b) **MAKE** the technological and financial resources available to the developing countries, in such a manner that would not hamper these countries from achieving sustainable (environment - friendly) development;

(c) **URGE** multi-national and national companies to stop manufacturing soil damaging pesticides and other chemicals, and the manufacturers of technologically - obsolete agricultural products and tools to stop (transferring) such environmentally damaging products to Third World countries;

(d) **HELP** the least developed countries (LDCs) sufficiently (economically and technologically) so as not to leave them with no option other than to destroy their environment and deplete their raw materials, in order to attain development;

(e) **HELP PROMOTE** the idea of self-reliant development and the idea of cost-effective development;

(f) **ASSESS** the history of the trend



of the "Global Warming" phenomenon and urge the developed countries, which are after all the major producers of the gases that contribute to this phenomenon and therefore the entities legally accountable for it, to minimise their emissions of such gases;

(g) **DETERMINE AND MONITOR** the appropriate mechanisms for combating desertification, replenishing forests and halting flood and drought-invoking phenomena;

(h) **HALT** the dumping of nuclear-wastes in the seas and oceans of the relatively unpolluted Southern hemisphere and to heavily invest in R&D aimed at finding environmentally acceptable solutions to the problem of nuclear and chemical waste-dumping;

AND APPEALS to the leaders and policy and decision-makers of the Islamic World to:

(a) **ADOPT** strategies that emphasize the great importance accorded by Islam to the human environment, at the educational as well as the social and economic levels;

(b) **INTRODUCE** appropriate legislation regarding the protection of the human environment;

(c) **FORMULATE** educational policies that promote environmental protection, using the greatest instrument of environmental education-the environment itself-to revitalize the teaching/learning objectives;

(d) **TAKE** immediate measures for the eradication of illiteracy in the whole of the Muslim Ummah as a further means of increasing environmental protection through education;

(e) **ADOPT** the appropriate measures required for the founding of an appropriate human environment for the population, in the basic areas of personal freedom, social and job security, health care, etc...;

(f) **PROMOTE** co-operation between countries, institutions and non-governmental organisations in the Islamic World and beyond in the field of Environment and Development;

(g) **PROVIDE** encouragement and funding to NGOs that are active in protecting the environment;

(h) **TACKLE** the root problems of health care and control, appropriate - technology adoption, food and water-security and the provision of shelter;

(i) **ARRANGE** to continuously monitor the various polluting and environmentally degrading affluents, eroding agents, etc... and set-up/support relevant research and development and extension projects on a national, regional and Ummah-level bases;

(j) **ENCOURAGE** house-holders to adopt, on an individual-level, chemical-free agriculture for house-hold self-sufficiency, so as to limit the need for the very highly-mechanised fertilizer-dependent and environmentally damaging agriculture;

(k) **UNDERTAKE** immediate measures to save our Islamic infrastructural and architectural heritage which is threatened by the present-day erosive environment, in many historical cities throughout the Islamic and Third Worlds; and

(l) **INITIATE AND SUPPORT** research and development on renewable and environmentally-safe energy resources.

Islamic Academy The Situation in L

RESOL

Adopted at Kuala

14 Saf

13 Aug

The Islamic Academy of Sciences, at its sixth annual conference, *Environment and Development in the Islamic World*, and in the presence of over one hundred and thirty scientists and scholars from all over the world, discussed the bloody war being waged against the Muslim population in the Republic of Bosnia-Herzegovina. Following is the resolution adopted by the IAS on this grave matter:

The Islamic Academy of Sciences notes with deep concern and anguish the terrible and bloody war being waged against the Muslim people of the Bosnia-Herzegovina, and the unjustified and systematic destruction of the educational and scientific institutions in that country.

The IAS appeals to the international community, United Nations and other organisations, and peace loving peoples throughout the world to help put an immediate end to this deliberate extermination of people, ethnic cleansing and wan-

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ton aggression against the innocent
civilians of the Bosnia.

It appeals to the Muslim coun-
tries and the various *OIC* organisa-
tions to take effective and im-
mediate measures to help stop the
massacre of the Muslims in that
country and assist its population in
their present plight both politically
and financially.

The *IAS* further requests all the
Muslim organisations, Islamic in-
stitutions, international NGOs to
make their voices heard against this
criminal act of violence and use all
their resources to help the people of
Bosnia defend themselves against
such savage brutality.

The *IAS* further condemns une-
quivocally all such cases where the
more mighty takes action against
the weak. It feels that if such prac-
tices are allowed to continue, there
will be no justice or harmony to
speak of, in the world.

The Islamic Academy of Sciences
therefore, urges the international
community to realize its respon-
sibility and help stop this genocide
of the poor and the innocent people
of the Bosnia-Herzegovina.

An effort to speed rescue of ozone layer

The speed with which the Earth's ozone blanket is being depleted has alarmed environmentalists, scientists and scholars, the world over.

Environmental officials say expert opinion is virtually unanimous that chemicals destroying ozone must be phased out much more quickly than originally planned.

Governments have been requested recently to propose and agree certain changes to 1987 Montreal protocol which aimed to halt ozone damage.

The United Nations Environment Programme UNEP, will adopt a proposal limiting the use of certain chemicals by the end of 1995, four years earlier than previously agreed.

New research showing ozone damage across the northern hemisphere- and not just Antarctica where damage was first spotted-has jolted industrialized nations.

The United States agreed to phase out the main ozone-destroyers by the end of 1995. The European Community decided in March to press for renegotiating the Montreal protocol over the same period.

The main culprits are chlorofluorocarbons (CFCs), halons and carbon tetrachloride-which are used in refrigerators, air conditioners, plastic foams, aerosols and industrial solvents.

Industry has suggested that hydrochlorofluorocarbons (HCFCs) are less damaging to the ozone layer than other substances, but the environmental groups say, they will also be pressing for a ban of HCFCs as well.

Ozone is considered a pollutant at ground level, but scientists say its presence in the upper atmosphere about 10 miles (16 kilometers) up-is beneficial. The ozone layer blocks some of the sun's ultraviolet radiation, which causes skin cancer, eye cataracts and crop damage.

Damage to the ozone layer is already so severe that experts recommend wearing hats when outside for long periods, sunscreen oil and sunglasses that block ultraviolet rays.

Scientists first found a hole in the ozone layer over the Antarctic in 1986.

In February, U.S. scientists noticed high levels of ozone eating chlorine monoxide over North America and Europe, higher than any readings recorded before, anywhere on the planet.

The researchers said ozone depletion as severe as 30 to 40 per cent had already occurred over the northern hemisphere.

During the Copenhagen Conference, scheduled for November 1992, various proposals will be presented for formal adoption by ministers of the 10 or so parties to the 1981 Montreal Protocol.

Sharing and caring for a better world

Dr Mostafa Tolba
Executive Director, UNEP



Nature works in mysterious ways. Since it contains the wonders of life, and some answers to our origins and survival, we seek to conserve it. To conserve it, however, means understanding how nature has survived these millions of years. These secrets will take hundreds of years to unravel.

The Malaysian forests have excited much scientific interest, and may hold the cure for many human diseases, yet scientists search for weeks and sometimes months for rare species of plants and animals in its forests. Hardly surprising as there are thousands of species of plants and an equally diverse amount of animals. At the end of that search, however, there are still some questions begging to be answered.

How do we preserve the gifts of nature that we find in rich areas such as Malaysia? How do we exploit these gifts without disturbing the delicate balance of nature?

Science gives us some answers. The news, alas, is not altogether heartening. It reveals that we are abusing nature's gifts, water, air, flora and fauna to our peril.

What are we to do about it?

There are some who seem to advocate preserving parts of the world as some kind of natural history museum. Preservation per se is no longer a valid currency. The issue today is poverty that enslaves many developing countries, and that ensures their continued and accelerating environmental destruction.

The way out of this is by development that is both economically, and ecologically sustainable. And the only way to deal with global environment problems

is to ensure the co-operation of both developed and developing countries.

The industrialised world, they say, is obsessed by green issues such as ozone depletion, climate change and loss of biological diversity, but less concerned about the problems of the developing world such as poverty, disease, lack of adequate water, loss of productive soils and so on.

There is, however, a growing recognition that the problems faced by the developing countries, although often locally or regionally distributed, are in reality global issues, in that at least part of the cause can be found in global patterns of consumption, trade and economic activity. A major part of their solutions must come through the co-operation of the developed countries.

The recently ended United Nations Conference on Environment and Development (UNCED) addressed some of these issues which I previously raised at the Second Ministerial Conference of Developing Countries on Environment and Development in Kuala Lumpur on April 28, 1992.

Co-operation thus is the key word in any effort to deal with global environmental problems. Without it there can be no consensus. This is why we chose the theme of Care and Share for this year's World Environment Day. We wanted the world community to be reminded that in renewing our pledge to the world and humankind, to keep the earth whole and intact, we must prove that we care about our planet's and children's future. If we really believe that people are part of the solution to problems, we will be ready to share our technical and financial resources and responsibilities with one another.

Malaysia is ideally placed to do this. As an emerging and eloquent voice in international fora, not least in the corridors of power in the United Nations, Malaysia's economic success and the strength and dynamism of its peoples are an inspiration to many. Under the leadership of Prime Minister Datuk Seri Dr Mahathir Mohamad, who believed strongly that the environment and development are the two sides of the same coin, the country will go on to greater heights seeing the benefits of an environmentally just and safe world.

The country has shown that it is keen on pursuing the cornerstone of its political philosophy: leadership by example. It has, for instance, signed the UNEP inspired landmark treaties such as the Convention on Biological Diversity to preserve the earth's natural assets, signed the final act of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their

Disposal, and acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol.

To recognise Malaysia's contribution to environmental affairs we have awarded UNEP's Global 500 Roll of Honour for Environmental Achievement to five of its outstanding personalities and organisations.

Other areas of co-operation are in education, regional seas programmes, industry and environment, water and soil. UNEP also works closely with the University of Malaya on a number of projects and under the UN system's technical co-operation project the government is preparing a policy and planning an overview on environmental aspects of development planning and co-operation.

UNEP on its part continues to implement its mandate and remind the world of its obligations. We manage a programme of global environmental quality, monitoring, an environmental management action plan and support measures comprising environmental law, public information, education and cleaner technology training for industry. Other important issues are solutions for the provision of adequate additional finances and the transfer of environmentally sound and sustainable technologies to developing countries. We are also acutely aware that without new and additional financial resources, there can be no meaningful transfer of technology and no real hope of sustainable development.

These then are some of the challenges and hopes that face the world today. UNEP, being the environmental conscience of the UN System, has played a vital role in bringing them to the attention of governmental agenda. This being the 20th Anniversary of UNEP. We

have mapped out this agenda in the State of the Environment Report (1972-92). I can report that the challenge is still there, and the hope, undimmed.

The world's largest flower, the Rafflesia, is unique to your region, I believe. It can measure up to one meter across and weigh up to 9 kilos. The flower bursts its bud of glory within a week and then shrivels up and dies. It is a magnificent example of the fragility, mystery and wonder of life. It is a reminder that man is fragile too and can only survive if he lives in harmony with nature.

by Dr Kaiser Mushtaq and A L Tan, "Quranic Method of Storage of Wheat" by Dr F H Shah, Dr W H Shah and Dr Tasnim Kausar, "The Qur'an as Stimulus of Science in Early Islam" by Dr H Daiber, "Constitutional Principles of Islamic Political System" by Dr M A Kazi.

The English-language version of "Islamic Thought and Scientific Creativity," is published quarterly by the Organisation of the Islamic Conference-Ministerial Committee on Scientific and Technological Co-operation, COMSTECH Secretariat, 3 Constitution Avenue, Sector G-5, Islamabad, Pakistan.

Arabic Islamic Thought published

Volume 2, Number 1 of the Arabic language version of COMSTECH's quarterly Journal, "Islamic Thought and Scientific Creativity," has recently been published by the IAS.

The publication which is co-sponsored by the Royal Academy for Islamic Civilization Research, Al Albait Foundation, contains the following articles; "Scientific and Technological Co-operation among the Muslim Countries" by Prof. M A Kazi, "Higher Curriculum Under Islamic Education" by Dr N A Baloch, "Interest-Free Banking and Finance in Economic Paradigm of Islam" by Dr Nawazish Ali Zaidi and also "The concept of Islamic Jihad" by Prof. M M Qurashi.

Volume 2, Number 2 of the Journal, which has also been published, contains the following articles; "Evolution of Science During the 8th to 11th century A.D."





Prof. Atta-ur-Rahman FIAS

An elected Fellow of the Islamic Academy of Sciences since 1988, Prof. Rahman graduated from Cambridge University (England) in 1968, with a PhD in Organic Chemistry.

Prof. Rahman is, at present, the Director of the Research Institute of Chemistry at Karachi University.

He is an internationally known scientist with an extensive list of publications in his field, and one who is known for his contribution to the establishment of one of the renowned Pakistani centres of natural products chemistry (H.E.J. Research Institute of Chemistry).

Of the previous posts occupied by Prof. Rahman, was that of a teaching professor as well as an associate professor at Karachi University (Pakistan).

Furthermore, Prof. Rahman has edited 24 books and about three hundred research papers in several fields of organic chemistry, and is the first recipient of "Scientist of the Year" Award as well as "Sitara-i-Imtiaz," which was awarded to him in 1990.

Apart from being a Fellow of the IAS, Prof. Rahman is also a Fellow of the Third World Academy of Sciences and a member of the American Chemical Society.



Prof. Ali Abdulla Al-Shamlan FIAS

A Founding Fellow of the Islamic Academy of Sciences, Prof. Al-Shamlan, who is 47, is the former Minister of Higher Education in the government of Kuwait.

Prof. Al-Shamlan obtained his Master's Degree from the University of Texas in 1971 and his PhD in Geology from Kuwait University in 1973.

Formerly, Prof. Al Shamlan has served as the chairman of the geology department at the University of Kuwait, Dean of Faculty of Science as well as the Director General of Kuwait Foundation for the Advancement of Science (KFAS), the Institution which hosted the Third IAS Conference of 1989, "New Technologies and the Development of the Muslim World."

Furthermore, Prof. Al Shamlan is a member of the American Association of Petroleum Geologists and the Society of Economic Paleontologists and Mineralogists as well as being a member of Kuwait University Council.

Prof. Al Shamlan is the author of 10 specialized publications on microfacies analysis, and petrography.



Prof. Abdullah Al Muti Sharafuddin FIAS

Prof. Sharafuddin, who is a Founding Fellow of the Islamic Academy of Sciences, is a Bangali professor of physics.

Currently, Prof. Sharafuddin is the President of Bangladesh Association for Science Education. He has obtained his MSc in Physics from Dhaka University in 1953 and his PhD in Science Education from Chicago University in 1962.

Of the previous posts occupied by Prof. Sharafuddin was that of joint secretary in charge at the Ministry of Education as well as being secretary of the science and technology division in the government of Bangladesh.

Moreover, Prof. Sharafuddin is the author of 24 books on science and technology and has over 500 published papers and articles on science and education. He is also a member of Bangladesh Educational Planning and Development-United Nations Association of Bangladesh.

In addition, Prof. Sharafuddin is the awardee of the UNESCO Kalinga Prize for the Popularization of Science in 1983; the Ekushey Padak Award for contribution to Education (President's Award), 1985; and the Abul Mansur Ahmad Award for Literature in 1985.



Prof. Salimuzzaman Siddiqui FIAS

Prof. Salimuzzaman Siddiqui is an elected Fellow of the Islamic Academy of Sciences, who was born on 19 October 1897 in Subeha, Barabanki, U.P. India.

Prof. Siddiqui was educated at Frankfurt University from where he obtained his PhD in the Chemistry of Natural Products in 1927.

Of the several posts occupied by Prof. Siddiqui, was that of Director of the Research Institute at Tibbi College, Delhi and the Director of the Chemical Laboratories. Since 1966, Prof. Siddiqui has been chair professor and co-director of the H.E.J. Research Institute of Chemistry-Karachi University.

In recognition of his remarkable contribution to international scientific research, Prof. Siddiqui was awarded the Gold Medal of the Soviet Academy, Hilal-e-Imtiaz of Pakistan and the Islamic Medicine Award by the Kuwait Foundation for the Advancement of Science, in 1981.

An outstanding professor of chemistry for more than fifty years, Prof. Siddiqui has over 150 research publications covering many fields of chemistry. Prof. Siddiqui was elected a member of the Vatican Academy of Sciences and appointed as Pontifical Academician in 1946.

The Islamic Academy of Sciences IAS

The IAS is an independent, non-political, non-governmental and non-profit making organisation of distinguished scientists and technologists dedicated to the promotion of all aspects of science and technology in the Islamic World.

The establishment of the Islamic Academy of Sciences IAS was recommended, by the Organisation of Islamic Conference; OIC Standing Committee on Scientific and Technological Co-operation COMSTECH, and subsequently approved by the Fourth Islamic Summit held at Cassablanca, in 1984. The Founding Conference of the Academy was held in Jordan in October 1986.

The Government of Jordan graciously hosts the IAS at Amman, where the headquarters of the Academy started functioning in April 1987.

The main objectives of the Academy are:

- * *To serve as a consultative Organisation of the Islamic Ummah and institutions in the field of science and technology.*
- * *To initiate science and technology programmes and formulate standards of scientific performance.*
- * *To promote research on major problems facing the Islamic countries and to identify future technologies of relevance for possible adoption and utilisation.*

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The Editorial Board welcomes all articles, particularly short ones, and would consider the appropriateness of any material submitted for publication in accordance with IAS's own regulations.

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New issues of Journal published

The IAS has recently published Volume 4, Number 4 and Volume 5, Number 1 of the Journal of the Islamic Academy of Sciences.

Volume 4, Number 4 contains more than 12 different articles in such subjects as Chemistry, Biology, Mycology, Hematology, Mechanics, Endocrinology, Nuclear Medicine, Parasitology and Pathology.

Volume 5, Number 1 contains an Editorial on Radioactive Pollution by A Y Ozemre as well as articles in Physics, Mechanical Engineering, Environmental Sciences, Botany, Microbiology, Cytology, Physiology, Pharmacy, Pharmacology and Hematology.

This Journal is the leading

Academy publication, and one which is edited and published in Turkey under the chief editorship of Prof. Naci M. Bor FIAS.

The Journal of the Islamic Academy of Sciences is widely distributed, with an ever increasing

number of subscribers.

Further information about the Journal and the articles it contains can be obtained from the Editor; Prof. Naci M. Bor FIAS, Mithatpasa Cad, No. 66/5, Ankara, Turkey, (Fax: 90-4-3110232).

Muslim Scholars



THABIT IBN QURRA (836-901 CE)

Thabit Ibn Qurra Ibn Marwan Al Harrani was born at Harran, in Mesopotamia.

Ibn Qurra contributed to several branches of science, notably mathematics, astronomy and mechanics in addition to translating a large number of works from Greek to Arabic.

Ibn Qurra had a big role in extending all concepts of traditional geometry to geometrical algebra and proposed several theories that led to the development of non Euclidean geometry, spherical trigonometry, integral calculus and real numbers.

Thabit Ibn Qurra, who mastered the Greek and Hebrew languages, authored many great books on mathematics and astronomy that later became reliable references in the Muslim World and beyond.

His original books as well as his translations accomplished in the 9th century, exerted a positive influence on the development of subsequent scientific research.

(Taken from: *Personalities Noble*, National Science Council of Pakistan, edited by Hakim Mohammed Said).

* Reference was made to "Arab and Islamic Scientific Heritage" by Prof. Ali Abdullah Daffa' FIAS.

