Abdulaziz H. Abuzinada is Secretary General of Saudi Arabia's National Commission for Wildlife Conservation and Development (NCWCD). He holds a Ph.D. in botany from Durham University and has served as Professor and Chairman of the Department of Botany, Riyadh University. In the IUCN, the World Conservation Union, he currently serves as Regional Vice Chairman for the Species Survival Commission and chairs the Arabian Plant Specialist Group as well as the IUCN Regional Advisory Committee for West and Central Asia and North Africa. He is also the Chair of the Standing Committee of the Convention on the conservation of Migratory Species of Wild Animals (CMS-The Bonn convention) and is Vice President of the Ornithological Society of the Middle East (OSME) as well as Secretary of the Saudi national section of the International Council for Bird Preservation (ICBP). Abuzinada has received the IUCN CNPPA Fred Packard Award for Distinguished Achievements in Wildlife Preservation and Environmental Protection (1992), and certificates of appreciation from Friends of the Earth (1991) and Greenpeace International (1992) for distinguished achievements in restoring marine wildlife following the Gulf War.

Abstract of paper: Wildlife Conservation and Development in Islamic Society: The Experience of Saudi Arabia

Saudi Arabia's National Commission for Wildlife Conservation and Development has been in the forefront of both national and international environmental conservation efforts in the Muslim world since its establishment in 1986. Among the responsibilities of NCWCD which have special relevance to Islamic thought are the following:
1) NCWCD's protected area system plan aims at conserving Saudi Arabia's remarkable biological diversity, and is based largely on the concept of the hima, or protected area, an Islamic institution which is one of the longest standing conservation institutions known on earth. Among its basic principles is the integration of sustainable development with protection in a manner that brings tangible benefits to the local people.
2) NCWCD has prepared environmental legislation including protected area regulations, hunting regulations, and regulations governing trade in wildlife and wildlife products, in the context of the shari'ah, which is Saudi Arabia's legal system.
3) NCWCD conducts public awareness campaigns through many different mediums. It aims to raise the level of environmental awareness from a focus on aesthetic concerns to a deeper understanding of the principles of sound management for the sustainable use of natural resources, so that people may realize their full potential as khulafa' or stewards of the earth.

Tahera Aftab

Abstract of paper: Women and Environmental Projects in Muslim Societies
The degradation of gender and environment, a hallmark of Muslim societies of today, finds no parallel in the history of Islam. On the contrary, there is much historical evidence that women played an active role in the preservation and protection of environment. This paper develops an argument that the relationship between environment and women has a historic tradition and that many Muslim women not only understood the concept of the all-pervading Beauty of Allah, but respected it. Support for this argument is found in the role played by women in South Asia from the 12th to the 18th centuries. The second part of the paper briefly looks at the factors responsible for restricting women from their active participation in community life. Summing up the paper are some suggestions for environmental awareness, such as curricula changes in institutions of higher learning.

A. Karim Ahmed is Deputy Director of Health, Environment and Development at the World Resources Institute in Washington, D.C.--a policy research center on global environment and development issues. He is also Program Director of the Georgetown Center for the Study of Science and Religion at Georgetown University--an international forum for fostering interfaith communication between natural scientists and religious scholars. Previously, Ahmed served as Research Director at the Natural Resources Defense Council in New York City and as Director of Research and Assessment at Science and Policy Associates in Washington, D.C. He received his B.Sc. in Physics and Chemistry from the University of Karachi, Pakistan and a Ph.D. in Physical Biochemistry from the University of Minnesota. He has served as an advisor and technical expert to national governments, international organizations, and multilateral agencies. He has published extensively in the areas of environmental health, risk analysis and public policy, theoretical physics/biology, and philosophy of science. His most recent paper, "Causality, Chaos and Consciousness: Steps Toward a Normative Cosmological Principle," will be appearing in the Fall 1998 issue of Process Studies.


Abstract of paper: Ecological Justice and Human Rights for Women in Islam

This paper relates the environmental crisis in Islamic societies to human rights concerns of women in those societies. The anthropological genre of one woman's life history will be used to explore such concerns. Qur'anic texts and other sources of Islam tradition will be used to contextualize the discussion.
Ali Asani is Professor of the Practice of Indo-Muslim Languages at Harvard University where he teaches courses related to Islam and Islamic civilization as well as various languages such as Hindi, Urdu, and Swahili. He is a scholar of Islam in South Asia, specializing in devotional literatures.

Muhamad Awang is Professor and Dean, Faculty of Science and Environmental Studies, University Putra Malaysia and a member of Malaysian Environmental Quality Council. He is also Chairman of the National Sub-Committee of Life Cycle Assessment (SC5) of ISO 14000/TC207 and a member of National R&D Council for Environmental Sector (Ministry of Science, Technology and the Environment, Malaysia). He obtained his Ph.D. degree from Sheffield University, U.K. and currently involved in research on Ecosystem Physiology of Tropical Forest and also on Impact of Air Pollution and Haze on Agricultural Crops and Forest Species.

Abstract of paper: Ecophenosophical Development in Malaysia

Malaysia and other ASEAN countries in the region are experiencing one of the fastest rates of economic growth and development in the world. The region is in transition from developing through industrializing towards industrialized country status. In this context the countries pose new economic, social, and environmental challenges which require the adoption of new policy instruments for efficient, cost effective, and equitable development results. Agenda 21 adopted at the UNCED Meeting in RIO 1992 represents the current international consensus on action necessary to move the world towards the goal of sustainable development, emphasizing on the arresting deterioration of the ecosystems in which humankind depends to sustain life. It provides a comprehensive and massive document covering all environmentally related issues including population explosion and resource depletion, ozone layer depletion and the enhancement of UV-B, environmental pollution and acid rain, habitat alterations and climate change. Recognizing the impact of human behavior on the environment and on the sustainability of production system in promoting the quality of life, this paper examines how Malaysia should be at the frontier of environmental awareness and management in the region utilizing moral and ethical values characterized philosophically from ecologically destructive or anthropocentrism path to ecocentrism and environmental activism. The paper also highlights several approaches currently exercised including environmental impact assessment and economic instruments for the control and management of the pollution and excessive habitat alteration.

Azizan Baharuddin is an Associate Professor at the University of Malaysia, department of science and technology studies. She has special interests in environmental ethics (a subject which she teaches), bioethics, the interactions and relationships between religion and science as well as
the impact of science on society. She is also a fellow of the Institute for Policy Research Malaysia.


The paper will outline the meaning of and justification for a theology of nature in Islam which can be seen as an instrument for showing the complementarity between science and religion. Such an exercise is important in view of the 'rational' and 'secular' temper of the age. Based on such a theology of nature it will then be shown that a persuasive environmental ethics might be possible in the Islamic context.

S. Sabra Bokhari has a Ph.D. in Education Policy, Planning and Administration from the University of Maryland at College Park. Bokhari has worked as an international education consultant at the World Bank and as a foreign language consultant with the American Council on Education, Washington D.C. She is presently working with United National Educational, Scientific and Cultural Organization (Paris) as a Programme Specialist in Basic Education and Literacy. Her doctoral dissertation topic was on the Veil and Education of Muslim women in a secular environment.

Abstract of paper: From Rio to Reality: Religious Perceptions, Cultural Barriers, and Economic Factors in Case Studies of Muslim Women in Bangladesh, Egypt, Pakistan, and Senegal

The focus of this paper is whether it is Islam, "Islamic culture,' or secular politics which hinder the participation of Muslim women in achieving "common' international objectives of environmental awareness and action to prevent the deepening ecological crisis. Case studies will be used to illustrate development interventions, responses, and strategies in four countries of the Islamic diaspora: Bangladesh, Egypt, Pakistan, and Senegal.

Hynd Bouhia

Saadia Khawar Khan Chishti is currently the founding president of CHEC-Pakistan, a chapter of CHEC-London. She obtained her M.Sc. and Ph.D. in education from Cornell University, Ithaca, NY. She was the only woman of the Council of Islamic Ideology, Government of Pakistan for six years and an ex-officio member of the Federal Council of Pakistan. She served the Ministry of Education of Pakistan as Director of Public Instruction (colleges, Punjab) and Chairperson of Commission for Women's University. She was also a Visiting fellow of Oxford University U.K. and Villanova University U.S.A.

Abstract of paper: Islam, Environment, and Sustainable Development
For a Muslim the nature of Allah as Al-Muhit, 'Divine Environment,' and as Al-Haseeb, 'the one who takes perfect account,' provides a case for a standard of respect, love, and care for the environment. Such a standard can be either driven by awe and fear of Allah or by a deep adoration for Allah leading into a desire to serve Allah as Abd Allah—the Servant of Allah.

Another line of reasoning that allows Islam to encompass concepts of environmental consciousness is the nature of Islam as a 'way of life' for its followers rather than as religion, narrowly defined. The Prophet of Islam declared, that, 'the whole of the Earth is a mosque that is a place of worship.' Together with strong traditions of respect for a mosque's sublime integrity and a duty of care for the mosque, this saying of the Holy Prophet offers a basis for developing a framework of environmental consciousness and its related issues such as Sustainable Development. Several similar lines of reasoning are presented as an outline for a Muslim seeking to establish the divinely intended relationship between humans and their environment. Further, this relationship is cast as a part of a broader Islamic paradigm of life, referred to as the 'Fitra Paradigm,' that is the natural state in balance and harmony with the Creator and Creation.

Alnoor Dhanani received his doctorate from Harvard University. His field of specialization is Islamic intellectual history and the relationship between science, religion, and society in medieval Islamic civilization. He is the author of "The Physical Theory of Kalam: Atoms, Space, and Void in Basrian Mu'tazili Cosmology" and several articles on science, religion, and philosophy in Islamic civilization.

Ahmad-Mahdavi Damghani holds a Ph.D. in Persian Literature and a Ph.D. in Islamic Theology from Tehran University where he was a Professor at the School of Literature and at the School of Theology between 1966-1985. He has been teaching at Harvard University and University of Pennsylvania since 1987. He teaches Islamic Sciences, Islamic Literature, Advanced Arabic and Persian Sufi texts, and Islamic Philosophy. Damghani also taught in Spain at Autonoma University of Madrid for three years. He is the author of several books including Kashf al-Haqa'iq, Unveiling of Truths; al-Majdi, On the Genealogy of the Prophet Muhammad's Family; A History of Arab Shi'ah Poets; The Sources of Arabic Poems in the Kalilah wa Dimna; The Garden of Light: An Anthology of Sana`i's Hadiqah; and over 300 articles in scholarly journals.

Abstract of paper: Protection of the Environment and Preservation of Natural Resources: A View through Islamic Primary Texts

The paper highlights views of Islam based on the Qur'an, Hadiths of the Prophet and Shi'i Imams, and Islamic legal texts concerning the protection of the environment, preservation of natural resources and the need to protect both domestic and wild animals. It also highlights discussions of the topic in Islamic culture and civilization through snippets from adab literature and Arabic and Persian poetry.
**Frederick M. Denny** is Professor of Islamic Studies and the History of Religions at the University of Colorado at Boulder. A University of Chicago Ph.D. with previous teaching appointments at Yale College and the University of Virginia, he has conducted field research on Qur'anic recitation, Muslim popular ritual, and characteristics of contemporary Muslim societies in Egypt, Indonesia, and Malaysia. His current research includes Muslim community formation in North America and Muslim human rights discourses. His college level textbook *An Introduction to Islam* (2nd edition, Macmillan 1994) is widely used and his University of South Carolina Press series "Studies in Comparative Religion" published pioneering books on Islamic subjects. He served on the editorial boards of *The Muslim World*, *Teaching Theology and Religion*, and *Journal of Ritual Studies*. He recently published (with John Corrigan, Carlos M.N. Eire, and Martin S. Jaffee) *Jews, Christians, Muslims: A Comparative Introduction to Monotheistic Religions*, together with a related anthology, *Readings in Judaism, Christianity, and Islam* (Prentice-Hall 1998).

**Mawi Izzi Dien** is a British citizen of Arabic Origin. He is a Senior lecturer in Islamic Studies at the University of Wales. Dien is author and co-author of many articles on Islam and the environment including the first work on Islam and Environment (IUCN, 1982) and a forthcoming book on *Islamic Law and Environment* (Lutterworth--Cambridge).

**Abstract of paper: The Fracturing of Islamic Social Bonds and Environment**

The paper discusses the impact of industrialisation on the natural environment in some parts of the Middle East. Despite Islam's deep sense of respect for the natural environment, the current status quo in the Muslim world is not any different than the rest of the world. This could be largely ascribed to the importation of industry without a value system that can be applicable in the local environment.

**Hassim Ismail Dockrat** is the Founder and Director of the Institute for Human and Environmental Development. He is also the Chief Editor of *The Islamic Times* and Director of Peoples Alliance for Nature. Dockrat obtained his B.A. at the University of South Africa, went to the Cadet School for the Department of Foreign Affairs, and is a graduate member of the Foundation for Business Leaders. He is author of *Developing a Free Society* (1996).

**Abstract of paper: Mu'amalat: Religious Behavior and Environmental Concern**

In Islam the complete existential Social Contract which is binding on the individual within society is contained within the idea of *Jamaat*. *Jamaat* means the binding of a complete social compact based on Ibadah (Ritual Faith and worship), Mu'amallah (principally economic behaviour such as commercial and related transactions) and Imarah (political governance). The opposite of *Jamaat* is the project of the individual as an end-in-itself. It is on the basis of
regulatory balance between *Ibadat* and *Mu'amalat* that the idea of human ecology in the Islamic context is best appreciated. Such balance inevitably impacts upon and determines the relationship between human society and the natural environment.

**Yasin Dutton** was educated at Jesus College, Oxford, where he received both his first degree, in Arabic and Urdu, and his doctorate, in early Islamic law. Having taught for some years at the Oriental Institute, Oxford, he is now Lecturer in Arabic and Islamic Studies at the University of Edinburgh. In addition to specific research interests in early Islamic law and the textual history of the Qur'an, he is also particularly interested in Islam and the environment. He has published several articles on these topics.

**Abstract of paper: Islamic Law and the Environment**

This paper will first consider the legal position of Islam with regard to the use and abuse of the environment, and second indicate how a knowledge of this can enhance not only our understanding of Islam but also of the nature of the environmental crisis of our time and of possible options for combating it. After a brief introduction to the question of scriptural authority and its relations to "scientific" authority, this paper will look at the main environmental texts in the Qur'an and the Omagaad-th and see how these build up into the overall picture of Islamic law on the environment. Particular attention will be paid to Islamic land and water law, animal welfare in Islam, and Islamic economic theory (especially the all-important issue of usury and its role in the degradation of the environment). Finally, there will be a brief assessment of the potential contribution of Muslims to solving environmental problems of our day, while also considering to what extent an effective response to such problems should be based on communal politics or individual spirituality, or both.

**Richard Foltz** holds a Ph.D. in Middle Eastern Studies from Harvard University, and is the author of *Mughal India and Central Asia* (Oxford University Press) and *Conversations With Emperor Jahangir* (Mazda Publishers). He has taught at Brown University and Gettysburg College, and has recently been appointed Visiting Assistant Professor in the Department of Religion, Columbia University.

**Abstract of paper: Islamic Environmentalism: A Matter of Interpretation**

It has been shown that Islamic sources offer models for increased environmental responsibility among Muslims. It does not appear, however, that an environmentalist Islam is the predominant interpretation of the tradition among any of the world's Muslim societies today. Several channels are proposed through which an environmentalist interpretation of Islam may be raised to normative status, including programs conducted through mosques, and legislation by Islamist governments.
Kambiz GhaneaBassiri, from Iran, is currently a fellow-in-residence at the Center for the Study of World Religions and a doctoral student in the study of religion at Harvard University. He is primarily interested in questions concerning the role of religion in human history, the emergence of religious sects, and the formation of religious identity. He intends to focus his research on Islam and to examine Islam as a religious phenomenon within the greater context of human religiosity.

John A. Grim is a professor in the Department of Religion at Bucknell University, Lewisburg, PA. As a historian of religions, John undertakes annual field studies in American Indian lifeways among the Apsaalooke/Crow peoples of Montana and the Swy-ahl-puh/Salish peoples of the Columbia River Plateau in eastern Washington. He published The Shaman: Patterns of Religious Healing Among the Ojibway Indians, a study of Anishinaabe/Ojibway healing practitioners, with the University of Oklahoma Press. With his wife, Mary Evelyn Tucker, he has co-edited Worldviews and Ecology a book discussing perspectives on the environmental crisis from world religions and contemporary philosophy. Mary Evelyn and John are currently organizing the series of twelve conferences on Religions of the World and Ecology held at Harvard University's Center for the Study of World Religions. John is also president of the American Teilhard Association.

Safei-Eldin Hamed is an environmental and international development scholar who practices in North America and the Middle East. He holds a Bachelors degree from Cairo University, a Masters degree from the University of Guelph and the University of Nova Scotia in Canada, King Faisal University in Saudi Arabia, University of Georgia, Virginia Tech, and the University of Maryland in the United States. From 1994 to 1996 he worked as an environmental assessment specialist for the World Bank. Currently, he is on the faculty of the College of Agriculture and Natural Resources at Texas Tech University. He has also served as consultant for several national and international organizations, including Aspen Institute for Humanistic Studies, Smithsonian Institute, Parks Canada, U.S. Fish and Wildlife Service, Agency for International Development, Aga Khan Award for Architecture, Arab Development Institute, and USIA. As a scholar, Dr. Hamed's research activities cover a wide range of studies including urban and regional planning, environmental strategies and management of arid lands, Islamic art and architecture, and Arab-Muslim cross cultural issues.

Abstract of paper: Toward Environmentally Sustainable Development: An Islamic Approach to Capacity Building

The experience of the developing countries during the colonial era and the years of independence points to a few trends: a) The gap is widening locally between the rich and the poor and globally between the North and the South; b) The conditions of the ecosystems are deteriorating quickly and on all fronts; and c) The imported economic models and borrowed development systems
have failed in most Muslim countries. As a result, some scholars suggest that examining the relationship between Islam and environmentally sustainable development is very critical in the few closing years of the twentieth century. The objectives of this session are twofold: 1) To examine the historical resource management institutions in Islam including Hisbah, Haram, Hema, Waqf, and Ihya; and 2) To evaluate the claim of international development scholars who suggest that these traditional Islamic institutions are capable of providing the operational components needed for achieving environmentally sustainable development within our global economic system.

Shahla Haeri is an Assistant Professor of Anthropology and the Director of Women's Studies at Boston University. She has written extensively on women, law and religion in the Muslim world, and is the author of Law of Desire: Temporary Marriage, Mut’a, in Iran (1989, 1993). She has conducted fieldwork in Iran, Pakistan, and India, and among her writings on this topic is "Obedience versus Autonomy: Women & Fundamentalism in Iran and Pakistan." Presently, she is writing a book on the relationship between Pakistani women, law, religions, and politics.

S. Nomanul Haq is currently on the faculty of Rutgers University and a Visiting Scholar at the University of Pennsylvania. For several years until 1996, he was Assistant Professor of Religious Studies at Brown University. His research interests lie in Islamic Intellectual History, Religion, and Sufism.

Abstract of paper: Nature in the Cosmology of Sufi Poetry and Imagination

Classical Sufi poetry in general presupposes certain cosmological doctrines, conveying physical reality as having an immutable structure bestowed upon it by the Creator. This structure is classical, that is, it is hierarchical, and the hierarchy is expressed essentially in terms of place (locus), ranging from the empyrean (‘arsh mu’alla) to the lowest earth (taht al-thara). In this system the primordial elements take their naturally assigned places, and as Rumi has it, the primary universal force is mutual attraction between cosmic bodies. These cosmological doctrines have generated a certain range of attitudes to the natural world and have offered Sufis certain characteristic mystical possibilities for imaginal constructions. The paper, based largely on the works of Hallaj, Attar, Rumi, and Iqbal, is a critical exploration of these attitudes and possibilities.

Shakeel Hossain, an architect from India, is currently a research associate at the Aga Khan Program for Islamic Architecture at MIT and a senior fellow at the Harvard Center for the Study of World Religions. He is presently writing a book on the ritual art and architecture of Muharram in India. The other projects that he is working on are the international traveling exhibition, "The Ephemeral, the Transient, the Static: Ritual Architecture and Urbanity" (hosted at Triennale di Milano XIX International Exhibition, 1996, MIT in Spring 1997, and University of Pennsylvania in Fall 1997) and the International workshop titled "From the Traditional to the Virtual" to be hosted at MIT for the Year 2000 celebration. He is also working as an architect in Cambridge, mainly designing mosques and Islamic centers.

Abstract of paper: Between Sinful Innovation and the Ethos of the Land: Sacred Traditions and Ritual Art of Indian Muslims

This paper presents the indigenous manifestations of rural and popular Islam in India as a platform for understanding the relationship between "Islam and Ecology." Drawing from extensive fieldwork documenting diverse sacred traditions and symbolisms of Indian Muslims, it intends to illustrate the ethos of the land in the making of their art and architecture and in their association with nature. The theoretical framework of the paper argues that only when religion embodies the ethos of the land in its regional manifestations, there then exists an ecological substructure. A mere reference to nature does not exemplify the weave of ecology.

Mohamed Hyder is a graduate of Makerere University (Uganda), Chelsea College (London University), St. Andrews University (Scotland) and Leeds University (England). At St. Andrews he took a First in Zoology and at Leeds, a Ph.D. After a Nuffield Research Fellowship at Makerere, he joined the University of Nairobi in his native Kenya in 1963, rising to the first Personal Chair (Zoology) in 1970. Although his main field of research was tilapia reproductive endocrinology, he has dedicated himself to the field of Islam and biology as one of his main intellectual pursuits in the last two decades, especially since his retirement in 1990.

Abstract of paper: Islam and Ecological Conservation: A Dichotomy of Principle and Practice

Human ecological impact has grown in proportion to new technologies acquired. The profit motive has clouded human's vision regarding the effects of the environmental damage being inflicted. Islam provides a set of principles which theoretically should guide its followers to lead a more environment-friendly existence. That this is unfortunately not so, suggests that a way forward is needed.
Tazim R. Kassam is Assistant Professor of Islamic Studies and South Asian Religions at The Colorado College. She received her Ph.D. at McGill University in the History of Religions and specialized in the Islamic and Hindu traditions. Her book, *Songs of Wisdom and Circles of Dance* (SUNY, 1995) offers a critical historical introduction to a major scholarly translation of the devotional hymns of Ismaili Muslims in the Indian subcontinent. Kassam is co-chair of the Study of Islam section of the American Academy of Religion, a Lilly Teaching Scholar, and a recipient of an NEH fellowship for college professors. Her interests include gender and development issues, computer-based learning technologies, and community service.

Abstract of paper: The AKDN's Ethic of Sustainable Development in South Asia

The Aga Khan Development Network (AKDN) is a cluster of institutions created by the spiritual leader of the Shia Ismaili Muslims, His Highness Karim al-Huseini Aga Khan, to improve the quality of life, living conditions, and socio-economic opportunities of communities in specific regions of the developing world. The Network's many institutions include the Aga Khan Rural Support Programme (AKRSP), the Aga Khan University (AKU), the Aga Khan Health Services (AKHS), the Aga Khan Education Services (AKES), and the Aga Khan Trust for Culture (AKTC). Each has an individual mandate to address focal issues in the diverse fields of rural development, education, health, the built environment, and private sector enterprise. This paper will investigate the AKDN's ethic of sustainable development and analyse the principles by which some of its projects in South Asia have responded to the challenges of social, economic, and cultural change in the modern world.

Fazlun Khalid is the Founder Director of the Islamic Foundation for Ecology and Environmental Sciences, the International Convenor of the Alliance of Religion and Conservation, and a consultant to WWF. He is author of *Qur'an, Creation and Conservation* and editor of *Islam and Ecology*.

Abstract of paper: Foundations of Consumerism: An Islamic Critique of the Root Causes of Environmental Degradation

This paper will examine two root causes of the environmental problems we experience today and propose that they are embedded in the political/economic system that now dominates the planet. It will argue that the Cartesian proposition that humans are "lords and masters of creation" together with an economic model built on an usurious banking system has created a consumer civilization built on endless unsustainable growth. The second part of the analysis will attempt to delineate what is seen as the paradigm of the natural order based on four principals--*Tawhid, Fitra, Mizan, and Khalifa*--drawn from the Qur'an.

Saba Samawat Khalid was an activist in the 1960s and 1970s feminist and civil rights movement in Europe and in the United States. She converted to Islam in 1970. In the 1980s and
1990s she played a leading organizational role in gender and environmental issues with European Muslims. She is also a writer and broadcaster.


**Abstract of paper: Architecture of Islam: Responsibility and the Natural Environment**

In correlation with the notion of stewardship of the earth in Islam, indigenous building has contained within it a sensitivity to nature and the spirituality of place. Patterns in nature are reflected in the organic forms of buildings and in interventions such as the *qanats* (underground irrigation channels) of Iran, the terraced cities of Yemen or the oasis settlements of hot, arid Arabia. Past architecture exhibits knowledge about the relationship and balance between the built and natural environment, even in the monumental works such as the Alhambra in Granada. The scientific revolution, the industrial revolution, and specialization seemed to bring with them the separation of beauty and utility and also an aggressive attitude towards exploiting nature. In the Islamic world, the project of modernity bringing "progress and development" has deepened the rupture between the built and natural realms. In the past two decades environmental awareness and economic imperatives have begun to generate programs that have resulted in built works that try to heal the scars in the landscape and be more sensitive to place. A part of this is the notion of an architectural and urban conservation. New architectural projects, based on ethical concerns, are beginning to reconnect the architecture of Islamic societies to the wisdom of the past to begin to produce solutions for a sustainable built environment.

Tom Kessinger is the General Manager of the Aga Khan Trust for Culture located in Geneva. From 1988 to 1996 he was president of Haverford College, Haverford, PA. He has also been a tenured member of the faculties of the Universities of Virginia and Pennsylvania. His Ph.D. is from the University of Chicago in South Asian History and Anthropology. During the late 1970s and into the 1980s he was with the Ford Foundation in India and Southeast Asia. His major publication is *Vilyatpur 1948-1968: An Historical Case Study of Social and Economic Change in a North Indian Village*.
Othman Abd-ar-Rahman Llewellyn is an environmental planner in Saudi Arabia's National Commission for Wildlife Conservation and Development. His responsibilities include planning and design of protected areas, environmental restoration and habitat enhancement. He studied environmental planning and landscape architecture with Ian McHarg in the Masters Program at the University of Pennsylvania and took courses in Islamic law at the University of Pennsylvania, Temple University, and the University of Michigan. He has written articles on a variety of subjects pertaining to conservation in Islamic law, and revised and expanded the World Conservation Union (IUCN) publication, *Environmental Protection in Islam*. He is a member of IUCN's World Commission on Protected Areas and its Commission on Environmental Law.

**Abstract of paper: The Basis for a Discipline of Islamic Environmental Law**

Although no independent discipline of environmental law has been recognized within the field of Islamic law, there exist sound bases to develop such a discipline, much as the new discipline of Islamic economics that has been developed in recent decades. Islamic environmental law encompasses far more than compilation of the myriad rulings of the *shari'ah* which pertain to the environment. These rulings must be understood and applied in light of the ethical values of Islam and the ultimate objectives (*maqasid*) of Islamic law as well as legal principles and precepts (*qawa'id*) which govern such processes as the weighing of benefits and costs, allocation of natural resources and accountability for their use. Legal instruments for conservation include protected areas and charitable foundations, and legal sanctions are to be enforced through the office of the *muhtasib* in addition to the courts. Some thoughts are also offered on key issues pertaining to environmental policy and planning in the context of Islam and on practicalities involved in establishment of the discipline of Islamic environmental law.

Nabil Maghrebi is an Associate Professor of Finance at the faculty of Economics, Wakayama University, Japan. He has undertaken postgraduate studies at Osaka University, Japan, from which he received a Ph.D. in Finance and where he also worked as Teaching Associate. His publications address issues in equity, options, and futures markets. He has contributed articles at *The Japanese Economic Review and Advances in Pacific Basin Financial Markets*. His research interests also include Islamic perspectives on finance and issues in the Islamization of knowledge.

**Abstract of paper by Nabil Maghrebi and Ronaldo A. Potmis: Environmental Risks and Financial Returns: Conflicts and Compromises**

Traditionally defined as the optimal management of resources, modern economic practices tend to contribute rather to their gradual exhaustion. Monetary delirium nourished by unconcerned maximization of wealth promotes a culture that associates consumption with indebtedness and investment with financial distress. The unstable monetary system and the misuses of financial technology are also conducive to the depletion or misallocation of real resources. Underlying financial principles and practices ranging from wealth non-satiation to usury legitimization should thus be given much thought and reflection. An Islamic-financial perspective can throw
Abu Kakar Abdul Majeed holds a Bachelor of Pharmacy from al-Zagazig University, Egypt, Ph.D. in Neuroscience from Sheffield University, United Kingdom and Masters in Business Administration from Science University of Malaysia. He is currently a senior fellow at the Institute of Islamic Understanding Malaysia, dealing with issues on Islam and science, and technology and the environment.

Abstract of paper: Islam in Malaysia's Planning and Development Policy

Malaysia aims to become, by the year 2020, a developed nation, imbued with a balanced material and spiritual well-being. A Universal Planning and Development Doctrine has been proposed, with a major emphasis on the conservation of the ecosystems, reflecting the relation of humans to the environment, to the Creator, and toward fellow human beings.

Farzaneh Milani is Associate Professor of Persian and Women's Studies at the University of Virginia. She is the author of Veils and Words (Syracuse University Press, 1992), A Fist Full of Stars: The Poetry of Simin Behbahani (with Kaveh Safa), and several articles and book chapters in Persian and English. Currently she is working on a book, tentatively titled, From Cinderella to Barbie: Women and Mobility From a Cross-Cultural Perspective. Milani is the past President of the Association of Middle Eastern Women's Studies.

Fathi Hasan Milkawi received a B.S. in Chemistry and Geology at Damascus University, Syria in 1966, Diploma in Science Education at Reading University, U.K. in 1972, M.A. in Educational Psychology at the University of Jordan, 1978, and a Ph.D. in Science Education at Michigan State University in 1984. He has been a high school science teacher, an instructor and tutor at Teachers' Colleges, and an Assistant and Associate Professor of science education at Yarmouk University. He is author and co-author of 26 school and university textbooks, and author of 15 research articles published in professional journals. Since June 1997, he has been the Executive Director of the International Institute of Islamic Thought (IIIT), in Herndon Virginia, and the Associate Editor of the American Journal of Islamic Social Sciences (AJISS), published quarterly by IIIT

Susan Gilson Miller is the Associate Director of the Center for Middle Eastern Studies at Harvard University and Director of its Moroccan Studies Program. She also teaches history of North Africa in the Department of Near Eastern Languages and Civilizations at Harvard. She is

**Azim Nanji** is Professor and Chair of the Department of Religion at the University of Florida. A member of the Steering Committee of the Aga Khan Award for Architecture, he has also participated in discussions at the World Bank on "Culture and Development" as is editor of the recently published *Building for Tomorrow* (London, 1996).

**Abstract of paper: Reimagining the Environment in African Muslim Contexts**

The interdependence of the built and natural environment has been a critical part of the expression of Muslim responses to the creation of urban and rural societies. This paper will explore some contemporary projects in Africa that have undertaken to restore and reimagine traditional Muslim human ecology and spaces.

**Seyyed Hossein Nasr** was born and received his early education in Iran. He later studied in the United States where he received his B.S. degree with honors in physics from the Massachusetts Institute of Technology and his M.S. and Ph.D. degrees in the history of science and learning with a concentration in Islamic science, from Harvard University. From 1958-79, he was Professor of Philosophy at Tehran University and is presently University Professor of Islamic Studies at the George Washington University. He is the author of many works on Islamic science and religion and the environment including: *An Introduction to Islamic Cosmological Doctrines, Science and Civilization in Islam, Islamic Science: An Illustrated Study, Man and Nature*, and *Religion and the Order of Nature*.

**Abstract of paper: The Religious Dimension of the Environmental Crisis: The Case of Islam**

Although there is an environmental crisis in the Islamic world today as a result of the onslaught of modernization, Islam as a religion teaches a view of the environment based upon the harmony between humans as God's vice regent on earth and nature as a reflection of God's Wisdom. Classical Islamic civilization demonstrated on many levels this harmony based on Qur'anic teachings which need to be resuscitated in light of present day needs to encounter the frightful effects of the environmental crisis.

**Abdullah Imar Nasseef** is Vice-Chairman of the Legislative Council of Saudi Arabia (Majlis Ash Shara). He holds a Ph.D. in Geology from Leeds University (U.K.) and has taught at Riyadh University. He currently is Professor of Geology at King Abdul Aziz University in Jeddah where he was president from 1980-1983. Nasseef was also Secretary General of the Muslim World League in Makkah from 1983 to 1993. Among his commitments, Nasseef is president of the
Board of Trustees of the Muslim World Congress, a member of the Royal Academy of Morocco, and a Fellow of the Geological Societies of London (U.K.) and of Boulder, Colorado, USA.

Dawud O. S. Noibi is a retired Professor of Islamic Studies at the University of Ibadan, in Ibadan, Nigeria, where he taught Islamic Studies for 23 years. He was also the Imam of the university's Muslim Community until retirement in 1996. As research professor and consultant with IQRA Trust, London, he is engaged in the work of helping people to better understand the various teachings of Islam including a responsible attitude to ecology. He has also been involved in a number of international multi-faith activities.

Abstract of paper: The Khalifah and His Trust: An Islamic Perspective on Ecological Responsibility

To Allah belongs all that is in the heavens and the earth. He created and sustains all that is in and on earth for the benefit of humankind, whom He also made His khulafa' (trustees) to look after these earthly creation for their own good, but also as an act of 'ibadah (service to, and worship of Allah). Humans are therefore accountable to Allah as to how well or badly they handle the trust. Thus, concern for ecology is a religious responsibility of Muslims.

Muhammad Zafa Mahafooz Nomani obtained a B.A. (History) LL.B. (Hons.), LL.M. (Environmental Law) and two diplomas, one in Personnel Management and another in Arabic Language Proficiency from Aligarh Muslim University. He started his career as Research Assistant at the Institute of Objective Studies, New Delhi, and as Junior Research Fellow of University Grants Commission's Projects on 'Readings on Minorities' and 'Environment Protection Through Control of Population: A Socio-Legal Study' respectively. Later he shifted to the Centre for Advanced Socio-Legal Studies, Hamdard University, New Delhi. At Aligarh he also served as Assistant Professor in Law and Joint Editor, Aligarh Law Journal. For his teaching and research in environmental law, Mr. Nomani has been recognized by the Indian Institute of Ecology and Environment, New Delhi, and International Association of Educators for World Peace.

Abstract of paper: Environmental Pollution and Conservation of Ecological Balance: A Search for an Islamic Development Model

This paper explores the possibility of evolving a sustainable development model in the midst of the comparative matrix of 'ecocentrism,' or 'deep ecology,' and Islamic ethics. Two parallel and distinct world views are apparent: one takes an axiomatic position that market mechanism along with technological innovations will take care of long term resource scarcity; the other view considers conservation as the sole criterion of natural resources. There are often seen as two extremes having no common territory to share. The Islamic response to environmental and ecological sustainability blends two diametrically opposite views. The paper harkens back to Qur'anic injunctions, Shariah and Islamic lego-ethical principles. As a futuristic strategy, the
paper foresees promise in the major role of eco-theological scholars in inculcating these ideals so as to avoid environmental catastrophe. The thematic thrust of the paper is a call for cutting across sectarian considerations to develop a strategy for institutional rehabilitation and networking to propagate an Islamic ethico-legal sustainable model.

Ayub Ommaya

Abstract of paper: Integrating Science and Religion for Global Environmental Security: An Islamic Ecologic Perspective

In spite of the markedly different methods of science and religion, Islamic teachings specifically advocate the need for gaining knowledge in all spheres, as well as, serving as human guardians of nature with a commitment to environmental responsibility. Indeed Islamic exhortations expressed in the Qur'an, suggest that an unequivocal social contract guided by science (knowledge) and spiritual guidance (religion) is mandatory. A brief description of current integrative approaches towards the use of the two methods of science and religion will provide some examples of what was done in the past and what should be done now. Internal and external obstacles to salutary progress in ecology within the Islamic world will also be discussed. Special attention will be paid to the intimate connections between the geopolitical facts, the health of humans, the economy, social justice and their effects on ecological systems. The work of Bryan Maurer, emphasizing the need for both theoretical and empirical ecologists armed with sophisticated statistical techniques is undoubtedly basic. The Islamic ethic however also emphasizes the significant power of spiritual belief in driving this scientific and ethical endeavor.

Roger Owen is the A.J. Meyer Professor of Middle East History at Harvard University and the Director of the Center for Middle Eastern Studies. He was educated at Oxford University in Britain and then taught Middle East economic history and politics there before coming to the United States in 1993. He is the author of Cotton and the Egyptian Economy, The Middle East in the World Economy, and State, Power, and Politics in the Making of the Modern Middle East.

Ibrahim Ozdemir is a senior lecturer at the Divinity School of Ankara University, Turkey. He received his Ph.D. degree from the Middle East Technical University. His major interests are environmental philosophy and environmental ethics. He is also involved in the development of Islamic environmental ethics. He is the author of The Ethical Dimension of Human Attitude Towards Nature (Ankara: Ministry of Environment, 1997) and Cevre ve Din (Environment and Religion), (Ankara, 1997).

Abstract of paper: Toward A Qur'anic Concept of Environmental Ethics
This paper will deal with Qur'anic perspectives on humans and nature. It is concerned with the Qur'anic value system which contains necessary elements for developing and constructing an environmental ethic. In this ethic, the meaning of nature is explained not only in relation to humans but also to the Creator. Nature's order, balance, and beauty are to be respected accordingly. The question becomes: How does the Qur'an read the great book of nature? What is the main characteristic of this reading and what are implications, not only to human beings but also to all other beings? It assumes that the Qur'an provides an ethical ground for environmental concerns and thus provides necessary motivation behind Islamic legal thought regarding the environment.

Muhammad Aslam Parvaiz, who has a doctorate in Plant Physiology from Aligarh Muslim University, is currently Regional Director of Maulana Azad National Urdu University at New Delhi. He research and teaching experience is spread over twenty years. He is a science communicator and has four books and more than 350 popular science articles to his credit. He is founder and editor of "Urdu Science," India's first and only popular science magazine published in Urdu. He was awarded an "International Visitorship" by the U.S. Government in 1995.

Abstract of paper: Genetic Engineering, Cloning, and Al-Mizan (The Balance)
Our attempts to master nature and conquer its resources has caused almost irreparable damage to the environment. This has happened because we failed to recognise the significance of Natural Balance, which exists very delicately, amongst all the components of our environment. Tampering with life-forms with the help of new techniques is perceived by the author, as another attempt, though at a different level, to disturb the Natural Balance in creation.

Attilo Petruccioli joined the Department of Architecture at M.I.T. in 1994. A specialist in typological study of Islamic and European urbanism, he was trained in architectural practice in Europe and northern Africa. Since his initial appointment at Rome in 1973, Petruccioli has taught in the Rome programs of both Pratt Institute and the Catholic University of America and at the University of Maputo in Mozambique, and has an ongoing commitment to the Ecole Polytechnique d' Architecture et d'Urbanisme in Algiers. Concurrent with his M.I.T. appointment, he continues to hold the rank of Professor at the Faculty of Architecture in Ferrara. He was the founder of the Islamic Environment Research Center in 1983 and has been Chief Editor of its journal, Environmental Design, since that time. He is the author of numerous studies of Islamic and Italian urbanism and landscape, most recently a major edited volume of Islamic gardens published by Electa of Milan in 1994. The theoretical framework developed from his studies of the Islamic environment was published as Dar al Islam, l'architectura del territorio nei paesi islamici in 1985 and as Fatehpur Sikri, citta del sole e delle acque in 1988.

Abstract of paper: Nature in Islamic Urbanism: The Garden in Practice and in Metaphor
As a subject for architectural study, the discipline of the history of Islamic gardens is quite young. Until now it has been in the hands of art or literary historians, who emphasized the
symbolic values conveyed by the garden in poetry—for example, the paradise-garden. If the idea of nature in Islam is referred to, there is a different orientation: garden and landscape are the testimony of the human activity to transform nature, which is a present from God. In this different vision, the garden is the aesthetic distillate of agricultural processes. As a consequence, emphasis must be placed on two important corollaries: 1) the concept of garden cannot be separated from the large scale of the landscape; and 2) the garden cannot be separated by its context. Furthermore, in the history of architecture, the garden and park design have often been used as the experimental laboratory for city design, and only in the second iteration is the green plan consolidated into stone. Thus, the two components, city and garden, are inseparable.

**Ronaldo A. Potmis** received a Ph.D. in Pharmacology and Toxicology from Florida A&M University Tallahassee, Florida in 1994. In 1995 he became a postdoctoral fellow at the National Institute of Neuroscience, Tokyo, Japan where he conducted studies on inherited metabolic diseases. He has published several articles related to toxicology and basic medical research in several international peer-reviewed journals. In college and thereafter he has been active in various Islamic organizations. Currently Potmis is the secretary of an Islamic Foundation, SHIP, in the Netherlands, and has started his own consulting agency.

**Abstract of paper by Nabil Maghrebi and Ronaldo A. Potmis: Environmental Risks and Financial Returns: Conflicts and Compromises**

Traditionally defined as the optimal management of resources, modern economic practices tend to contribute rather to their gradual exhaustion. Monetary delirium nourished by unconcerned maximization of wealth promotes a culture that associates consumption with indebtedness and investment with financial distress. The unstable monetary system and the misuses of financial technology are also conducive to the depletion or misallocation of real resources. Underlying financial principles and practices ranging from wealth non-satiation to usury legitimization should thus be given much thought and reflection. An Islamic-financial perspective can throw light on the fundamental relationship between environmental risks and financial returns and the inherent conflicts and compromises.

**Peter Rogers**

**Abdel Aziz Said** currently is the first occupant of the Mohammed Said Farsi Chair of Islamic Peace, the Director of the Center for Global Peace, and the Director and founder of the International Peace & Conflict Resolution Program at American University in Washington, D.C. Said is a frequent lecturer and participant in national and international peace conferences. He is the senior professor of International Relations at AU, having been with the University since 1957. Author of a dozen books and scores of articles, including: the Fourth Edition of a book he

The Islamic understanding of peace suggests an ecological harmony of the spirit predicated on tawhid, the fundamental unity of God and of all existence. The essential thrust of the Qur'anic revelation upholds principles of universalism, inclusiveness, and coexistence which refer not only to all humankind, but also to the creatures of the natural world, which are themselves signs of God. While the implications of the message of Islam have been variously interpreted, exemplary practitioners of Islam have underscored the ecological, holistic, and integral modalities of their faith, promoting reconciliation and harmony through the peaceful resolution of conflicts and respect for nature. Islamic spiritual and cultural traditions, in both their cosmopolitan and local forms, provide rich sources for peace and ecology.

Zekai Sen graduated from the Technical University of Istanbul in 1971 with a M.Sc. degree in civil engineering. In 1972, he obtained DIC (Diploma of Imperial College) and another M.Sc. degree in hydrology from the Imperial College of Science, Technology and Medicine, London. He holds a Ph.D. from the University of London. He worked as a staff member and researcher in engineering colleges, faculty of earth sciences in different countries, and he is now in the Technical University of Istanbul, Faculty of Aeronautic and Astronautic Sciences. He contributed numerous papers in international journals in many topics including engineering, earth sciences, atmospheric sciences, atmospheric environment, rock mechanics, hydrology, and environmentally clean energy sources such as wind and solar energy and hydrogeology. His current research interests are atmospheric sciences, scientific research methodologies, history, and philosophy of science.

Abstract of paper: Role of Environment in Human Faith and Ibn Sina's Perspectives

Environment may be defined as that part of space where human activities take place for the betterment of all living creatures in a harmonious manner. Degradation in human faith and uncontrolled interactions with the natural environment are the sole factors which have damaged atmospheric, lithospheric, and hydrospheric environments that are essential parts for survival on this planet. This paper will concentrate on Islamic philosophy, faith, and scientific goals for the protection of the environment. It will highlight Ibn Sina's perspective concerning human health at the center of environmental protection actions.
Mohammad Yusuf Siddiq is an Associate Professor of Islam at Islamic University, Bangladesh. He has written extensively on the history, civilization, and culture of Muslim Bengal both in Arabic and English including a dozen entries in the Encyclopedia of Islam. Currently, he is the 1997-98 Benladen Fellow of Islamic Legal Studies Program at Harvard Law School. He is also the Founding President of Baitulmal Prokolpo, a rural welfare project actively engaged in environmental awareness and afforestation programs in Kushtia, Bangladesh.

Abstract of paper: An Ecological Journey to the Islamic East (Bengal)

Defined by the Prophet as *din al-fitra* or the religion of nature, Islam emerged in a way as the religion of ecology in the riverine Bengal—the gateway to the rice-culture—during its eight hundred years of historical presence there. Islam rapidly became the popular religion of the ever-growing picturesque Bengali villages as human settlement expanded along the delta and as rice cultivation spread, often clearing the forest of its otherwise low marsh land. Bengal's wonderful ecological balance and natural harmony left a strong imprint in its popular literature, art, architecture, culture, and folklore. This symbiotic relationship was thwarted during the colonial period due to the excessive exploitation of natural wealth such as deforestation, the legacy of which still continues, in an ever increasing manner, in this most densely populated region of the world.

Lawrence Sullivan is director of the Center for the Study of World Religions, Harvard Divinity School. He took his Ph.D. in the history of religions from the University of Chicago, under the direction of Victor Turner and Mircea Eliade, and later taught on the faculty there. He has special research interest in the religious life of native peoples of South America, about which he wrote a book entitled *Icanchu's Drum* which was awarded a prize for the best book in philosophy and religion from the Association of American Publishers, and lived among the Nahua peoples in the state of Hidalgo in Mexico. He edited the *Encyclopedia of Religion* published by Macmillan. He has served as President of the American Academy of Religions, the 8,000-member professional organization of those who teach about religion in North American colleges and universities.

World and Ecology at Harvard's Center for the Study of World Religions. They are also editors for a series on Ecology and Justice from Orbis Press.

**Iqbal Unus** is registrar and dean of students at the School of Islamic and Social Sciences (SISS) in Leesburg, Virginia, and a former secretary general of the Islamic Society of North America (ISNA). He serves in a voluntary capacity as director of the Association of Muslim Scientists and Engineers (AMSE) and is a former president of that association. He holds an M.S. in Nuclear Engineering from Georgia Institute of Technology and a Ph.D. in Nuclear Physics from Emory University.

**Nargis Virani** is a doctoral candidate in the department of Near Eastern Languages and Civilizations at Harvard University. As a lecturer, Nargis taught courses in Islam, Sufism, and Arabic language and literature at the University of British Columbia, Canada. Nargis is currently working on her dissertation studying the macaronic verse-form in the poems of Rumi. The famous mystic Jalaluddin Rumi (d. 1273) composed some of his lyrical poems, ghazal in macaronic form, *mulamma* in a highly original linguistic mix of Arabic, Persian, Turkish, Greek, and Armenian. Nargis plans to offer a literary and linguistic analyses of these poems with an English translation.