Introduction: The Need for Ethical Approaches

The complex nature of our global environment crisis is increasingly evident as the globe is warming, as weather patterns are becoming more severe, as species are going extinct, as nonrenewable resources such as oil are being used up, as forests and fisheries are being depleted, and as water is becoming polluted or scarce. The large-scale problem of climate change is now more visible to a larger public, but the shift to a sustainable low carbon future has yet to be realized.

As the developing world attempts to raise its standard of living with rapid industrialization, there is an inevitable impact on the environment and natural resources. The result is that severe pollution of water, air, and soil is becoming more widespread in places such as India and China. Similarly, the high level of consumption of energy and resources by the developed world, especially the United States, raises serious ethical issues of equity and justice. The tension between reducing emissions for
environmental protection and increasing them for economic development is a source of increasing conflict and lack of trust between the developed and developing world.

Since the United Nations Conference on Environment and Development in Rio in 1992 we have witnessed a series of major UN conferences, along with the Kyoto Protocol, to try to redirect the course of development and emissions to be more equitable and sustainable. Due in part to the lack of leadership from the U.S. we have not made sufficient progress. Moreover, the worldwide increase in military spending, especially by the United States, means that less money is available for the pressing issues in the Millennium Development Goals regarding poverty and the environment (www.un.org/millenniumgoals).

Thus, the human community is still struggling to create a sustainable, low carbon future. It is becoming clear that a broader set of participants is needed to realize this goal, especially participants who are sensitive to integrating poverty alleviation with environmental protection and climate adaptation. Many religious communities have been involved in efforts to mitigate poverty, hunger, and disease, but now they are recognizing this cannot be done adequately without attention to the environment and the climate, which is deteriorating rapidly. Sufficiency of food, shelter, and health for humans will depend on a thriving atmosphere and biosphere to support life for the Earth community.

The litany of environmental, climate, and development problems is well known, but what is becoming ever more
self-evident is that they cannot be solved by science, technology, law, politics, or economics alone. That is because we are more aware that environment, climate, and development issues are, in large measure, social issues. Thus “fixing” the environment or climate through technology or finance or legislation is necessary but not sufficient. Ethical approaches are also needed.

We are being pressed to see the linkage between environment and people, between healthy ecosystems and healthy social systems, between climate protection and poverty alleviation. We need truly interdisciplinary approaches and systemic thinking that includes more stakeholders. Our challenge is to create not simply low carbon societies but whole communities, where humans are not recklessly dominating and exploiting nature for material gain, but rather recognizing their profound dependence on the larger community of life. In this spirit, unrestrained economic growth that underlies the climate crisis needs to be examined. A broader ethical perspective is required so as to integrate ecology and economy, climate mitigation, adaptation, and development needs.

In short, new indicators of “progress” need to be developed. The world’s religions and the Earth Charter can play a role in this redefinition with an ethical articulation of a path toward not just a low carbon society, but toward a flourishing Earth community.

New indicators of progress:

Neo-classical economic thinking has equated economic growth with progress, despite any harm to the
environment. While this thinking drives our industrial processes, economists are shifting, however gradually, to a realization that the environment and climate can no longer be seen as an externality to be ignored. Methods of cost accounting that disregard the environment are no longer viable. Instead the bottom line needs to include, not only financial profit, but also environmental health and social well-being. New measurements are being developed for this triple bottom line, such as measuring “ecosystems services”. Ecological economists have estimated that it would cost some $33 trillion dollars to replicate nature’s services. (Robert Costanza, Gretchen Dailey et al, “The Value of the World’s Ecosystem Services and Natural Capital”, Nature, 15 May 1997.)

In addition, the UN Global Reporting Initiative has been formed for measuring the environmental and social impact of corporations (http://globalreporting.org). The Equator Principles have been created by a Dutch banker, Herman Mulder, for guiding banks and financial institutions in their investments (www.equator-principles.com). The “ecological footprint” provides a similar opportunity for individuals or institutions to calculate their environmental impact in a variety of areas, including use of carbon. This method was first developed by William Rees and Mathias Wackernagel and is now part of a broad international network (www.footprintnetwork.org). Religious communities have entered this arena through socially and environmentally responsible investments. Jewish and Christian groups have
collaborated in forming the Interfaith Center on Corporate Responsibility based in New York (www.iccr.org).

In addition to the triple bottom line of economic profit, environmental health, and social well-being, some people are suggesting that spiritual well-being is also an important component of human flourishing. They maintain that the full range of human happiness includes a sense not only of physical health, but also spiritual well-being and happiness. In fact, in Bhutan the Gross National Happiness Indicator has replaced the Gross National Product Index. Developed with Buddhist principles and supported by the King, this notion has gained a wider audience than Bhutan. It is based on a conviction that there is more to social cohesion and individual fulfillment than economic competition and profit making. The Happiness Indicator takes into account other factors. For example, personal spiritual cultivation is encouraged along with community building; the quality of life is seen as more important than the quantity of material possessions; non-material values, such as cultural and ecological integrity, are highly prized. (www.grossinternationalhappiness.org) Because of this, along with many other projects named above, “progress” is being redefined as more than economic growth.

World Religions and the Earth Charter

In discussing the topic of creating a sustainable future with a low carbon society we may need a broader basis for analysis than simply economic indicators of growth. As defined by the Bruntland Commission report, *Our Common*
Future (Oxford University Press, 1988), it is development that meets present needs while not compromising the needs of future generations. This ethics of intergenerational equity is a necessary criterion, but may not be fully sufficient. That is because while it emphasizes balancing environmental and economic growth, it does not always take into account the full range and interaction of human-Earth flourishing. Such a broad context may be enhanced by the contribution of the world’s religions, both in theory and in practice regarding poverty alleviation, environmental protection and climate mitigation. We may be able to draw on shared values as well as diversified practices of the religions. This can be done in relation to the Earth Charter, a major international document drafted in response to the needs for an integrated ethical framework for sustainable development. (www.earthcharter.org)

In terms of general principles and values that the world religions offer to sustainability discussions, they can be described as broadening the category of sustainability to include past, present, and future concerns. In short, large-scale and long-term perspectives will be needed to envision sustainable ecosystems that have developed over billions of years, sustainable living for humans at present, and a sustainable future for all life. These correspond to the central concerns of the Earth Charter and the growing commitments of the world’s religions to ecology, justice, and peace. They correspond to six key “values for human-Earth flourishing” shared by the world religions as they are being challenged to envision a viable future for the Earth community. These values include: reverence, respect,
restraint, redistribution, responsibility, and renewal. These values for human-Earth flourishing were first identified as the result of a three-year conference series at Harvard on World Religions and Ecology from 1996-1998 (Daedalus “Religion and Ecology: Can the Climate Change? Fall 2001).

Harvard Conferences on World Religions and Ecology

The conferences were intended to explore elements of the world’s religions that highlight human-Earth relations in scripture, in ritual, and in ethics. A major goal of the series was to begin a process of retrieving, revaluing, and reconstructing the ecological dimensions of the world’s religions so as to contribute to a sustaining and flourishing future for the Earth community. Over 800 international scholars and theologians of world religions participated in the conferences that included the western religions (Judaism, Christianity, and Islam), the Asian religions (Jainism, Hinduism, Buddhism, Confucianism, Daoism, and Shinto), and Indigenous religions. Ten edited volumes were published by the Harvard Center for the Study of World Religions as a result of these conferences.

Forum on Religion and Ecology at Yale www.fore.yale.edu

The Forum on Religion and Ecology was formed at the culminating conference at the United Nations and the American Museum of Natural History in 1998. It is now based at Yale. Moreover, a major international website was created to assist research, education, and outreach in this area. The website provides introductions to the world religions and their ecological dimensions along with
annotated bibliographies of the books and articles in English on this topic. It also identifies over a hundred engaged projects of religious grassroots environmentalism. It contains a lengthy bibliography on religion and poverty issues. It includes educational materials such as syllabi, videos, CDs and DVDs. (http://fore.research.yale.edu)

Field and Force of Religion and Ecology

One of the outcomes of the conference series at Harvard and the ongoing Forum work is the emerging alliance of religion and ecology both within academia and beyond. Over the dozen years since the conference series began a new field of study has emerged in colleges and secondary schools. Moreover, a new force has arisen within the religions from leaders and laity alike. Both the field and the force are contributing to a broadened perspective for a future that is not only sustainable, but also flourishing.

Within academia, religious studies departments are offering classes in this area: divinity schools and seminaries, focused on training Christian ministers, are including courses (www.webofcreation.org); and high school teachers have developed creative curriculum as well (www.rsiss.net.rsissfore.html). There are graduate programs being offered at Drew University and the University of Florida, as well as a joint Master’s degree program in religion and ecology at Yale. Many environmental studies programs are encouraging the participation of religious studies and the humanities in what have been predominantly science and policy oriented
programs. Moreover, a two-volume encyclopedia on religion and nature has been published and two academic journals have been launched. A Forum on Religion and Ecology was established in Canada, a Society for the Study of Religion, Nature, and Culture has been formed in the United States and a Forum for the Study of Religion and the Environment has been created in Europe.

Within the religions, statements on the environment, on climate change and on eco-justice have been released by the major world religions and indigenous traditions. Leaders such as the Ecumenical Patriarch, the Pope, and the Dalai Lama have spoken out regarding the urgency of these issues. The Patriarch, Bartholomew, has presided over six international symposia focused on water issues and more recently climate change (www.rsesymposia.org). Rowan Williams, the former head of the Anglican Church in England has written sermons on this topic (www.archbishopofcanterbury.org) and the US Presiding Bishop for the Episcopal Church, Katherine Jefferts Schori, has testified before Congress on the risks of climate change. Ministers and lay people are organizing projects such as fighting mountain top removal, educating children in ecology, conserving energy in the Interfaith Power and Light project (www.theregenerationproject.org). Many of these activities are depicted in the film, Renewal that features eight case studies of religious environmentalism across the United States (www.renewalproject.net). The Catholic nuns around the world have been especially active in projects on sustainable agriculture and ecological literacy (www.sistersofearth.org, www.genesisfarm.org,
Green Sisters: A Spiritual Ecology, by Sarah McFarland Taylor, Harvard University Press, 2007). In addition, in the U.S the National Religious Partnership for the Environment has been working for fifteen years with Jewish and Christian groups in the United States (www.nrpe.org), while the Alliance for the Conservation of Nature in England has established numerous ecological projects around the world (www.arcworld.org).

As this field and force has expanded there is a growing recognition from many quarters of the importance of the participation of the religions in environmental programs and concerns, such as climate change. For some years, for example, scientists have been asking for the religious communities to play a more active role in environmental issues. They recognize the large number of people around the world who are involved with religions. There are one billion Muslims, Christians, Hindus, and Confucians, respectively. They observe that moral authority has played an important role in many transformations of values and behavior, such as the abolition of slavery in 19th century England and in civil rights by Martin Luther King and other religious leaders in the United States and South Africa in the 20th century.

Support of Scientists and Policy Makers:

Moreover, scientists such as E.O. Wilson have called for an alliance between religion and science in a shared concern for the future of the environment. This was articulated in A Warning to Humanity in 1992 and more recently in Wilson’s book, The Creation: An Appeal to
Save Life on Earth (Norton, 2006). Similarly, the biologists Paul Ehrlich and Donald Kennedy have proposed a Millennium Assessment of Human Behavior (Science 2005). In addition, policy think tanks, such as Worldwatch Institute in Washington DC, have encouraged the role of religions. One of their principal researchers, Gary Gardner, has published a chapter on this topic in the State of the World report of 2003 and a book called Inspiring Progress: Religious Contributions to Sustainable Development (Worldwatch Institute, 2006). Moreover, the policy expert and former Dean of the School of Forestry and Environmental Studies at Yale, James Gustav Speth has also called for the participation of the world’s religions in his book, Bridge at the Edge of the World (Yale University Press, 2008).

While religions have their problematic dimensions, including intolerance, dogmatism, and fundamentalism, they also have served as well springs of wisdom, as sources of moral inspiration, and as containers of transforming ritual practices. Thus their tendency to be both conservators of continuity and agents of change are both apt descriptions. Religions have always played this role of conserving and transforming, balancing the dynamic tension of continuity and change for cultures over long spans of time. Indeed, human cultures are profoundly shaped by this dialectic and civilizations endure by navigating the delicate balance between tradition and modernity. Moving too deeply into traditional ways leads to fossilization and fundamentalism, while going too far
into modernity can lead to superficial and inadequate responses to change.

**World Religions and Climate Change**

It is now becoming clear that a further step for the alliance of religion and ecology is in the area of climate change and a low carbon future. The Forum on Religion and Ecology at Yale has collected major statements of the world religions on the ethics of climate change (www.fore.yale.edu)

The essential question is what does the flourishing of the Earth community require so as to create a low carbon society? Here are some suggestions from the perspective of ethics and values.

1) **Intrinsic Value of Nature and the Common Good**

Recognizing nature’s intrinsic value is foundational for creating a sustainable, low carbon future. Nature is not just an economic resource, but the source of life for present and future generations. Thus we need to consider the common good of the Earth community – humans, other species, land, water, air and future generations. It means valuing the inherent beauty and complexity of nature. This sensibility is a shared concern of both religion and science.

2) **Environmental degradation as an ethical issue**

To reverse the role of humans in destroying the environment and polluting the atmosphere is not only an economic issue but a moral concern as well. Adversely
affecting ecosystems, causing biodiversity loss, and contributing to species extinction will require an extension of ethical concern to the rights of nature as a whole and to individual species. The Ecumenical Patriarch, Bartholomew has already spoken out against “crimes against creation” naming them “ecological sins”. A Catholic Bishop in Canada has called for the halting of the extraction of oil in the tar sands in Alberta and the Bishops in the Philippines have made a plea for the cessation of mining and logging as the land is being devastated and the air and water polluted.

3) Environmental rights for present and future generations

It will be necessary to expand the notion of human rights to include environmental rights to a healthy atmosphere and biosphere for present and future generations. To do this we need to consider the rights to information, public participation, and justice regarding environmental issues. This was set forth in the Aarhus Convention in 1994 and it needs to be revived as a moral right.

4) Distributive justice

We will need to consider our moral responsibilities to the poor and those most vulnerable to the effects of climate change: the millions of impoverished people in the coastal region of Bangladesh and many other parts of Asia, the 100,000s of African-Americans in New Orleans after Hurricane Katrina, the elderly in Europe during the summer heat wave of 2004 where some 50,000 people died. This notion of distributive justice clearly requires further reflection on our moral obligation to people at a distance. The group of Small Island Nations in the UN is already suing the developed countries, as their citizens are
becoming climate refugees. Tuvalu citizens are being relocated to New Zealand.

5) Precautionary principle (Source oriented)

We need to invoke the precautionary principle or principle of prudence as a means of stemming global warming. Cap and trade (Nicholas Stern) or a carbon tax (Jim Hanson) are no doubt necessary economic incentives, but we need to develop a deeper sensibility regarding cutting back emissions at the source. We need to see this as a moral responsibility.

6) Unintended consequences (Long-range orientation)

Examining unintended consequences of various proposed solutions to climate change is becoming crucial, especially in terms of geo-engineering. This requires incorporating long term ethical thinking to envision a broader range of variables, outcomes, and unintended consequences. (bio-fuel and the food crisis)

7) Renewable energy

The development of safe renewable energies is of utmost urgency as we make a shift from use of fossil fuels to energy from sun, wind, water, and geothermal power.

8) Technology transfer

Along with this is the obligation for transferring appropriate technology to developing countries to assist climate change mitigation or adaptation. As we develop alternative energy and technology in the U.S. and the industrialized world, how can we find the economic means and political will to transfer this knowledge to developing countries?
9) Consumption/ Affluence

We need to examine issues of over-consumption and high levels of affluence as factors in contributing to global warming (4% of the world's population, the U.S., contributes to 25% of greenhouse gases) How can life style change be seen as a moral issue? As the head of the IPPC, R. K. Pauchauri, suggests, eating less meat will help reduce greenhouse gases. This will also involve re-examining our carbon footprint, our building patterns, our transportation systems, our development plans, our clothing manufacturing, and most especially our agricultural processes, which are fossil fuel depend for fertilizers.

10) Population growth

How can the issue of population growth be raised in conjunction with consumption as a moral issue? The planet has limits clearly and this is a key moral challenge.

Contributions of Religious Values and the Earth Charter Toward a Sustainable, Low Carbon Future

We are at a moment of immense significance for the future of life on the planet and thus the world’s religions may be of assistance as they move into their ecological phase. The common set of values for human-Earth flourishing identified from the Harvard conference series on World Religions and Ecology can be seen as compatible with the ethical principles of the Earth Charter. These values include: reverence and respect, restraint and redistribution, responsibility and renewal. Recognizing the complementary nature of these two ethical frameworks
may be helpful for linking religion, ethics, sustainability, and a low carbon future.

**An Overview of the Earth Charter**

The Earth Charter is both a document and a movement. It draws on scientific knowledge, legal principles, sustainability practices, ecological economics, the precautionary principle, and equity issues. In its decade long drafting process, it involved thousands of individuals and groups from around the planet and is the most inclusive civil society document ever negotiated. As a people’s treaty it is a soft law document that is complemented by hard law of international covenants and laws. It has been endorsed by such international agencies as United Nations Educational Scientific and Cultural Organization (UNESCO) and the International Union for the Conservation of Nature (IUCN), the largest body of conservationists in the world. It is also endorsed by thousands of individuals and groups as well as by a number of countries and cities. The implications for the application of the Charter is seen in the *Earth Charter in Action*, a book of inspiring stories from around the world – ranging from youth to civil servants and government officials ([www.earthcharterinaction.org](http://www.earthcharterinaction.org)).

The Charter was drafted by an international committee chaired by Steven Rockefeller from 1996-2000. A distinguished group of international figures served as Earth Charter Commissioners for the drafting process and now an Earth Charter International Council guides the activities of
the Charter. There is a Secretariat and a website based in Costa Rica at the University for Peace.

The Charter offers a comprehensive framework for revisioning sustainability as balancing the needs for economic development with environmental protection. It presents an integrated set of principles to guide our emerging planetary civilization that is multinational, multicultural, and multi-religious. It provides a platform for universal commitment to the flourishing of bio-social planetary life systems along with differentiated responsibilities. There is no other global ethics that can point us toward a framework for a low carbon society.

The key components of the Earth Charter are: 1) cosmological context, 2) ecological integrity, 3) social equity, 4) economic justice, 5) democracy, 6) non-violence and peace. These six components of a sustainable future have their counterparts in the values for human-Earth flourishing that are shared among the world’s religions as identified in the Harvard conference series. These values include: reverence, respect, restraint, redistribution, responsibility, and renewal. A planetary future that is “flourishing,” not simply “sustainable,” will be enhanced by the six components identified by the Earth Charter along with these six values of the world religions. Such a framework that integrates values for flourishing of the world’s religions with the central component of global ethics in the Earth Charter may be an important context for expanding sustainability principles and practices.

Cosmological context:
All cultures have been grounded in the stories they tell regarding the nature of the universe, the evolution of the Earth and of life, and the destiny of humans in this context. These cosmological stories provide accounts of the creation and evolution of life and the purpose of humans. As humans are currently trying to navigate their way between scientific accounts of evolution and the multiple religious stories of creation, the Charter articulates a broad, simple and inclusive sensibility that Earth is our home, our dwelling place.

This enlarged perspective of home may be a critical foundation for articulating a future that is both sustaining and flourishing. The Charter recognizes that we are part of a large family of life, including not only other humans but also other species. The interdependent quality of the Earth community is celebrated along with the fact that the conditions for life have been evolving for billions of years. “Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life’s evolution.”

Thus to speak of the broadest context for the flourishing of bio-social systems we need to be reminded of the cosmological, evolutionary story of life’s emergence. The religious response to this is one of reverence, a quality shared by many scientists who are deeply inspired by their study of nature from cells to galaxies, enhanced now by powerful microscopes and telescopes. The intricacy and complexity of life is valued from both a spiritual and a
scientific perspective. Awe and wonder become expressed through the shared experience of reverence.

Ecological integrity:

The broad context for a sustaining and flourishing future from the Earth Charter is preserving ecological health and integrity. Without such a basis for healthy ecosystems there can be no long-term basis for the continuity of human life. It is expressed succinctly in the Preamble as follows: “The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clear air.”

The response of the religious communities to this call for biological protection is the principle of respect for the rich diversity of life and the ecosystems that support life. Without such respect environmental exploitation will continue and we may irreversibly damage the ability of ecosystems to renew themselves. This is further spelled out in the Charter as protecting and restoring Earth’s ecosystems, preventing harm through the precautionary principle, adopting effective patterns of production, consumption and reproduction, and advancing the study of ecological sustainability.

Social and economic justice:

The next section of the Charter highlights social and economic justice that are also key concerns of the world’s religions. The religious virtues of restraint in use of
resources, as well as redistribution of wealth through charitable means, complement the Charter’s principles. All of the world’s religions encourage moderation in personal behavior as well as in the accumulation or use of material goods. In addition, the world’s religions express a strong concern for the suffering of the poor and for inequality between the wealthy and those in need. Charitable giving is valued as a fundamental religious act.

The Charter calls for eradicating poverty, equitable development, gender fairness and non-discrimination regarding minorities and indigenous people. Thus justice is seen as balance of ecological, economic, and social factors. The term that many of the religions are using to describe this is “eco-justice” where biological and human health is seen as indispensable to one another. Indeed, preserving ecological integrity and protecting social and economic justice will require an integrated understanding of human-Earth relations.

In addition to restraint and redistribution, a broadened sense of ecological virtue is required. Women who do so much unpaid work to sustain their families, especially in developing countries, need to be valued and respected. The same applies for other minorities and for indigenous peoples who have preserved valuable environmental knowledge in many parts of the world. While the religions still have a ways to go in recognizing the dignity and value of women and the communities of indigenous peoples, some progress is being made in this regard.

Democracy, non-violence and peace:
Finally, the Earth Charter recognizes that democracy, non-violence and peace are necessary ingredients for a sustaining and flourishing future. From the perspective of the religious communities, democracy requires a fundamental sense of responsibility to future generations of the community of life - human and more than human. Non-violence and peace encourage the renewal of inner and outer peace, something that the religious communities have tried to foster for millennia. Spiritual practices such as prayer and contemplation, yoga and tai ch’i, ritual and rites of passages have been developed to foster peace and non-violence for individuals and communities. Of course, it should be noted that non-violence has not always been practiced, but it is one of the reasons why Mahatma Gandhi, Leo Tolstoy, and Martin Luther King are so widely admired. The principles in the section of the Earth Charter are: strengthening democratic institutions, promoting sustainability education, respecting animals, and promoting a culture of non-violence and peace.

**Conclusion:**

This integration of the principles of the Earth Charter with the virtues for human-Earth flourishing of the world’s religions provides a unique synergy for rethinking a sustainable future. Such a synergy can contribute to the broadened understanding of sustainability as including economic, ecological, social, and spiritual well-being. This broadened understanding may be a basis for long-term policies, programs, and practices for a planetary future that is not only ethically sustainable, but also sustaining for
human energies. For at present we face a crisis of hope that we can make a transition to a viable low carbon future for the Earth community. The capacity of the world’s religions to provide moral direction and inspiration for a flourishing community of life is significant. The potential of the Earth Charter to create an ethical framework for sustainable plans and practices is considerable. Together they may provide a comprehensive grounding for creating a common and shared future.