

GLOBAL CLIMATE CHANGE: **The most critical challenge in the 21st century** *Reflections from the Maryknoll Office for Global Concerns*

Climate change refers to a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods – United Nations Framework Convention on Climate Change

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Introduction

Scientific evidence of climate change has been accumulating for over two decades. Indisputable evidence exists that Earth's climate warmed by one degree last century, that the 20th century was the warmest in at least 1,000 years, and that the main cause has been an increase in greenhouse gases, primarily carbon dioxide – from 280 parts per million (ppm) in 1860 to 380 ppm in 2004. Burning of fossil fuels, particularly coal and oil, has been the single most instrumental factor in these climatic events.

The tremendous loss of habitat and biodiversity and the severe disruptions to human societies that will result make climate change the most critical challenge facing not only humans but all living species. In 2007 the United Nations Intergovernmental Panel on Climate Change (IPCC) issued a dire assessment, projecting, among others, the following severe consequences:

- More “freak” weather conditions such as hurricanes, floods and droughts.
- Massive displacement of populations in the worst-affected areas.
- Potentially enormous loss of life.
- Greater risk from diseases like malaria as the mosquito widens its reach.
- Extinction of entire species as their habitat is wiped out.

Only humans have the capacity to prevent these threats to human and other biological existence. As people of faith we wish to join our voices with those of many others calling for

radical change in human behavior. Addressing climate change is most fundamentally a moral and spiritual issue. We have entered a new human epoch that can correctly be called a *kairos* moment, that is, a moment in which we must take a stand, and commit to far-reaching actions that will preserve and sustain our planet.

Scientific discoveries have enlightened us with the awe-inspiring knowledge of the universe's 14 billion year evolution to innumerable galaxies and solar systems, and of our own planet's four and a half billion year evolution to its current status as a stable, balanced, life-giving biosphere. We cannot know if ours is the only planet that has evolved complex animal species. However, given the extremely unlikely series of fortuitous events that have occurred in planet Earth's evolution, we can conclude that planets such as ours are very rare. Therefore, Earth must be cherished, protected, and preserved. As people of faith, we use the word sacred to describe our planet.

Yet, despite its permanence and stability, there is a fragility to our planet, at least with regard to the life of species. Geological evidence indicates that, in the past, periodic climatic changes have occurred very rapidly. It is becoming increasingly clear that current climate change is due primarily to human behavior. The eventual outcome of risky human behavior can not be definitively predicted, but it is undeniable that humans are engaged in a reckless gamble with the environment. It has been said that, "If you want to travel to a different planet, just live on Earth to the year 2100."

Voices from around the world

Maryknoll missionaries living in many different countries report dramatically changing weather patterns and an increase in extreme weather events. From Kenya, Guatemala, Cambodia, Bolivia, East Timor, Tanzania, Mexico, Nepal, the United States, and beyond, their stories - some anecdotal, others grounded in careful research - help give shape to the widespread concern about global warming/climate change. The following are excerpts of what Maryknoll missionaries have seen and heard. They are available in full at www.maryknollogc.org/ecology.

- In Kisii, Kenya, people living at high altitudes are dying from malaria. Mosquitoes are surviving at higher elevations than ever before and are infecting communities with little or no resistance to the disease. In the north and east of Kenya concern is widespread that climate change is increasing the frequency and severity of droughts.
- In the Peten of Guatemala, the Mayan people are no longer able to depend on the rains coming when they should for the planting of crops and when the rains do arrive, they often don't stop on time and the crops are ruined. Indigenous farmers also are confronted with plagues of field mice and worms, and dry periods are longer, threatening water supplies.
- In Bolivia, what were once the world's highest ski slopes and an important Andean glacier and only source of fresh water, are now nothing more than two rapidly dwindling patches of ice; ground water levels have risen; and the winds are much stronger in the Cochabamba valley.
- In Nepal, excessive melting of glaciers on the world's tallest mountains is resulting in flooding, erosion, a decrease in water supplies and in glacial lake outbursts.
- Cambodia's "dry forest" region is rapidly disappearing because of human encroachment, illegal cutting, and inadequate administrative protection.
- Parts of the United States have seen increasingly severe storms with huge amounts of precipitation and terrible flooding; others are experiencing extremes of heat or cold,

increased wildfires, drought, melting glaciers, water shortages, dust storms, increased soil erosion and runoff; decreased livestock productivity; increased risk of infectious disease; alterations in wetlands and more.

Principles that guide our way forward

We stand at a critical moment in Earth's history, a time when humanity must choose its future...We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations. (Earth Charter)

As in all Maryknoll reflections on major issues of the day, Catholic Social Teaching (CST) has been the bedrock of our deliberations. It has shaped the content and direction of our policy statements. CST, in turn, since its inception over 100 years ago, has drawn its inspiration and guidance from a number of sources, among them: the scriptures and tradition, the wisdom of respected theologians, ethicists, and Biblical scholars, as well as the lived experience of the Christian community. One can say that CST as enunciated by the leadership in pastoral letters, in encyclicals and various writings reflects most faithfully the continuing discernment process, recommended for all Christians at Vatican II, to read the “signs of the times” and see in the signs the workings of the Spirit guiding and inspiring the faith community in its struggle to walk the Gospel way of life in the world.

In fact, it is in light of reading these very “signs” that today the “social” teachings of the past, which have focused exclusively on people and how their human affairs should be conducted, are now expanding to include a new reality, an “ecological” dimension. This is a broadening realization for many, that the whole of the natural world –not just the human population– is the true context within which we exist. Air and water, forests and mountains, meadows and wetlands, animals and plants are our primary community. The well-being of this whole life community must become the focus and concern of our ongoing discernment. It is this understanding that suggests Catholic Ecological Teaching (CET) as the more appropriate context to discern a Christian way forward.

People of faith determined to create a more just and peaceful future for the entire Earth community are challenged by Thomas Berry to move from a “devastating presence on the planet to a benign and mutually enhancing presence.” (*Evening Thoughts*) Our goal becomes a flourishing Earth community within which all members thrive and fulfill their unique role to sustain and ensure the well-being of the whole.

It is with this background that the following principles are offered as guidelines for our appropriate response to global climate change.

Principle #1: The good of the commons/The common good

The common good is the sum of the conditions of social life which are necessary for individuals, families and nations to achieve their own fulfillment, conditions which can only be achieved together. (Gaudium et Spes)

To bring this foundational principle of CST into better focus for our present purposes and to be faithful to our reading the “signs of the times,” we now speak of the “common good” as the “good of the commons.” It is the “common good” plus. This language reflects the

growing realization that, in fact, it is the good of the whole created order, the commons, which must be sustained in order for humans and the rest of the Earth community to have a viable future. There can be no separate “good” for the human community divorced from healthy air, clean waters, fertile soils, vibrant plant and animal life and all the other wondrous, hidden ways Planet Earth sustains itself. It is indeed a “web” with each strand making its essential contribution to sustain the whole. Thus, the good of each expression of the created order becomes normative in our reflections.

Therefore, we are filled with alarm as we awaken daily to new evidence of the deleterious impact human activity, the source of catastrophic climate change, is having on ancient survival patterns everywhere on Earth. A radical shift in human consciousness and subsequent human activity are necessary to address the challenges of global climate change. New and concerted efforts to bring about the essential changes in direction are required of governments, international institutions, multinational companies, religious bodies, churches and as a critical first step, within our own hearts and lived realities. Each of us and all of us together can make a significant difference.

Principle #2: Participation and solidarity

Humanity is part of a vast evolving universe... alive with a unique community of life... The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust. (Earth Charter)

One of the recurring themes throughout Catholic Social Teaching is the right and responsibility to participate in decisions that affect one's life. This means being able to play an active role in shaping the political, economic, social, cultural, educational and religious institutions that constitute public life. Participation is recognized as a basic human right. Too many people, especially those who are made poor, are excluded from the decision-making process, and Earth, in all its magnificent expressions, is paying a heavy price for the extravagance of the few.

L'Osservatore Romano, the official Vatican newspaper, carried an editorial that asserted that ecological crises pose “a bigger global threat than terrorism.”
(National Catholic Reporter, January 12, 2007)

Pope John Paul II defined the virtue of solidarity as a firm and persevering determination to commit oneself to the common good. Expanding this concept to the “good of the commons” as noted above in principle #1, requires respect for the integrity of creation – human and other-than-human. The virtue of solidarity recognizes the need for building and preserving right relationships on all levels and the acknowledgement of the interdependence of all beings, nations and peoples. Solidarity calls for a different world view and mindset, one that understands that human beings create and can change social, cultural and political structures that impede healthy societies and sustainable ecosystems. (National Catholic Reporter, March 13, 2007)

With regard to global climate change, the principles of participation and solidarity take on an added dimension since its destructive impact is being felt with increasing intensity by the whole created order. Daily we awaken to the intimate and critical relationship that knits together the natural world, including human beings, and realize as never before our absolute dependence upon the integrity and well-being of all of creation.

Each species, each dimension of the planet, makes its unique contribution to the good of the whole. Therefore, when we see the following tragedies we can no longer separate ourselves from them:

- Magnificent polar bears struggling to survive as ice floes melt away
- Essential food grains indigenous in northern zones disappearing as temperatures rise
- The spread of tropical diseases to new and more extensive areas
- Extremes of weather destroying ancient mangroves, flooding the land, and devastating the landscape

Our survival is intimately connected to the survival of the other species of the planet! We can no longer exclude the rest of the Earth community from participating in shaping our common future. Rather, we must align ourselves with all the innocent victims who bear testimony to the destructive impact of human actions and recognize their “right” to help shape how Planet Earth will be sustained into the future. It is the responsibility of human beings “in whom this grand diversity of the universe celebrates itself in conscious self-awareness” (Berry, *Dream of the Earth*) to promote the sustainability of the fish and the forests, the seas and the soils, the birds and the bees and to ensure that each species is represented in the public discourse. We can no longer maintain a posture that separates human well-being from the rest of creation or fail, as a species, to be life-sustaining members of the whole community. Catholic Ecological Teaching is expanding our sense of community and awakening in us a sense that to lose the song of the bird or the cry of the wolf or the design of the butterfly wing or the shape of a rose petal is to lose a face of the divine. This cosmological moment of grace is indeed a *kairos* moment that should not be lost – either for the sake of today or for the sake of the generations to come!

Principle #3: Accountability

The principle of accountability is of critical importance to the integrity of any undertaking and is not negotiable. Accountability, as we understand it, presumes an open, transparent process on the part of those who make decisions in our name so that we can be confident they have accurate, current information and are guided by an enlightened moral posture. Accountability, if it is to be trusted, requires that all who are involved in a particular matter have been included in the negotiations at hand. In the matter of climate change, accountability must be extended to the natural world along with the human family. To create an open universal system where the flourishing of the human spirit and the flourishing of the rest of creation are measured hand-in-hand will be an immense project but it is the only way forward.

We can take hope in what Thomas Berry says are the two things needed “...to guide our judgment and sustain our psychic energies for the challenges ahead: a certain alarm at what is happening at present and a fascination with the future available to us if only we respond creatively to the urgencies of the present.”

Pope Benedict XVI and Patriarch Bartholomew I of Constantinople stated: “In the face of the great threats to the natural environment, we want to express our concern at the negative consequences for humanity and for the whole of creation which can result from economic and technological progress that does not know its limits.” As religious leaders, we consider it one of our duties to encourage and to support all efforts made to protect God's creation. (Common Declaration, November 30, 2006)

(The Great Work)

Principle #4: Sufficiency

We are at once citizens of different nations and of one world in which the local and global are linked...The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature...We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. (Earth Charter)

Sufficiency, part of the Jubilee tradition and an essential element in addressing global climate change, is a mind set, a way of being, of understanding the world that underpins Earth's reality. It implies and accepts two concepts as operative –“enough” and “limitation.” These concepts are drawn from the cycles of the natural world where each species has a right to exist and draws what it needs for life from its surroundings...enough, this much and no more. It is recognition of the rule of interdependence, each species engaged with and dependent upon the continued existence and well-being of others. To maintain this essential balance, limitation is built into the system. For thousands of generations, humans also lived within these natural limits.

In today's world, however, because of sheer numbers and the dominating power of human technology, Earth's delicate balance has been upset and a culture of “enough” has been eroded, replaced by “bigger and better,” “more of everything,” no “limits to growth.” Earth's treasures are regarded as “resources” meant for human consumption. In the global market place, they are labeled “externalities,” not accounted for in the cost of production. To use, and all too readily, to abuse has become a way of life designed to benefit the few at the expense of all others in the community of life. It is a kind of insanity that threatens the very future of the planet.

To live and to legislate by the rule of sufficiency becomes an overarching challenge, inviting us to develop a new ethical stance toward the natural world order and our own role within it. Only in doing so will we ensure a truly sustainable future enhancing all forms of planetary existence.

Signs of hope along the way forward

While acknowledging the gravity of the effects of climate change, we see many signs indicating that people are becoming aware of the impact human actions are having on global climate, the need to take immediate steps to mitigate the effects of these actions, the urgency of finding alternatives to destructive behaviors, and the necessity of developing adaptations to the inescapable impact of global climate change.

Changes are happening on local, regional, and international levels. The following are a few examples of the work being done by Maryknoll missionaries:

- **Fr. Frank Higdon, Joao Pessoa, Brazil**, serves with the Church's Pastoral Land Commission for the protection of the rain forest and indigenous peoples' rights.
- **Sr. Margarita Jamias, Baguio, Philippines**, models a zero waste project and teaches neighborhoods how to create and implement recycling centers.

Human dignity can be recognized and protected only in community with others.
(Peace on Earth)

- **Lay Missioner Phil Dahl-Bredine, Oaxaca, Mexico**, works in the Farmer-to-Farmer program for sustainable agriculture and watershed recovery and preservation.
- **Srs. Noreen McCarthy and Rachel Kunkler, Iringa, Tanzania**, direct an intermediate technology education center for alternative methods of securing water and generating electricity.
- **Sr. Jocelyn Fenix, Darien, Panama**, uses her skill as a medical doctor to help people find and cultivate medicinal plants and gives workshops on organic agriculture.
- **Lay Missioner Maruja Gutmann-Gonzalez, Vilches, Bolivia**, teaches at the Center for Spirituality connecting Earth, health and spirituality.
- **Fr. Herb Gappa, Bariadi, Tanzania**, spent more than 20 years inspiring his parishioners in the work of preserving and enhancing the forest watershed and Bariadi River
- **Srs. Janet Miller and Doreen Longres, Maryknoll, NY**, facilitated the drafting of the Maryknoll Sisters Land Ethic and are engaged in implementing Earth-friendly, environmentally sustainable practices at the Maryknoll Sisters Center.
- **Sr. Aurelia Atencio, Prelature of Juli, Peru**, works with indigenous farmers in organic farming to create a seed bank.

The United Nations and NGOs are at the forefront of discussions about climate change and the need for the people of the Earth to find more sustainable ways of living on Earth. The Intergovernmental Panel on Climate Change is the international, interdisciplinary group that is considered to be the definitive source on climate change/global warming.

The latest report of the Intergovernmental Panel on Climate Change affirms that global warming is caused by human action and will have its greatest impact on poor people who are the least responsible for carbon emissions.

Nobel laureate Wangari Maathai of Kenya and Prince Albert of Monaco are spokespersons for a UN Environment Programme (UNEP) initiative to plant a billion trees to reforest the globe and help mitigate global warming (trees turn greenhouse gas carbon dioxide into oxygen). To date there are pledges to plant over 600 million trees.

The UN has tried to develop the Clean Development Mechanism whereby countries can off-set their emissions by investing in clean development projects in developing nations. While controversial and open to charges that it allows highly industrialized nations to continue emitting greenhouse gases, it is an attempt to make polluting nations pay by supporting development in low emissions nations.

In the **United States**, although the president and congress have not shown leadership on global climate change issues, ordinary citizens, municipalities, states and the courts are moving ahead. As of April 2007, about 460 mayors had signed the Mayors' Climate Protection Agreement, thereby signaling their municipalities' intention to reduce their greenhouse gas emissions to seven percent below 1990 levels by 2012, that is, they intend to meet the standards mandated for the U.S. by the Kyoto Protocol. The Sierra Club has provided resources and support for local citizens' groups to encourage their local officials to sign onto the Agreement.

The state of California leads the U.S. in setting goals to reduce their greenhouse gas emissions to 1990 levels by 2020 and to 80 percent below 2006 standards by 2050. While California's goals are the most stringent, a number of other states have developed or are developing emissions reduction plans.

States in the west and in the northeast/mid-Atlantic regions have formed regional consortiums to work on common emissions goals and cap and trade emissions reduction programs.

Federal judges have acted to sustain environmental law already established. The Supreme Court has authorized the Environmental Protection Agency to regulate emissions of greenhouse gases contrary to the agency's former interpretation of its mandate.

Global corporations are realizing that global climate change threatens business as usual and provides opportunities for innovative corporations. (We note their statements only as a measure that the awareness of global climate change and its consequences is high, not as an endorsement of their business practices).

The Global Roundtable on Climate Change, a group of officials from international corporations, NGOs, and other organizations met together to discuss climate change and its impact. They issued a statement calling climate change "an urgent problem" and called for action to curtail greenhouse gas emissions and develop new energy technologies.

The Pew Center's Business Environmental Leadership Council (BELC) comprises 42 corporations which are committed to addressing climate change.

Ministers for the G8 are expected to put pressure on the U.S. to change its resistance to addressing climate change.

It is our hope that these examples signal a growing consensus/understanding that we are all part of an interrelated, fragile community of life that has developed together on Earth. Global climate change challenges us to recognize that we are one Earth community with a common destiny.

Recommendations

We began by saying that we are joining our voices with many others calling for radical change in human behavior. The Earth Charter states in stark terms that we face a critical moment when humanity must choose its future. In order to mitigate the worst effects of global climate change and adapt to those we can no longer avoid, the changes required will necessarily impact our personal, social, economic, and political lives. It is within these varying but interlocking aspects of our lives that we must find the ethical and moral framework, the spiritual values, and appropriate actions to address this great work of our time.

First of all, we must learn again to love this Earth, to take time to be present to the beauty and mystery of the planet that is our home. It is within this amazing but damaged biosphere that we live and move and have our being. We cannot destroy it without destroying the life it holds within it. Contemplation of the sacredness of Earth is one step towards changing our presence from threat to healing.

Secondly, we must learn to live within this fabric of life - taking no more than we need and putting no more burden back out than the Earth can bear. In our personal, family, and community lives, we must begin to move back into balance with the real limits of the Earth. This will impact how we consume, what we consume, and what we put back into the land, the water, and the atmosphere.

Thirdly, we must educate ourselves to the global climate crisis and to take action in whatever way we can. Participating in workshops or classes, joining groups or campaigns working to stop global warming, asking legislators to support strong environmental policies, and leading or sharing in dialogue and reflection within our own faith communities, families, and neighborhoods - all of these activities can make important contributions towards slowing down, and ultimately reversing, the drivers leading to climate change.

Finally, sharing our concerns, reflections, and actions with others can help move our consciousness to a more integrated way of understanding the natural world as we work to reframe our traditional CST within the perspective of this Earth that is our home.

Final thoughts

This is a *kairos* moment, a moment of awakening to a new level of understanding that draws us to assume responsibility for human actions deleterious to the interconnected life of the whole planet. We are challenged to an ethical stance toward the natural world and our role in it. Our survival is intimately connected to the survival of the other species of the planet. Beyond this, we sense that we are summoned to allow the integrated nature of the natural world to lead us to a transformed view of how God is among us, in communion with all that exists. We are called by the Spirit to embrace wisdom at a new depth. To have wisdom is to know how to live. May we empower each other in meeting the call of the Spirit at the present time.

For references please see the Global Concerns website: <http://www.maryknollogc.org/ecology/>