



# CHANGING THE CLIMATE OF CHRISTIAN INTERNATIONALISM: GLOBAL WARMING AND HUMAN SUFFERING

By Noah J. Toly

**T**his summer's movie lineup included the usual number of would-be blockbusters. But for every *Shrek 2*, there was a *Terminal*, and for every *Spider-Man 2*, there was a *Day After Tomorrow*. This last, an apocalyptic natural disaster film, was widely acknowledged as an artistic and commercial disappointment. While no single shortcoming can be credited with its failure, its unscientific climatic hyperbole warranted a great deal of criticism. The extreme weather and rapid changes in climate portrayed in the movie are not forecast for the day after tomorrow. We may rest assured, for example, that the "conveyor belt," an Atlantic current of warm water keeping Northern and Western Europe habitable, will not cease to operate in the next year, or even in the next few decades. In fact, a global ice age, while thought to be related to earlier periods of warming, is not an anticipated effect of contemporary climate change, as the massive amounts of fresh water required to significantly alter ocean currents simply do not exist any longer, and any cooling effect of a minor modification would be offset by the overall warming trend.

The rapid onset and order of magnitude of environmental degradation and human suffering portrayed in *Day After Tomorrow* are part of the Hollywoodization of environmental

hazards with which we are all too familiar. Yet we should not hastily dismiss climate change as just another *cause celebre* pushed by "environmentalist wackos" (to borrow the bombastic phrasing of Rush Limbaugh). Climate change does indeed rank among the most important challenges we face in our rapidly globalizing world, not only presenting particularly pressing environmental difficulties, but also possessing immense human dimensions.

In his 1970 book, *Pollution and the Death of Man*, Francis Schaeffer presciently addressed some of these dimensions: "Modern man has seen that we are upsetting the balance of nature and the problem is drastic and urgent. It is not just a matter of aesthetics, nor is the problem only future; the quality of life has already diminished for many modern men. For the future, many thinking men see the ecological threat as greater than that of nuclear warfare."<sup>1</sup> Happily, the threat of global nuclear war is greatly diminished since the time Schaeffer wrote these words. The same, unfortunately, cannot be said of the risks established by ecological crisis.

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In a recent contribution to *Science*, David King, Chief Scientific Advisor to Her Majesty's Government, went so far as to argue that "climate change is the most severe problem that we are facing today—more serious even than the threat of terrorism."<sup>2</sup> Notwithstanding these dire warnings, global environmental concerns garner little attention in the Christian international affairs community, which appears to be primarily concerned with questions of conflict and the persecuted church. Environmental questions seem lost in a sea of concern for these contexts of human suffering and a desire to bring theological resources to bear upon them. What little attention is granted to environmental concerns is most often expressed in terms of economics (asking, for example, "What is the most efficient means of pollution control?"; "Who will pay for controlling pollutants?") or security ("Is dependence on oil undermining the battle against terrorism?"), with little regard for the human suffering mediated by environmental conditions.

### The Human Factor

Contemporary ecological crises are distinguished from earlier manifestations of environmental change by their *human* dimensions. Both human origins and consequences set apart phenomena such as biodiversity loss, deforestation, desertification, and climate change. The latter is especially disturbing, demonstrating both an increased scope and scale for human intervention in ecological systems and processes, and an increased impact upon human populations.

While evidence of climate change has only recently emerged, the phenomenon is far from novel.<sup>3</sup> Geological records indicate previous dramatic shifts in global average surface temperature, which were accompanied by associated changes in regional and local climates.<sup>4</sup> These shifts have been attributed to various natural causes and feedback loops related to, among other phenomena, slight shifts in the orbit of the earth, variability in solar irradiance, dramatic changes in the reflectivity of the planet, and volcanic activity.<sup>5</sup> The analogous contemporary phenomena of global

warming and climate change, however, are set apart by increased impact upon human populations, and likely also by "anthropogenesis," the human origins of the crisis itself.

The evidence that the earth is warming is overwhelming; over the past 100 years, an increase of 0.6° Celsius in the average global surface temperature of the earth has contributed to highly differentiated deviations from normal weather patterns across the globe.<sup>6</sup> However, while the phenomenon itself is generally incontrovertible, the causes of climate change have been hotly debated. A not insignificant minority of the scientific community disputes the anthropogenic character of contemporary climate change, arguing instead that the phenomenon is natural in origin. Still, the clear balance of scientific opinion and evidence does implicate significant human contributions. Since the emergence of climate change as a field of inquiry in its own right, compelling evidence has been found to support the notion of anthropogenesis. The Intergovernmental Panel on Climate Change (IPCC),<sup>7</sup> a consensus-based international scientific community dedicated to understanding the origins and implications of global warming, has demonstrated a high level of concurrence on the anthropogenic elements of the phenomenon, attributing its development to two chief causes: land use change and increased greenhouse gas (GHG) emissions.<sup>8</sup> Releases of sequestered carbon, alterations in the capacity for carbon sequestration, changes in the reflectivity of the planet, and modifications to the composition of the atmosphere have set the global climate on a path toward serious environmental change.<sup>9</sup> GHG emissions are considered the most pernicious of these causes, and current totals, both natural and anthropogenic, greatly exceed the earth's limited recycling capacity.<sup>10</sup>

Another area of some scientific dispute regards the likely consequences of climate change. Some argue that its probable effects are by no means strictly harmful. Increased atmospheric concentrations of CO<sub>2</sub> and other GHGs, along with the poleward spread of temperate weather, are likely to bring such agricultural benefits as longer growing seasons

and decreased exposure-related mortality.<sup>11</sup> However, despite such possibilities, a full reckoning of the effects of climate change suggests strongly that profound global costs will outweigh marginal benefits.

With a 1.7° - 4.9° C projected warming of global average surface temperatures over the next century, anticipated adverse effects of climate change are many.<sup>12</sup> For instance, climate change is currently the primary cause of specie extinction; it is the chief driver of what Norman Myers has described as a “biotic holocaust”<sup>13</sup> as the poleward spread of temperate weather dramatically alters habitat at latitudinal and elevational extremes. Climate change-induced biodiversity loss is not simply a matter of stewardship of ecological values, but implies lost social values, as well. Not merely aesthetic, these values carry significant implications for the sustenance of life and livelihood of millions of people across the globe. As the lynchpin of ecological integrity, the diversity of ecosystems, species, and genetic resources is of central importance to the maintenance of ecological systems and processes upon which many people directly depend. For example, the bleaching of coral reefs due to even minor changes in water temperature can have dramatic ill effects upon local communities with significant dependence upon marine resources.

And biodiversity loss is not the only environmental threat to social values. Others include sea-level rise, increased storm surge, increased intensity and frequency of hurricanes, typhoons, and tornadoes, and heightened intensity of floods and droughts.<sup>14</sup> Sea level rise threatens to flood more than ten percent of Bangladesh, a country densely populated with 133,000,000 people, over the next 100 years.<sup>15</sup> Nor is climate change-induced human suffering necessarily a far off, twenty-second century problem. In many parts of the world the effects of climate change are already issuing in hard realities. For example, sea-level rise has made environmental refugees of the citizens of Tuvalu, a small island state in the South Pacific, who are retreating from their homeland and seeking safe-haven and new citizenship in New Zealand.<sup>16</sup>

The present human suffering generated by climate change goes well beyond the psychological and financial hardships of displacement. Recent research attributes more than 160,000 deaths per year—mostly poor children in Africa, Asia, and Latin America—to climate change-related causes including, but not limited to, extreme weather and the poleward spread of typically tropical diseases.<sup>17</sup> Notably, the consequences of climate change threaten poor populations and future generations in disproportionate measure to their GHG emissions, demonstrating the uneven geographic and temporal distribution of climate change’s pernicious effects.<sup>18</sup> Put simply, today’s rich populations produce more GHG emissions while the consequent burden of human suffering is borne by today’s poor and by future generations.

But the Global North will not escape this suffering forever, for the clock is ticking on its relative insulation from the gathering environmental storm. The effects of climate change are unlike those of many other environmental problems characterized by exportable externalities, such as nuclear waste. Climate change will inevitably hit home for many of the international community’s largest GHG emitters. We may already be seeing some consequences. Europe’s summer of 2003, for example, was the hottest since the sixteenth century, and more than 19,000 deaths on the continent were attributable, at least in part, to the oppressive heat.<sup>19</sup> The research also indicates a possible dramatic acceleration in climate change, as the summer of 2003 exceeded average summer temperatures of the period 1901–1995 by 2.0° Celsius. While no single weather event may be attributed to global warming, this summer heat wave was consistent with the predicted patterns of global climate change. Meanwhile, average temperatures of European winters over the past three decades have been the warmest since instrumented readings became available in 1750.

The largest polluters will not entirely escape the uncertainty and pernicious effects associated with climate change. But of special concern to the Christian international affairs

community is (or should be) the fact that global warming victimizes already-vulnerable populations more quickly and more intensely. The capacity for adaptation to global warming is unevenly distributed around the globe, and this exacerbates the global inequalities in human suffering. Capacity for adaptation is generally a function of wealth and geography.<sup>20</sup>

Qader-Mirza has noted that policy mechanisms designed to increase global investment in adaptive capacity-building currently focus on increasing the capability of developing countries for recovery from climate-related disasters, rather than adaptation to potential environmental hazards.<sup>21</sup> Critics have suggested that these adaptation investment regimes do not address the increasing magnitude of economic and social vulnerability due to the debt incurred in such a recovery effort. In this regard, a preoccupation with adaptation may only intensify already significant inequities in the distribution of climate change's effects and the human suffering caused by them.

### The International Response to Climate Change

In the face of this crisis, the international community has gathered under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) in an effort to organize efforts toward abatement and adaptation. The highlight of the convention has been the emergence of the Kyoto Protocol, one of the most ambitious international treaties in history. Adopting a principle of shared but differentiated responsibilities, the Protocol sets emissions targets for thirty-nine industrialized nations, defined in the Protocol's "Annex B," during its first budget period, 2008 – 2012.<sup>22</sup> Other parties are exempt from emissions objectives during this initial accounting, but are likely to be assigned targets for the second period. However, cumulative emissions abatement under the Protocol's targets would indicate a 5.2% reduction in emissions among Annex B nations by 2010, a far cry from the IPCC's suggested global reductions of 60% from 1990 levels in order to achieve stabilization of atmospheric GHG concentrations.<sup>23</sup>

Faced with the prospect of even minimal emissions reductions, negotiators at the 6<sup>th</sup> Conference of the Parties (COP-6) began the development of the Protocol's flexibility mechanisms, policy devices designed to limit the necessity of domestic emissions reductions in favor of joint action. Among these flexibility mechanisms is "emissions trading." Often described as "hot air," emissions trading is the mechanism by which countries that have achieved emissions reductions in excess of their targets may sell the difference to countries that would rather not achieve their emissions reductions through domestic action. Notably, the majority of "hot air" would be provided by countries of Eastern Europe and the Former Soviet Union, whose reductions have been achieved because of economic recession. Also notable are joint implementation (JI) and the clean development mechanism (CDM). JI represents an energy development or GHG sequestration project conducted by one member of Annex B in another Annex B country, in exchange for credits equivalent to the difference between business-as-usual (BAU) and actual emissions. CDM, on the other hand, represents an exchange between a member of Annex B and a non-Annex B country. The Parties have also included carbon sinks, representing already existing sequestration capacity, in accounting for domestic emissions, effectively reducing the emissions reduction requirements of many Annex B nations. While applicable sink credits are capped, there are no limits to the use of "hot air," JI, or CDM.

These policy tools have been designated as means to achieve economically efficient emissions abatement. Unfortunately, the implementation of these mechanisms will likely lead to emissions increases according to BAU projections, rather than to abatement.<sup>24</sup> Indeed, phantom emissions reductions from the application of these flexibility mechanisms, applied to the accounts of Annex B countries, ensure a "successful" protocol despite these likely increases in emissions. Parties may claim to have achieved their target reductions despite significant emissions growth at both national and international levels.

While many of the flexibility mechanisms have been introduced into the protocol under great pressure from the government of the United States (the world's largest polluter), this very same government (along with other prominent emitters) has opted out of participation in international negotiations for the abatement of greenhouse gas emissions. It has chosen instead to pursue a domestic agenda of voluntary emissions reductions based upon a "no regret" strategy that invokes the scientifically dubious rhetoric of uncertain causes and effects in global climate change.<sup>25</sup> "No regret" policies for greenhouse gas emissions abatement involve the rectification of market inefficiencies and failures in order to reduce emissions at low or no cost, deriving these benefits from increased market efficiency. This approach rejects any high-cost options for abatement in rhetorical deference to the slight possibility that the effects of climate change may not be as vicious as most scientists are projecting.

While the scientific community cannot claim to have achieved the same consensus regarding climate change as exists regarding basic laws of science, the evidence for dramatic changes in climate and some level of human contribution to the problem is more overwhelming now than ever. Yet climate change skeptics are undeterred; they continue to deploy the rhetoric of uncertainty as partial justification for "no regret" strategies.

### Changing the Climate of International Affairs

Despite failure to achieve its stated goals and to compel the participation of key GHG emitters, the Kyoto Protocol has been hailed by some as a success for the international policy community.<sup>26</sup> In some quarters, the formation of an international climate change regime seems to have become an end in and of itself. Even as the agenda has regressed from abatement to adaptation at COP-10, many

nonetheless defend the Protocol on the ground that it is a building block for future diplomacy and cooperation.

Climate change and climate change policy, however, should not simply be seen as contexts for new experiments in post-Cold War diplomacy and negotiation, but should be recognized as contexts for human suffering and its alleviation. The methodology of international cooperation is not an unqualified good, but rather should be used toward the goal of abatement of GHG emissions for the sake of

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reducing human suffering. Absolute, verifiable reductions in the anthropogenic environmental causes of human suffering should be the measure of any international climate change regime, not conformity to ideological presumptions about either governmental

or market-based approaches. Indeed, successful engagement of the issue on these terms may require a significant departure from both state-centric diplomacy and market-oriented means in favor of per capita emissions standards in the atmospheric commons.

Fresh approaches in this policy area will require nothing less than a change in the "climate" of international affairs, an ambitious project to which the Christian international affairs community can and should contribute. A faith-based international affairs community, diplomats and scholars alike, may not only direct the international community away from the means-centric preoccupation of the current debate, but may also be an important voice in normatively reshaping objectives. In a sense, a faith-based international affairs community may even "subvert" the current climate regime—not in the colloquial sense of subversion, but rather in the sense aptly noted by Cardinal Arns, of Sao Paulo. In a 1983 address to the annual meeting of the Society for International Development, he described the kind of positive subversion that all disciples of Christ should be bold enough to pursue: "Subvert" means to turn a situation round

and look at it from the other side... the side of people who have to die so that the system can go on."<sup>27</sup> In this way, Christian internationalists might come to grips with a more holistic view of the multiple contexts for human suffering, including the global environment, while at the same time providing direction and candid truth-telling to the broader international community.

Like other people of faith, Christians recognize a responsibility to empathize with suffering and to use all their God-given talents to help alleviate it. On this score, the global environment merits—indeed, commands—attention; some 160,000 climate change-related deaths per year should be more than enough impetus to rebalance how we are using our resources (intellectual, financial, political, and theological)—resources that are currently lavished upon questions of suffering in other contexts. Christian inquiry into international affairs has been far too slow to adopt questions of environmental justice. The matter of the global environment should be seen as an opportunity to do so.

To be sure, there are difficulties and challenges in turning attention toward the global environment. Christians have tended to mobilize in reaction to global problems that have (or seem to have) an easily identifiable “bad guy.” By contrast, the inherent ambiguity and structural nature of the global warming problem can make it seem abstract and remote; it’s a humanitarian cause that doesn’t “sell” well amongst donors. For instance, it is easy to externalize the evil of terrorism and the crisis of the persecuted church, both from national and religious perspectives. This is not so easily accomplished with environmental problems;

Osama Bin Laden has no analog in the environmental crisis.

In order to fully appreciate the global environment as a context for human suffering, we must be willing to face the implications of a global political economy (in which we all participate) that militates against environmental integrity and security. The battle of good against evil must become more holistic—and it must come home. Christian inquiry into international affairs should reflect a deep concern for the multiple contexts of human suffering, in spite of ambiguity and structural evil. Climate change and the emerging climate change policy regime should be seen as occasions to articulate a Christian response to environmental crises that threaten the lives and livelihoods of whole populations, and in this way to speak a transformative word into the discourse of the discipline. ❖

#### Recommended :

- Read the Oxford Declaration on Global Warming, signed by more than 70 Christian leaders, climate scientists, and policy makers at a forum jointly sponsored by the Au Sable Institute (U.S.) and the John Ray Initiative (UK). See <http://www.climateforum2002.org/statement.cfm>.
- Follow global climate change negotiations at the 10th Session of the Conference of the Parties in Buenos Aires from December 6 – 17.
- Advocate faith-based engagement with questions of environmental justice.
- Consider the multiple and overlapping contexts for human suffering, of which the global environment is one.

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2. David A. King, “Climate Change Science: Adapt, Mitigate, or Ignore?” *Science*, Vol. 303 (2004): 176.
3. For an interesting and accessible history of climate change science, see Spencer R. Weart, *The Discovery of Global Warming* (Cambridge: Harvard University Press, 2003).
4. See Michael E. Mann, Raymond S. Bradley, and Malcolm K. Hughes, “Global-Scale Temperature Patterns and Climate Forcing Over the Past Six Centuries,” *Nature*, Vol. 392 (1998): 779-787, and P.D. Jones, T.J. Osborn, and K.R. Briffa, “The Evolution of Climate Over the Last Millennium,” *Science*, Vol. 292 (2001): 662-667.
5. Thomas J. Crowley, “Causes of Climate Change Over the Past 1000 Years,” *Science*, Vol. 289 (2000): 270-277.
6. Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2001: The Scientific Basis* (New York: Cambridge University Press, 2001). See also Thomas R. Karl and Kevin E. Trenberth, “Modern Global Climate Change,” *Science*, Vol. 302 (2003): 1719-1723.

7. The IPCC was founded in 1988 as a joint effort of the United Nations Environment Programme and the World Meteorological Organization.
8. See IPCC, *Climate Change 2001*.
9. See Karl and Trenberth, "Modern Global Climate Change" and K. Hasselman, et al., "The Challenge of Long-Term Climate Change," *Science*, Vol. 302 (2003): 1923-1925.
10. IPCC, *Climate Change 2001*.
11. Ibid.
12. Ibid. See also Karl and Trenberth, "Modern Global Climate Change."
13. Norman Myers, "Biotic Holocaust," *National Wildlife Federation* (1999): 31-39.
14. See IPCC, *Climate Change 2001*.
15. IPCC, *Climate Change 1995: The Science of Climate Change* (Cambridge: Cambridge University Press, 1996), p. 364.
16. See Reuters News Service, "Tuvalu Seeks Help in U.S. Global Warming Suit" (2002) and Leslie Allen, "Will Tuvalu Disappear Beneath the Sea? Global Warming Threatens to Swamp a Small Island Nation," *Smithsonian* (2004).
17. World Health Organization, *Climate Change and Human Health - Risks and Responses* (Geneva: World Health Organization, 2003). For a contrarian position, see Robert E. Davis, et al., "Seasonality of Climate-Human Mortality Relationships in U.S. Cities and Impacts of Climate Change," *Climate Research*, Vol. 26 (2004): 61-76. This recent article has received much publicity for its very low estimates of projected marginal mortality increases in U.S. cities due to increased heat. The authors note that marginal increases in mortality during summer heat waves may be offset by marginal decreases in exposure-related mortality during the winter months. However, the authors examined only the effects of increased heat in U.S. cities, where air conditioning is ubiquitous. The authors do not attend to the relationship between energy use and climate change. Nor do they address the effects of extreme heat in less affluent communities, other examples of extreme weather, or other warming-related phenomena, such as sea level rise.
18. See IPCC, *Climate Change 2001*; Anil Agarwal and Sunita Narain, "Global Warming in an Unequal World: A Case of Environmental Colonialism" (New Delhi: Centre of Science and Environment, 1991); Anil Agarwal, Sunita Narain, and Anju Sharma, "The Global Commons and Environmental Justice - Climate Change," in *Environmental Justice: Discourses in International Political Economy*, eds. John Byrne, Leigh Glover, and Cecilia Martinez (New Brunswick, NJ: Transaction Books, 2002), pp. 171-199; and Monirul Qader Mirza, "Climate Change and Extreme Weather Events: Can Developing Countries Adapt?" *Climate Policy*, Vol. 3 (2003): 233-248.
19. Jurg Luterbacher, et al., "European Seasonal and Annual Temperature Variability, Trends, and Extremes Since 1500," *Science*, Vol. 303, No. 5663 (2004): 1499-1503.
20. Adil Najam, Huq Saleemul, and Youba Sokona, "Climate Negotiations Beyond Kyoto: Developing Countries Concerns and Interests," *Climate Policy*, Vol. 3 (2003): 221-231.
21. Mirza, "Climate Change and Extreme Weather Events."
22. "Kyoto Protocol to the United Nations Framework Convention on Climate Change" (1997).
23. IPCC, *Climate Change 2001*.
24. John Byrne, et al., "Beyond Kyoto: Reclaiming the Atmospheric Commons," *Climate Change: Policy and Politics*, ed. Velma Grover (Enfield, NH: Science Publishers, 2004), pp. 429-452.
25. See Cabinet-Level Climate Change Working Group, "Analysis of the Kyoto Protocol" (Washington, DC: 2001); David Wirth, "The Sixth Session (Part Two) and Seventh Session of the Conference of the Parties to the Framework Convention on Climate Change," *The American Journal of International Law*, Vol. 96, No. 3 (2002): 648-660; Detlef van Vuuren, et al., "An Evaluation of the Level of Ambition and Implications of the Bush Climate Change Initiative," *Climate Policy*, Vol. 2 (2002): 293-301; White House, "Executive Summary of the Bush Climate Change Initiative" (Washington, DC: 2002); and White House, "Transcript of the Speech of President Bush Delivered at NOAA in Silver Spring, MD" (Washington, DC: 2002).
26. See, for example, Jon Hovi, Tora Skodvin, and Steinar Andresen, "The Persistence of the Kyoto Protocol: Why Other Annex I Countries Move on Without the United States," *Global Environmental Politics*, Vol. 3, No. 4 (2003): 1-23, and Michael Grubb, Christiaan Vrolijk, and Duncan Brack, *The Kyoto Protocol - A Guide and Assessment* (Earthscan Publications Ltd, 1999).
27. Cited in Majid Rahnema, "Introduction," in *The Post-Development Reader*, eds. Majid Rahnema and Victoria Bawtree (London: Zed Books, 1997), p. xi.