

## The Transition to Sustainability



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“**A**s never before in human history, common destiny beckons us to seek a new beginning.” These words introduce the concluding section of the Earth Charter, entitled “The Way Forward.” The new beginning envisioned by the Earth Charter is the transition to a sustainable way of life, which involves as radical a shift in human thinking and behavior as the emergence of agriculture, the rise of the nation state, or the industrial revolution. One recent study aptly describes this shift as “The Great Transition.”<sup>1</sup> The Earth Charter views the Great Transition to sustainable patterns of development locally and globally as essential to the survival and flourishing of human civilization in the twenty-first century. It also considers a sustainable future as a real possibility that human beings may achieve if they have the will, courage, and vision. This essay endeavors to clarify the distinctive contribution of the Earth Charter to the Great Transition, and it explores the Earth Charter’s vision of the way forward and the progress being made.

The Earth Charter is designed to focus attention on the fundamental importance of ethical values and choices in the process of social change and the achievement of sustainability. Ethical values are concerned with what people determine to be right or

wrong, good or bad in human conduct and relations. They form a community’s sense of social responsibility and reflect a concern with the common good, the well-being of the whole community. Ethical values have a profound impact on human behavior, especially those values to which a people feel deeply bound. Scientific knowledge can inform our ethical choices by clarifying the consequences of different courses of action. However, science cannot determine, in the final analysis, what is right and wrong. That is the domain of the imagination, the heart, and the will. As stated in the Earth Charter Preamble, “When basic needs have been met, human development is primarily about being more, not having more” (paragraph four). Our ethical commitments reflect what kind of persons we choose to be as well as what quality of relations we choose to maintain in our communities.

A major social transformation involves a change in a people’s ethical values. Ending slavery and discrimination on the basis of race or ending discrimination against women are prime modern examples. The Great Transition requires that a new ethical vision take hold of the imagination and heart of the world’s peoples. The ethical reasons for a shift to sustainability are, of course, not the only reasons. There are many economic, health, and other practical considerations that appeal to individual, corporate, and national self-interest and that provide strong arguments for the shift. These practical considerations do often generate progress in the movement toward sustainable development, and that is well and good. However, appeals to self-interest narrowly defined are not sufficient. Without a new expanded sense of ethical responsibility that extends to the whole human family, the greater community of life, and future generations, a clear sense of direction and the motivation, aspiration, and political will needed will be lacking. For over three decades, United Nations (UN) Summits at Stockholm (1972), Rio (1992), and Johannesburg (2002) have recognized the challenge and set promising agendas for action, but governments have mostly failed to vigorously pursue implementation. In the words of the Earth Charter, the achievement of sustainability requires “a change of mind and heart” (The Way Forward, paragraph two).

More specifically, the Earth Charter focuses attention on the need for global ethics. It is concerned with the identification and

promotion of ethical values that are widely shared in all nations, cultures, and religions—what some philosophers call universal values. Global ethics are of critical importance in the Great Transition because we live in an increasingly interdependent, fragile, and complex world. The mounting scientific evidence that Earth’s climate is warming and that the primary cause is the human generation of greenhouse gas emissions provides one dramatic example of humanity’s growing interdependence. In this matter, each and every nation is being affected by the accumulated impact of the behavior of all others.

In the twenty-first century, global interdependence means that no community or nation can manage its problems by itself. Partnership and collaboration are essential, and the dramatic innovations in communications technologies and the sharing of knowledge are making all sorts of new national, regional and global networks and partnerships possible. However, effective cooperation in an interdependent world requires common goals and shared values. This is especially true when communities endeavor to address problems like poverty, inequity, economic instability, global warming, the loss of biodiversity, the depletion of resources, nuclear proliferation, and terrorism. The Earth Charter Preamble, therefore, states that “we urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community” (paragraph 6). The Earth Charter principles, which are the product of a decade-long, cross-cultural dialogue, endeavor to address this need.

One of the major achievements of the twentieth century has been a wide-ranging, international dialogue that has led to articulation of an expanding vision of shared values. This vision is found in the Charter of the United Nations, the Universal Declaration of Human Rights, the World Charter for Nature, and in many other covenants, treaties, and declarations issued by UN Summits and intergovernmental partnerships. In addition, the emerging global civil society has issued over two hundred people’s treaties and declarations in the last three decades. In developing its vision of “interdependent principles for a sustainable way of life,” the Earth Charter builds on and extends the ethical vision in these UN and civil society documents.

One especially important contribution of the Earth Charter to the shaping of the new global ethics is the document’s recognition of the interdependence of all its principles and presentation of a holistic and integrated ethical outlook. More concretely, the Earth Charter appreciates the interrelation of humanity’s environmental, economic, political, social, and spiritual challenges, and, therefore, its ethical principles include, for example, respect for nature, environmental conservation, poverty eradication, human rights, gender equality, economic justice, democracy, and a culture of tolerance, nonviolence, and peace. Attempts to deal with problems in isolation will, at best, have only limited success. An inclusive, well-coordinated, long-term strategy is part of the meaning of living and acting sustainably.

Taken together the sixteen main principles and sixty-one supporting principles of the Earth Charter provide a vision in rough outline of the ideal of a sustainable world community. These principles provide an ethical compass for charting the way forward. The Earth Charter can also serve as an educational tool for clarifying the meaning of sustainable development as a general concept. Narrowly defined, sustainable development means ensuring ecological sustainability, but, beginning with the Brundtland Commission, there has been a deepening international realization that given the interrelation of humanity’s goals, the more inclusive conceptualization found in the Earth Charter is appropriate. When discussing the concept of sustainable development, however, it is important to keep in mind that implementation at the local level of the general principles set forth in the Earth Charter will take many different forms. As “The Way Forward” states: “Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision” (paragraph two). In addition, when the Earth Charter Commission approved the final version of the document, there was recognition that the global dialogue on shared values would, and should, continue.

The Earth Charter is made up largely of general ethical guidelines and broad strategic goals supported by a world view that includes a sense of belonging to the larger evolving universe and “reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.”<sup>2</sup> Concerned to keep the document fairly brief, the Earth Charter Commission made a decision not to include discussion of mechanisms and instruments for implementing the principles. “The Way Forward” does, however, make these observations about what implementation will require:

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance. (paragraph three)

In addition, a specific reference is made to the important role of the UN and the need for a new international covenant that synthesizes and consolidates international law in the fields of environmental conservation and sustainable development:

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international

legally binding instrument on environment and development. (paragraph four)

Since the Earth Charter was drafted, it has become increasingly clear that if the UN is to be an effective instrument of international cooperation and global governance in the twenty-first century, it must undergo major reforms. The Secretary General and a number of member nations have made constructive proposals, and the future of the UN hinges on the willingness of the international community to implement a reform agenda. Just as the soft law principles in the Universal Declaration of Human Rights have been translated into several legally binding human rights covenants, so there has been hope that the Earth Charter principles would, in time, find expression in “an international legally binding instrument on environment and development” (The Way Forward, paragraph four). The elements of such a treaty have already been assembled by the IUCN Commission on Environmental Law in its Draft International Covenant on Environment and Development, which was first presented at the UN in 1995 and which has since been updated and revised. This Draft Covenant provides a solid basis for intergovernmental negotiation, but, to date, the international community has not been prepared to take the next step in advancing international law in the field of environment and development.

What progress is being made in deepening and expanding the ethical vision that guides the international community? What role has the Earth Charter played in this matter? Shortly after the launch of the Earth Charter at the Peace Palace in The Hague in June 2000, the Millennium NGO Forum, which included over one thousand non government organizations (NGOs), endorsed the Earth Charter and recommended that the UN Millennium Summit recognize and support the document. While this did not happen, the UN Millennium Declaration did reaffirm, for the first time in two decades, the principle of “respect for nature” as among the “fundamental values essential to international relations.” It also identifies as fundamental shared values, freedom, equality, solidarity, tolerance, and shared responsibility and calls for “a new ethic” of conservation and environmental stewardship. In addition, the document sets forth the Millennium Development Goals (MDGs), which are entirely consistent with the Earth Charter, and established some targets and timetables that involve important steps toward the implementation of a number of Earth Charter principles. For example, the MDGs include commitment to reduce by half the number of people living in absolute poverty by 2015, to eliminate gender disparity in primary and secondary education, and to integrate the principles of sustainable development into nation state policies.

Further progress was made at the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002. Even though many NGO groups endorsed the Earth Charter during the Summit and South Africa, the host nation, led an effort to recognize the Earth Charter in the Johannesburg Declaration,

this was not to be largely due to the opposition of the United States. However, the Johannesburg Declaration does use language almost identical to that found in the Earth Charter Preamble to affirm in broad outline the Charter’s vision of “global interdependence and universal responsibility”:

From this continent, the cradle of humanity, we declare, through the Plan of Implementation of the World Summit on Sustainable Development and the present Declaration, our responsibility to one another, to the greater community of life and to our children. (Paragraph 6; emphasis added)

This statement is the first time that an international law document has made an explicit reference to the community of life. Furthermore, the Johannesburg Declaration deepens the meaning of respect for nature by affirming that people are responsible to, as well as for, the protection of the greater community of life. From the perspective of the Earth Charter, there is implicit in this formulation recognition that people are members of Earth’s community of life and, as with communities in general, all the members of the community of life – non-human species as well as people – are worthy of moral consideration. In other words, non-human species as members of the greater community of life have intrinsic value as well as instrumental value.<sup>3</sup> It is also noteworthy that the ethic of care central to the Earth Charter finds expression in the Johannesburg Declaration’s reference to a “caring global society.” The WSSD Plan of Implementation in its Introduction states that “we acknowledge the importance of ethics for sustainable development” (I.5).

In 2003, the UNESCO General Conference of Member States adopted a resolution introduced by Jordan that recognizes the Earth Charter as an ethical framework for sustainable development and as a valuable teaching tool. A year later the World Conservation Union (IUCN), which includes seventy-seven state governments and over 800 NGOs among its members who are from 140 countries, adopted a similar resolution at its World Conservation Congress in Bangkok. Over two thousand NGOs, including many religious groups, have also endorsed the Earth Charter. Coupled with the wide use of the Earth Charter as a teaching tool in schools and universities, all of these developments mark a significant, even if very gradual, shift in humanity’s ethical awareness.

Is there actual progress being made in moving toward the goal of sustainable development? Is there evidence that a heightened sense of social and ecological responsibility is leading civil society, business, and government to undertake efforts that involve implementation of Earth Charter principles? It is very easy to become discouraged and pessimistic about the human future when one reads the steady stream of grim reports on global warming, the destruction of forests, biodiversity loss, shortages of water, poverty, HIV/AIDS, rising military expenditures, nuclear proliferation, and terrorism. However, in 2002,

two environmental leaders, David Suzuki and Holly Dressel, published a book entitled *Good News for a Change: How Everyday People are Helping the Planet*.<sup>4</sup> In fact, there is much good news that suggests attitudes are changing and an increasing number of individuals, corporations, religious organizations, and governments are finding ways to reverse dangerous trends and to implement Agenda 21 and the ideals and goals of the Earth Charter. The remainder of this essay considers some examples.

The dramatic growth in population during the twentieth century is one factor contributing to the depletion of resources and the degradation of ecosystems. The world population has more than doubled over the past five decades, reaching 6.3 billion in 2004. The UN Population Division estimates that the world's population will continue to grow in the twenty-first century increasing by forty percent before stabilizing and that this growth will occur largely in the world's fifty poorest countries. This will put added stress on ecological and social systems. The good news is that the annual rate of population growth has declined over the past three decades from 2.1% to 1.14% in 2004. Median fertility is projected to decline from 2.6 children per woman to just over two children by 2050. Demographers, therefore, predict that in 2050, human numbers will peak at around 9.1 billion rather than 10 or 11 billion as estimated earlier.<sup>5</sup> They may then begin to decline. It is largely the decisions and actions of women in countries like Brazil and India that account for the unanticipated decline in birth rates, and there is wide international agreement that the key to sustainable population growth in the developing world is gender equality and the empowerment of women through access to health care, education, and economic opportunity.<sup>6</sup> These values and goals have been incorporated to a large extent in the Millennium Development Goals.

The 2002 World Summit on Sustainable Development identified poverty eradication as a cornerstone of a sustainable future. Over a billion people live in absolute or extreme poverty, struggling to exist on a dollar a day or less. In 2005, Jeffrey Sachs, an economist who is the director of the Earth Institute at Columbia University and special adviser to the United Nations Secretary-General on the Millennium Development Goals, published an important book with the optimistic title: *The End of Poverty: Economic Possibilities for our Time*. Noting that the world community has made a commitment to halving absolute poverty by 2015, Sachs argues that "Our generation can choose to end that extreme poverty by the year 2025." *The End of Poverty* systematically explains what must be done to overcome the basic causes of poverty and how this can be achieved at affordable costs. Sachs calls for a global poverty eradication coalition that would organize the scientific research required and generate the necessary financial assistance and with these resources help poor countries create the basic infrastructure (roads, power, and ports), health care, and education systems needed so that they can take advantage of the world's markets as engines of development.<sup>7</sup>

Some critics argue that Sachs is an overly optimistic liberal with too great a faith in reason, science, and the malleability of societies and with too little appreciation of the obstacles presented by traditional culture, corrupt governments, undemocratic institutions, and armed conflict.<sup>8</sup> It is certainly important to keep these concerns in mind when designing strategies to assist developing nations. However, the Millennium Development Goals and studies such as *The End of Poverty* present a challenge that an increasing number of international leaders are taking seriously. One indication is a recent decision by the Group of Eight (G8), the world's wealthiest nations, to cancel \$40 billion of debt owed to international agencies by the eighteen poorest countries, reducing their annual debt burden by \$1.5 billion.<sup>9</sup>

Democracy and sustainable development are interdependent, and democracy is now the dominant form of government in the world and is widely viewed by people in all regions as a universal value and the only legitimate form of government.<sup>10</sup> Historians view democracy as having spread during the modern period in three waves. The "third wave" involved a global democratic revolution that began in Portugal in 1974 and then swept through Latin America and into Asia and Africa and, with the fall of the Berlin Wall, into central and Eastern Europe.<sup>11</sup> By 2003, 117 or sixty percent of the world's countries were democracies.<sup>12</sup> One great advantage of democratic forms of government is that criticism is built into the system and people are able to hold their leaders accountable for how they respond to environmental and social problems. The democratic trend in modern history is a cause for hope.<sup>13</sup>

In addition to population numbers, the major factor determining a society's ecological footprint is the technology it uses in energy production, agriculture, manufacturing, transportation, and the operation of households. A sustainability revolution requires a technology revolution that 1) greatly increases the efficiency with which energy and material resources are used with the goal of doing more with less, 2) generates a shift from the use of fossil fuels to renewable energy sources, and 3) facilitates the prevention of pollution and elimination of all waste except what can be assimilated by ecological systems.<sup>14</sup> The technological revolution is gaining momentum and the world community has the scientific and technological expertise to achieve the innovations and advances that are needed. In order to expand and quicken the pace of the sustainability revolution in technology, there will have to be larger budgets for research and development, increased consumer demand, and stronger markets for green products. A special effort must be made to transfer green technology to the developing nations as their economies mature and modernize.

A sustainability revolution also requires new systems of global governance that better manage the process of globalization, promoting the eradication of poverty, environmental protection, human rights, a more equitable process of economic develop-

ment, and world peace.<sup>15</sup> The market by itself does not protect the environment or ensure social and economic justice. This problem is magnified when governments subsidize unsustainable activities, which they often do, and when the prices of goods and services do not reflect the full environmental and social costs, which is generally the case. Full-cost pricing should be high on the agenda of those working for a sustainable economic system.<sup>16</sup>

On the one hand, the achievement of good global governance requires well-constructed systems of international law, responsible national governments, democratically managed and accountable transnational institutions (such as the UN, World Bank, World Trade Organization, and International Monetary Fund) and effective methods of enforcement. On the other hand, global governance in our complex world is also increasingly a responsibility shared by civil society and corporations acting both independently and in collaboration with governments. This dimension of global governance involves decentralized, voluntary, and creative initiatives on the part of citizens' campaigns, consumer advocacy groups, and human rights and environmental NGOs, as well as businesses.<sup>17</sup>

Prime examples of the sustainability revolution in technology and positive developments in global governance are the innovations and collaborations taking place in the field of energy production and consumption, especially as it relates to the problem of climate change. Many experts view global warming as the most serious environmental problem facing the world. Scientists report that global warming is melting mountain glaciers and the ice sheets at Earth's poles and weather-related disasters are on the rise, and they warn that climate change may lead to a rise in sea levels that threatens coastal ecosystems and communities, a disruption of ocean currents such as the Gulf Stream, a further increase in catastrophic weather events, and the spread of disease.<sup>18</sup> Considerations of this nature have led many business leaders to conclude that global warming is the major environmental threat to a healthy economy. In a "Special Report" on global warming *Business Week*, a USA publication, stated in 2004: "Consensus is growing among scientists, governments and business that they must act fast to combat climate change. This has already sparked efforts to limit CO2 emissions. Many companies are now preparing for a carbon-constrained world."<sup>19</sup> The formation of The Climate Group illustrates the point. The Climate Group is an international coalition with a secretariat in the United Kingdom. Its members are representatives of corporations, cities, states, and national governments committed to collaborating on reducing greenhouse gas (GHG) emissions and sharing best practices. These members have joined in a commitment to develop new clean technologies, maximize energy efficiency, increase the use of renewable energy sources, build markets for green power, and promote best practices.<sup>20</sup>

In the last decade, the primary obstacle to corporate and gov-

ernment action on GHG emissions and other environmental problems has been the assumption that implementing sustainability measures will be too costly and will slow or halt economic growth. The experience of The Climate Group is providing significant evidence that this assumption is false and that major advances in energy efficiency and innovations in the use of renewable energy sources leading to substantial GHG emissions reductions are being made in ways that are cost-effective and often highly profitable. For example, a recent study of The Climate Group found that:

BP reports a savings of \$650 million from emissions reductions efforts. IBM reports a saving of \$791 million. DuPont claims \$2 billion in efficiencies. Alcoa is looking at saving \$100 million by 2006. STMicroelectronics expects \$900 million in savings by 2010. Germany reports its efforts will lead to the creation of 450,000 jobs, many of them within the renewable energy sector....<sup>21</sup>

Reinforcing these trends, 150 national governments have ratified the Kyoto Protocol which entered into force in 2005. As a result of these and many other initiatives, the Worldwatch Institute reports that "total use of solar and wind energy is expanding at a thirty percent annual rate" and that wind energy is now cheaper than natural gas and "closing in on coal."<sup>22</sup> The industrialized world may be approaching the tipping point with regard to a willingness to take action in response to global warming and the need for more sustainable energy policies and practices.

Many of these developments reflect the growing power and influence of global civil society which is exercised in and through consumer campaigns, shareholder initiatives, political movements, and Global Public Policy Networks (GPPN) all involving the work of thousands of NGOs.<sup>23</sup> The role of NGOs is well-illustrated by the new ways in which social and environmental standards are being set for corporate behavior and compliance is verified. There was a time when corporations wrote their own codes of conduct and performance audits were generally an internal affair. In the twenty-first century, standards are being set in open negotiations between industry representatives and all the relevant stakeholders, including NGO experts associated with initiatives such as CERES, the Global Reporting Initiative (GRI), the GHG Protocol, the Forest Stewardship Council, and the Equator Principles. Verification of compliance is conducted by outside organizations that require full disclosure. In addition, NGOs have learned how to skillfully use market campaigns to put pressure on corporations to comply with performance and reporting standards. From the perspective of the Earth Charter, which is itself a global, civil society endeavor to promote ethical principles that are in turn translated into binding government and business standards, all of these developments contribute to the implementation of the Charter's principles and are part of the way forward.

The critical role of the emerging global civil society in building just, democratic, participatory, and sustainable societies underscores the great importance of education for sustainable development in schools, colleges, and universities and in non-formal programs that encourage life long learning.<sup>24</sup> The UN Decade of Education for Sustainable Development (DESD), which the UN General Assembly has charged UNESCO with organizing, focuses much needed international attention on this urgent task. As UNESCO recognizes in its International Implementation Scheme for the Decade, the Earth Charter can serve as a valuable teaching tool in ESD programs.

As this essay suggests, it is possible to identify the beginnings of the Great Transition, but there are no grounds for complacency. Some would argue that what has been accomplished to date is too little too late. It is certainly true that fully achieving sustainable patterns of development remains a distant and very challenging goal. There is an urgent need to strengthen and accelerate the positive trends, and civil society can make the difference. Citizens, NGOs, and religious organizations must keep the pressure on government and business. However, there are many examples of a new sense of social and ecological responsibility taking hold in the corridors of economic and political power supported by the realization that sustainable development is sound economic practice, especially if one takes a long-term view. The Earth Charter can continue to serve as an ethical guide, teaching tool, and source of inspiration—a vision of what the human family can choose to be and to create. If the dangers and risks today are great, so are the opportunities. In the closing words of the Earth Charter: “Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.” ●

## Notes

- 1 Raskin, P. et. al. (2000). *Great Transition: The Promise and Lure of the Times Ahead*. Boston: Stockholm Environment Institute.
- 2 See Earth Charter Preamble.
- 3 See Earth Charter Principles 1 and 15.
- 4 (2002). Douglas and MacIntyre Publishing Group: Vancouver, Toronto, and New York: Greystone Books.
- 5 United Nations Department of Economic and Social Affairs, Population Division. (2005). *World Population Prospects: The 2004 Revision – Highlights*. New York: United Nations. Document ESA/P/WP.193 24 February 2005. See also Worldwatch Institute, *Vital Signs 2005: The Trends that are Shaping our Future*. New York: W.W. Norton, 64-65.
- 6 See Earth Charter Principles 7 and 11.
- 7 Sachs, J.D.(2005). *The End of Poverty: Economic Possibilities for our Time*. New York: Penguin, 1-4, 364-68.
- 8 Brooks, D. Liberals, Conservatives, and Aid. (2005, June 26). *New York Times*, sec. 4.
- 9 Colwell, A. Finance Chiefs Cancel Debt of 18 Nations. (2005, June 12). *New York Times*, Final edition. sec. 1.
- 10 Sen, A. (1999). *Development is Freedom*. New York: Anchor Books, Random House, xi-xii, 146-88. Sen, A. (1999, July). “Democracy is a Universal Value, *Journal of Democracy* 10:3(July 1999):3-16. Diamond, L. (Winter/Spring 2005). “The State of Democratization at the Beginning of the 21<sup>st</sup> Century. *The Whitehead Journal of Diplomacy and International Relations* 6:13-18. Gershman, C. (Winter/Spring 2005). “Democracy as

Policy Goal and Universal Value,” *The Whitehead Journal of Diplomacy and International Relations* 6:119-37. Gershman provides a very useful summary of the eight ways that democracy benefits people in developing countries and contributes to sustainability.

- 11 Huntington, S.P. (1991). *The Third Wave: Democratization in the Late Twentieth Century*. Norman: University of Oklahoma Press, 3-30.
- 12 Diamond, 13.
- 13 See Earth Charter Principle 13.
- 14 See Earth Charter Principles 6 and 7 and Speth, J. G. (2005). *Red Sky at Morning: America and the Crisis of the Global Environment*. New Haven: Yale University Press, 157-61.
- 15 See Earth Charter Principles 5, 7, 10, 12, 13, and 16.
- 16 Speth, 161-66.
- 17 Speth, 172-90, 222-27, and Afterword. The World Business Council on Sustainable Development has labeled the spontaneous innovations of corporations and NGOs JAZZ, and Speth provides a very good description of the nature and extent of green JAZZ. See also *Vital Signs 2005*, 106-07.
- 18 The Arctic Climate Impact Assessment (ACIA) (2004). *Impacts of a Warming Arctic* (Cambridge: Cambridge University Press and *The Millennium Ecosystem Assessment: Synthesis Report*. (2005). Washington, DC: World Resources Institute, as well as the reports of the Intergovernmental Panel on Climate Change. For a more complete discussion of scientific research on global warming and what can be done to address the problem, see Speth, Afterword. See also *Vital Signs 2005*, 40-41, 50-51, and 88-89.
- 19 *Business Week* (2004, August, 16):60.
- 20 Northrop, M. (2004). “Leading by Example: Profitable Corporate Strategies and Successful Public Policies for Reducing Greenhouse Gas Emissions,” *Widener Law Journal*, 14:1:57.
- 21 Northrop, M. “Leading by Example,” 55.
- 22 *Vital Signs 2005*, 14, 34-37.
- 23 Speth, 222-27. Speth provides an overview of the activities of dozens of leading environmental NGOs that are contributing to global governance.
- 24 See Earth Charter Principle 14.