

YALE UNIVERSITY SCHOOL OF FORESTRY & ENVIRONMENTAL STUDIES

International Conferences Course: COP-15

The Sands of Time: Reflections on the Copenhagen Climate Negotiations

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There are as many opinions about what took place in Copenhagen last December, 2009, as there were participants. *Even more.* Beyond those who did attend, a seemingly infinite number of blogs, op-eds, editorials, think tank workshops and diplomatic briefings are focusing on what happened and *now* what do to *next* about “climate change.” Measures to advance and embrace elements of international agreement, in line with the *Bali Action Plan*, are under scrutiny. For example, last week I was in Bonn meeting with UNFCCC staff and environmental law specialists about what modest steps need to be taken to make the COP-16 in Mexico City a measured success. It is too early to say with specificity where a new consensus will emerge.

It is not surprising that there is no shared vision about the way forward at this time. Let me share with you some preliminary thoughts about (a) some of the problems of the Copenhagen COP, and (b) perspectives on a longer-range view, and (c) the next phases.

Neither Copenhagen collectively, nor the UNFCCC diplomats, nor the Heads of State are ready yet to act. Regional or unilateral approaches will be pursued, and out of those efforts a pattern will emerge. It will provide a basis for the “shared vision” that the Bali Action Plan called for, but which has not yet been produced. Meanwhile Earth’s global natural systems respond to the growing volumes of emissions of gases and destruction of photosynthesis. Should not an hour glass, that ancient instrument of time, be placed on everyone’s desk? As the assessment reports from the IPCC reminds us, from the one perspective that counts, the wellbeing of humans and nature within the biosphere, the grains of sand in the hour glass are running out.

A. Copenhagen

The Bali Action Plan was a script led by the European Union, with the meetings in Poznan and Copenhagen. The schedule was designed to oblige the USA under President George W. Bush into meaningful negotiations on mitigation and adaptation. The election of President Barak H. Obama and the change in US Administrations did not fit the Bali Action Plan’s timetable. He had less than 6 months to shape a foreign policy and engage the Congress and other major nations. Secretary Chu has been brilliant in laying a long-term domestic and foreign policy elements for the new technological changes needed. However, those initiatives too were not part of the EU’s Bali time-table.

It is a hubris to think that a single set of Presidential meetings with African leaders at the UN, with the leadership of China and Japan in their capitals, combined with another set of meetings by the Secretary of State and her team (and yet no meaningful meetings with the most vulnerable States), would produce a consensus on action for COP-15 at Copenhagen. The leaders of various States and regions used the Chair’s negotiating text as a stalking horse for their geo-political negotiations. Getting

financial commitments trumped agreeing pragmatically on the next steps appropriate for mitigation, adaptation and technology transfer. Moreover, Obama invested all his time with Congress in the Health Care issues, and he did not have a deep team of allies on Capitol Hill ready to work on the climate change agenda (indeed he faced active opposition from lobbyists and from Members of both Houses of Congress). He simply had limited time and depth of analysis to devote to COP-15. Since the USA could not make promises because the President lacked the support for ratifying a treaty in Congress, no treaty involving the USA was possible.

The EU misconstrued its capacity to build a common vision, as the Bali Action Plan contemplated, with the USA and other States, hubris of sorts. The EU was also preoccupied with securing approval of the new constitutional framework of the EU and the election of its new “President” and “Foreign Secretary”; the EU too simply had limited the time and depth of analysis it could devote to COP-15. Moreover, the EU still makes new foreign policy collectively, in a collegial meeting of the States, and this cumbersome “confederacy-era” approach meant that when the fast pace negotiations began between Brazil, China, India, South African and the USA at the end of the COP, the EU could not find the legal competence to quickly join in. The EU was also embarrassed by the failure to establish a “Friends of the Chair” (key diplomats from each of the regions) to assist Denmark as the Chair of the COP. Had this group existed over the past 2 years, the outcome would have been different. Denmark’s Prime Minister lacked the experience and support to conclude even an acceptance of the “Accord” negotiated by a select group of States.

The UNFCCC COP has not adopted the UN General Assembly Rules of Procedure, so it had no way to force a vote. It operates on a consensus model, in which (as it turned out) five States could block even modest action. It is time for the UNFCCC simply to adopt the Rules of Procedure of the UNGA. Until it does, a vast amount of time is spent on consensus building with no process to push a consensus through to adoption.

The UNFCCC Secretary also miscalculated in admitting so many observers that it could not process the actual State Delegates in a timely way, nor facilitate their work. The G-77, for instance, could have had lawyers working in and with the Legal Committee, but since they did not, they vetoed any ability of this committee to meet throughout the COP. Some major powers did not even include a lawyer on their delegations. Preliminary meetings of such sub-groups are needed before a COP to be sure the work is agreed at the COP. For many subsidiary bodies of the UNFCCC this preparation was inadequate. The reason: too much was tried (all of it useful and urgent) but not enough resources existed to support the many efforts. A more focused agenda of work is needed. While civil society meetings and side-events are of enormous importance in their own right, they distracted from the Secretariat’s capacity to make the official COP sessions as productive as they needed to be.

In sum, the environmental diplomacy signals along the way suggested trouble: No rules of procedure in place for a contentious process; no negotiating text from governments, rather only a Chairman’s text; no regional friends of the chair to build a deep leadership approach; not enough time to truly build consensus around the 4 pillars of the Bali Action Plan; and with no consensus about a G-20

financial approach to supplant the G-8 and reshape the Bretton Woods Institutions, there was shallow to no agreement on how to strengthen the financial institutions under the umbrella of the UNFCCC.

Nonetheless, many elements of the Chair's Negotiating Test are informally acceptable to many States, and select issues are moving forward (e.g. renewable). Copenhagen was a global teach-in that worked. Civil society networks were refreshed and strengthened. Many heads of State are now personally engaged in the climate debate, for the first time. The rush to push new technology and energy efficiency has accelerated. What is needed now is to disaggregate these agreed elements, and pursue the ones that can advance as stand-alone programs for the time being. Let them develop, do measurably good work, and then be reunited into the more holistic program of which they are a part. The Biosphere will be the winner by doing so.

B. The Historical Perspective – Long term

The overhang of history was present at Copenhagen, but was forgotten in the rush of events. The climate issue is not a new problem, but the newest global manifestation of the longstanding question of humans and their relationship to nature.

The Intergovernmental Panel on Climate Change is at once a brilliant success – recognized by the award of the Nobel Prize – and an enormous challenge. Without the IPCC's assessment reports, we would not have today the UN Framework Convention on Climate Change, and the many climate change action programs. At the same time, the IPCC has shown nations a mirror of how the effects of climate change threaten their futures. Governing elites in nations across the world are anxious about their futures and their economies. This dichotomy produced the "cliff-hanger" negotiations during the final hours of the Copenhagen COP. COP-15 surely ranks as the most visibly contentious and extraordinary international negotiations about our environment ever. The level of civil politeness was breached; customary ways of deliberating were shunted aside. For the moment, nations have lost confidence in this climate change forum within the system of multilateral conference diplomacy. Part of the mission in Mexico must be to restore the decorum of the process, and agree on some modest but important steps forward. We all must, therefore, work at the national and regional levels, and through parallel conference diplomacy (such as the regime for the Stratospheric Ozone, where confidence remains high) to rebuild confidence essential for intergovernmental global climate collaboration.

Over the past 18 months, Gus Speth, Dick Hildreth, David Hodas and I assembled the course book, **Climate Change: Mitigation and Adaptation** (West Academic Publishing, 2009). This editorial task required deep introspection about how we humans dragged ourselves to this impasse. For those of us in the field of environmental law, we have known that the successive revolutions in agriculture, industry and technology, have been both a blessing and a curse. We have learned to feed billions of people but at the cost of extinguishing species at unprecedented rates and scales, and diminishing Earth's natural heritage precipitously. As our technologies endangered Earth's stratospheric ozone layer, nations awoke to the reality that humans were collectively diminishing life on Earth. We need only ask anyone in Australia or Argentina, where the protection of the ozone hole has changed daily life as humans protect themselves from the sun. As our exploitation of carbon fossil fuels expands, we mobilize and release new

levels of carbon dioxide into the biosphere. A few short years ago, the concentration of CO₂ in the atmosphere increased to exceed 350 parts per million, and at this juncture humans measurably began to impact the once stable climate conditions.

None of this is a new story. Climate skeptics aside, we have known that humans could affect nature and reshape the Earth at least since George Perkins Marsh wrote his seminal work, **Man and Nature** (1864). Marsh was a lawyer and President Abraham Lincoln's diplomat sent to Rome, with a write to handle our relations in the Mediterranean. The USA was not yet a world power in the mid-19th century, and Marsh had time to tour the region. He marveled at the arid climate in Greece, which in Plato's time appeared more like the coast of New England; he saw the few remaining cedars of Lebanon and wondered at their loss. He concluded that it the landscape of the Middle East had been transformed by humans – the culling of timber without replanting, the over-grazing of sheep nibbling away the roots of grasses, with consequential erosion and desertification. When Marsh published his insights in 1864, his book became the intellectual foundation for what became the conservation of nature and natural resources.

For the first time, through Marsh, humans understood that we are a force of nature, demigods in creation. Humans were in fact incrementally transforming the face of the Earth, just as had the glaciers and floods. Humans would need to be conscious of their power and the unintended consequences of employing it in ways that degraded nature.

As the ecological sciences emerged at the end of the 19th century, humans found evidence for what Marsh had described. Goaded on by conservationists, in the ensuing years governments fashioned laws for conserving wild flora and fauna, for establishing vast parklands and wilderness areas, and for conserving soils, forests and grasslands. In the past 40 years, governments added to these conservation programs a host of new environmental laws to abate pollution of air and water, to rehabilitate soils contaminated with hazardous chemicals, and to manage a new genre of substances, invented by humans and unknown in nature. Our discipline of environmental law was born and its framework now extends across and within all nations. Since the 1972 United Nations Stockholm Conference on the Human Environment, nations negotiated multilateral environmental agreements to build the field of international environmental law. In 1992, the UN convened the largest summit meeting ever held, the "UN Conference on Environment and Development," known as the Rio Earth Summit.

In between the admonitions of George Perkins Marsh and the 1992 Earth Summit, the world had changed. The human population had grown from 1 billion to 6 billion people, a six-fold increase. At the same time the world's economic output grew some 68 times, and the energy use increased eighty times from what it had been. Having clear-cut forests, culled fish from the seas to the point of extinction, degraded vast areas of soil, polluted water vapor with acid exhausts and spread persistent organic pollutants across all the Earth, we humans were altering life as never before. Our scientists and journalists and environmental educators provide an understanding of these impacts. As Aldo Leopold put it, "Ecological science has wrought a change in the mental eye." (**Sand County Almanac**). What we have learned about the degradation of Earth's natural systems worried us.

The governments represented in the United Nations recognized that international cooperation would be needed to redress these trends. The foreign ministries came to understand that their nations' environmental conservation laws had failed to avert escalating patterns of environmental degradation across the Earth, which in turn were thwarting the socio-economic advancement of the developing nations. The foreign ministries sent negotiators to determine what cooperative measures would be needed to reverse these trends. At the Rio Earth Summit, they successfully agreed upon an 800 page text, **Agenda 21**, to serve as a blue print for national to redress deteriorating environmental trends and build the foundation for development that would be truly sustainable. On the eve of the Rio meetings, the draft 800 pages had more paragraphs in brackets than without, signifying unresolved disagreements over the proposed texts. On the eve of the Copenhagen meeting, some 250 pages of negotiated text were all in brackets. However, unlike the fate of the Copenhagen "Chairman's Negotiating text," at Rio the nations had sufficient common cause that they confidently adopted **Agenda 21**, and also signed the UN Framework Convention on Climate Change and the Convention on Biological Diversity.

Rio achieved consensus, notwithstanding deep divisions between developed and developing nations and between nations of communist and capitalist persuasions. The nations assembled at Rio were able to do so because from 1985-87, the UN World Commission on Environment & Development had held meetings in all regions, with a membership representing all blocs of nations. The Commission's report, **Our Common Future**, persuaded nations to call for convening what became the Rio Earth Summit. **Our Common Future** documented and described the challenges of climate change, among other environmental problems. Duly concerned by **Our Common Future**, The UN General Assembly convened a Preparatory Committee that met from 1990-92 to prepare for the Earth Summit. At the same time, the General Assembly convened two international negotiating committees to draft what became the UNFCCC and CBD. Contemporaneously, in 1988 the UN Environment Programme and the World Meteorological Organization convened the Intergovernmental Panel on Climate Change, to assemble the collective scientific assessment of scientists across all nations about how humans were changing Earth's climate.

Since The Rio Earth Summit in 1992, scientific consensus has confirmed the rise of sea levels, melting of Earth's cryosphere, disruption of species and their habitats and the continuing extinction of many species altogether, and the spread of pollutants around the globe. The admonitions of George Perkins Marsh echo in these reports and rafts of books and articles. Marsh's worldview is now ours. The economist Nicholas Stern has demonstrated that governments will have to cope with the effects of climate change at some cost today, or devote rather vast financial resources to cope in the future...thereby denying funds needed for other dimensions of socio-economic development.

Yet, in contrast to the overwhelming consensus of scientists, the international political consensus on global environmental crises that we enjoyed in 1987, 1990 and 1992 has evaporated. Although the Cold War has ended, the divide between developing and developed nations has become acute. The greed and mismanagement of transnational banks and financial institutions has brought on the Great Recession of 2007. The Group of 8 has been displaced by the Group of 20, but this change has not led to effective negotiations about the reforms to the global economy to cope with the Great Recession of 2007's

economic melt-down, nor the melt-down of the climate. The globalization movement, to build commercial trade agreements and laws, has ground to a halt, and world trade negotiations are also at an impasse. World-wide environmental degradation trends escalate further, and all our environmental conservation laws and treaties barely stent the bleeding. As Gus Speth put it, we stare into the abyss. **The Bridge At The Edge of the World** (2008).

What became of the consensus of 1992? Why did the Copenhagen Conference of the Parties of the UNFCCC not embrace the sort of concrete recommendations that appeared in Agenda 21, or even in the commitments within Article 4 of the UNFCCC?

I reflected long and hard on these questions while preparing the course book, **Climate Change Law: Mitigation and Adaptation**. It is evident that all nations are beyond the tipping point when it comes to degrading Earth. We already have caused irreversible change, “dangerous anthropogenic interference with the climate system,” and we cannot go back...indeed business as usual is making things worse. We are all so enthralled by our socio-economic model of development that we find it hard to change, even when the scientific evidence is compelling, starkly demonstrating that it is in our best interest to stop our dysfunctional behavior. We like “business as usual” and see no need to alter our practices. We know how to mine coal and drill for oil and these carbon fuels flow in our economic veins. Even as Denmark demonstrates that a nation can thrive without needing fossil fuels, or Delaware designs and enacts plans to become carbon-neutral within a decade, the energy policy and law of great powers like Brazil, India, China, the USA and Russia, do little to implement the obligations that each accepted under the UNFCCC.

There is much hand-wringing about the developing nations, and their rush to burn coal to fuel economic growth, just as the developed nations did in the 19th and 20th centuries. They will not change their business as usual behavior, until and unless the radical new technologies of non-carbon energy sources are widely available and cheaper than the price of coal and oil. The same can be said of the developed nations, such as the USA and Russia, but it is even worse for they wish to make as much money out of selling fossil fuels as they can for as long as they can. Reason, logic and lectures on scientific consensus about the shared climactic threats to the planet Earth cannot shift China or India from their present socio-economic development models. They of course must provide for many of the 2 billion new souls being born in the come few years ahead. But is there not a development impulse, and should not the USA remember it.

Did the logic or voices of the early conservationists stop the USA in the 19th century from pursuing “manifest destiny”? Our early New York novelist, James Fennimore Cooper, in his book **The Prairie** (1827), bemoaned how immigration westward was oblivious to the loss of the high grass ecosystems, the loss of wildlife and coming destruction of the buffalo, or the genocide against Indigenous Peoples. The citizens of our great democracies in the Americas, Australia, or India are similarly oblivious today to the destruction of nature as a result of our industrial carbon energy-dependent system. These economies will continue the current course of carbon-based development, at least for the next two decades or more. The result: further carbonization of the air.

The **Climate Change Law** book is designed to help this generation of law students and their teachers ponder how the law can enable us to cope with the effects of climate change. In this Yale F&ES course in international conferences, you have learned a great deal about how nations behave when trying to debate climate change and development and energy needs. Yet this is not enough. *Teaching all aspects of climate change (including the legal ones) is necessary, but not sufficient.* Educational institutions must make common cause across all disciplines in order to shift Earth's governments into a sustainable future, the vision of **Agenda 21** unanimously adopted by the Rio Earth Summit only 18 years ago. Most of the world has no insurance systems, so economic rebuilding after a disaster is a challenge; we see this still in the 9th Ward in New Orleans and across the Gulf or in Haiti or other nations ravished by hurricanes. Most of the world has no renewable energy regimes, and our intellectual property laws retard the transfer of needed technologies, much as the governments of the developed world aided our great pharmaceutical companies in resisting dissemination of medicines for HIV AIDS in Africa. Much of the world lacks land use planning laws, or any building codes at all (much less green ones), or effective regimes for providing potable water, and the USA and developed world responds by saying these are domestic issues of other countries, and not a global concern.

The world's governance models today, in 2010, are unsustainable. This afternoon our discussion will explore what went awry in Copenhagen and how nations may recover some of the Rio 1992 consensus as we anticipate the meetings later this year in Mexico City of the UNFCCC and Kyoto Protocol regimes. Are annual meetings helpful? There is a good argument that our nations are not well served by annual meetings of the COP. Consider how long it took nations to frame and negotiate and agree on **Agenda 21**. It took 3 years of briefings and extensive consultations (and hard work by James MacNeill and others) to produce **Our Common Future** and another four years of intergovernmental talks to achieve the consensus at Rio. The European nations were so upset by the unilateral policies of President George W. Bush that they deliberately enshrined in the *Bali Action Plan* a two year process to get a new climate regime at Copenhagen. Was not this time-line unrealistically short? On the surface, it looked like the Bali COP gave nations same 2 year period it took States to negotiate the underlying UNFCCC itself (1990-92); surely it could be done. However, for the new Obama Administration, it amounted to a short 6 months; for many developing nations, there was too little time to build consensus about energy conservation and the roll out of distributed, renewable energy systems as a foundation for socio-economic development. Moreover, the policy rhetoric against coal and oil triggered a back-lash; vested interests defeated the Australian government's cap-and-trade proposal, and lobbyists in the USA produced so many amendments to the bill adopted by the House of Representatives that it resembles business as usual in many respects, masquerading as a climate mitigation law.

Until nations can restore confidence in a fair and open negotiating process, there will be little to no consensus on much further action under the umbrella of the UNFCCC. COP-15 shut down some on-going work. For instance at the behest of the G-77, the working group of legal experts was prevented from meeting during the Copenhagen deliberations. The G-77 has little confidence in "experts" until they see that they have played a part in the redesign of the grounds rules and ensured that their own experts are involved and included in the leadership. The USA and EU have an interest in taking a step back and accommodating this interest....but they have yet to do so. Moreover, in the wake of the Copenhagen

deliberations, the developing nations want to hold the developed nations to their pledge made at Copenhagen to produce upwards to \$100 billion in aid to facilitate their investment in building their capacity to mitigate greenhouse gas emissions and adapt to the impacts of climate change. While the economies of the European nations and the USA are in deep recessions, it is unlikely that such aid will be forthcoming, and arguments about the lack of accountability or the weak rule of law in some developing countries will excuse the reluctance to produce financing pledged at Copenhagen. The developed world will see the developed world as an unfaithful partner in the financing of mitigation and adaptation. This will make agreement in Mexico problematic.

On the technology side, the 4th pillar of the Bali Action Plan, there is some progress. There will be talk of the need for capacity building in all nations to design new, green grids and to establish energy efficiency programs. States, NGOs and intergovernmental organizations are working to transfer such technology to the developing countries.

Other issues that should be negotiated are emerging at the margins of debate. Many small island developing States, facing an existential crisis as rising sea levels destroy their lands, need international cooperation to facilitate relocation of their peoples and cultures. Until the UN system addresses this need, they (and their block of some 40 votes) will be increasingly unwilling to join in discussing any new regime that treats them as expendable. Meanwhile China and the USA may hope to produce coal sequestration and clean coal technologies, but whether or not this new technology becomes operational, both nations will burn coal, and oil, for the foreseeable future. Carbon dioxide emissions will grow enormously – even if someday we scrub the air to remove some of them. Small island States will endure the consequences. The neglect of the plight of small island states compounds the lack of confidence that all nations have in the UNFCCC COP process.

Thus, post-Copenhagen, there is a need for confidence building, before we can agree on the needed investments in capacity building. There will be little further effective international cooperation through the UNFCCC until the confidence building advances. *Realistically, this process will take several years, and will only advance if States enhance their cooperation on several fronts.* International cooperation through the International Renewable Energy Agency can roll out the distributed energy systems to provide rural electrification in African and Asia and South America where there is no grid, and may never be a grid. A new UN treaty needs to be agreed to cope with the coming flow of refugees and provide for resettlement of entire national communities, both within nations and across nations. A global regime for insurance, including micro-insurance in developing nations, needs to be instituted. New parks need to be established to sustain photosynthesis and preserve the habitats for species, and afforestation programs need to be advanced everywhere. To date, only China has major laws and national afforestation programs in place.

C. The Next Phases

As nations adopt their legal and socio-economic, energy and other reforms to cope with climate change, their collective actions can also build the confidence across all nations that is needed to build a new global consensus. We cannot put all our eggs on the UNFCCC basket, for in the short term that

threatens to be a recipe for a repeat of Copenhagen. This is not to say we can survive without a global consensus and admittedly we need one...urgently. However, in order to cultivate such a new consensus, we must (as René Dubos put it in 1972 to those of us assembled for the 1972 UN Stockholm Conference on the Human Environment) *“think globally and act locally.”* This is more than just a hackneyed slogan. Think about it. Our individual acts incrementally contribute to this tragedy of the climate commons, and our individual actions can avert and restore. We shall need to frame strong economic incentives and disincentives and enact tough laws to keep us all acting locally and thinking globally. That “global vision,” as the Bali Action Plan urged, is our “thinking globally.”

By accumulating many common reforms across many nations, we shall build the new international paradigm. It will not come from on high, as in a new UNFCCC treaty. When a new treaty comes, it will be to consolidate and enhance an already emerging body of collective activity. We can build toward this needed global consensus in three stages:

(1) **Short Term:** In the immediate term of the next 3-7 years, or the first decade, no UNFCCC -sponsored new global treaty agreement is likely, but we can engraft onto every action appropriate measures for mitigation and adaptation; we can also work with local authorities to provide adaptation, such as ordinances for coping with sea level rise and flooding, or with the private sector to expand insurance regimes. Environmental impact assessment regimes must be used to this end. If the UNFCCC COP did nothing more (and it may not do this much) it would prepare action plans for each of the obligations already agreed to in Article 4 (transportation, agriculture, etc.). Aldo Leopold wrote in *“The Land Ethic” (Sand Country Almanac)*, that “When one asks why no rules have been written one is told that the community is not yet ready to support the education that must precede rules.” Every step that we take in the immediate term needs to educate at the same time as mitigating the causes of climate change or adapting to its impacts. This is the time frame in which our many university degree programs in environmental studies can make a difference. Your participation in this 2009 course in International Conferences served this end. These cumulative, short-term measures will produce the common experiences and consensus that will move nations into the next phase.

(2) **Middle Term:** In the intermediate phase, 2-3 decades from now, we need to end the destruction of forests and wetlands, stabilize those that remain, and plant vast new areas. We need to adopt the reforms recommended in **Agenda 21** where this has not yet been done. We need to remove infrastructure from the coasts and develop a new discipline of coastal morphology, to redesign ports and estuaries and install kinetic energy system to tap the tides, and reseed our oyster and other shell fish beds and help coral to adapt. We need to use all available economic tools to price carbon out of the market and subsidize non-carbon fuel sources. We need to eliminate the internal combustion engine and launch a green fleet of vehicles and the green grid. All the obligations in Article 4 of the UNFCCC will be the subject of new international adaptation regimes. It is likely that corporate charters, and the laws providing for incorporation, will need to mandate a kind of “corporate social responsibility” to protect the environment, in lieu of the often ineffectual voluntary CRS we now enjoy. In short, this generation will make the transformation from a society oblivious to its impact on the Earth to the society that consciously provides stewardship of the Earth’s natural systems.

(3) **Inter-generational Term:** After the next 40 years, the long-term, we shall see how much remains to be done. The transitional generation will not have succeeded in a uniform way. Much will remain to be done, but the international consensus to do so will have been forged. The shared vision of **Agenda 21** and Rio will have been refashioned and reborn, and international cooperation will proceed.

The history of multilateral negotiation and international cooperation in the past six decades teaches that States cannot learn to cooperate faster than this three-phase time-line. Indeed, the history of the one regime that has eliminated huge amounts of greenhouse gases, the Vienna Convention to Protect the Stratospheric Ozone Layer, and the Montreal Protocol, confirms that it has taken some 30 years to build confidence and capacity to reform the damaging socio-economic practices...and we shall now know if we succeed for years yet to come.

Whether we walk in the shoes of George Perkins Marsh, or Ralph Waldo Emerson, or Theodore Roosevelt, or John Muir and my Hudson Valley's John Burroughs, or Aldo Leopold or René Dubos, all of who make our careers in environmental stewardship of our Earth already know that we are fighting an uphill battle. COP-15 reminds us that it will neither be easy, nor even possible to accomplish all that should happen in order to sustain Earth's robust biodiversity and ensure its human populations a just life with respect for human rights. That we shall fail in some respects is no reason not to strive to succeed in as many as possible. We shall lose the unique ecology of an Alpine glacier. Glacier National Park always will be important, but no longer for its name sake. Like George Perkins Marsh, we must learn all we can from the world. We have tools that he lacked: the satellites to probe the biosphere, the computer to model the systems, the refinements of molecular biology to understand life. F&ES graduates, like all citizens, but especially those who chose to enter the service of governments, must teach your institutions to become ecologically literate.

Because we are all beyond the climate tipping point, we can no longer afford "business as usual," oblivious to unintended adverse environmental impacts, and greedily enjoying the benefits of economic externalities. This message, if understood at COP-15, is not yet understood in the capitals around the world. As **Our Common Future** put it, "The Earth is one, but the world is not."

In the accounts of the Copenhagen conference, we find many contrasting or inconsistent interpretations. From their different vantage points, all these variations illustrate the lack of consensus which we discuss this afternoon. I, who followed the CIOP-15 from afar, hope to learn from your impressions and considered reflections as survivors of the COP-15. To build Earth's environmental governance systems, we all need to collaborate – just as you did in your PODS. We have a lot to teach each other.

Let me close this essay on a note of optimism. I have seen the realm of environmental law come into existence since I was a law student. It did not exist when I was as student, and I have been privileged to create and help shape elements of this new field at home and abroad. The law of climate change entails much more than just my field of environmental law. Climate Change Law necessarily will permeate all of environmental law and every other dimension of the civil society and socio-economic life.

No single discipline can bring us back from the abyss. We must engage all our knowledge to do so. For instance, we shall not solve the climate conundrum with just a resort to economics; are we not able to “game” the economic cost-benefit analysis to achieve whatever results the game masters wishes? We need to recall, as Aldo Leopold counsels, that conservation of nature is more than scientific or economic question. It is emotional. We in New York share with those living in Brazil, China, India, Russia, Micronesia, or anywhere else on Earth, a love of nature, as reflected in our poetry and painting, in our parks and botanical gardens, in our parks and in our fledgling young environmental laws. Enactment of statutes and treaties about nature in the past four decades extends beyond economics or science. More than being legislative acts, they are the embodiment of the human love of the Earth. In the short term, if we want climate negotiations to succeed, should we not find the confidence to nurture this shared appreciation for Earth’s beauty among all nations?