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“The global climate change regime . . . was once considered an elegant, groundbreaking area of multinational environmental law [but] is now looking decidedly complex, increasingly weary, and, to some, unfit for its purpose.”

Turbulence in the Climate Regime

STEPHEN PEAKE

Throughout the history of international climate negotiations, the rhetoric of the “last chance” has never been far away. The world’s latest “last chance” was the December 2009 Copenhagen summit. But now here comes another dramatic moment in the global climate change talks.

Between November 29 and December 10, 2010, Cancun will host the 16th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) and the 6th Meeting of the Parties to the convention’s Kyoto Protocol. With the days for bargaining before the talks now dwindling, nations are once again posturing and preparing to lock horns in what has become one of the most technically and politically complicated global negotiations in history.

If satisfaction is a function of expectations, then it is not hard to understand the overwhelming dissatisfaction that delegates and the world’s media experienced last December regarding the outcome at Copenhagen. Expectations had risen out of hand in the run-up to the meeting. Today, in contrast, the mood in the run-up to Cancun is sober. The hangover from Copenhagen has still not fully worn off among negotiators, and expectations are now more carefully managed. All parties speak of the difficulty of reaching a legally binding outcome either in Cancun or indeed during the next major climate conference, scheduled to take place in South Africa at the end of 2011.

The Kyoto Protocol specifies binding targets for industrialized countries to reduce the greenhouse gas emissions that contribute to global warming. The Protocol was designed to oversee emissions

declines over the long term in a set of consecutive five-year plans. The first five-year plan ends in 2012. The next one should in theory begin in 2013. But now even some negotiating documents anticipate potential “gaps” between the end of Kyoto’s initial commitments and the start of a legally binding timetable under a new agreement.

It has been a turbulent couple of years for the international science-policy regime concerning climate change. With the start of Barack Obama’s presidency in early 2009 and with the subsequent wave of “green” economic stimulus plans that countries around the world put forward in response to the 2008 financial crisis, a sense of optimism emerged. But this mood was soon crushed by a triple whammy consisting of “Climategate”—a controversy in late 2009 that called into question the integrity of a group of climate researchers; the perceived failure of Copenhagen in December last year; and the retraction in early 2010 of some claims about potential climate impacts by the Intergovernmental Panel on Climate Change (IPCC), a UN-based scientific advisory group.

Stresses are building in the political tectonics of the global climate change regime. What was once considered an elegant, groundbreaking area of multinational environmental law is now looking decidedly complex, increasingly weary, and, to some, unfit for its purpose. Negotiations have stalled in a mammoth game of chicken-and-egg: What comes first—text or political agreement? Targets or actions?

Copenhagen was by no means an outright failure. But because expectations for a new legally binding global agreement had been built up, the general reaction to the talks has put a great deal of strain on the climate regime. Likewise, the failure of the United States to enact comprehensive climate legislation, combined with a change of government in Australia in part due to the unpop-

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ularity of a proposed emissions-trading scheme, has increased negotiators' doubts and wariness.

BUILDING A FRAMEWORK

It has been about a quarter of a century since the international community started to take climate change seriously, and the steps that have been taken so far—while setting an impressive, if complex, foundation—have unfortunately coincided with a significant rise in global greenhouse gas emissions.

The UNFCCC regime came into force in 1994, and at the first follow-up conference, in Berlin in 1995, negotiators began bargaining over the implementation of long-term targets and timetables for emissions reductions by developed countries. The “F” in UNFCCC is important—it is a “framework” treaty. This means that various key details of how its goals should be achieved required further elaboration from the beginning. In the original agreement, developed countries pledged to return their greenhouse gas emissions to 1990 levels. But in order to do so, it was argued, a longer time frame would be needed—one that would allow planned and natural economic adjustments to deliver emissions reductions at economic costs that were much lower (perhaps even negative in some cases).

The result was the “Berlin Mandate,” which attempted to address many of these implementation concerns. Finally, on December 11, 1997, the text of the Kyoto Protocol was adopted. A further seven years of negotiation and political maneuvering ended when Russia ratified the Protocol in late 2004, allowing it to come into force on February 16, 2005. The Americans and Australians refused to ratify the treaty—but nevertheless, here we had a legally binding regime for emissions controls. And we had a nascent carbon market involving some innovative flexibility mechanisms, such as trading in emissions credits, to help developed nations achieve their carbon emission reductions (and in theory to promote sustainable development in Eastern Europe and the developing world).

Like the UNFCCC itself, the text of the Kyoto Protocol was a political agreement—the specific modalities of its operation would be hashed out and eventually finalized in 2001 in Marrakesh. Kyoto was designed so that the caps on industrial-

ized countries' emissions would be lowered every five years, or “commitment periods,” as they are called. Kyoto's first five-year commitment period ends in 2012. A global economic downturn has helped reduce emissions recently, but even so, several developed countries are on track to overshoot their Kyoto commitments—some spectacularly so (for example, Canada). Thus the negotiations leading up to Copenhagen concerned a successor to the Kyoto Protocol and a strengthening of commitments in general under the UNFCCC.

Copenhagen was unique in its staging as both a climate conference and a summit of world leaders. For the humdrum business of the annual climate conferences, the diplomatic protocol is that heads of state or their representatives fly in for the “high-level segment” at the start of the second week, give their speeches, and then fly off again more or less right away, leaving their heads of delegation to horse-trade and negotiate the minutiae of the final political agreements. A few keen heads of state might stay on. But Copenhagen was different.

The leaders flew in and they stayed—partly in response to the new, positive energy around Obama and the hope that this energy could lead to a breakthrough in negotiations.

The Danish hosts had scheduled plenary sessions with heads of state sitting, rather unusually, in a theater-style lecture rather than around the usual grand summit table. The leaders each took the floor, egging one another on at times like naughty school kids, and behaved, rather predictably, in an unscripted fashion. Climate conferences and summits, it turns out, do not mix. As the negotiations quickly turned to back-room summitry, the climate treaty process seemed sidelined, even undermined, with many delegates and the press unsure as to what was happening in the final days and hours. The final accord emerged from a smaller negotiation involving around 30 countries, in turn driven by a much smaller core of the most powerful nations, including China, India, and the United States.

THE COPENHAGEN DEAL

The global media's subsequent framing of Copenhagen's outcome was almost universally negative. But in fact, several elements of the Copenhagen Accord indicate real diplomatic progress. Granted, the Accord's status within interna-

Four scientific assessment reports and sixteen climate change summits later, global greenhouse emissions have risen by about a third.

tional law is unquestionably soft. It is far from the legally binding successor to Kyoto that many were hoping for. Nevertheless, it is a letter of intent signed by 140 parties representing approximately 80 percent of global emissions (compared to 30 percent in the case of Kyoto).

Thanks to the achievements in Copenhagen we have, as we approach Cancun: (1) a helpful quantitative clarification of the UNFCCC, asserting that in order to prevent “dangerous anthropogenic interference with the climate system,” the increase in global temperature “should be below 2°C” (albeit we are not sure of the base year); (2) an agreement to “cooperate in achieving the peaking of global and national emissions as soon as possible”—this phrase is distinctly new; (3) a set of longer-term [2020] emissions targets for developed countries; (4) an invitation to developing countries to submit inventories of mitigation actions; and (5) a commitment to provide technology and additional financial assistance for developing countries to help reduce emissions and mitigate the effects of climate change. The financial aid is to amount to \$30 billion annually by 2012, with a commitment to raise that figure to \$100 billion per year by 2020.

In recent years, several back-of-the-envelope modeling exercises have indicated that the amount of money developing countries need in order to adapt to the impact of climate change in coming years is in the region of \$100 billion to \$200 billion per year. Taken at face value, the commitment to provide *additional* finance (that is, over and above current aid expenditures) of \$100 billion per year by 2020 is very significant. Copenhagen’s \$100 billion fund represents the single greatest commitment of development assistance in history and comes on top of an aid budget that is already increasing rapidly.

To put this in perspective, gross overseas development assistance provided in 2008 by members of the Organization for Economic Cooperation and Development (OECD) was about \$120 billion, some \$35 billion of which was multilateral aid. This is approximately 0.3 percent of 2008 global gross national income (GNI). The figure has been rising rapidly in recent years as more and more developed countries have responded to their commitment, under the UN’s Millennium Development Goal program, to raise aid to 0.7 percent of GNI (about \$250 billion) by 2015.

If OECD donor countries were to fulfill both their Millennium Development Goals *and* the

Copenhagen commitment, global overseas development assistance would reach \$350 billion by 2020—a near tripling of current levels. These are unprecedented sums. (Indeed, they instantly pose questions about the capacity of the development assistance community as well as host countries to usefully absorb such additional spending.)

If the numbers are staggering in relation to development assistance, they are even more so in terms of specific funding for climate change. Total resources dedicated to climate change mitigation and adaptation are currently in the range of \$9 billion to \$10 billion per year (\$8–9 billion for mitigation and \$1 billion for adaptation). OECD data show that members of the organization’s Development Assistance Committee provided \$3.8 billion in bilateral assistance in 2007 to help developing countries reduce their own greenhouse emissions. This represents about 4 percent of total bilateral development aid that year. The largest donors were Japan (\$1.3 billion), Germany (\$800 million), and France (\$500 million). This funding contributes to sustainable development and greenhouse gas reduction in developing countries’ energy, transport, water, and forestry sectors.

So the Copenhagen deal not only helps treble overall development assistance; it effectively increases climate-related development aid by 1,000 percent in less than a decade—assuming, of course, the commitments are respected.

THE TICKING CLOCK

Going forward, one of the greatest stumbling blocks in the climate negotiations is the practical interpretation of the “principle of common but differentiated responsibilities.” According to the UNFCCC, parties should act to protect the climate system “on the basis of equality and in accordance with their common but differentiated responsibilities and respective capabilities.” The “common” element of the principle is over 60 years old (for example, the international community has been discussing common concerns about stocks of tuna and other fish since 1949). The phrase “differentiated responsibility” (or expressions that are derivatives thereof) crept into international law in the 1970s, implicitly recognizing that developing countries’ first priorities are economic and social development.

Recent scientific findings embodied in the spirit of the Copenhagen Accord suggest that the earlier the “peaking” of global carbon emissions, the better. Meanwhile, today’s situation can be likened to parties sitting locked in a room with

a ticking time bomb, squabbling over who is to blame for the predicament.

The principle of common but differentiated responsibilities has the effect of delaying the peaking of emissions, as developing countries invoke their right to develop on the basis of cheap, carbon-based energy supplies just as their richer counterparts did. Developing countries point the finger at the OECD economies and ask them to show leadership and provide financial assistance. Developed countries point back at the ticking clock.

Interestingly, the Copenhagen Accord provides an implicit time stamp identifying where differentiation of responsibilities stands in practice. The Accord's requirement for developing countries to list their actions in support of the UNFCCC marks precisely where developed countries stood back in 1994. On this basis, the developing world is running about 15 years behind in terms of commitments under the climate regime. The upshot is that the principle of differentiated responsibilities has resulted in very slow political progress.

SCIENTISTS AS PLAYERS

Another key principle in the UNFCCC regime is that policy should be based on sound scientific advice. While hapless technocrats battle away in political and technical negotiations, a parallel set of battles has been taking place within the world's scientific communities, as vividly reported by the global media. The IPCC was established in 1988 and published its First Assessment Report in 1990. Scientific input from the IPCC was extremely influential in the design of the UNFCCC as agreed upon at the Rio Earth Summit in 1992. Since then, the IPCC has published three more assessment reports outlining the evolving state of collective scientific knowledge regarding observed and predicted climate change.

The mantra has been that international climate policy making is based on sound science—with the IPCC providing “policy-relevant but not prescriptive” summaries of the scientific evidence on climate change. Each time the IPCC has issued an assessment, its confidence that the earth is indeed warming at an alarming rate—and that humans are almost certainly the cause—has grown. The IPCC has shown clearly that humans have changed atmospheric composition by burning fossil fuels, producing cement, and clearing the land, and that the earth's biogeochemical systems have been responding (through rising greenhouse gas concentrations, acidifying oceans, melting glaciers,

increased drought, and changes in the timing of spring and in the ranges of species). All of this points to a rapid warming that far exceeds normal rates of climatic variability.

But the scientific foundation of the policy process, in the form of the IPCC, has taken a battering recently through two turns of events. In late 2009, the so-called Climategate affair embroiled the University of East Anglia's Climatic Research Unit in a global debate about the integrity of a few scientists behind some cherished IPCC evidence of global warming. The other debacle came in the spring of 2010 when the IPCC had to retract an unsupported statement from 2007 suggesting there was evidence that the Himalayan glaciers would melt by 2035.

Resistance is a function of speed. Both the above events, in different ways, contributed to a form of resistance among politicians, opinion formers, and ultimately voters that was itself a response to the speed at which the international climate policy regime was nudging toward a successor to Kyoto in the buildup to Copenhagen.

The perceived stalling of the UNFCCC/Kyoto regime, combined with the reputational damage suffered by the IPCC, has prompted some assessment of the international community's overall progress in addressing climate change. Nearly a quarter of a century after the establishment of the IPCC, four scientific assessment reports and sixteen climate change summits later, global greenhouse emissions have risen by about a third.

At the same time, the latest science suggests these emissions must fall rapidly toward just 20 percent of their current levels within a few decades if the world is to avoid global warming beyond 2°C. While it may be true that, without the UNFCCC/Kyoto regime, global emissions might have been some 5 to 10 percent higher than they currently are (thanks to both Kyoto mechanisms and the setting of domestic targets), carbon emissions are still heading dramatically in the wrong direction.

DESIGN FLAWS

Some are now openly critical of the overall climate regime's progress to date. A group of experts held a post mortem meeting on Copenhagen in February 2010. The product of the meeting, known as the Hartwell Paper, argues that the UNFCCC regime has failed to reduce global greenhouse gas emissions because it is structurally flawed. Indeed, according to the 14 authors of

the paper, the regime's failure in 2009 "presents an immense opportunity to set climate policy free to fly at last." Copenhagen, they argue, calls into question "the very process of multilateral diplomacy through large set-piece conferences." They go on: "Copenhagen has shown us the limits of what can be achieved on climate change through centralizing and hyperbolic multilateralism."

The authors have an interesting point to make about the overall design process of the climate regime. An enormous amount of complexity around principles, modalities, and operational entities has crept into the science-policy regime. Meanwhile, global emissions continue to rise and many in the world lack access to clean energy supplies. The Kyoto model "has dangerously narrowed our option space for thinking seriously and realistically about energy and environmental policies," the Hartwell experts claim.

Their diagnosis of design flaws is strong, as are their ideas for creative ways forward. They argue that decarbonization should be viewed as a contingent benefit—not a primary goal in itself. A reframing of action on climate change to emphasize enabling access to clean energy has a much greater chance of success, they maintain. The world would be more successful in addressing climate change if the goal were changed from reduced "sinfulness" to increased "dignity"—that is, from a negative to a positive.

One of the highest insights that anyone engaged in thinking about climate change can have is the revelation that "climate change" itself—as a term, a concept, or even a political movement—means everything and nothing. Typically, the ascent to this understanding involves the scaling of a number of false summits along the way. First the prescriptions for dealing with climate change are seen as similar to those around energy security (energy conservation, efficiency, and fuel diversity). Then the agenda broadens to encompass a menu of policy prescriptions around mitigation for a basket of greenhouse gases (carbon dioxide, methane, nitrous oxide) across all sectors of the economy (buildings, transport, energy industry, agriculture, and so forth).

The next stage is the realization that mitigation is just half the problem—and that adapting to the now nearly inevitable effects of climate change is

a critical piece of the negotiations jigsaw. In turn, this emphasis on adaptation promotes thinking about human development in a wider sense. The issue of climate change starts to be framed in the context of mechanisms to promote sustainable development—that is, in the context of globalization and trade. Ultimately then, the problem of climate change is transformed from a simplistic understanding of an energy policy into a bundled set of agendas around development, globalization, trade, and models of economic growth.

This insight brings with it a powerful and troublesome conundrum. Climate change and human development are inextricably linked and themselves interact with myriad social, economic, and biogeochemical systems. The problem, in other words, is complex. A natural, if somewhat potentially misguided, response to the task of managing complexity is to call for greater centralization in the system of 300 or so multilateral environmental agreements (MEAs) that now exist in the hope that this might lead to more effective policy making and sustainability outcomes.

The principle of common but differentiated responsibilities, along with some other influential legal notions associated with the Rio Earth Summit, is a common thread running through many MEAs—a kind of legal

DNA. On top of this, the systemic nature of the challenge—the interdependence, inter-system complexity of the sustainability challenge—also suggests a more holistic approach. These arguments in the past have led to calls for the establishment of a World Environment Organization or Forum—an environmental counterpart to the World Trade Organization.

SEE YOU BACK IN RIO

It is likely that in the future the international community will look more toward the development agenda to help advance climate change goals. The next Earth Summit will take place in 2012 in Rio de Janeiro. The planned summit, known as "Rio+20," will be held 20 years after the 1992 Earth Summit, which convened in the same city, and 40 years after the very first Conference on the Human Environment, which met in Stockholm in 1972. Low expectations for a breakthrough on climate change in Cancun this year or even in South Africa in 2011 suggest that everything could come

Continued stalemate in the UN-based system could lead "coalitions of the willing" to take the lead on climate action.

to a head again at or around Rio+20. The themes of that summit will focus on “a green economy in the context of sustainable development and poverty eradication and the institutional framework for sustainable development.”

What is likely to happen in the meantime? While parties to the UNFCCC are making few tangible advances in negotiations (focusing instead on “bracketing” practically everything in sight), one bright light and potential area of breakthrough is a growing emphasis on what the negotiators call “cooperative sectoral approaches and sector-specific actions.” These refer to concrete international initiatives to improve, for example, energy efficiency in the transport or steel making sectors.

Kyoto’s preference for flexible mechanisms is still at work here, but in this framework the emphasis is not on carbon markets but on international technological cooperation—for example, to double the fuel efficiency of the world’s car fleet, or to develop new energy technologies or drought-resistant crops. Thus it is possible that a second version of the UNFCCC/Kyoto regime will transform itself into a more direct mechanism for the promotion of low-carbon technologies.

The last Earth Summit was Rio+10, held in Johannesburg in 2002. The Johannesburg plan of action, along with the Millennium Development Goals initiative, split up large challenges into smaller, more manageable parts (in the case of Johannesburg’s approach to sustainability, the parts were water, energy, health, agriculture, and biodiversity). This strategy of unraveling policy synergies is perhaps more politically attractive than attempting to deal with abstract notions of sustainable development. The authors of the Hartwell Paper argue similarly that “Adaptation, forests, biodiversity, air quality, equity, and the many other disparate agendas that have been attached to the climate issue must again stand on their own.”

Another possibility is that continued stalemate in the UN-based regime could lead to an increasing emphasis on non-UN “coalitions of the willing” to take the lead on climate action— independent of the shackles of differentiated responsibilities and other UNFCCC/Kyoto principles. We might see, for instance, the formation of an E-8 (the world’s top 8 emitters).

THE STAGES OF FAILURE

What makes this a spectacularly fascinating moment in history is science’s clear implication

that we must wean the global economic system from cheap fossil fuels and unsustainable land use patterns in a very short period of time. Failure to do so may have, we are told, profound effects—including on the global economic system itself.

Jared Diamond, in work based on his best-selling 2005 book, *Collapse: How Societies Choose to Fail or Succeed*, offers a framework for thinking about how past societies have been capable of such dramatic failures in collective decision making that they have collapsed altogether. According to Diamond, four stages of failure in group decision making can lead to catastrophe: (1) a society fails to anticipate a problem before it arrives; (2) it fails to perceive the problem when it arrives; (3) it fails to try to solve the problem after perceiving it; and (4) it fails to solve the problem after trying.

Where are we in relation to the threat of climate change? While the infrared trapping capabilities of water vapor, carbon dioxide, and other greenhouse gases have been known since the early nineteenth century, it was not until 1988 that the IPCC was established—about a century after John Tyndall suggested that slight changes in atmospheric composition could bring about climatic changes. It took us about a century, thus, to avoid failure at Stage 1. The past 22 years of assessments by the IPCC have clearly set out the nature of the problem that climate change poses.

Many people have assimilated this knowledge to the extent that they have perceived something of the true nature of the threats (as well as a few opportunities) that the world faces as a result of rapid climate change. So the world, or at least much of it, has passed Stage 2. And it is clear that the UNFCCC and its Kyoto Protocol, however inadequate some may perceive them to be, are most definitely the start of some kind of global response (Stage 3).

The world’s leaders have perceived the problem that climate change presents—though this took a decade or two longer than would have been ideal (and indeed a few leaders remain unconvinced). Arguably, therefore, we have so far managed to avoid climate change-induced societal collapse through stages 1, 2, and 3. The world’s task at this point is to harness imagination and boldness to ensure political momentum for more effective measures—that is, we must try even harder to find workable international solutions. ■