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Avoiding Gridlock on Climate Change

With the Kyoto Protocol's global process bogging down, a parallel strategy of smaller, focused negotiations to achieve partial solutions could put the world back on the right path.

For the twelfth consecutive year, nearly 190 nations convened in November 2006, this time in Nairobi, to address the critical issue of climate change. Unfortunately, the atmosphere at these two-week annual conclaves most resembles a medieval trade fair: a hearty reunion of thousands of well-tailored diplomats (some countries send as many as 100 representatives), plus additional thousands of nongovernmental “observers,” some manning colorful information booths, others intent on picturesque mayhem to attract squadrons of riot police. Hundreds of media representatives also join the party in search of a provocative sound bite or an attention-grabbing image.

These UN mega-conferences have by now developed a predictable pattern. Considerable time is occupied by tedious problems of coordinating positions and tactics, both inside the huge national delegations and within blocs of countries such as the European Union and other regional or “like-minded” coalitions. There are the usual dire warnings—fully justifiable—of impending global catastrophe. There are trivial protocol debates and ritualistic ministerial speeches exhorting complicated and unrealistic actions. There are cultural diversions such as boat rides on the Rhine or dance performances in Marrakech. As the end nears, all-night negotiating sessions contribute to a sense of destiny.

But despite the customary self-congratulatory finale, the results at Nairobi, as at preceding meetings, were embarrassingly meager. This process has been going on every year since the 1995 Berlin Conference of Parties to the United Nations (UN) Framework Convention on Climate Change. The sheer size of the treaty, with its integral accompanying

explanatory texts, definitions, and regulations, has meanwhile grown from under 40 pages to several hundred pages of numbing complexity. Much of the negotiations have centered on how the industrialized countries can dilute (for example, by emissions trading or by arbitrary estimates of emissions absorbed by ecological land use) the unrealistic emission targets that they accepted in the midnight hours nine years ago in Kyoto and how much financial resources should flow from the “rich” to the “poor” countries, which have no targets at all.

The process is inevitably slow because of the large number of parties involved. But is it necessary to have everyone at the table? In actuality, only 25 nations, about half of them in the “developing” category, are responsible for about 85% of the world’s greenhouse gas emissions. None of the other 160-plus countries accounts for even 1%! Many of the world’s largest emitters are, in fact, “newly industrializing” nations that shun even a hint of voluntary restraints by claiming affinity with the poorest developing countries. Yet India’s emissions are greater than those of Japan and Germany, Brazil emits more than the UK, and China’s emissions exceed everyone but the United States. Moreover, greenhouse gas emissions from these soi-disant “poor” nations are growing far more rapidly than those of the “rich.”

The climate meetings, obsessively focused on short-term targets and timetables applying only to industrialized nations, have become trapped in a process that is unmanageable, inefficient, and impervious to serious negotiation of complex issues that have profound environmental, economic, and social implications extending over many decades into the future.

The Kyoto Protocol, lamely defended by its proponents as “the only game in town,” now best serves the interests of politicians whose rhetoric is stronger than their actions and of those commercial interests and governments that want no meaningful actions at all—notably, Saudi Arabia, Kuwait, and other Near East oil producers, and the U.S. administration, which is not unhappy with the treaty’s lack of progress.

Lessons from the ozone history

It is worth recalling that the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer, later characterized by the heads of the UN Environment Program and the World Meteorological Organization as “one of the great international achievements of the century,” was negotiated by only about 30 nations in nine months, with delegations seldom exceeding six persons and with minimal attention from outside observers and media. I doubt whether the ozone treaty could have been achieved under the currently fashionable global format.

We might draw some useful lessons from the ozone history. In the late 1970s, the ozone science was actually much more disputed than the climate science of today, and the major countries that produced and consumed chlorofluorocarbons (CFCs) were hopelessly deadlocked over the necessity for any controls at all. In this situation, the first international action on protecting the ozone layer was neither global, nor even a treaty. Rather, it was an informal accord among a loose coalition of like-minded nations, including Australia, Canada, Norway, Sweden, and the United States, to individually and separately ban the use of CFCs in aerosol spray cans.

This measure alone resulted in a temporary 30% drop in global CFC consumption (temporary because these “wonder chemicals” were continuing to find new uses in numerous industries.) But the action was nevertheless significant for the future. The resultant technological innovations demonstrated to the skeptics (in this case the European Community, Japan, and the Soviet Union) that controls were feasible, at least for this class of products. It also gave the United States and other proponents of a strong treaty the moral and practical high ground in later negotiations to restrict all uses of CFCs. Yet, if anyone had actually proposed a 30% reduction target, it would surely have been rejected as impossible.

An important lesson here is that a specific policy measure, not an abstract target, could stimulate unanticipated technological innovation. The policy measure drove the agreement on targets in the later ozone protocol, not vice versa. In contrast, the half-hearted performance of most govern-

ments with respect to climate policy measures has not matched their political rhetoric about the urgency of targets.

Another important lesson from the Montreal history was that not all countries need to agree in order to take a substantial step forward. It is also relevant to note that, in contrast to Kyoto, developing nations did accept limitations on their CFC consumption, but only when they were assured of equitable access to new technologies. Technology development is the missing guest at the Kyoto feast.

An architecture of parallel regimes

Is it sensible to continue trying to solve the extremely complex climate problem in a single common format with 190 countries having widely variant national interests? Given the halting progress of the Kyoto Protocol, supplementary agreements appear inevitable and have, in fact, already appeared in the form of bilateral and other arrangements, including innovative actions at state and municipal level. The Montreal experience suggests that pursuing activities involving fewer countries and more narrowly defined objectives, in parallel to the Kyoto process, might be more effective than focusing solely on targets and timetables in a global forum.

The climate problem could be disaggregated into smaller, more manageable components with fewer participants—in effect, a search for partial solutions rather than a comprehensive global model. An architecture of parallel regimes, involving varying combinations of national and local governments, industry, and civil society on different themes, could reinvigorate the climate negotiations by acknowledging the diverse interests and by expanding the scope of possible solutions.

To be sure, even here success would require a degree of genuine political will among at least a significant number of key governments. Nonetheless, by focusing on specific sectors and policy measures in smaller, less formal settings with varying combinations of actors and by not operating under UN consensus rules, the possibilities for achieving forward motion would be increased. The process and results could be termed protocols or forums or agreements, but their essential character would more closely resemble a pragmatic working group than a formal diplomatic negotiation. Following are some examples.

Energy technology research and development. The most important issue not addressed by the Kyoto approach is that solving the climate problem will require an energy technology revolution on a global scale that would enable, at acceptable costs, emissions reductions of 60 to 70% or more in the course of this century. As early as 1998, a group of scientists from Pacific Northwest National Laboratory and other institutions, led by Jae Edmonds, initiated the pioneer-

ing Global Energy Technology Strategy Program (GTSP). Employing integrated modeling analysis, they demonstrated that the magnitude of emissions reductions required to avoid dangerous climate exchange would entail prohibitive costs in the absence of a new generation of “post-modern” technologies. They demonstrated that technological breakthroughs in several areas, including carbon capture and sequestration, biotechnology (biomass), hydrogen, nuclear power, solar and wind, and end-use (efficiency) technologies, could save trillions of dollars compared to “innovation as usual.”

These insights initially went largely unheeded in the prevailing efforts to make the Kyoto Protocol functional. Current worldwide energy R&D is clearly inadequate. It is ironic that governments were negotiating emission-reduction targets while simultaneously reducing their budgets for energy technology R&D. In effect, they were implicitly counting on a reluctant private sector, stimulated by the modest Kyoto targets, to somehow generate a monumental transformation of the world’s existing fossil-fuel-based energy system.

Given the stakes, energy research arguably merits a degree of public sector commitment comparable to that devoted not long ago to aerospace and telecommunications. The amounts involved are not exorbitant, especially when compared to expenditures in other parts of our entertainment- and defense-oriented economies. For example, a U.S. tax of \$8 per ton of carbon, equivalent to two cents per gallon of gasoline, would generate about \$12 billion annually—about six times what the government currently spends on energy R&D. Investments in an energy technology revolution would also yield political dividends by stimulating economic growth, job opportunities, and commercial spin-offs, as did the space program.

Why not, then, convene an open forum for like-minded countries, North and South, involving also participation from industry, universities, and research institutions? The industrialized nations could aid and contribute to energy technology research programs of developing countries, recognizing that technological solutions may vary in different regions. The participants could also commit to increase basic and applied research budgets and to collaborate in technology development and diffusion.

Transportation. A large proportion of global carbon dioxide emissions comes from the transportation sector, particularly automobiles. As China and India, each with populations of over one billion, expand automobile use, their resultant emissions will dwarf those of the industrialized North. Yet, it is no secret that much more fuel-efficient vehicles, or even cars that do not need fossil fuel at all, are feasible.

Is it not conceivable that the 15 or 20 major automakers of the world, together with the ministers of industry of their respective nations, could convene in a medium-sized conference hall and hammer out a schedule for introducing low-carbon and then no-carbon vehicles? The topics could range from new fuels and engines to strong but lightweight structural materials. No auto manufacturer could complain of competitive disadvantage, for they would all operate under the same constraints, and new technologies would be shared. Moreover, the companies would be encouraged to pool their intellectual talent in order to arrive at technological solutions sooner and at lower cost. (Their respective advertising departments would doubtless later find ways to differentiate their products for consumers’ tastes.) Interestingly, this type of collaboration was fostered by the Montreal Protocol among companies in the race to eliminate CFCs.

Power generation. A similar process of collaborative technology research, development, and diffusion could be applied to electric power generation. Even though there are many more producers worldwide, one can conceive of arrangements on a subnational or cross-border basis to stimulate cooperation on emissions-reducing technologies. This is already occurring among U.S. states and Canadian provinces. Agreements could also be reached on commitments to progressively introduce technology standards for future new power plant construction, which would influence private sector long-term investment planning.

Agriculture, coal, and adaptation technologies. Relevant governments and industries could collaborate on the development of biofuels, biomass, and land-use and agricultural practices to promote carbon absorption. Clean coal as well as carbon capture and sequestration technologies would be an important subject for North-South collaborative agreements involving major coal-producing and consuming countries such as Australia, China, the Czech Republic, Germany, India, Poland, and the United States. Partners from industrialized countries could also work together with developing countries on new adaptation technologies. For example, the Netherlands could share its extensive experience in flood prevention and water management with countries such as Bangladesh, Egypt, and island states of the Pacific and Caribbean.

Other technology R&D agreements. Separate protocols or collaborations, involving flexible coalitions of governments, industry, universities, and civil society, could be envisaged to promote other technological innovations, including energy efficiency, hydrogen, nuclear, solar, wind power, and biotechnology. A working example is the ITER project to explore fusion energy.

Government procurement policies. Because of their buying power, governments can, through procurement policies, provide a powerful market stimulus for technological innovation. Industrialized and developing country governments could develop procedures to aggressively promote energy efficiency, non-fossil fuels, and innovation through their automobile fleet procurement, building standards, and other commercial policies. In the ozone history, the U.S. Department of Defense played an unexpectedly critical role in accelerating the global phase-out of CFC 113 by revising its procurement standards.

Regional cooperation. Regional forums would provide another opportunity to bring together industrialized and developing countries for scientific, technical, and policy cooperation, as well as for the diffusion of new technologies. The 2005 Arctic Climate Impact Assessment was a model of innovative scientific and policy-related cooperation on climate issues among diverse nations and peoples bordering on the Arctic. The Asia-Pacific Partnership on Climate and Clean Development, established in 2005, involves Australia, China, India, Japan, South Korea, and the United States, which together account for about 60% of the world's energy use. The partnership, which includes industry participation, is intended to complement, not replace, the Kyoto Protocol, and promotes collaboration in eight areas: aluminum, buildings and appliances, cement, cleaner use of fossil fuels, coal mining, power generation and transmission, renewable energy and distributed generation, and steel. One could envision similar models in other regions.

Looking forward. There are no easy answers; we could begin by admitting that over a decade of global negotiations has not brought notable progress. We should be open to new ideas. Parallel regimes would complement the Kyoto Protocol's focus on short-term emissions targets and trading by developing the essential technological and policy conditions for the steep emissions reductions that will be neces-

sary in future decades. In order to influence long-term private investment decisions in energy, transport, and infrastructure, policy-oriented parallel regimes should be reinforced by clear signals that the price of carbon emissions will rise indefinitely—for example, gradually increasing carbon taxes and cap-and-trade systems similar to the successful U.S. experience in the 1990s with sulfur dioxide. U.S. leadership in this process, as in the Montreal ozone protocol, would be critically important, but any given regime could make practical progress even absent U.S. involvement.

Parallel regimes would enable motivated governments to move away from the mega-conference syndrome and its accompanying trade-off mentality, and instead to focus on pragmatic problem-solving coalitions in smaller and less formal settings. Public-private partnerships drawing on industry expertise, local communities, and civil society would be characteristic of this approach. Negotiations and consultations would be reduced to a manageable number of countries and delegations, and would be more specialized and technical in their scope. Providing reports on these activities to the wider audience of the annual Conference of Parties to the Framework Convention could stimulate other countries to join one or another regime of interest and could gradually transform the Convention into a forum for dissemination of new ideas and practical results, rather than an instrument for illusory consensus, rhetoric, and delay.

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