An Architecture of Parallel Regimes: Disaggregating the Climate Negotiations

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Introduction. I believe that a major reason for the Kyoto Protocol's persisting problems lies in the negotiating process itself. For more than a decade, climate "mega-conferences" have provided a convenient setting both for political leaders whose climate actions do not match their rhetoric, and for those who want no meaningful actions at all.

Over 180 nations meet for two weeks at a time in an atmosphere that resembles a medieval trade fair or carnival. There are thousands of government participants; many delegations comprise 50 to 100 or more individuals. There are also thousands of nongovernmental "observers," some intent on picturesque mayhem that attracts squadrons of riot police. There are hundreds of media representatives, all eager for sound bites.

There are problems of coordination and pre-negotiation – both within huge delegations and within blocs of countries (e.g., the European Union, United Nations regional groups), that necessitate wearisome meetings before, during, and after the real negotiations. There are the ritualistic ministerial speeches. There are all-night sessions; there are cultural programs (boat ride on the Rhine, native dancers in Marrakech); there are time-consuming diplomatic protocol issues ("which country should chair working group 12?").

This process has now gone on since the 1995 Berlin Conference of Parties to the United Nations Framework Convention on Climate Change. And yet, in terms of reducing greenhouse gas emissions, it is relevant to note that only 25 countries – both industrialized and developing – together are responsible for about 85 percent of the global problem. None of the other, more than 160, nations accounts for even one percent of total emissions.

The sheer size of the Kyoto Protocol, with its integral accompanying explanatory texts, definitions, and regulations, has grown correspondingly, from under forty to several

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hundred pages of numbing complexity. Preoccupied with seemingly endless debates that mainly center on how to weaken or avoid what are essentially inconsequential short-term emissions targets, the negotiators have, unfortunately, been distracted from the fundamental challenge of the climate issue: namely, *how to promote an energy technology revolution on a global scale that would enable, at acceptable costs, far steeper emissions reductions in the course of this century than the modest, diluted aspirations of Kyoto.*

The Kyoto Protocol, lamely defended by its proponents as "the only game in town," seems to be trapped in a process that is unmanageable, inefficient, and not conducive to sober consideration of complex issues that have profound environmental, economic, and social consequences extending over many decades into the future. Is this inevitable? Is it really necessary to try to solve the climate problem in a single common format, when there are so many significant differences in the characteristics of individual countries, both North and South, that can affect the solutions?

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 UNEP and WMO as "one of the great international achievements of the century,"[2] was negotiated by only about 30 nations in nine months, with delegations seldom exceeding six persons and minimal attention from outside observers and media. If we had to negotiate the ozone treaty under the currently fashionable global format, I wonder whether we could succeed.

We might draw some useful lessons from the ozone history. In the late 1970s, the ozone science was considerably more disputed than the climate science of today, and the major chlorofluorocarbon (CFC) producing and consuming countries 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 drop in global CFC consumption by 30 percent (temporary because these "wonder chemicals" were continuing to find new uses.) 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 possible, at least for this class of products. It also gave the proponents of a strong treaty both the moral and the practical high ground in the subsequent contentious protocol negotiations. Yet, if anyone had actually proposed a 30 percent reduction target, it would surely have been rejected as impossible.

A significant lesson is that a specific *policy measure*, not an abstract target, stimulated unanticipated technological innovation; the policy measure drove the subsequent agreement on targets, not *vice versa.* In the current climate negotiations, the half-hearted

[2] Forward to R. Bojkov, *The Changing Ozone Layer*, Geneva: WMO/UNEP, 1995.

performance of most governments with respect to policy measures has not matched their political rhetoric about the urgency of short-term targets.

Another important lesson for climate from the Montreal history is that *not all countries needed to agree* in order to take a significant step forward. It is also relevant to note that developing nations would only accept limitations on their CFC consumption when they were assured of equitable *access to new technologies*.

Parallel Climate Regimes. The following categories briefly illustrate the potential range of a system of parallel regimes among like-minded countries that might reinvigorate the climate negotiations by acknowledging both the diversity of participating nations and the breadth of possible solutions. They are examples of how the climate negotiation process could be disaggregated into smaller, mutually reinforcing, more manageable, and potentially more productive components -- a search for partial solutions rather than a comprehensive model: in other words, *an architecture of parallel regimes.*

To be sure, success in these proposals would require a degree of genuine political will, by at least a significant number of key governments, that has not, unfortunately, characterized the Kyoto process. By considering specific sectors and policy measures in smaller, less formal settings with varying combinations of nations, and by not operating under UN consensus rules, the possibilities of achieving forward motion may be increased. In addition to governments, private sector participation, as well as sub-national and local community involvement, should be strongly encouraged. The process and results could be termed protocols, or forums, or agreements, but their essential character would more resemble a working group than a formal diplomatic negotiation.

Energy Technology Research & Development. It is ironic that while nations were agreeing in Kyoto on targets to reduce emissions, most of these same governments were actually *reducing* their budgets for public sector investment in energy technology R&D -- without which any significant emissions reductions will be impossible to achieve. In effect, they were implicitly counting on a reluctant private sector to somehow generate a monumental transformation of the world's current 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. What is needed is the equivalent of a "space program" for energy technology. The amounts involved are not exhorbitant, especially when compared to other priorities in our consumer- and defense-oriented economies. For example, a U.S. tax of $4 per ton of carbon, equivalent to one cent per gallon of gasoline, would generate about six billion dollars annually: this would more than triple existing public sector energy R&D. Moreover, investments in an energy technology revolution would yield political dividends -- stimulating economic growth, job opportunities, and commercial spin-offs, as did the space program.

Why not, then, open a forum for like-minded countries – North and South -- who would commit both to increase their energy research budgets and to collaborate in technology development and diffusion?

Transportation Sector. A significant 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 significantly 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, 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 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 chemical companies in the race to eliminate CFCs.

Power Generation Sector. 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 sub-national or cross-border basis to stimulate cooperation on emissions-reducing technologies. This is already occurring among American 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 development of biofuels, biomass, and land-use and agricultural practices to promote carbon absorption.

Clean coal and carbon capture and sequestration technologies would be an important subject for North-South collaborative agreements involving important coal-producing and consuming countries such as Australia, China, Czech Republic, Germany, India, Poland, and the U.S.

Partners from industrialized countries could work together with developing countries on new adaptation technologies – the Netherlands, for example, applying its experience in sea-level control.

Other Technology R&D Agreements. Separate protocols or collaborations, involving flexible coalitions of governments, industry, universities and civil society, could be envisaged to promote various other technological innovations, including energy end-use

efficiency, hydrogen, nuclear, solar and wind power, biotechnology (for biomass), etc.; a multinational agreement for cooperation in fusion technology development was recently established.

Government Procurement Policies. Because of their size, governments can, through their procurement policies, provide a powerful market stimulus for technological innovation. Collaboration among industrialized and developing country governments could develop and promote effective procedures for advancing energy efficiency and innovation through their automotive 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 phaseout of CFC 113 by revising its procurement standards for sensitive applications covered by this chemical.

Regional Cooperation. Regional forums provide another opportunity for engaging both industrialized and developing countries in technical and policy cooperation, as well as in diffusion of new technologies. The recent Asia-Pacific initiative involving Australia, China, India, Japan, South Korea and the United States hopefully will soon begin to demonstrate practical achievements. The 2005 Arctic Climate Impact Assessment was a model of successful cooperation among diverse nations and peoples bordering on the Arctic.

Conclusion. The idea of parallel regimes is not intended to detract from emissions reductions targets or emissions trading, but rather to provide a complementary and supportive structure to develop the essential technological and policy conditions for the much steeper emissions reductions that will be necessary in the coming decades.

Parallel regimes would enable motivated governments to move away from the mega-conference syndrome and its resultant trade-off mentality, and instead to focus on pragmatic, specific problem-solving coalitions in smaller and less formalized settings. Public-private partnerships drawing on industry expertise, and involvement of 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 composition. The objective would be to focus on specific technologies and policy measures, and to achieve pragmatic, partial solutions.

I would anticipate that the parallel regimes would submit progress reports to the wider audience of the annual Conference of Parties to the UN Framework Convention on Climate Change.