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Roles for a G20 in Addressing the Threats of Climate Change?

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Ever since the Rio summit in 1992 essentially all international diplomacy on the problem of climate change has focused on the United Nations Framework Convention on Climate Change and its daughter agreement, the Kyoto Protocol. After twelve years of hard labor, the international community has remarkably little to show for its effort. A new effort, crafted within a G20, could help refloat the climate treaty system and set it on the right course.

To be sure, the Framework Convention and Kyoto Protocol have made some contributions to the collective effort to manage the threats of changing climate. The Framework Convention has facilitated cooperation on useful procedures for sharing data on emissions of greenhouse gases. The Framework Convention also formally established a useful funding mechanism that sponsors climate-friendly projects in developing countries. Within the Kyoto Protocol, the achievements are still hypothetical. Some of the advanced industrialized nations are on track to meet or beat their Kyoto targets – mainly, though, for reasons outside the realm of climate policy and therefore reveal little about

how to craft effective long-term climate policy. The rest are falling short. Kyoto's international emission trading system, originally billed as a market-friendly way to reduce the cost of controlling emissions, has become a farce as perhaps one billion tons of extra credits hanging over the market – all from Russia and Ukraine who got madly excessive quotas in Kyoto and are loath to give them up. In a particularly bizarre twist of fate, Kyoto's future as a binding international treaty hangs with Russia, the industrialized country that cares least about climate change – indeed, many of Russia's best climate scientists think that some global warming would be good for Russia, and most of Russia's top political analysts see Kyoto either as a threat to economic growth or, at best, a scheme that can be bilked for money. Efforts to engage developing countries within Kyoto have hinged on the Clean Development Mechanism (CDM), but that has become a paragon of inefficiency as the mechanism for reviewing CDM projects is highly politicized and micromanages every project it scrutinizes. The original promise to the developing countries was that CDM could be operational by 2000 so that benefits of their engagement would flow early and liberally; yet today the CDM's executive body has given approval only to three relatively minor projects. Although a start, the CDM has not created the flood of investment that had been promised to developing countries.

Despite all these problems, many industrialized countries are developing and implementing constructive policies. Canada and Japan are developing coherent plans that will deliver some reduction in emissions below the level that would occur in the absence of policy. The EU is furthest ahead and today in the midst of launching a novel emission trading system. (Among the industrialized countries, only the U.S. fails the test of crafting a serious response to the challenge of climate change.) These efforts are evidence of concerned publics and committed leaders, but each reflects mainly the nation's calculus

in isolation. Collectively they could justify and achieve much more if a viable framework for international cooperation were in place.

This memorandum explores possible roles for a G20 in establishing a new international framework for climate change. My argument is not that a G20 would replace the Framework Convention and the Kyoto Protocol. Rather, a G20 could supply a badly needed crucible in which the leaders of the world's most relevant countries would frame their responses to this problem. Having worked out viable strategies in this smaller and more nimble institution they could then apply the solutions more widely – including in successors to the Kyoto Protocol.

What Went Wrong?

Assessing the potential roles for a G20 requires a sober assessment of what went wrong with Kyoto. My diagnosis finds three afflictions, of which one is ripe for remedy through a G20.

First, Kyoto ran afoul of unexpected circumstances. The approach of setting caps on emissions might have worked if nations could have implemented their caps largely within their borders or if the international emission trading system had not become mainly a shell game for Russia. But both these conditions failed for reasons rooted mainly in horrendous errors of judgment by the United States. In Kyoto, the U.S. accepted a target that was unachievable within U.S. borders. Thus, from the day after adopting Kyoto on 11 December 1997, U.S. diplomats worked overtime on the architecture for the trading system and special accounting rules for sinks – all of which, it was thought, would allow Americans to obtain huge quantities of emission permits overseas. Yet the U.S. economy grew much more rapidly in the late 1990s than most experts had anticipated,

and as U.S. emissions therefore rose ever higher the Kyoto targets slipped ever further from reach and the need for inflated overseas credits grew ever greater. Having created its own perfect storm of noncompliance, it was inevitable that the U.S. would demand to renegotiate its Kyoto targets or simply withdraw. When the U.S. finally exited the wreckage it left behind included a vast surplus of potential credits whose value then plummeted, which undermined the whole concept of trading. While the U.S. exit was undiplomatic and the Bush administration's behavior ever since has left much to be desired, no American president could have crafted a politically viable compliance strategy. It is interesting to ask why the U.S. administration accepted those commitments in 1997, but the pathology of that error is beyond the scope of this memo.

Second, the architecture of the Kyoto Protocol – strict binding caps on emission quantities – was extremely unlikely to work. The problems for U.S. compliance were an extreme case, but every nation faced similar exposures. When the architecture for Kyoto was set – at high level meetings in 1995 and 1996 – a binding cap on emissions was seen as a politically astute move because it would deliver assured benefits for the environment. Economically, however, that architecture was wrongheaded. The climate system is largely insensitive to the exact level of emissions because carbon dioxide (the main human cause of global warming) accumulates slowly in the atmosphere; the damage from global warming depends mainly on that accumulation rather than the particular level of emissions in any year (or even any decade). What matters is the long-term trend. The cost of action, however, is extremely sensitive to the exact cap on emissions. If the cap is too tight then firms will be forced to shut plant and equipment prematurely – a huge cost for little environmental benefit. The international emission trading system could help to ameliorate such economic problems, but the trading system could link national and

international actions only if the system were backed by strong monitoring and enforcement to ensure that emission credits reflected real efforts. The proper analogy for this system is the creation of a new international currency. Yet practically none of the Kyoto architects had contemplated the implications of that analogy. The mechanisms for monitoring and enforcement, although strong in the canon of international environmental law, were inadequate to the task. Particularly bizarre was the decision by the architects of the trading system to allow “seller liability” rules – that is, any emission credit that is monetized in the system is awarded full face value. That decision thus undercut all of humanity’s experience with how money finds its true value. As the European Union has demonstrated with the Euro, the only way to create a strong currency is to work with small numbers of like-minded countries in the context of strong institutions and *after* individual economies have established their own currency values.

These first two problems are tightly interlinked. Poor architecture allowed unanticipated events to destabilize the system. New thinking about architectures is needed, although that is a subject I address elsewhere.¹ A G20 could make it easier to experiment with alternative architectures, but a G20 by itself will not necessarily yield the proper system.

A G20 could be helpful in addressing the third deficiency in the climate treaty system. Kyoto is too inclusive. Thus the negotiating agenda has become extremely complex, and at critical moments the conflicting interests of participants have undermined the effectiveness of the regime. Yet substantial leverage on the climate problem could be achieved by working, at least initially, with just a small number of

¹ e.g., David G. Victor, *The Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming*, (New Jersey: Princeton University Press, 2001). A reissued version, with an updated afterword, is due in August 2004.

countries. Ten countries account for 58% of global emissions. Fifteen account for 67%. Twenty control 74%.² The next twenty add just another sixteen percent.

The norms of openness and inclusion in the UN system make discrimination difficult. Formal slots on key committees are typically allocated by geographical and political regions, often with little regard to the relative weight of countries. Rigid and crowded representation make it difficult to fine-tune coalitions and commitments. Commitments in the Framework Convention and Kyoto have been crafted within two broad and crude categories – industrialized and developing countries. The first category is subdivided into the advanced industrialized countries (a list identical to the OECD's membership in 1992) and the reforming countries. Yet the bluntness of this categorization is evident, for example, in the exclusion of Mexico and South Korea from the list of industrialized countries. Yet both these "developing countries" joined the OECD (after 1992), are on the top 20 list of emitters, and participate in free trade regimes that put their firms in head-to-head competition with firms in countries that have adopted caps on their emissions.

The inability to exclude participants or create sophisticated categorizations of commitments has made it particularly difficult to fine tune commitments to the interests of the countries within the system. To date, four different "types" of countries have participated actively in the work of the climate treaty system:

- A. Controllers. Countries that have an interest in controlling their emissions and are willing to pay for it. These include all members of the OECD, including

² These calculations are based on 2001 emissions of CO₂ from burning fossil fuels (including flaring), reported by the US Energy Information Administration. The top twenty are: U.S. (24%), China (13%), Russia (7%), Japan (5%), India (4%), Germany (3%), Canada (2%), United Kingdom (2%), Italy (2%), Korea (2%), France (2%), South Africa (2%), Australia (2%), Ukraine (1%), Mexico (1%), Brazil (1%), and Iran (1%).

the U.S. once the U.S. gets beyond its presently destructive engagement with international institutions. These countries vary in their enthusiasm, and thus the most effective system would allow for "multispeed" efforts.

- B. Important avoiders. Countries that have no interest in controlling emissions and will participate only if they are paid for the full cost of their efforts (and then some). This group includes all the major developing countries as well as Russia and Ukraine.
- C. Destructive avoiders. Countries that fear they will lose handily from any effective emission control program. These include essentially all members of OPEC. This group might eventually include Russia, which is the world's second-largest oil exporter, except that Russia probably stands to gain more from selling low-carbon gas to Europe than it will lose if oil sales decline in a carbon-constrained world.
- D. Terrified bystanders. Countries that are rightly worried about the severe effects of climate change but themselves have no direct or indirect leverage over the problem. These include essentially all low-lying island nations, all of which are small (and therefore have low emissions).

There isn't a tight correlation between these categories of interests and the categories of commitments that these countries are expected to adopt. The core obligations to control emissions apply mainly to countries in group A. Some key nations in group B are also included, but most are absent. Membership in key committees is open to nations from all groups. The key decision-making rule – voting on binding decisions – has been

determined largely by the interests of countries in group C, which partially explains why unanimity is required and therefore formal progress is often stymied.

Success requires focusing on countries in groups A and B – those that *want* to do something and those that *should* (eventually) do something. Working on those two groups will set a framework for effective action. Countries in group C want to destroy that framework; they, therefore, must be isolated and then pushed into action once the framework is sold. Countries in group D are well-meaning, but they lack the practical experience with costs and modalities for emission controls for them to make a meaningful contribution to the countries whose efforts are needed most.

Pathways for the G20

A G20 could obviously help solve these problems by focusing debate and innovation within a smaller group of nations. It could allow greater flexibility while making it possible to fine tune commitments around the nations that matter most. What, exactly, could be done?

The G20 could provide a forum for the countries that want to control emissions (group A) to coordinate their efforts. Today each major industrialized unit – Canada, Japan, EU, and (to a much lesser degree) the U.S. – is developing its own response to the dangers of climate change. Although all of those (except the U.S.) are doing that formally in the context of the Kyoto Protocol, in fact their programs reflect different levels of effort, different policy strategies, and even different timetables. That situation is not to be lamented; rather, it is a reflection of how most collective international efforts on high-stakes economic matters evolve in practice. The creation of the GATT/WTO trading system, the emergence of an effective IMF, the reconstruction of Europe and sundry other

grand projects of international collaboration all evolved from the “bottom up”, with loose international coordination and room for efforts along different tracks and timetables. The question for the architects of international institutions is not whether serious cooperation can or should evolve “bottom-up”; rather, the key task is to identify ways to accelerate the truly collaborative aspects of this evolution so that an effective collective effort emerges as rapidly as possible. For that collective effort to be sustainable politically it must be sensitive to cost, competition and the other factors that real people in real legislatures will use when they decide whether to commit their nations.

Emission trading offers an interesting opportunity in creating an effective collective response. As is evident already in the design of the European emission trading system (ETS), countries will not simply open their markets to international trade unless they are sure that their trading partners are making similar efforts. In other words, a country that aims to create a “strong currency” at home will demand that other countries also have in place the institutions needed to monitor and enforce the integrity of their own emission trading systems. That’s why the ETS is ringed with a large wall around the EU trading zone and requires strict review of international trades. In effect, the system prevents imports from undermining the bona fide reductions that are occurring within the EU and leads to a high price for EU emission credits.³ Economists lament such barriers as “transaction costs”, but the barrier makes perfect sense when it is understood for what it really is – a mechanism for protecting the value of the new EU currency and assuring the

³The review process is a lot more complicated than I present here. It is triggered once international trade reaches a small threshold, and many key questions about system design remain to be answered. One of the key questions is how the EU will control this trade if Kyoto does not enter into force since the validity of international permits is set with reference to the Kyoto mechanisms. The most likely outcome is that in those situations the EU will establish its own review procedures.

integrity of the system. A truly collective international effort could evolve when other nations also adopt their own "strong currencies", and portals for mutual recognition are established between these currency zones. Such arrangements for mutual recognition are exactly how the European common market and the GATT emerged to be truly effective international institutions. A G20 could be the locus for negotiating the terms for mutual recognition and resolving the many problems that surely would arise. No other institution is ready for this task as it will require blending the skills of finance ministers and environment ministers with high-level capacity to make deals on market access.

That task alone is not uniquely suited to a G20. The G8 or even OECD might perform a similar role. But at the same time that leaders catalyze the emergence of a new strong international currency they must also work with countries that have different interests – the group B nations whose eventual involvement is essential but whose interests today don't include controlling carbon. As we have already seen with Kyoto, simply inviting these countries into the trading system is a recipe for disaster since their interest is to maximize revenues, not to ensure the integrity of the new carbon reserve currency.

An effective strategy with these countries will require subtle political deals. Each of the countries that is reluctant to control its emissions could be the subject of a broad program through which outsiders could provide an extensive program of technical assistance (including some project funding) for low-cost emission control programs. Every country (industrialized and developing) is replete with opportunity for better efficiency and switching to lower carbon fuels (e.g., gas instead of coal), often with economic benefit. Many such programs exist at the present, but most of the collective effort to date has suffered from three flaws:

- These programs are highly atomized and not pursued within a larger strategy that reflects the host country's own development goals. Indeed, many programs funded by foreign governments reflect mainly the priorities of the funding agencies that manage the project. A better approach would put "development first" and would find ways to integrate low-carbon investments into a country's own development strategy. For example, if China and India want to boost energy efficiency and accelerate the transition from coal to gas (which are professed central goals of both countries today), what can outsiders do to help? That question will command high level attention in China and India; its answers can be integrated into the organizations that control development policy. In contrast, the long lists of micro projects for energy efficiency and environmental protection that are often the mainstay of climate change assistance programs do not command such attention and, instead, are usually relegated to environmental ministries and other internal organs that are relatively weak and unable to leverage true development trajectories.
- Insiders in the climate treaty system have placed too much faith on the CDM. They have assumed that by creating an incentive to earn credits that the investors will automatically find low-carbon projects. The reality is that CDM incentives for investment are laden with transaction costs and thus very weak inducements for serious private investors. Moreover, the process of certifying CDM projects creates a bias for small and discrete projects because those have the most obvious baseline and thus are the easiest projects for earning credits. Yet the projects that really matter most are those involving large-scale infrastructures that shift and lock-in low-carbon development trajectories – for

such projects, however, it is usually impossible to identify the baseline level of emissions that would have occurred in the absence of the project and thus impossible to create any credible promise for emission credits that might induce the investor. Twenty-three firms and governments (including Canada) have teamed together to support the World Bank's Prototype Carbon Fund (PCF) with the goal of jump-starting the CDM. In my view, the PCF experience has been enormously valuable and confirms all these practical difficulties. Indeed, working with the best (and most expensive) accountants, key early PCF projects in Chile and Brazil have demonstrated that it is essentially impossible to provide a robust calculation of emission baselines and credits.

- Some of these problems could be solved if the Framework Convention's financial mechanism itself were to fund broad-based climate programs. But that is outside the mandate of the mechanism. Moreover, the actual investment portfolio of the Global Environment Facility (GEF), which serves as the climate treaty mechanism, has given disproportionate attention to exotic renewable energy technologies that play little practical role in the world's energy system. In a mechanism that was already prone to become peripheral in country energy strategies, the GEF's own investment strategy has made its efforts even more peripheral.

A G20 isn't going to fix all these problems. What it can do, however, is ensure that the package of international activities pursued within each major developing country is focused on the country's development strategy, and articulated at the highest level. At

the same time, a G20 can provide the forum for managing the transition from this “country strategy” approach to the eventual inclusion of these nations in the evolving emission trading system. Within the climate treaty system, countries have been loath to “graduate” from the list of developing countries to those nations that are expected to implement more costly policies. Focused pressure and a package of incentives can help ease that transition. It is unlikely that the transition will occur at exactly the same income level or with the same character for each country – local circumstances and interests vary, and a G20 can become a forum for establishing the expectations for the transition, including rules regarding the institutions that new members in the trading system must create to monitor and enforce the integrity of emission permits within their borders. For some countries the best approach may include the creation of broad-based emission trading systems; for others it may prove better to follow the approach that the EU is already pursuing with a trading system that is exclusive to just a few industrial sectors of the economy. These will be very complicated and highly politicized issues that will require an institution that is much more nimble, smaller, and responsible to political leadership than is evident in Kyoto.

Finally, I raise some questions of membership. The top twenty emitters do not correlate perfectly with the likely membership in the G20. In particular, Ukraine (#17) and Iran (#20) are significant emitters but unlikely G20 candidates, not least because their leaders are toxic to some of the other key G20 members (Russia and the United States). In contrast, Indonesia (#21), Poland (#24), Malaysia (#32), and Nigeria (#43) are important political and economic players in their regions and attractive for G20 membership. These variations are unlikely to affect the central merits of a G20 strategy for climate change. Indeed, the lack of perfect correlation merely underscores that many factors will

determine G20 membership. The G20's ability to handle particular problems such as climate change will depend on its broader standing as a collective of key countries in world affairs; that legitimacy depends precisely on the institution not being viewed simply as a coalition of the willing convened to work on climate change.