International Climate Efforts

Beyond 2012

REPORT OF THE

Climate Dialogue at Pocantico

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From the Chairs

Some eighteen months ago, the Pew Center on Global Climate Change brought together a select group of policymakers and stakeholders from around the world in the Climate Dialogue at Pocantico, a series of discussions exploring options for advancing the international climate change effort. It was our privilege to chair this group, and it now is our pleasure to present this report of our deliberations.

We do so with a deepened sense of the global challenges we face—and with renewed hope for shared solutions. In our four dialogue sessions, discussion ranged from the intricacies of policy design to more fundamental issues of political and social change. The aim was not a definitive blueprint for action, but rather consensus around a set of approaches that the group as a whole believed worthy of consideration by the broader community. This report, we believe, fulfills that aim.

Of the many valuable ideas in the pages that follow, two, we believe, are paramount:

- First, there is ample scientific justification for much stronger action now, and in coming decades, to stem the causes and prepare for the consequences of global climate change.

- Second, this requires that the world's major economies accept their responsibility to agree and act on fair and effective approaches to curb global greenhouse gas emissions.

Our dialogue concludes at a critical moment. The Kyoto Protocol's recent entry into force is an historic achievement—finally setting governments and markets to the task of addressing climate change. Yet the continued divide over Kyoto bespeaks the extraordinary challenges ahead. Broadening and strengthening the international effort beyond 2012 will require creative new policy approaches building on efforts already underway. It will call as well for far greater resolve from all in protecting the global climate. There is no better time or place to begin than next month in Montréal, where governments have a crucial opportunity to launch a process toward a new multilateral agreement.

We take heart from the spirit and success of our informal exchange. Participants brought to the dialogue a diverse range of experience and expertise spanning diplomacy, business, policymaking, and analysis. They brought as well a sincere interest in discovering common ground and possible paths forward. By speaking openly and listening, we all learned a great deal from one another, and collectively, our views were broadened and enriched.

As co-chairs of this rich discourse, we are grateful to the participants for their time and for their insights. We also would like to thank José María Figueres for his early contributions to this effort. On the group's behalf and ours, we commend this report to you in the hope that it contributes now and in the years ahead to a vigorous and sustained multilateral climate effort.

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Summary

Global climate change represents a profound long-term challenge for governments, business, and society at large. The onset of global warming has made the dangers ever more apparent, and the need for action all the more urgent. There is clear scientific justification for stronger action now, and over coming decades, both to avert the gravest potential consequences of climate change and to prepare for adverse effects that cannot be avoided. The critical question is how best to engage nations and their peoples in a long-term effort that fairly and effectively mobilizes technology and resources to protect the global climate and sustain economic growth.

FRAMING THE FUTURE EFFORT

Climate change is inherently a global challenge and should be met with a global response. The UN Framework Convention on Climate Change (UNFCCC) establishes a foundation, and fundamental guiding principles, for such a global approach. To effectively advance the climate effort beyond 2012, the international framework must:

Engage major economies—The immediate imperative is successfully engaging the world's major economies. Twenty-five countries account for 83 percent of global greenhouse gas emissions, 71 percent of global population, and 86 percent of global income. There is tremendous diversity within this group. While all should be prepared to commit to stronger action, an equitable approach must be consistent with the principle of "common but differentiated responsibilities."

Provide flexibility—To broaden participation, the multilateral framework must be flexible enough to accommodate different types of national strategies by allowing different types of commitments. Each country must be able to choose a pathway that best aligns its national interests with the global interest in climate action.

Couple near-term action with a long-term focus—Near-term action is urgently needed on three fronts: achieving immediate, cost-effective emission reductions; fostering the development of breakthrough technologies to achieve deeper reductions in the future; and strengthening resilience to the adverse effects of a changing climate. These efforts should be guided to the degree possible by a common view of the long-term objectives.

Integrate climate and development—Countries can contribute to the international effort through actions that serve their development goals while simultaneously delivering climate benefits. In developing countries, efforts will be most successful if complemented by assistance, investment, and access to clean technologies.

Address adaptation—The impacts of climate change are being felt already and are certain to intensify, even if immediate steps are taken to dramatically reduce emissions. These impacts fall disproportionately on the poor, particularly in developing countries. Fairness demands that they be assisted.

Be viewed as fair—A new global bargain on climate change will be possible only if each participating country perceives it to be reasonably fair. This assessment is ultimately a political one. Each country will judge fairness in terms it believes it can defend both to its own citizens and to the global community.

OPTIONS FOR STRENGTHENING MULTILATERAL ACTION

Approaches that might serve as elements of the future international effort include:

Aspirational Long-Term Goal—Rather than attempt to negotiate a quantified long-term target, governments and others should continue to articulate their own visions of a long-term objective. In time, these may coalesce into a more concrete common view informally guiding the international effort.

Adaptation—New assistance could support the development of national adaptation strategies and help highly vulnerable countries cope with urgent adaptation needs. Further steps are needed to discourage investments increasing climate vulnerability and promote those strengthening climate resilience.

Targets and Trading—Emission targets coupled with international emissions trading should remain a core element of the multilateral effort. Future targets could vary in time, form, and stringency. In addition to binding absolute targets, other types could include intensity, "no-lose," or conditional targets. Other market-based approaches could include a mechanism crediting policy-driven emission reductions in developing countries.

Sectoral Approaches—Commitments structured around key sectors such as power, transportation, or land use could take a variety of forms: emission targets, performance- or technology-based standards, or "best practice" agreements.

Policy-based Approaches—Countries could commit to broad goals integrating climate and development objectives, then pledge national measures to achieve them and report periodically on implementation and results.

Technology Cooperation—Governments could coordinate and increase support for research and development of long-term technologies. Stronger cooperation also is needed to facilitate the deployment of clean technologies in developing countries.

Forging new approaches that draw on these elements will pose extraordinary political, design, and negotiating challenges. Meeting them may require new forms—and new forums—of engagement:

A Dialogue Among Major Economies—On the political front, leaders of the major economies should convene an informal dialogue to seek consensus on the general nature and scope of multilateral efforts post-2012. While this dialogue could be convened within the UNFCCC process, it may be more practical and productive to convene it outside the process, with the understanding that formal agreements would be negotiated under the Framework Convention.

Linking Approaches—Multiple approaches could be pursued in parallel as different groups of countries engage with one another along different tracks. Such efforts could launch action on multiple fronts and yield valuable lessons to guide future steps. But an ad hoc assemblage of initiatives may not produce an overall effort that is sufficiently timely or robust. A more integrated approach could produce a stronger outcome. By linking and negotiating across tracks, governments may arrive at an arrangement flexible enough to accommodate different approaches and reciprocal enough to achieve higher levels of effort. It may help to agree at the outset that certain countries will negotiate within designated tracks appropriate to their circumstances.

Introduction

Thirteen years ago, at the Earth Summit in Río de Janeiro, world leaders agreed on the need for a robust global effort to meet the quintessential global challenge of climate change. With the recent launch of the Kyoto Protocol and other initiatives, this effort is now finally getting underway. Yet the onset of global warming has made the dangers ever more apparent, and the need for action all the more urgent. Among governments and key stakeholders, there is broad and growing recognition that if the international effort against climate change is to succeed, it must be substantially broadened and strengthened, and it must be sustained.

Over the past year, the Pew Center on Global Climate Change brought together senior policymakers and stakeholders from 15 countries in the Climate Dialogue at Pocantico, a series of discussions exploring options for advancing the international climate effort beyond 2012. This paper reflects the spirit and the outcome of these discussions. Part I lays out the case for immediate and sustained action to address climate change. Part II presents a set of broad objectives agreed by the group at the outset of the dialogue to frame the ensuing discussion. Part III describes a set of possible approaches to future multilateral action and ways they might be linked.

Participants in the Pocantico dialogue came from the ranks of government, business, and civil society.[1] They participated in their personal capacities, and their association with the dialogue and its outcome is without prejudice to the policies and positions of their respective institutions. Given the wide range of perspectives within the group, the goal was not a unanimous view on a specific course of action, and not all participants support every element of this report. Rather, this statement of outcome distills the dialogue among participants into a set of ideas, options, and approaches that the group as a whole believes worthy of consideration by the broader policy community. It is offered by the participants in the hope that it will help advance the international climate effort by contributing to dialogue and decisions at the upcoming Climate Change Conference in Montréal and beyond.

I. The Case For Action

Global climate change represents a profound long-term challenge for governments, business, and society at large. Mounting scientific evidence provides clear justification for stronger action now, and in the decades to come, both to avert the gravest potential consequences of climate change and to prepare for those impacts that cannot be avoided.

The broad consensus within the scientific community is that global warming has begun, is largely the result of human activity, and is bound to accelerate. This consensus was reflected most recently in a joint statement by the science academies of the G8 countries, Brazil, China, and India. It stated: "The scientific understanding of climate change is now sufficiently clear to justify nations taking prompt action….[A] lack of full certainty about some aspects of climate change is not a reason for delaying an immediate response."[2]

Atmospheric greenhouse gas (GHG) concentrations have risen to 380 parts per million (ppm), nearly one third above pre-industrial levels and higher than at any time in the last 400,000 years. Projections indicate that stabilizing concentrations at 450 ppm would limit global temperature increase this century to 1.2 to 2.3 degrees Celsius (2.2 to 4.1 degrees Fahrenheit), but that given current emission trends, this would be an exceptional challenge. Stabilizing concentrations at 550 ppm, roughly twice pre-industrial levels, would still require that global emissions peak before mid-century and over time decline more than 80 percent. Under this scenario, global temperature would rise a projected 1.6 to 2.9 degrees Celsius (2.9 to 5.2 degrees Fahrenheit) by 2100, resulting in more extreme weather, increased flooding and drought, disruption of agricultural and water systems, threats to human health, and the loss of sensitive species and ecosystems. The physical, economic, and social impacts of continued warming will vary from country to country, but in many cases will fall most heavily on those countries and peoples least able to cope with them.[3]

International cooperation has led to important advances in scientific understanding of the causes and consequences of climate change. While further scientific work is needed to better characterize future climate risks, almost any significant change will be costly. Given that some impacts will effectively be irreversible and some may be catastrophic, it is prudent from an economic standpoint to hedge against these risks with early, cost-effective action to reduce emissions.[4] It also is critical to invest more strongly now in the search for new technologies capable of achieving much larger reductions over time. Delaying action could substantially increase the long-term costs of addressing climate change and result in harsher climate impacts, undermining economic growth, particularly in developing countries.

The need for action is clear. The critical question is how best to engage governments, business, and the public at large in a long-term effort that fairly and effectively mobilizes the technology and resources needed to protect the global climate while contributing to sustained economic growth.

II. Framing The Future Effort

At the outset of the Pocantico dialogue, participants discussed and agreed on a set of broad objectives to frame their consideration of possible future approaches. This discussion was premised on the understanding that climate change is inherently a global challenge; that it should be met with a global response; and that the UN Framework Convention on Climate Change (UNFCCC) establishes a foundation, and fundamental guiding principles, for such a global approach.

Participants agreed further that a post-2012 approach should:

Engage Major Economies—In fashioning the next stage of the international climate effort, the immediate imperative is successfully engaging the relatively small but diverse set of countries constituting the world's major economies. Twenty-five countries account for 83 percent of global emissions, and for the vast majority of projected future emissions. These same countries also account for 71 percent of global population and 86 percent of global GDP.[5] From a strictly environmental perspective, participation of this core group is clearly critical to the success of any long-term strategy to substantially reduce global emissions. Given their growing economic interdependence and the potential for carbon constraints to create competitive imbalances, the participation of all major economies is critical politically as well. It will be difficult if not impossible for some to commit to sustained and effective climate action unless all do.

It is imperative, however, to recognize the tremendous diversity within this group, which includes developed and developing countries, and economies in transition. Per capita emissions range by a factor of 14, and per capita incomes by a factor of 18. These differences have significant implications in assessing responsibility for climate change and capacity to address it. While all should be prepared to commit to stronger action, any approach must be consistent with the principle of "common but differentiated responsibilities" established in the Framework Convention.[6] It must allow for variation both in the nature of commitments taken by countries and in the timeframes within which commitments must be fulfilled.

Provide Flexibility—While climate change is a collective challenge, nations will work collectively to address it only if they perceive this to be in their national interests. All nations aspire to growth and a rising standard of living. However, particular national interests vary as widely as do national circumstances, from the nature of a country's economy and governance structure to its natural endowments, level of affluence, development priorities, and vulnerability to climate impacts. The types of policies that can effectively address greenhouse emissions in a manner consistent with national interest will by necessity vary from country to country. To achieve broad participation,

a framework for multilateral climate action must therefore be flexible enough to accommodate different types of national strategies by allowing for different types of commitments. It must enable each country to choose a pathway that best aligns the global interest in climate action with its own evolving national interests.

Couple Near-Term Action with a Long-Term Focus—An effective climate effort must be cognizant of multiple timeframes. In the near-term, action is required on three fronts: mobilizing existing technology and resources to begin curbing emissions; investing in the research and development of breakthrough technologies that can achieve much steeper reductions in the future; and increasing resilience against unavoidable climate impacts. These near-term efforts should be guided, whether formally or informally, by a common view of the long-term objectives. Whether defined in environmental, technological, or other terms, long-term goals can help drive near- and medium-term efforts, and serve as a metric to continually assess the adequacy of commitments and implementation. They also can signal markets to invest in longer-term solutions, reduce the associated investment risk, and help mobilize society more broadly by raising public awareness.

Integrate Climate and Development—As recognized in the Framework Convention, climate protection must be achieved in ways consistent with economic development. Strengthening the international effort—and, in particular, deepening the engagement of developing countries—requires new approaches to better integrate climate and development concerns. Strategies advancing the core priorities of economic and social development and poverty eradication can simultaneously serve to moderate greenhouse gas emissions. Similarly, measures to strengthen critical societal systems and promote sustainable development can help countries adapt to climate impacts. Capitalizing on these synergies can turn climate change into a driver for—rather than a perceived impediment to—development objectives. In a more flexible framework, some countries could participate by agreeing to undertake national policies that serve their development goals while simultaneously delivering climate benefits. Such approaches should be complemented by measures to increase assistance and investment flows to developing countries, support economic diversification, and ease access to climate-friendly technologies.

Address Adaptation Needs—Thus far, the international climate effort has focused primarily on mitigation—reducing greenhouse gas emissions. The next stage of the international effort must deal squarely with the other half of the climate equation: adaptation. This is, first, a matter of need. The adverse effects of a changing climate are being felt already and are certain to intensify, even if immediate steps are taken to dramatically reduce emissions. All societies must prepare for the unavoidable. It also is a matter of equity. Climate impacts fall disproportionately on the poor, particularly in developing countries, which have less capacity to adapt and historically have

contributed least to climate change. Fairness demands that they be assisted. For some, facing immediate or far-reaching effects, the need is especially urgent. Supporting adaptation is, finally, a political necessity. Agreement on stronger mitigation efforts—particularly one with some form of developing country commitments—will likely be achieved only if it also delivers more on adaptation.

Be Viewed as Fair—The search for an effective multilateral response to climate change is fraught with difficult distributional issues. These are most evident in debates over responsibility, burden-sharing, and competitiveness. A new global bargain on climate change will be possible only if each participating government can justify the outcome to its people as reasonably fair. Given the wide variances in national circumstance, universal acceptance of any particular equity formula is unlikely. Quantified indicators such as emissions historically, per capita, or per GDP may inform each party's assessment of what is fair. But this assessment is ultimately a political one. Whether an agreement is fair will be judged by each country in terms that it believes it can defend both to its own citizens and to the global community. Not reaching agreement is, likewise, a judgment with equity implications, as the resulting climate impacts will fall unevenly, and unfairly.

III. Options For Strengthening Multilateral Action

Within this broad framing, participants considered a wide range of possible approaches. These options were viewed not as alternatives per se, but rather as "elements" that might be pursued in parallel or in combination. This section describes the six elements that appeared most essential or promising and ways they might be linked in a more integrated multilateral approach.[7]

ELEMENTS

Aspirational Long-Term Goal—The Framework Convention establishes an ultimate objective: stabilizing GHG concentrations at a level that avoids dangerous human interference with the climate.[8] Some parties have begun to adopt or articulate quantified long-term climate goals. Prominent examples include the European Union's goal of limiting global temperature increase to 2 degrees Celsius, California's goal of reducing emissions 80 percent by 2050, and BP's support for stabilizing concentrations at 500-550 ppm.

Governments and others, acting singly or with like-minded parties, should continue to articulate their own visions of a long-term climate objective. Such "aspirational" goals drive the efforts of those adopting them while also signaling others about the urgency and scale of the challenge. Over time, with continued input from the scientific community, these independently asserted goals may well coalesce into a more concrete common view of the long-term objective that can guide the international effort. However, the scientific uncertainties and inherent political stakes are too great to allow formal agreement on a quantified long-term target at this time, particularly one intended as a basis for future commitments.[9]

Adaptation—Strengthening adaptation at the international level requires new efforts initiated within the climate framework but extending well beyond it. In practice, adaptation to climate change takes place in the context of adaptation to climate risks generally. Not only is it difficult in most cases to discern whether a particular climate impact results from human-induced change or natural variability, but the needed response measure is often the same. Adaptation is a challenge for all countries. The international framework should as a first priority target the urgent needs of the most vulnerable. Its broader goal should be spurring comprehensive efforts to reduce climate vulnerability generally by fully integrating adaptation into the development process.

Within the framework, new funding commitments by donor countries could build on existing efforts with two primary goals: to help highly vulnerable countries cope with those urgent needs most closely related to climate change, and to support the development of comprehensive national

adaptation strategies. These strategies, apart from driving and organizing national-level efforts, could serve as a basis for targeting assistance through the climate framework and complementary support through development channels.

Elsewhere at the international level, new efforts should be geared toward more systematically discouraging investments that increase climate vulnerability and promoting those that strengthen climate resilience, taking into account national circumstances. Multilateral development banks could, for instance, establish new lending guidelines to routinely incorporate climate risk assessments and adaptation measures in project design, review, and approval. Bilateral donors and private lenders could adopt similar approaches.

Targets and Trading—A central feature of the Kyoto Protocol is the use of emission targets coupled with international emissions trading. Market-based approaches should remain a core element of the international effort. Emission targets provide a reasonable degree of environmental certainty while allowing countries that adopt them considerable flexibility to tailor emission reduction strategies to national circumstance. Targets also can be differentiated to address equity concerns and can be scaled over time. The principal virtue of targets-and-trading, however, is cost-effectiveness: allowing emitters to buy and sell allowances gives them strong incentive to discover lowest-cost emission reductions.

The Kyoto Protocol employs a particular type of emissions target: a binding national target limiting absolute emissions relative to an agreed baseline year.[10] A future approach could also allow for other types of targets. Possibilities include:

- Indexed or "intensity" targets limiting emissions relative to an indicator such as GDP, which would provide greater cost certainty by allowing emissions to vary depending on whether an economy shrinks or grows;
- Nonbinding "no-lose" targets, which would allow a country to market reductions below its target, creating an incentive for stronger mitigation efforts, but entail no penalty if the target is exceeded; or
- Conditional targets, which would remain binding only under specified conditions—for instance, only if compliance costs stay below a predetermined level.

Targets could vary in time, form, and stringency. Such differentiation could be through ad hoc negotiation or through agreed criteria.

A second market instrument established by the Kyoto Protocol, the Clean Development Mechanism (CDM), enables countries with targets to purchase certified emission reduction credits from countries

without targets. This provides developed countries with lower-cost reduction options while encouraging investment in sustainable development in developing countries. The CDM, however, allows crediting only of discrete projects. Stronger incentive for broader-scale emissions reduction might be achieved through a "programmatic" crediting approach. For instance, reductions across a given sector driven by policies such as energy efficiency standards could, upon verification, be credited for sale on the international emissions market.[11]

Sectoral Approaches—Another option is to structure international efforts around sectors: governments and/or companies agree on measures to limit or reduce emissions from key GHG-generating sectors such as transportation, power, land use, steel, cement, or other emissions-intensive industries or activities.

In some sectors, a concerted effort may be possible by engaging a relatively small number of parties. In the automotive sector, for instance, an agreement among just 15 countries and even fewer companies would cover most of the global market.[12] Also, in sectors with significant international trade, a sectoral agreement could address competitiveness concerns by ensuring some comparability of effort across a given sector (unlike an economy-wide approach, which allows each country to shield whatever industry it chooses from emission constraints). Finally, reliable emissions and other data are more readily available for certain sectors than on an economy-wide basis, particularly in developing countries.

International sectoral efforts could take a variety of forms, including emission targets (absolute, intensity, or no-lose), performance- or technology-based standards, or "best practice" agreements. They could be agreements among governments, among companies, or some variant of the two. Under any such approach, efforts could be differentiated, or could begin with a handful of countries or companies and grow over time. Possibilities include:

- Differentiated vehicle fuel economy or GHG standards;
- Differentiated intensity targets in electricity or in energy-intensive manufacturing;
- Goals for increasing, maintaining, or slowing reductions in carbon stocks in agriculture or forestry; or
- Standards requiring the phase-out of old technologies or, in fossil fuel-based electrical generation, the phase-in of advanced combustion and carbon capture-and-storage technologies.

Policy-based Approaches—Countries could agree to undertake national policies that moderate emissions while advancing core economic, social, and development objectives.

One approach could be for countries to commit to broad policy goals, and then to pledge specific national policies or measures to achieve them. They could, for example, agree that:

- In efforts to expand energy services or strengthen energy security, they will implement measures that improve energy efficiency, increase use of renewable sources, and moderate GHG emissions;
- In efforts to improve transportation services or reduce local air pollution, they will implement measures that raise fuel economy and expand use of cleaner fuels; or
- In efforts to raise agricultural productivity or support sustainable forestry, they will implement measures that expand use of sequestration-promoting practices.

Countries would periodically report on implementation of pledged policies and measures and their estimated emissions impacts, with their reports subject to review according to agreed procedures.

This combination of broad commitments and specific pledges could encourage countries to better integrate climate concerns into their development planning, allow policies to be tailored to national circumstance, and grant international recognition for ongoing or future efforts that lower GHG trajectories. Developing countries pursuing such an approach may require financial and technical assistance to develop and implement effective policies supporting meaningful policy commitments.

Technology Cooperation—Most of the approaches described thus far aim in one way or another to "pull" climate-friendly technology into the marketplace. Other approaches also are needed to "push" technology—particularly long-term technology—and to ensure broad and equitable access to it.

While significant emission reductions can be achieved with existing technologies, the steeper reductions needed over the long term may be achievable only with new technologies. Targeted efforts are needed to develop and nurture potential breakthrough technologies with long investment horizons that are not likely to be driven by near- or medium-term emission goals. Future efforts could include agreements or commitments among groups of countries to better coordinate and substantially increase government support for initiatives to develop long-term options such as hydrogen, fuel cells, next-generation nuclear reactors, large-scale solar generation, biomass fuels, or carbon capture-and-storage. Governments could negotiate funding commitments and technology-sharing terms, form partnerships with business to leverage private expertise and investment, and support on-the-ground demonstration projects for disseminating best practices, particularly in developing countries.

One way to frame and propel enhanced R&D efforts would be for governments to agree on long-term goals such as achieving zero net emissions in key sectors—for instance, by 2065 in the power sector, or 2080 in the automotive sector.[13] Zero-net emission goals would provide a clear, concrete objective around which to organize long-term research activities, and could be linked to sectoral agreements elaborating nearer-term mitigation commitments.

Stronger cooperation also is needed to facilitate the deployment of existing and future climate-friendly technologies in developing countries. As with technology development, private sector investment, both foreign and domestic, will likely remain the primary means of technology diffusion. Private flows could be directed toward lower-GHG technologies through targeted tax incentives in originating countries and loan guarantees from export credit agencies. Additional efforts could include:

- Long-term concessionary loans through multilateral development banks for the deployment of lower-GHG technologies;
- Funding to developing countries to support capacity building and the creation of enabling regulatory environments; and
- Agreements among governments to ease access to commercial technologies while protecting property rights and other legal interests.

FROM ELEMENTS TO ACTION

The Framework Convention and the Kyoto Protocol provide a number of important avenues for launching new initiatives or seeking new agreements to strengthen and advance multilateral climate efforts beyond 2012. However, forging new approaches that draw on the elements described above will pose extraordinary political, design, and negotiating challenges. Meeting them may require additional forms—and forums—of engagement.

A Dialogue Among Major Economies—As stated earlier, a successful effort must engage the world's major economies. An essential ingredient, then, is a broad political consensus among 15 to 30 key countries on the general nature and scope of future multilateral efforts.

Such a consensus will be possible only as this issue matures, and political will builds, within individual countries. But it also will require forums where leaders can informally exchange views and develop common understandings. The Dialogue on Climate Change, Clean Energy and Sustainable Development launched at the G8 Summit in Gleaneagles in July 2005 is one such forum. A logical

parallel or next step would be a high-level dialogue among major economies focused more directly on scoping out possible post-2012 approaches. Such dialogue should bear in mind the needs and concerns of other countries and, in particular, those most vulnerable to climate impacts.

This dialogue could be convened within the UNFCCC process. Given political sensitivities, however, it may be more practical and productive at this stage to convene it informally outside the process. It should be understood that the purpose is dialogue, not negotiation, and that any formal agreements would be negotiated under the Framework Convention. The Convention is broad and flexible enough to incorporate virtually any of the approaches described here, and is the natural forum for linking different approaches through a set of reciprocal political arrangements.

Linking Approaches: Two Options—Beyond the need for political consensus, moving forward with multiple approaches raises critical issues of design and process. These include: how new efforts or negotiations are to be launched; the degree to which different approaches would be integrated; and the nature of their linkage to the existing multilateral framework. These would, in turn, strongly influence the type of outcome that might be achieved.

Following are sketches of two possible paths for simultaneously pursuing multiple approaches. In the first, efforts proceed along parallel but largely independent tracks; in the second, the tracks are explicitly linked or integrated. Both would be consistent with the Framework Convention. They might be viewed as alternatives; or, together, they might suggest a path for evolving from a more modest to a more ambitious overall effort. These ideas are offered here not as fully conceived approaches but rather to stimulate further dialogue and analysis.

Parallel tracks—As countries assess which approaches best suit their circumstances, groups of like-minded countries may begin to engage with one another along different tracks. These parallel tracks could correspond to the following elements:

- Targets and trading;
- Sectoral approaches;
- Policy-based approaches;
- Technology cooperation, and
- Adaptation.

Different (and possibly overlapping) groupings of countries would develop agreements within separate tracks. Major steel-producing countries, for instance, might explore sectoral approaches. Some might also negotiate economy-wide targets or technology commitments,

while others explore policy-based approaches. As agreements emerge, participating countries would report on them to the Framework Convention. But the tracks would otherwise remain independent of one another.

Such parallel efforts could launch climate action on multiple fronts, help build confidence within and among countries, and, in their diversity, produce valuable lessons to guide future action. However, a purely "bottom up" approach might produce only an ad hoc assemblage of disparate initiatives, with little certainty that the overall effort would be sufficiently timely or robust.

An integrated approach—Expressly linking approaches may allow for a more robust overall effort. In order for governments and for the private sector to undertake and sustain ambitious climate action, they must be confident that their counterparts are contributing their fair share. An integrated agreement could help provide this mutual assurance. By linking and negotiating across tracks, it may be possible to arrive at an arrangement that is at once flexible enough to accommodate different approaches, and reciprocal enough to achieve a higher overall level of effort.

This more integrated approach could be initiated by a formal decision by UNFCCC parties to open negotiations. Such negotiations would likely be more complex than under the first approach. They could take the form of sequential bargaining: Countries would come forward with proposals describing the commitments or pledges they are prepared to undertake along one or more tracks. After allowing time for each to assess what the others have put forward, governments might then have the opportunity to adjust their proposals, or to suggest that others adjust theirs. This sequence would continue until agreement is reached on an overall package.

One issue at the outset is how explicitly to define the terms of engagement. Allowing countries full flexibility in choosing which tracks to pursue could produce only a modest level of effort. If some major economies are prepared to participate only in technology agreements, and not in near-term mitigation efforts, others may feel little incentive to do more. To encourage a more balanced and thereby stronger overall effort, it may help to agree at the start that certain countries will negotiate within designated tracks appropriate to their circumstances. It could, for instance, be decided that one group of countries will negotiate binding emission targets while another has the choice of targets or some form of policy commitment. It could be decided that all countries will negotiate targets, with different

types for different groupings. Or it might be agreed that wealthier countries will commit funds for technology development and diffusion, adaptation, or capacity building, with specific levels to be negotiated.

The admitted complexity of this approach would test the creativity and dexterity of negotiators and stakeholders alike, but may be the necessary price for a more variable architecture capable of producing a more ambitious overall effort.

Assessing Effort and Effectiveness—Key to a successful multilateral approach is the ability to reliably assess relative levels of effort and the effectiveness of the overall effort.

As noted earlier, agreements are possible only if all parties perceive them as fair. While fairness is ultimately a political judgment, parties are best able to make those judgments if they understand what actions others propose to undertake and can assess relative levels of effort. This requires close analysis of economic trends, emissions scenarios, the likely costs and benefits of proposed actions, and national circumstances such as level of development and natural endowments. Analysis of even a reasonably straightforward proposal applying to a single political entity is inherently complicated and often contentious. Comparing multiple proposals, particularly a mix of quantified and non-quantified commitments or pledges, is considerably more challenging. It requires that each party have, or have access to, strong and independent analytical capacity.

Ultimately more important than effort, however, is effectiveness. Whatever shape it takes, the international climate effort should continually be informed by, and measured against, the best possible assessments of implementation and results. This requires good monitoring and data, agreement on terms for reporting and review, and greater consensus on long-term objectives. The provisions of the Framework Convention provide opportunities for such assessments.

Conclusions

Strengthening the effort against climate change is among the most urgent challenges facing the global community. While new policy designs and political processes are needed, they are only part of the answer. Other ingredients will be critical as well if broad consensus is to emerge on a fair, effective, and durable international response.

The first ingredient is openness. There is a danger that positions, however justified, become so fixed as to make meaningful agreement impossible. Going forward, all should be prepared to hear others' views and examine their own, and be open to new ideas. This report is offered in that spirit—to provoke thinking and dialogue and, should its ideas prove valuable, to contribute to meaningful action.

A second need is broader engagement. Real consensus will be possible only by reaching beyond the climate circle to constituencies and decision-makers across governments and across societies, in realms such as finance, trade, energy, and development. In particular it is critical that business stakeholders be more closely engaged. The climate effort can succeed only with the insights, capital, and leadership of the private sector. On issues of technology, its experience and expertise are invaluable to governments. Business can also contribute more directly to future efforts by offering industry agreements as a basis for multilateral action or by negotiating directly with governments.

Greater openness and engagement might in turn help produce a third and perhaps the most essential ingredient: stronger political will. When and how political will arises depends on a host of factors, some more predictable than others. Science's steady documentation of the impacts of warming will help focus the attention of the media and the public. As the demand for action grows, so, too, will the appreciation within the private sector of the opportunities it presents. Crystallizing this emerging will into strong and sustained action will in the end take something more, however—political leadership.

Political will is by and large a domestic matter. It cannot be imposed from outside; it must arise from within. But the attitudes and actions of other nations can either assist or detract. An effective multilateral effort must not only capitalize on—but also contribute to—the generation of political will in individual nations. Through approaches that respect and reflect the needs of all, it will hopefully be possible to muster the collective will needed to successfully meet the profound challenge of global climate change.

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Affiliations are included for identification purposes only. Participants took part in the dialogue in their personal capacities.

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Endnotes

1. See list of participants, page 22.

2. Joint Science Academies' Statement: Global Response to Climate Change (2005).

3. IPCC Third Assessment Report (2001).

4. *Addressing Cost,* in Adly et al. (2003).

5. Baumert et al. (2004).

6. Article 3.1 of the Convention states: "The Parties should protect the climate system…on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."

7. "International Climate Efforts Beyond 2012: A Survey of Approaches" describes the broad range of approaches introduced at the outset of the dialogue (Bodansky et al. 2004a). Select approaches and their relative merits were further examined in two successive papers, "Strawman Elements: Possible Approaches to Advancing International Climate Change Efforts," and "Strawman Elements: An Assessment" (Bodansky et al. 2004b and 2005).

8. UNFCCC art. 2.

9. *A Long-Term Target: Framing the Climate Effort*, in Adly et al. (2003).

10. Under the Protocol, developed country and other Annex I parties assume quantified emission limitation or reduction commitments for the 2008–2012 commitment period, ranging from –8 percent to +10 percent, relative to a base year of 1990.

11. A "programmatic" crediting mechanism could complement the policy-based approach, or figure in the technology approach, described elsewhere under "Elements." For emission reduction credits to be certified under the CDM, it must be demonstrated that a project will reduce emissions from a projected baseline. A similar demonstration would be necessary under a "programmatic" approach.

12. Baumert et al. (2005).

13. "Zero net" means emissions either are reduced to zero or are fully sequestered or offset. This would, for instance, allow for continued use of fossil fuels in electrical generation, or as a feedstock in the production of hydrogen fuels for transportation, provided that the resulting carbon emissions are sequestered.

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