Climate Change Policies: Many Paths Forward

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The twelve years since the conclusion of Kyoto have provided an abundance of ideas and experiences that can contribute to effective global action to address climate change. Individually, developed and developing countries are establishing and implementing national policies and investing in new technologies. Internationally, governments, the private sector, and nongovernmental organizations (NGOs) are working together in numerous venues to share ideas, to coordinate policies in areas such as regulation, research, and investment, and to distill lessons that can be incorporated into new policies. Linking these many efforts, which range from large international exchanges to targeted multilateral groups to action-oriented partnerships, will be crucial to success in combating climate change.

International Initiatives

The United Nations Framework Convention on Climate Change (UNFCCC) is the premier international forum for climate change negotiations. Created during the 1992 UN Conference on Environment and Development, the UNFCCC aims to limit the impact of human activity on the global climate by stabilizing "greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." In working towards this goal, the convention codifies national commitments for developing policies to reduce greenhouse-gas emissions, promotes technology transfer from developed to developing countries, and shares information about national polices and their effectiveness.

Negotiations between and during the UNFCCC's annual Conference of Parties (COP) meetings usually focus on setting a single emissions target for developed countries while eschewing targets for rapidly developing countries. While this is in keeping with the UNFCCC's principle of "common but differentiated responsibility" for developed and developing countries in reducing emissions, it has predictably led to gridlock and frustration as each group presses the other to make a more significant commitment.

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The authors' experiences, informed by collectively attending over half the COP meetings to date, suggest that the greatest strengths of the COP process lie in its role as a forum for coordinating national and multilateral efforts. COP meetings enjoy a unique status as inclusive venues in which each country, regardless of size, has a voice and an ability to highlight its efforts and as forums for countries to pledge actions and review lessons from concrete experiences. The December 2009 COP in Copenhagen demonstrated clearly that the UNFCCC has a critical role in climate change policy, albeit not one that focuses on setting target-based regulations.

The work of the UNFCCC and many international climate change efforts are supported by the scientific assessments that the Intergovernmental Panel on Climate Change (IPCC) produces every five years. Though not able to undertake its own research, its standing within governments, and its access to global scientists, has allowed the IPCC to play an important role in building global awareness of climate change issues while informing international efforts.

Multilateral Groups

Another important lesson of the last twelve years has been that more manageable conversations among smaller groups—especially those that include the major greenhouse-gas emitters—are often more effective in identifying practical solutions.

Starting in 2005, the G8 became an important vehicle for climate discussions. As it became increasingly clear that its potential impact was limited by the exclusion of large developing economies, the G8 launched the G8 + 5, including Brazil, China, India, Mexico, and South Africa to broaden the conversation. Building on the concept of the G8 +5, the George W. Bush administration announced the creation of the Major Economies Meeting (MEM) on Energy Security and Climate Change in 2007. The MEM brought together the seventeen largest economies, which together represented over 80 percent of annual greenhouse-gas emissions. The overarching goal of the MEM was to seek agreement among top developed and developing economies on a long-term goal for emissions reductions and to discuss national policies and international actions to achieve these objectives. In 2009, U.S. President Barack Obama replaced the MEM process with the Major Economies Forum on Energy and Climate (MEFEC), which brought together the same seventeen economies to try to build consensus (ultimately unsuccessfully) on climate-change policy in advance of the Copenhagen climate conference. While committing to targets has not been achieved, both the MEM and MEFEC processes have been instrumental in building consensus for developing action plans to increase financing for mitigation and adaptation activities, particularly in developing countries. In addition, the meetings have lead to general agreement among the major greenhouse-gas emitters on the need for regularized reporting of national emissions inventories.

Regionally focused organizations, including the European Union (EU) and the Arctic Council, have also done a great deal to develop broad agreement on climate-change policies and a deeper understanding of region-specific climate impacts. The EU process has been instrumental in developing and implementing a regional approach to addressing climate change, including the creation of the novel European-wide Emission Trading System. As the world's largest multination emissions-trading scheme, it provides an important model and experience as countries beyond Europe work to identify potential mechanisms for efficiently reducing greenhouse-gas emissions. The EU process is also working to develop a regional target for energy production from renewable sources.

The Arctic Council has been a particularly valuable forum to bring together the various stakeholders of the Arctic region (NGOs, ethnic communities, national governments) at the political and technical levels to evaluate the economic and ecological implications of climate-change. The Arctic Council's landmark 2004 Arctic Climate Impact Assessment provided decision-makers and scientists with critical information about observed and predicted changes in the Arctic climate system that, in turn, facilitated important policy discussions.

Action-Oriented Partnerships

While action-oriented partnerships, like the groups described above, are also multilateral in structure, they differ from other groupings in that they have been established specifically to develop and implement projects to reduce greenhouse-gas emissions while forging close relationships, sharing resources, and coordinating activities. As a rule, these partnerships work with a targeted group of countries that have both the necessary technical expertise and the capacity to affect the overall rate of growth in greenhouse-gas emissions; focus on practical projects that advance the development or utilization of technology; and leverage private-sector investment to accelerate action.

The **Asia-Pacific Partnership on Clean Development and Climate** (APP) is an excellent example of such a partnership. The APP brings together Australia, China, India, Japan, South Korea, the United States, and Canada—which collectively account for over 50 percent of the world's greenhouse-gas emissions, economic activity, and population—to mobilize resources, promote trade policies, and develop specific projects to address energy security, national air-pollution reduction, and climate change. It includes public-private partnerships with companies and trade associations and has begun more than 100 projects to expand investment and trade in cleaner energy technologies as well as goods and services in key market sectors. By engaging private industry as well as government officials, the APP is using public-private partnerships to build local capacity, to improve efficiency, and reduce greenhouse-gas emissions, to create new investment opportunities and to remove barriers to the introduction of clean energy technologies in the Asia-Pacific region. What makes the approach unique is that APP activities are identified and supported using an innovative "bottom up" approach.

The **Renewable Energy and Energy Efficiency Partnership**, launched by the United Kingdom during the 2002 World Summit on Sustainable Development and based in Vienna, uses innovative financing techniques to implement small- to medium-scale technology-deployment projects and helps to develop and promote policies to create and expand markets for renewable energy in major developing economies. This helps to meet two critical goals for developing nations: increasing access to energy essential for economic growth and limiting or reducing the greenhouse-gas emissions that result from the increasing prosperity their citizens want, need, and deserve.

Other partnerships focus on specific problems or particular technologies, such as the **Methane to Markets Partnership**, intended to bring cost-effective methane-capture technology to developing countries. The focus on methane reduction has particular benefit given that this gas, a powerful contributor to the greenhouse effect, has a shorter atmospheric lifetime and is easier to remove from the atmosphere than carbon dioxide. Methane is also a key low-carbon energy source in itself (as natural gas). Thus, policies and technologies that decrease its leakage into the atmosphere or assist in capturing it can meet the dual objectives of increasing energy supplies while decreasing greenhouse-gas emissions. Under this Part-

nership, member countries work closely with private sector development banks and other governmental and nongovernmental organizations to promote and implement methane recovery and use opportunities in four sectors: oil and gas systems, underground coal mines, landfills, and animal waste management systems. Other examples include the **International Partnership for a Hydrogen Economy**, designed to efficiently organize, evaluate, and coordinate multinational research and which works to pioneer the development and deployment of hydrogen technologies as a clean energy carrier. **The Carbon Sequestration Leadership Forum** is developing and demonstrating cost-effective methods to capture and store carbon emissions from fossil fuels. The **Global Nuclear Energy Partnership** (GNEP) is leading nuclear-technology research and development. GNEP is a groundbreaking new effort that seeks to develop a worldwide consensus on enabling expanded use of economical, carbon-free nuclear energy to meet growing electricity demand. The Partnership has two major goals: (1) to expand carbon-free nuclear energy to meet growing electricity demand worldwide; and (2) to promote nonproliferation objectives through the leasing of nuclear fuel to countries that agree GNEP Partner countries will consist of both "fuel supplier nations" and "reactor nations." Finally, China, the EU, India, Japan, Russia, South Korea, and the United States are cooperating in a cutting-edge partnership—**International Thermonuclear Experimental Reactor** (ITER)—that aims to develop clean, renewable commercially available fusion energy by the middle of the century. While clearly a long-term effort, success in this research could fundamentally change the global energy–production and delivery system, providing cheap, reliable, and abundant energy that will massively reduce greenhouse-gas emissions on a global scale.

Other Action

Bilateral partnerships can also significantly advance specific projects that leverage areas of commonality. For example, America's Strategic and Economic Dialogue with China has been useful in harmonizing climate policies and identifying financial tools to promote clean energy technologies. Given that the United States and China are the two largest greenhouse-gas producers, any global success at addressing emissions will require cooperation and agreement between the two countries. While the relationship with China on these issues is developing, the United States has also has other important and well-established dialogues with Japan on technology and efficiency, and with India, through the U.S.-India Global Issues Forum and with Europe (both bilaterally with individual states and through the EU) on policies and developing technologies to address greenhouse-gas emissions. The EU and China are working through climate-change partnerships on carbon-reducing strategies, including an agreement to co-finance a carbon-capture and -storage coal plant in China. This demonstration project will serve as a testbed for determining the feasibility for large-scale deployment, especially in rapidly developing and coal-intensive countries.

Additionally, development-bank and NGO activities have shown great promise in providing concrete steps and models for addressing greenhouse-gas emissions. For example, the World Bank's Prototype Carbon Fund creates a public-private partnership to finance specific projects in borrowing countries that lead to greenhouse-gas reductions. It also helps build capacity in these countries by focusing on training and "learning by doing" approaches to projects. The Congo Basin Forest Partnership demonstrates the potential role of track-two partnerships to develop programs, policies, and projects designed to address forest management. Given the important role that deforestation plays in producing the greenhouse-gas effect, governmental and NGO-led programs that reduce forest loss are important to a comprehensive global climate-change strategy.

CONCLUSION

The current global economic crisis highlights the fact that environmental objectives exist in a balance with economic growth, a balance that political leaders struggle to find in their own countries and at the global level. The UNFCCC contributes importantly to achieving a healthy balance by providing an overall framework for action to address climate change and as a regular gathering point for diplomats, policy-makers, and technical experts from the widest range of countries. As such, it is a unique forum for building partnerships to help countries meet their own national objectives and to forge the consensus needed for success in global efforts to address climate change. It could also help to coordinate international efforts, creating synergies, and avoiding duplication.

Despite these many advantages, however, it would be a mistake either to rely solely on UNFCCC processes or to give insufficient resources and attention to the many other venues and partnerships that advance global climate objectives, including the diverse contributions from governments, companies, NGOs, and other groups acting individually and collectively.

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ABOUT THE HARVARD PROJECT ON INTERNATIONAL CLIMATE AGREEMENTS

The goal of the Harvard Project on International Climate Agreements is to help identify and advance scientifically sound, economically rational, and politically pragmatic public policy options for addressing global climate change. Drawing upon leading thinkers in Australia, China, Europe, India, Japan, the United States, and other countries, the Project conducts research on policy architecture and key design elements of a post-2012 international climate policy regime. The Harvard Project also provides insight and advice regarding countries' domestic climate policies, especially as these policies relate to the prospects for meaningful international action. The Project is directed by Robert N. Stavins, Albert Pratt Professor of Business and Government at the Harvard Kennedy School. Major funding for the Harvard Project on International Climate Agreements is provided by a generous grant from the Climate Change Initiative of the Doris Duke Charitable Foundation.

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