Climate Change and Its Implications Through 2020

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On 28 June 2004, the NIO for Economics and Global Issues, hosted a conference entitled Climate Change and Its Implications Through 2020. This conference was part of the Global Trends 2020 program and was designed to help the NIC think about ways in which the climate change issue could affect international relations through the end of the next decade. Participants came from policy making, academic, and nongovernmental organization (NGO) circles.

Key Findings

The insights from the conference can be divided into two groups: the geopolitical implications of changes in the global climate by 2020, and implications of policies to address climate change. Following a thorough survey by Dr. Edmonds of the science of climate change, participants concluded that ***the rise in temperature under most forecasts over the next 15 years is unlikely to lead to significant physical disruptions--such as a major rise in sea level or alteration of agricultural production--therefore, physical changes to the world's climate are likely to have only a negligible impact on bilateral relations by the end of the next decade***.

- There is a strong consensus in the scientific community that the greenhouse effect is real, and that average surface temperatures have risen over the last century. There is no consensus, however, concerning how sensitive the earth's temperature is to concentrations of greenhouse gases such as CO2. Moreover, some gases—such as sulphates and aerosols—lower surface temperatures, and the impact of clouds is uncertain.

- A mid-range estimate indicates that a doubling of CO2 emissions from pre-industrial levels would raise temperatures 2.6 Celsius, but average global surface temperatures are likely to rise less that 1 Celsius from 2000 to 2020.

- That said, one participant asserted that rising global temperatures could reduce access to water, which will worsen the impact of diseases. Through the end of the next decade, there are likely to be "environmental refugees" as people flee resource-stressed areas. This impact is likely to be greatest in developing countries that are least prepared to manage the pressures.

In contrast to the moderate warning on the impact of temperature increases, participants concluded that ***policies designed to address climate change are likely to have a large impact on multilateral relations; and that the United States, in particular, is likely to face significant bilateral pressure to change its domestic environmental policies and to be a leader in global environmental efforts***. They judged that concerns about greenhouse gases will increase steadily through 2020, and that there are likely to be numerous weather-related events that—correctly or not—will be linked to global warming. Any one of these events could lead to wide spread calls across the international community for the United States—as the largest producer of greenhouse gases—to take dramatic steps to reduce its consumption of fossil fuels.

There will be numerous obstacles to creating a multilateral solution.

- There will be resistance from OPEC countries that depend heavily on revenues from fossil fuels to fund domestic welfare programs.

- Less developed countries (LDCs) view climate change as a problem created by the industrial world and they face tremendous pressures to create jobs for their growing populations, so developing countries will be unwilling to bear much of the cost of an international climate change program.

- An effective global response is unlikely to occur without US leadership. But the US is currently viewed as too hostile to the UN, in particular, and multilateral institutions, in general, to be viewed as a coalition builder.

- The Kyoto Protocol in its current form is likely to be unacceptable to most any US administration.

- An environmental regime that is solely based on economic incentives will probably not produce needed technological advances because firms will be hesitant to invest in research when there is great uncertainty regarding potential profits. On the other hand, a regime based on government regulation will tend to be costly and inflexible.

- Technological innovation—such as breakthroughs that allow for more efficient use of energy or that promote cleaner alternative sources of energy such as solar, wind, and nuclear power—will be essential to curbing carbon emissions.

- The environmental policy conundrum is this: the level of confidence about global warming is not yet high enough for most countries to justify a major response--especially when they don't see others taking dramatic action, but the slower the response, the higher the costs of remediation could be if global warming occurs as forecast. For example, most models forecast that a gradual rise in greenhouse gases will produce a gradual rise in average temperature and sea level, yet some participants cautioned that there could be a threshold/tipping point for more dramatic change--as witnessed in the emergence of the ozone hole.

Nonetheless, there are reasons for optimism.

- One participant argued that, despite the United States' decision to not sign the Kyoto Protocol, the world is ready and eager for Washington to be a leader in climate issues. A strategy to make the US a global leader on this issue would require two elements. (1) The US would have to develop a credible domestic "cap and trade" environmental policy that attempted to slow the increase in the use of fossil fuels and to create a market in which industries could trade the rights to pollute. Washington must be willing to go first without conditions for other countries. (2) LDCs must be able to benefit from the United States' global strategy.

- The world does not need new multilateral institutions to address this issue. Indeed, crafting a policy to limit carbon emissions would be made simpler by the fact that three political entities (the United States, the European Union, and China) account for over half of all CO2 emitted into the atmosphere. An agreement that included these three plus the Russian Federation, Japan, and India would cover two-thirds of all carbon emissions.