

MEANINGFUL ACTION

A Proposal for Reducing Greenhouse Emissions & Spurring Energy Modernization in Developing Nations

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I. INTRODUCTION

Industrial and developing countries have a common interest in a more stable climate. But this shared agenda has been obscured in the past two years by disputes over who is to blame for global warming, and how the burden of addressing the problem should be shared. Responding to pressures from the Senate, the U.S. government has said it will not seek ratification of the Kyoto Protocol without the "meaningful participation of key developing countries." This demand has provoked strong reactions in some developing countries, and even after extensive bilateral discussions, the U.S. Administration has yet to come up with a politically acceptable formula for new developing country commitments.

This "Non-Paper" proposes a new approach. The key to stabilizing the climate is cooperation rather than confrontation—and to view the challenge ahead as an economic opportunity as well as an environmental necessity. Far from being a threat to further economic growth, well-designed policies to reduce emissions can spur development and create jobs. Those nations that are most successful in quickly adopting the efficient low-emissions energy systems that will likely prevail in the 21st century will gain an economic edge.

For developing countries, efforts to slow climate change could spur the transfer of a host of advanced new technologies now emerging from industrial country labs. This "Non-Paper" proposes a new approach to enhancing developing country involvement in the Framework Convention on Climate Change in ways that are economically beneficial to developing countries, attractive to industrial country governments, and which will accelerate achievement of the ultimate objective of avoiding dangerous climate change. The key is to move straight to policy reforms that will accelerate energy modernization, and to provide the necessary financing by early introduction of the Clean Development Mechanism.

II. BACKGROUND

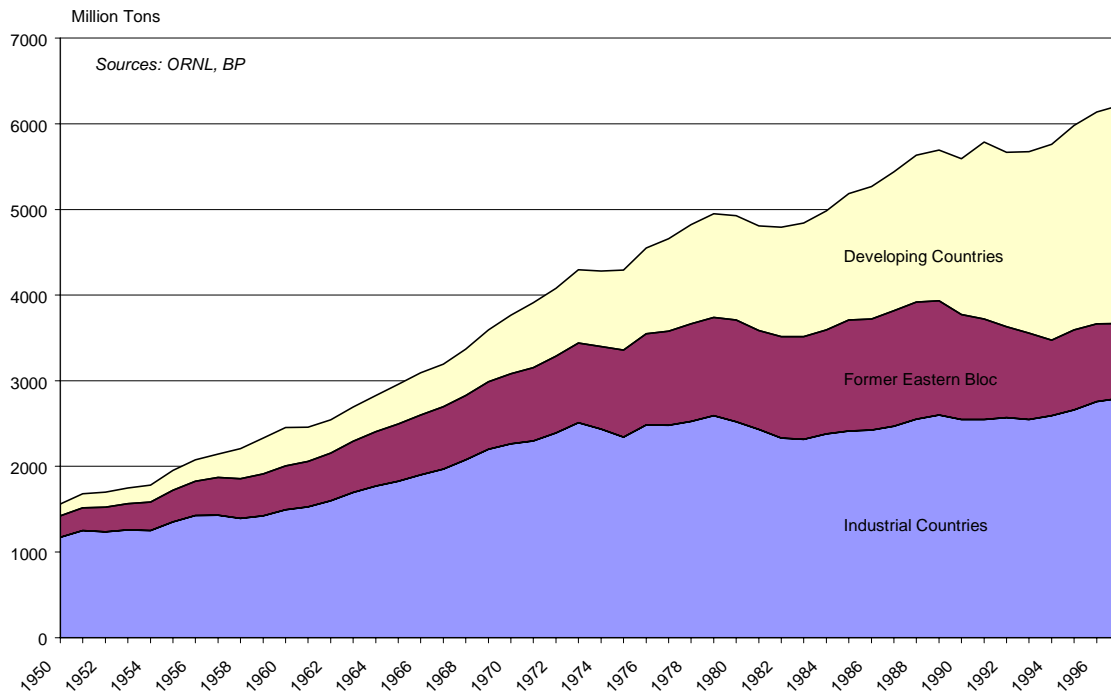
On July 25, 1997, the U.S. Senate passed, by a 95-0 vote, a “Sense of the Senate” Resolution. Challenging the 1995 Berlin Mandate consensus that the first round of protocol talks would not include new commitments for developing countries, the Senate argued that “exemption for Developing Country Parties is inconsistent with the need for global action on climate change.” The resolution said that the Senate would not ratify a protocol to the Framework Convention that mandated new commitments for Annex I (industrial) countries unless it “also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Countries within the same time period.”

The Senate Resolution reflects the underlying fear of some U.S. companies that heavily emitting industries will shift to developing countries that lack emission restrictions, thus leading to a loss of economic competitiveness and jobs. The Clinton Administration responded to these concerns in Kyoto last December by proposing that the Protocol include an article that would allow non-Annex I Parties to voluntarily adopt a “level of limitation or reduction” of greenhouse gases. Many developing countries, including Brazil, China, India, and Saudi Arabia, pressed for the article’s deletion, arguing that it was unfair. South Korea, Mexico, Argentina, and Samoa (on behalf of small-island states) supported the concept. However, Raul Estrada-Oyuela, chair of the Kyoto talks, determined that there was no consensus on the article and deleted it from the text just hours before the Protocol was adopted by consensus.

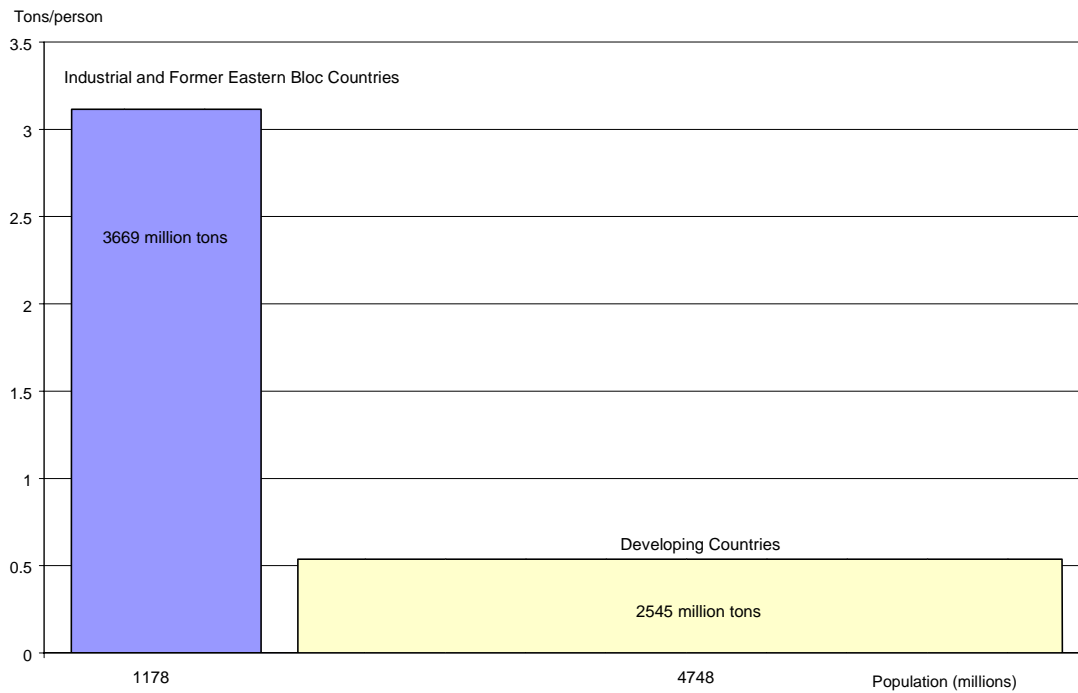
Most developing countries have resisted emission targets in light of the fact that they are at a much earlier stage of development; their current per capita emissions are in many cases less than one-tenth the U.S. level, and are bound to increase as development proceeds. (See Figures.) Industrial countries, with less than 20 percent of the world’s population, account for 76 percent of the cumulative carbon emissions from fossil fuels. Indian negotiators stress that their people should not be limited to a few “survival emissions” while industrial countries are only willing to accept modest cutbacks in their “luxury emissions.” Developing country governments also note that financial and technology transfers to developing countries under the 1992 Framework Convention, for reductions of greenhouse gas emissions, have fallen far short of expectations.

After the Kyoto Protocol was adopted in December 1997 the Clinton Administration said that it would not submit the Protocol for ratification without the “meaningful participation of key developing countries.” However, even after extensive bilateral discussions with developing country governments, the U.S. Administration has yet to produce a clear definition of “meaningful participation,” nor has it significantly closed the gap with developing countries over how their role in the Protocol should be developed. On the eve of Buenos Aires, this is one of the main impasses blocking implementation of the Kyoto Protocol.

Carbon Emissions from Fossil Fuel Burning, By Country Grouping, 1950-97



Carbon Emissions (Total and Per Capita) and Population, 1997



III. FROM MEANINGFUL PARTICIPATION TO ACTION

Developing countries are already active participants in the Framework Convention on Climate Change, and have a full range of reporting requirements. Much of the debate over their additional involvement has centered so far on the notion of numerical emission limits for developing countries, analogous to those for industrial countries in the Kyoto Protocol. However, there are several reasons to think that this approach may not be practical.

Emissions trends in developing countries are highly uncertain, making it virtually impossible to determine appropriate emission limits. For example, unexpected economic problems in 1998 have sharply curtailed emissions in some Asian nations that had predicted increases of more than 5 percent annually. In addition, political realities may spur developing nations to follow Russia's lead, negotiating weak targets that create spurious emissions credits—termed “tropical hot air” by some observers—that can be traded on the market for billions of dollars, lessening incentives for the wealthier industrial countries to reduce emissions domestically.

Although developing countries might benefit in the short term by attracting heavily polluting industries that are dying in the North, there is good reason to think that this will not be a productive long-run development strategy. An energy revolution is now in the making, with advanced new technologies such as fuel cells, photovoltaics, wind turbines, and flywheels entering the market. As was the case a century ago when the oil era began, those nations that develop and attract the new technologies and industries will be best positioned to succeed economically in the 21st century. Developing countries that avoid action on climate change today may find that they have been bypassed by other nations that have moved beyond the outdated energy systems of the 1900s.

These potential pitfalls suggest a need to “leapfrog” the rigid industrial country definition of “participation” in terms of targets and trading, and seek a more flexible, equitable, and effective approach. One alternative is to define the meaningful action of developing countries in terms of the implementation of policies and measures that provide development benefits while reducing emissions. To ensure the effectiveness of this approach, the same operating entities that certify emission reductions for the CDM also certify policies that meet an emissions-based “effectiveness threshold,” and monitor and assess progress in their implementation. Developing countries that have adopted certified national policies to cost-effectively limit their greenhouse gas emissions in particular sectors would receive first preference for CDM projects.

This approach would reinforce the developing world's position in the climate negotiations that domestic policies and measures must be the main means of meeting the treaty's goals, to which international mechanisms such as emissions trading are to be supplementary. It would also be environmentally effective and

politically attractive: A “win-win” focus on energy modernization policies would simultaneously promote sustainable development and climate stabilization.

IV. CLIMATE POLICIES THAT WORK

The goal of this Meaningful Action initiative is to build on the progress already being made in many developing countries to limit greenhouse gas emissions. Some governments have already cut fossil fuel subsidies, while others have adopted efficiency standards as well as tax incentives for energy efficiency and renewable energy—all policies that were adopted primarily for economic reasons, but are at the same time cutting greenhouse gas emissions. Taken together, these initiatives already compare favorably with those undertaken by industrial country governments in the past decade.

Since the main aim of national emissions targets is to speed up the adoption of national policy reforms, the process can be accelerated by moving directly to policy development. Meaningful Action will also show industrial countries that developing nations are already taking steps to implement the Kyoto Protocol.

FOSSIL FUEL SUBSIDY REMOVAL

Removing fossil fuel supports—financial transfers, preferential tax treatment, and price supports—for coal, oil, and natural gas is a good example of a “win-win” climate policy. According to the Intergovernmental Panel on Climate Change (IPCC), “Eliminating permanent subsidies that encourage fossil fuel use would reduce greenhouse gas emissions and increase real incomes in the long run.” Already, developing countries have reduced fossil fuel subsidies from more than \$300 billion annually in the early 1990s to \$150-200 billion today; it is estimated that completely removing developing nation fossil fuel subsidies would deliver \$35 billion in economic, environmental, and social benefits.

Current Examples:

- ◆ China’s coal and oil subsidy cuts between 1990 and 1995 saved 155 million tons of carbon and \$14 billion in government expenditures. China cut coal subsidies from \$750 million to \$250 million between 1993 and 1995.
- ◆ Brazil has completely removed its oil subsidies, saving 4 million tons of carbon and \$2.2 billion.
- ◆ In India, coal subsidy reductions between 1990 and 1995 saved 6 million tons of carbon and \$1.6 billion.

- ◆ In Mexico, oil subsidy reductions between 1990 and 1995 saved 6 million tons of carbon and \$3.3 billion.

CARBON AND ENERGY TAXES

Taxing the carbon content of fossil fuels helps to internalize the external climate costs of fossil fuels, and discourages their use. Revenues from the tax revenue can be recycled to lower other taxes or support other mitigation measures, lowering the cost of reducing emissions. Already, five European nations have adopted some form of carbon tax, with partial recycling to reduce labor and wage taxes. Such taxes can provide a solid, continuing source of revenues for developing country governments, while also stimulating investment in advanced new energy technologies.

Current Example:

- ◆ Costa Rica has enacted a 15-percent carbon tax, with a third of its revenues supporting tree-planting by farmers.

ENERGY EFFICIENCY STANDARDS AND INCENTIVES

Policies aimed at energy efficiency improvements help overcome the frequent failure of manufacturers and users of energy-using devices to account for their lifetime, rather than initial, costs. Minimum standards and incentives motivate manufacturers and consumers to create a market for higher-efficiency products, bringing about carbon and energy savings. The opportunity is particularly great in developing countries, where automobile, building, and appliance use are projected to multiply several-fold in the next few decades.

Current Examples:

- ◆ China has introduced tax incentives for constructing energy-efficient buildings, and now requires that all industrial boilers cogenerate electricity with their waste heat. Industrial energy efficiency improvements between 1980 and 1990 saved between 75 and 104 million tons of carbon, a 30% decline in energy intensity, and new industry investments of \$5.7 billion.
- ◆ Mexico has disseminated 1.8 billion compact fluorescent light bulbs in the world's largest energy-efficient lighting project. The project offsets 32,000 tons of carbon annually, and is estimated will eventually save \$180 million over the project's lifetime.

- ◆ Thailand's demand-side energy efficiency program, introducing energy-saving fluorescent lamps, refrigerators, and air conditioners, has saved 1.2 million tons of carbon and avoided 300 MW of energy use.
- ◆ South Korea has introduced mandatory automobile efficiency standards. Approximately a dozen developing countries, including China, have instituted mandatory building codes modeled on those in the United States.

RENEWABLE ENERGY MARKET SUPPORTS

Solar, wind, biomass, and other forms of renewable energy offer major long-term potential for reducing emissions. The IPCC, together with the Royal Dutch Shell Company, estimates that renewable energy sources could meet more than half the world's energy needs by the middle of the next century. The modular, decentralized nature of renewable energy technologies is particularly well-suited to the needs of developing countries, avoiding costly upfront investments in centralized power plants and electric grid extensions. In the past decade, both industrial and developing countries have implemented a range of successful policies to spur renewable energy markets. These policies have allowed global wind power generation to grow at 25% per year in the 1990s, while the solar Pv market has grown at a rate of 16% annually.

Current Examples:

- ◆ Brazil's ethanol fuel program, the world's largest renewable energy program, has kept its carbon emissions 20 percent lower than they would otherwise be, displaced half the gasoline used in cars, and created 700,000 jobs.
- ◆ China's existing use of wind, biogas, small hydro, and tidal energy already displaces 223 million tons of carbon—26 percent of its current emissions—that would have been produced by coal-fired power plants.
- ◆ Egypt's Renewable Energy Authority is aiming for 90 MW of new wind power installation in the Zafarana desert by the year 2000.
- ◆ India has become the world's fourth-leading user of wind power, with 950 megawatts of capacity installed by 1998, by eliminating import tariffs and by adopting a system of power purchase requirements and tax incentives.

REFORESTATION AND FOREST PROTECTION

The proper protection and management of forests can complement efforts to reduce fossil fuel emissions by sequestering carbon. Studies suggest this is a relatively inexpensive way to slow, though only temporarily, the buildup of carbon

in the atmosphere—approximately \$4-5 per ton of carbon. The potential is particularly large in tropical regions, where deforestation currently releases 2 billion tons of carbon into the atmosphere each year.

Current Examples:

- ◆ In Uruguay, a successful National Reforestation Law has brought 660,000 acres of degraded land under reforestation since 1990.
- ◆ An innovative Certified Tradeable Offset (CTO) mechanism designed by Costa Rica seeks to consolidate and conserve 1.3 million acres of protected areas and national parks through the sale of environmental services.

RESTRICTIONS ON HIGHLY EMITTING INVESTMENT PROJECTS

In order to avoid becoming a carbon dumping ground and restrict the entry of highly emitting industries, some developing country governments may want to adopt tax penalties or other restrictions on new international investments that do not reflect global “best practices.” This measure would promote the transfer of clean technology that developing countries have been seeking.

V. THE WAY FORWARD

An international system of capacity building and policy certification could go a long way toward making these new policy initiatives effective. Their potency would be further boosted with new financial mechanisms to assist in the transfer of state-of-the-art new technologies. Together, policy changes and financing will accelerate economic development even as they help stabilize the climate.

The new Clean Development Mechanism, authorized under the Kyoto Protocol, offers a potential new source of finance that could be one key to such a strategy. The objective of the CDM is to help developing countries achieve sustainable development while offering the North some flexibility in meeting its Kyoto commitments. As envisioned, the CDM would channel Northern investment, technologies, and practices into developing country projects, such as solar power systems, wind farms, efficient industrial boilers, and forest-protection projects. These projects would generate certified emissions reductions, which could be combined with domestic reductions to meet Kyoto commitments.

As it stands today, the Kyoto Protocol provides only a rough outline of the CDM’s structure and function. It is to be responsible to all Parties to the protocol, and supervised by an executive board and “operational entities.” These are to ensure projects are voluntarily approved by all Parties, bring about real, measurable, and long-term benefits, and achieve emissions reductions that are “additional” to what

would have occurred otherwise. Private companies as well as governments may participate in the CDM, under the guidance of the body's executive board. Reductions obtained as early as 2000 can be used to achieve compliance in the first commitment period. Further work is needed in Buenos Aires and beyond to work out the CDM's governance structure, and to ensure that it is transparent, equitable, efficient, and accountable.

It is important that these issues be worked out rapidly. The CDM has already generated more excitement and business enthusiasm than any other provision in the Kyoto Protocol. Accelerated implementation of the CDM, and the early flow of sizable capital to developing country projects, may be essential to ensuring the active involvement of developing countries, and speeding implementation of the Protocol itself. To be "meaningful," the CDM must move quickly beyond the modest scale of the Global Environment Facility, whose \$100 million per year for climate-related activities essentially confines it to pilot-project scale. The goal with the CDM should be to move quickly to multi-billion-dollar commercial scale.

Current estimates of the potential flow through an effective CDM hover around 400 million tons of carbon-equivalent for each of the five years in the commitment period 2008-2012. Assuming industrialized countries are granted total freedom in the use of the flexibility mechanisms, projected average price of carbon oscillates between \$24/ton and \$36/ton. The CDM has the potential to channel \$9 to \$14 billion annually.

VI. CONCLUSION

With prospects for early ratification and implementation of the Kyoto Protocol fading, it is time for a "leadership" group of governments, private sector representatives, and non-governmental organizations to step forward with proposals to accelerate achievement of the goals of the Framework Convention on Climate Change. The success of the Kyoto Protocol and the stability of the world's climate depend in part on our ability to bridge the North-South divide—and that in turn depends on whether we can develop new "win-win" approaches to the climate problem.

North and South must both step forward with creative solutions, undertaking real commitments—but ones that strengthen the global economy rather than weaken it. The combination of accelerated policy reforms in developing countries and rapid implementation of the Clean Development Mechanism may be the solution to that equation.