Reconciling Human Development and Climate Protection

BY JING CAO

OVERVIEW

This paper proposes a fair and efficient climate change policy architecture for the post-2012 era. It focuses on how to break the current political impasse between the developed and the developing countries. The architecture is a multi-stage framework that gradually engages developing countries.

DISCUSSION

The Kyoto Protocol is an ineffective tool for stabilizing long-term greenhouse gas concentrations. It fails to address core issues such as setting targets based on a fair and efficient burden-sharing principle, effectively engaging developing countries, and providing a mechanism to address long-term uncertainties.

This paper proposes an alternative international climate policy architecture for the post-2012 period. The architecture has three important characteristics. First, the architecture uses a multi-stage framework in which countries face targets and timetables for emissions reductions that vary depending on national circumstances. A multi-stage framework addresses the challenge of long-term target-setting by setting accessible and relatively short-term targets for each stage. It also allows for "common but differentiated responsibilities" among nations—or in other words, allows developing nations to take on emission reduction responsibilities gradually.

The second important characteristic of the architecture is that emissions control responsibility is allocated using an explicit "Global Development Right" burden-sharing formula. This formula defines an individual person's responsibility for reducing emissions as a mathematical function of responsibility for current and historical emissions and of capacity to reduce emissions without sacrificing basic necessities. The formula includes two weighting factors that represent ethical judgments about the relative importance of responsibility and capacity. National emission reduction responsibilities are then calculated as the sum of the responsibilities of the citizens of that country. The advantage of the Global Development Right formula is that it obliges people with incomes and emissions above the threshold to pay the costs of mitigation and adaptation, while allowing people with incomes and emissions below the threshold to maintain their right to development.

The final important characteristic of the architecture is that its implementation would be negotiated, managed, and enforced using a combination of top-down and bottom-up diplomatic processes. At the global level, an international institution would determine long-term emissions targets. Such an institution could provide a simple negotiation forum that could focus on key emitters and important groups of countries. At the regional level, "clubs" of nations would establish common policies regarding technology transfer, R&D funds, market-based instruments, and enforcement regimes. At the country level, national climate agencies would establish regulatory mechanisms to achieve negotiated obligations.

KEY FINDINGS & RECOMMENDATIONS

A future climate architecture should include the following stages:

➢ *In the first stage, all member countries would agree on a path of future global emissions that leads to an acceptable long-term stabilization goal.* Developed countries would increase the stringency of their binding Kyoto emissions reduction commitments, but developing countries would not be required to make any commitments. The goals for this stage recognize the political reality that less developed countries are unlikely to accept short-term emissions commitments.

➢ *In the second stage, developing countries would focus on "no regrets" mitigation options with priorities in local sustainable development.* Sustainable development measures should include gradual phase-out of inefficient and energy-intensive equipment, "no regrets" greenhouse gas mitigation options, and new investments and standards aimed at both development and environmental objectives. If current economic growth trends continue, developing countries that are more capable of participating in GHG reduction activities could begin more stringent voluntary reduction of greenhouse gas emissions.

➢ *In the third stage, developing countries would take on moderate emissions targets that are only binding in one direction.* If these countries achieved their emissions targets, they could sell their allowances, but if they did not achieve their targets, they would face no penalties. This strategy would encourage participation.

➢ *In the final stage, all countries would agree to binding, absolute emissions targets.* The distribution of emissions reduction responsibilities would be allocated based on the Global Development Right formula. The targets are binding in both directions.

This paper improves previous authors' Global Development Right calculations by incorporating cumulative historical carbon emissions back to the 19th century and by taking into account carbon sinks. The results show that:

➢ *Under the Global Development Right calculations, high-income countries should accept 87% of the burden of current emissions reduction targets, middle-income countries should take 13% of the burden, and low-income countries should take 0.1% of the burden.* The United States alone should accept 39% of the burden of current emission targets because of its ability to reduce emissions and its large historical responsibility for emissions. The next largest shares of the burden fall on Germany, Japan, and the United Kingdom, which should accept 7.8%, 7.8%, and 6.4%, respectively. EU (27) as a whole should accept 36% of the burden. The calculations indicate that China should accept 2.2% of the burden, South Africa should accept 0.7%, and India and Brazil have no obligations.

➢ *Although the developing countries initially accept a very small share of the burden of emissions reductions, their share increases over time.* Considering that China and India have had annual growth rates of 8% to 10% per year, in the future many people in these countries will exceed the poverty threshold and will need to bear more responsibilities.

CONCLUSION

Climate change is a complicated problem that requires a fair and effective international climate policy regime. The sooner the current political climate impasse can be broken, the better the future chances of stabilizing the global climate.

AUTHOR AFFILIATION

Jing Cao, *Assistant Professor, Department of Economics, School of Economics and Management,* Tsinghua University, Beijing

ABOUT THE HARVARD PROJECT ON INTERNATIONAL CLIMATE AGREEMENTS

The goal of the Harvard Project on International Climate Agreements is to help identify key design elements of a scientifically sound, economically rational, and politically pragmatic post-2012 international policy architecture for global climate change. It draws upon leading thinkers from academia, private industry, government, and non-governmental organizations from around the world to construct a small set of promising policy frameworks and then disseminate and discuss the design elements and frameworks with decision-makers. The Project is co-directed by Robert N. Stavins, Albert Pratt Professor of Business and Government, John F. Kennedy School of Government, Harvard University, and Joseph E. Aldy, Fellow, Resources for the Future. 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.

Project Email: *climate@harvard.edu*
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