



Climate Justice: Sharing the Burden

It is now beyond scientific doubt that the emissions of greenhouse gases need to be reduced significantly to prevent dangerous interference in the climate system and avoid dramatic consequences of global warming. The debate on how to do this has largely centred on achieving the reductions in a cost-effective manner. Doing so on an equitable basis that takes account of past historic emissions and their development consequences have been given much less attention. It is the existing stock of emissions rather than anticipated future flows that must weigh more heavily in the design of more equitable solutions to the climate challenge.

The *World Economic and Social Survey 2009: Promoting Development, Saving the Planet* (<http://www.un.org/esa/policy/wess>) argues that putting development and poverty reduction on hold as the international community goes about trying to solve the climate problem would be economically, politically and ethically unacceptable. The major challenge is identifying how developing countries can build resilience to future climate shocks and achieve catch-up growth in a carbon-constrained world. Confronting this challenge brings us back to the question of burden sharing, namely what advanced countries must do to support adaptation and mitigation actions in developing countries, in order to complement the actions that developing countries are taking or are capable of taking on their own within the limits of their technological, institutional, and financial capacities and consistent with their developmental aspirations. Such cooperative action is essential not only to ensure the achievement of urgent climate goals but also to re-establish the level of trust between rich and poor countries needed to sustain future global agreements on the bold multilateral actions that will be needed to stave off the climate change threat.

Dangerous Odds: Double Inequity

Even if the annual flow of carbon emissions were to immediately stabilize at today's rate (40 gigatons), the stock of greenhouse gases in the atmosphere would be double the pre-industrial level by 2050, resulting in a high probability of dangerous temperature rises, serious economic damage and potentially destabilizing political consequences.

Making an exact estimate of the economic damage from climate change is a difficult exercise. Given the complexity of interactions between the climate and economic systems, the uncertainty surrounding future outcomes and the limited use of markets in pricing those outcomes, numerous judgment calls are inevitably involved. As a result, policy makers face a wide range of estimates. The Intergovernmental Panel on Climate Change estimates that climate change could entail a loss of between 5 and 20 per cent of world gross product per year by 2050 if nothing is done to miti-

gate carbon emissions. Even taking the lowest estimate, it is clear that the cost of doing nothing will be significant.

There is also little doubt that the burden of projected damages will fall disproportionately on developing countries. On past trends, it has been estimated that for every 1 degree rise in average global temperatures, annual average growth in poor countries drops between 2 and 3 percentage points, with no change in the growth performance of rich countries.

It has, moreover, been estimated that the welfare loss for developing regions (measured as a percentage of GDP in 2100) is more than double that for OECD countries excluding the United States, and more than 5 times greater than the damage to the United States. The economic damage to Latin America and the Caribbean, Africa and the Middle East, and India and Southeast Asia could be between 7 and 10 times greater than that for the United States.

Nicholas Stern has dubbed this a "double inequity" as developing countries will be hit hardest by global warming, while carrying little responsibility for causing the problem.

Historical responsibility

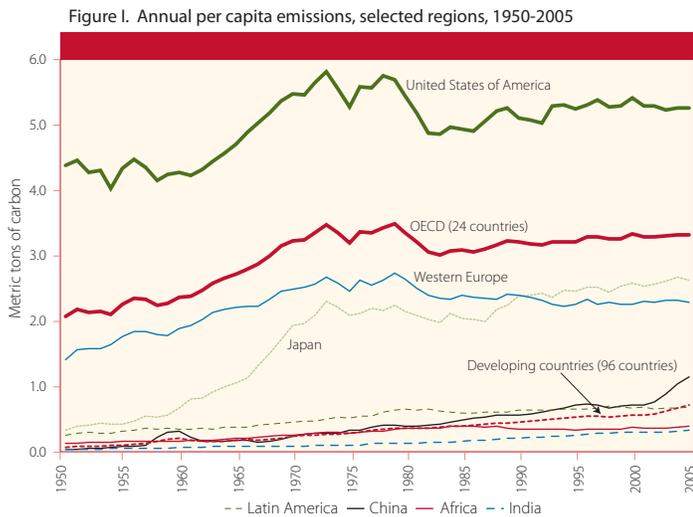
It is the cumulative stock of emissions produced by the currently developed industrialized countries that are the root cause of dangerous rise in greenhouse gas concentrations. Since 1840, three quarters of the cumulative total has been generated by Annex I countries with the United States alone accounting for close to 30 per cent. The picture is even starker if per capita emissions are used (see figure 1).

Recently, much attention has been given to the fact that several large developing economies now rank among the largest greenhouse gas emitters in absolute terms with China having replaced the United States as number one. In per-capita terms, however, emissions levels of the major developing countries remain far below those of the developed countries. Indeed, China's current level of per capita emissions is at a level reached by the United States at the time of the First World War. That gap is being reduced thanks to China's remarkable growth performance. This is helping to fulfil longstanding development objectives, but it is also pushing China towards the per-capita emission levels of some advanced countries.

The transition to a low-emissions economy must begin immediately. Countries need not all follow the same path, however. For most developing countries a very large commitment of resources will be needed to ensure this transition is consistent with existing development goals: increasing energy access remains imperative in all developing countries, given its strong correlation

with human development (see Policy Brief No.24). Advanced countries will need to do more and quickly to not only reduce their own stock of emissions but also to support developing country efforts to decelerate their flow of emissions over time and establish a viable low-emissions development pathway. This support to developing countries has been guaranteed by the advanced countries in the United Nations Framework Convention on Climate Change (UNFCCC), but it has not been adequately internalized in climate financing mechanisms. This gap between promise and action remains a major problem that needs to be overcome soon.

Compelling developing countries to cut emissions at this stage of their development constitutes an inappropriate—and unworkable—approach to facilitating progress. Such an approach would almost certainly freeze a pattern of income inequality that already exhibits intolerable income gaps within and, in particular, across countries. Catch-up growth and convergence remain fundamental policy priorities. Reconciling this with climate objectives can be achieved only if the investments needed to drive growth assume a technological profile different from the one that drove the historically unprecedented growth performance of today's advanced economies.



Towards an equitable burden sharing

Equity is an essential ingredient of an effective global climate change policy, as reflected in the principle of “common but differentiated responsibilities and respective capabilities”, set forth in the UNFCCC. Not only have today's high-income economies generated about 80 per cent of past fossil fuel-based emissions, but those same emissions have helped carry them to high levels of social and economic well-being. These countries carry the responsibility for the bulk of climate damage but they also have the capacity to repair it.

It is important to acknowledge that developing countries have already begun to take significant steps towards developing energy efficiency and cleaner energy sources (see Policy Brief No. 23). However, much larger initial investment costs will have to be initiated if the adjustment to a low-emissions economy is

to take place at a faster pace and on the requisite scale to meet climate goals while at the same time ensuring the achievement of development goals.

This will require additional multilateral financing, on an adequate and predictable scale, comprising grants, concessional loans and compensatory payments. In the context of the ongoing UNFCCC negotiations, developing countries have insisted on the fact that Annex II countries have a clear-cut responsibility for providing new and additional financial resources to meet the agreed full costs incurred by developing-country parties in complying with their obligations. Translating such responsibilities into tangible resources is still a major stumbling block.

The Greenhouse Development Rights (GDR) methodology provides one possible way of sharing the burden of emissions reductions among countries according to their capacity to pay for reductions and their responsibility for past and current emissions. Each of these criteria is defined with respect to a development threshold so as to explicitly safeguard the right of low-income countries to economic growth (such as a PPP per-capita income level of \$9,000, beyond which human and economic development approaches “advanced” levels); only individuals with incomes above this threshold have a responsibility to pay for emissions abatement. Each country is assigned an emissions allocation based on per capita rights. In addition, each country is assigned an obligation to pay for abatement—whether at home or abroad—based on its share of cumulative emissions starting from a base year (such as 1990) and the cumulative income of its population with incomes above the development threshold.¹ Following these criteria, at this point, the EU, for example, would need to contribute \$32.9 billion (for every \$100 billion of climate financing, while the contribution of the United States would be \$47.7 billion and that of Japan \$11.2 billion.

Placing this challenge in the context of an evolving investment programme is to recognize that developing countries will themselves be responsible for mobilizing resources on an increasing scale over time, as well as for insisting on the responsibility of developed countries for meeting the additional costs of undertaking such investments in the initial stages of the transition. Developed countries need to live up to the responsibility they took on themselves under UNFCCC regarding climate change related assistance to developing countries. ■

¹ Baer, Paul, Tom Athanasiou and Sivan Kartha (2007). *The Right to Development in a Climate Constrained World: The Greenhouse Development Rights Framework*.

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