



Financing mitigation and adaptation by developing countries

There is a broad consensus that without the active participation of developing countries, global temperatures cannot be stabilized at a safe level. It is also agreed that even if temperatures are contained, many developing countries will still suffer significant climate damage.

Investment in mitigation and adaptation activities will need to be scaled up significantly as part of an integrated strategy to address climate and development goals. Energy provision should be a central component of such a strategy (see Policy Brief 24), but shifting to greater energy efficiency and greater use of renewable sources will need to be closely linked to, inter alia, the expansion and reorganization of transportation and water systems (Policy Brief 21), improved forest management (see Policy Briefs 15 and 16) and more sustainable patterns of consumption and growth.

According to the *World Economic and Social Survey 2009: Promoting Development, Saving the Planet* (<http://www.un.org/esa/policy/wess>) a properly targeted and globally funded public investment programme is the surest way to promote equity, support catch-up growth and make significant cuts in emissions. But such a programme must not leave developing countries dependent on commodity exports, vulnerable to sharp price shocks, or encumbered by accumulating debt levels. It will, accordingly, be necessary to devise effective financing mechanisms to support them make the shift to low-emissions development pathways.

The financial mismatch of the century

The additional investment needed for both mitigation and adaptation in developing countries will be on a massive scale. Estimates of additional assistance to developing countries to tackle climate change range from under \$100 billion to over a trillion dollars. Most anticipate that these will be peak figures in twenty years or later. The Survey bucks conventional wisdom by making a case for front-loading the needed investments. It suggests that at least one per cent of world gross product (WGP) annually—a figure comparable to the resources channeled in to helping rebuild post war Europe under the Marshall Plan—will have to be mobilized to bolster greener growth in poor countries.

Currently, the available resources for climate change mitigation and adaptation are woefully inadequate to meet the challenge. The Global Environment Facility, established in 1991 under the UNFCCC to promote the transfer of climate-friendly technologies to developing countries, for instance, has allocated over the past 17 years just \$3 billion, with an additional \$14 billion raised in the form of co-financing. The Clean Development Mechanism (CDM), the Kyoto Protocol's channel for mitigation

activity in developing countries, has led to the implementation of 700 projects between 2004 and 2007 with a total value of \$6 billion. The World Bank's Climate Investment Fund, the largest of multilateral initiative announced at the 2008 G8 meeting, intends to raise \$6 billion. Japan's Cool Earth Partnership, the largest of bilateral initiative and set up in 2008, plans to disburse \$10 billion over next five years. The *Survey* estimates that, all together, international financing available for climate change related needs of developing countries is at the very most \$21 billion.

Closing this financing gap must be high on the climate agenda. A mix of mechanisms will be needed, that will vary across countries and over time.

Where should the additional financing come from?

There are various potential sources of alternative additional multilateral financing:

Official development assistance (ODA): Currently, OECD countries provide around 0.3 per cent of their GDP to ODA. If they instead devoted 0.7 per cent, in compliance with the agreed target set by the United Nations Millennium Declaration, the additional funds would amount to \$150-200 billion a year, meant for achieving Millennium Development Goals, without considering investments for climate change related needs. UNFCCC stipulates climate change related assistance to developing countries to be “additional,” and not reclassification of usual development assistance. The G-77 and China have therefore suggested that OECD countries devote another 0.5 to 1 per cent of their gross national income (GNI) exclusively for climate change-related assistance.

Carbon credit from developing to developed countries: Emission credits, such as Certified Emission Reductions (CER) issued currently under CDM, can be another source of climate change finance. UNFCCC estimates that an extra \$10-\$34 billion per annum could be generated from this source by 2020, rising to between \$50 billion and \$100 billion by 2030.

International taxes or levies: No matter whether it is done through carbon tax, cap-and-trade, or some combination of the two, imposition of carbon price will generate extra revenues. Estimates vary as to how much exactly. UNDP calculates that a \$20 tax per ton of CO₂ could generate about \$265 billion per annum in OECD countries at current emission levels.¹ According to the

¹ UNDP (2007), Human Development Report 2007/8: *Fighting Climate Change; Human Solidarity in a Divided World*, Basingstoke, United Kingdom, Palgrave Macmillan.

UN *World Economic and Social Survey 2009* a tax of \$50 per ton of CO₂ could yield as much as \$500 billion per annum,² while Stern estimates it could be as much as \$750 billion.³ Whatever the precise amount, the OECD countries can devote an important share of the revenue to be generated this way for climate related assistance to developing countries. Imposition of carbon price has the added benefit of making renewable energy sources more competitive with non-renewable fossil fuels.

Reallocation of existing spending: There is also the possibility of providing climate change related assistance by redirecting funds from current expenditures, without having to raise new, additional revenues. Currently, spending on military services in many developed countries constitute about 10 per cent or more of their budget. By comparison, an expenditure of 0.3 per cent of their GNI for climate related assistance would amount to only about 1 per cent of the government expenditure. Also, subsidies on carbon-intensive energy services are currently estimated to equal \$300 billion per year, part or all of which can instead be directed toward climate-related expenditures.

Overall, therefore, it seems that it is possible to generate the financing necessary to support mitigation and adaptation activities of developing countries, provided developed countries summon the necessary political will and back it up by appropriate follow-up actions.

Front loading a global investment programme

Apart from the availability and predictability of adequate finance, there are important issues of timing and composition of investment. First, as mentioned, there is a strong argument for front-loading. Energy services, transportation infrastructure, irrigation schemes, and alike have long gestation lags, so that if developing countries do not set themselves now on course towards an emission-heavy pathway, it will be difficult to achieve mitigation goals in time. The Survey argues therefore for an urgent Big Push involving a broad range of sectors and regions.

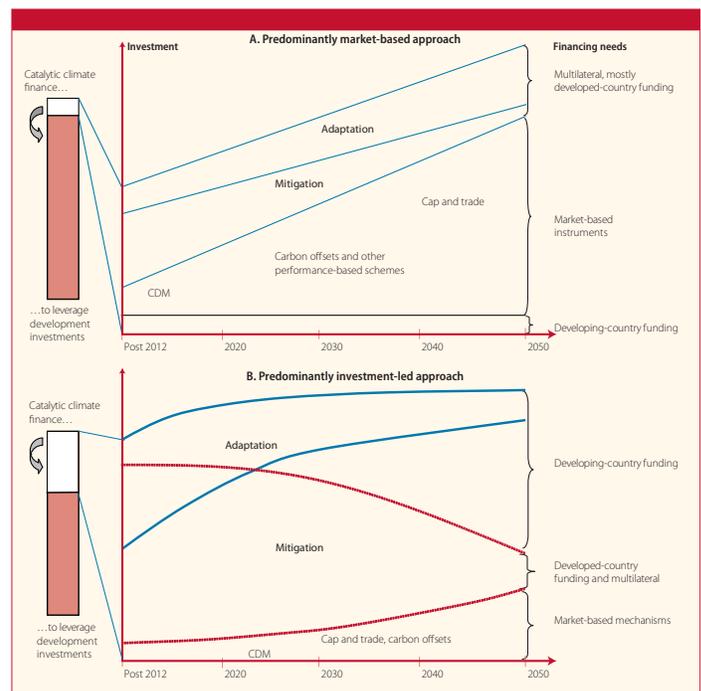
Second, investments required to set developing countries on a low-emission pathway are of large scale, characterized by indivisibilities. It is difficult to envisage the private sector to undertake such investments with uncertain gains to be reaped far into the future. The Big Push therefore requires that the governments take the lead, at least in the early stages of the mitigation effort. The private sector will, of course, play an important complementary role, including through mechanisms such as enhanced CDM. It will also be a key agent in implementing the projects and programs financed by public-sector money. With time, the private sector should start playing a more dominant role in invention, adaptation, and transfer of technologies required for the low-emissions development pathway.

² United Nations (2009), *World Economic and Social Survey 2009: Promoting Development, Saving the Planet*, New York: United Nations, p. 163 (<http://www.un.org/esa/policy/wess>)

³ Nicholas Stern (2009), *A Blueprint for a Safer Planet*, London: Bodley Head, p. 180.

Finally, while external financing will be key to beginning this process, domestic resource mobilization by developing countries to finance their own mitigation and adaptation activities will become increasingly important over time. The Big Push logic implies that the increased public investment will eventually create matching increases in new saving. Modelling exercises presented in the *Survey* indicate that the low-emissions, high growth driven by large-scale public investments are certainly economically feasible and have historical precedents. In fact, a number of larger developing countries are already making significant climate change related investment out of their own resources (see Policy Brief 23). The Survey also provides a list of other proposals for mobilizing domestic resources many of which are linked to the idea of reforming domestic financial systems to better serve the job of making long-term investments in a more sustainable future. These include green bonds and a more prominent role for development banks. Making the Big Push towards a green planet therefore is not only a necessity, it is achievable. ■

Figure 1. Strategic investment and financing mechanisms for developing countries



Sources: World Bank (2009), for figure VI.1A; and United Nations, Department of Economic and Social Affairs, for figure VI.1B.

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