

## Equity as the Gateway to Environment Ambition

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In the quest for an international climate agreement on actions to address the climate change crisis, three aspects have to be the basis simultaneously: the environmental imperative, the developmental imperative, and the equity imperative. This EDE formula requires that the different pieces of the climate negotiations be seen and addressed as a whole, in a holistic way. In particular, setting the global goal for emission reduction has to take account of the environmental imperative, and also deal with the emission reduction of Annex I and non Annex I parties. Equity is the element and principle that cements the link between environment and development. Indeed, equity is the gateway to environmental ambition.

For example, fixing of a temperature target and of a global emissions reduction goal must be done within a paradigm or framework for the equitable sharing of the atmospheric space and the development space. The sharing of the mitigation efforts, and the support (finance and technology transfer) that must accompany this sharing, is a most critical piece of the jigsaw puzzle.

**The UN Climate Convention recognises the equity principle;** that developed countries take the lead in emission reduction, and that developing countries have development imperatives, and their ability to undertake climate actions depend on the extent of support they receive from the developed countries. Annex I countries will also meet the **agreed full incremental costs** of implementing developing countries' mitigation measures, as well as providing financing on adaptation and technology.

There are competing claims on a national budget or a family budget. The trade-offs and dilemmas are more acute for the poor. A poor family would put greater priority on feeding the children and on health care, and also on adaptation action such as preventing floods and rain from occupying the house, ahead of spending on mitigation. Thus, financial assistance is required if changing to more environmentally sound cook stoves to be done by the family. So too regarding a typical budget making exercise by developing countries. Thus the provision of finance to support mitigation in developing countries, which is operationalising the equity principle, would be a necessary piece of effective global mitigation action. Recognising the gateway role of equity to higher environmental ambition is not a rhetorical but a logical and realistic way of getting to a successful mitigation framework.

According to the latest IPCC reports, total CO<sub>2</sub> emissions since 1870 have to remain below about 2900 Gton of CO<sub>2</sub> if global warming is to be kept at less than 2 degree C (relative to 1861-80= with a probability of over 66%. However 1900 Gton has been emitted by 2011, leaving the space of only 1,000 Gton between now and the future. Since the emission level was 49 Gton of Co<sub>2</sub> equivalent in 2011, the carbon space would be exhausted within 2 or 3 decades at current rates of emission.

Of the cumulative global emissions Annex I countries accounted for 72% of the total compared to their share of population of about 25%. Developing countries

accounted 28% of the total. The over-utilisation by Annex I was 568 Gton, the same as the under-utilisation by developing countries (up to 2009, in my estimation, in a paper on Equitable Distribution of Atmospheric and Development Space, South Centre, 2010). In terms of annual flow, Annex I is still exceeding its fair share.

**In sharing the remaining carbon space** in 2010-2050 two concepts are needed: (1) The allocation of carbon space as according to rights and responsibilities; (2) The actual carbon budget (and related physical emissions reduction schedule) that countries eventually put forward as what they can physically undertake.

There could be a difference between the allocation of responsibilities and rights, and the actual emissions reduction or related budgets. Therefore: Countries that cannot meet their allocated budget or emission cut can compensate for this unmet part of their obligation and countries that do not make full use of these rights, can obtain the funds for their actions.

The equity approach has implications for the various topics in the UNFCCC discussion. In a discussion on global mitigation goal, the setting of a global goal for emission reduction should be accompanied by a clarification of the roles of developed and developing countries. For example, a proposal of a global goal of 50% and an Annex I goal of 80% proposal raises some issues. Firstly, the 50% global cut is environmentally not ambitious enough, as it would correspond to a carbon budget above what is required. Secondly, the implied distribution of the carbon budget gives Annex I countries a budget share of 30-35 per cent, compared to their 16% share of world population in this period. Thirdly, acceptance of this proposal means accepting not only an unfair distribution of the 2010-50 carbon budget, but also writing off the cumulative debt of developed countries.

Fourthly, accepting these figures (50%, 80%) implicitly accepts a specific emissions cut target for developing countries, and locking in this whole distribution of carbon budget and set of emissions cuts. It implies that in 2050, annex I total and per capita emissions would be cut by 80% while developing countries' per capita emissions would be cut to 1.5 ton or about half below 1990 levels and compared to 2005 levels it would be around 40% below in absolute terms and 60% below in per capita terms. The cuts would be even more compared to business as usual in 2050.

It is doubtful that developing countries can meet this implied target for them, unless decoupling between emissions and economic growth takes place through a miraculous mechanism. For this decoupling, massive infusions of finance and technology, coupled with institutional and human capacity building is required. This is why equity is also embedded in the finance and technology issues.

The enormity of the problem was not lost on the economist Nicholas Stern who has said : "If the allocations of rights to emit in any given year took greater account both of history and of equity in stocks rather than flows, then rich countries would have rights to emit which were lower than 2 tonnes per capita (possibly even negative) The negotiations of such right involve substantial financial allocations: at \$40 per tonne CO<sub>2</sub>e a total world allocation of rights of, say, 30Gt (roughly the required flows in 2030) would be worth \$1.2 trillion per annum".

On estimates on mitigation funds needed, the World Bank estimated that: "In

developing countries mitigation could cost \$140 to \$175 billion a year with associated financing needs of \$265 to \$565 billion. A study in India (by the CSE) of six sectors to determine India's low carbon growth options concludes: "There is no real way we can reduce emissions without impacting growth once we cross the current emissions-efficiency technology threshold...It is for this reason that India (and all other late entrants to the development game) must not give up on their demand for an equitable global agreement." For the power generation sector, a low-carbon strategy could reduce emissions in India cumulatively by 3.4 Gton by 2030-31. The additional cost of generating power from renewable technologies is estimated at US\$203 bil or about \$10 bil a year or \$60 per tonne of CO2 emissions avoided.

**On adaptation financing needs,** the World Bank estimates up to \$100 billion a year, higher than the UNFCCC's financial flows report (at \$27 to \$66 bil a year). The most comprehensive estimate is a IIED-Imperial College study led by Martin Parry which found the adaptation cost for developing countries may come up to \$450 billion annually.

**Financing for technology cooperation and transfer:** The UNFCCC's expert group on technology (EGTT) estimates the total finance needs are \$300-1,000 billion a year; with developing countries' additional funding needs of \$182 - 505 billion a year, for deployment and diffusion of technology. This does not include research and development or demonstration costs in developing countries.

## IMPLICATIONS FOR NEGOTIATIONS

**(a) Global Goal:** In the negotiations on global goal, developing countries have argued that a decision on a global goal (whether temperature limit or global emissions reduction) should be in the context of equity and to be preceded by a paradigm for the equitable sharing of the atmospheric space or resource. This should also be the case for the wording on a global peaking year.

This is a correct position because the global goals for temperature and emissions reduction have implications for the responsibilities of developing countries or for their options in their emissions and thus their economic pathways. This principle of equity in the sharing of atmospheric space has to be operationalised with the use of carbon budget and debt concepts. The data on fair shares and actual emissions and thus on debt/surplus also have major implications for the sharing of the carbon space in the 2010-2050 period, and thus of the allocation of emission obligations and rights as would be expressed in the shared vision's important element of "global goal for emissions reduction."

**(b) Mitigation:** The concepts and figures on cumulative emissions and carbon debt/surplus make it clear that Annex I parties must continue to "take the lead" in emissions reduction. If developed countries undertake only weak targets for the next commitment period and their emissions are only reduced a little (or even increases), then there is even less carbon space left for developing countries. The present pledges made either in the Copenhagen Accord/ Cancun pledges or Kyoto Protocol are far from adequate. Various analyses show that the Annex I (including the US) pledges add up collectively to only a 16% reduction (by 2020 compared to 1990) at best and if loopholes (through LULUCF and AAUs) are taken into account there can

even be a 6.5% increase in Annex I emissions.

**(c) Finance:** One way in which the historical carbon debt that developed countries hold may be discharged is through payments into the Green Climate Fund. Besides this, the developed countries have obligations under the UNFCCC to meet mitigation, adaptation and capacity building expenses. The quantum of funds for discharging the carbon debt and for meeting the additional costs are large, but this is to be expected since the financial requirements of adaptation, mitigation, capacity building and technology are massive. The amounts so far announced (\$10 bil a year in 2010-12 and \$100 bil by 2020) are inadequate. Moreover there is no road map between 2013 and 2020 and beyond.

**(d) Technology Transfer:** To play their extremely ambitious and difficult role, developing countries need technology at the most affordable rates. The following measures are proposed: (1) They must have the maximum access at least cost to the best technologies; (2) Barriers to technology transfer must be addressed, including the issue of IPRs; (3) Developing countries must be assisted in the development of endogenous technology and to undertake their own R and D and develop innovation, with international support; (4) R and D activities should be financed by UNFCCC funds, and the products from these should be in the public domain; (5) Sufficient funds should be provided for technology development and transfer to developing countries.; (6) A Technology Policy Board or Council should be set up under the UNFCCC to address the technology issues.

**It would be useful to have a work programme or research agenda with the objective objective to examine the various aspects of equity as a principle and how it is to be operationalized in various issues (mitigation, adaptation, finance, technology, global mitigation goal).**

**The recognition and operationalizing of the equity principle will be a major gateway for the raising of environmental ambition, including in facilitating that the means of implementation can be provided in adequate amounts and appropriate forms to developing countries so that they can contribute more to the global mitigation effort as well as to meeting their adaptation needs.**