



Mitigation Action Plans & Scenarios

# EQUITABLE ACCESS TO SUSTAINABLE DEVELOPMENT: in a carbon constrained world

POLICY BRIEF // EASD

November 2012

*It is vital to resolve the gap between the viewpoints of Northern (developed) and Southern (developing) countries as to what to do in a world where the emission of greenhouse gases must be constrained to avoid dangerous climate change. While the North must take full responsibility for its greater share of historical emissions, the South must take action to play its role in ensuring a sustainable future. At the same time, it is necessary to make space for countries to develop sustainably. The equity-based framework outlined in this brief provides just such a flexible reference point for future negotiations, from the perspective of the BASIC experts, as set out in the EASD Report.*

## Equitable sharing of the global carbon budget

There is a limited amount of greenhouse gas that can still be emitted globally before the risk of dangerous climate change becomes even more severe. The first step is to determine what future global carbon budget remains available globally and the second is to apportion this and the associated costs of reductions fairly between countries – either by way of a national carbon budget or by the degree of effort to reduce emissions from their rising trend.

## About this brief

This brief outlines a range of principles and criteria to ensure equitable access to sustainable development in the face of global climate change. Based on work by experts from Brazil, South Africa, India and China (BASIC countries) as a contribution to a broader debate, it proposes a reference framework based on science and fairness for the equitable apportionment of the remaining global carbon space, adequate time for development and fair provision of support.

This brief has been prepared to assist countries collaborating in the Mitigation Action Plans and Scenarios (MAPS) programme.<sup>i</sup> It distils the key findings of the EASD Report written by experts in response to a request by the BASIC Ministerial Meeting on Climate Change.<sup>ii</sup>

Only global effort can resolve climate change because greenhouse gases, regardless of origin, circulate around the world, accumulating in the atmosphere to drive global warming long after they are emitted. By including the total greenhouse gases emitted since the Industrial Revolution, it is possible to estimate the gross amount that the world could still emit while nevertheless limiting temperature rise to a maximum of 2°C above pre-industrial temperatures.<sup>iii</sup> As a consequence of scientific uncertainties, a remaining available budget for the period

2000 to 2049 of 1 440 Gigatonnes of emissions of CO<sub>2</sub> has roughly a 50% probability of exceeding the 2°C limit. There are ranges around these probabilities, but a roughly even chance to keep below 2°C is a reasonable starting point.

Given this global budget, a formula to distribute these available emissions fairly between countries must be determined, addressing the legitimate concerns of all countries in a fair, multi-lateral process. Article 3 of the United Nations Framework Convention on Climate Change (UNFCCC) specifies the '*basis of equity*' and '*accordance with ... common but differentiated responsibilities*' as fundamental to any response.

## Industrialisation and the right to sustainable development

Developed countries are responsible for much higher levels of past greenhouse gas emissions – a consequence of their long history of industrialisation and its benefits. Developing countries, on the other hand, still face the challenges of eradicating poverty and reducing inequality. While they lack the technological and financial means to pursue a less carbon-intensive economic path, many, including all BASIC countries, have pledged to slow down their rate of emissions increase (either as a deviation below business-as-usual or a reduction in the carbon intensity of GDP). Central to the principles of equitable access and sustainable development is time, which developing countries need, to address poverty through infrastructural and industrial development. The claim of developing countries to carbon space is not a claim to a right to pollute.

The EASD Report finds that over-occupation of atmospheric space by developed (Annex I) countries – evident from Figure 1 – is so extensive that even if they were to stop emitting tomorrow there would not be sufficient remaining future carbon space for developing countries (non-Annex I) to be able to emit their equitable share. The actual carbon budget which developing countries will be able to access depends on the extent to which Annex I countries reduce emissions and pay for any shortfall. Sharp and immediate reduction commitments are required by Annex I countries if they are to 'take the lead', in the language of Article 3 of the UNFCCC.

## In calculating available carbon space, start with developing countries

In reducing emissions, if some countries do less, others must do more if the same level of temperature increase is to be avoided. Annex I countries have already achieved development by consuming more carbon space than an equitable allocation would entitle them to, leaving only a small remainder within which non-Annex 1 countries are now expected to develop. This conceptualisation should thus be reversed: non-Annex 1 countries should implement the actions which they have pledged, and Annex I countries should work within the constraints of the remainder of the carbon space (i.e. turn the formula around to read: Annex 1 = available global emissions – non-Annex 1).

## Towards a framework for the equitable sharing of carbon space

The EASD Report suggests various approaches to achieving equity in the allocation of the remaining atmospheric space and support, operationalizing both Articles 2 and 3 of the Convention. In essence, these are:

- ▶ **Per capita.** Equity demands that more populous nations require greater amounts of carbon space. The Indian and Chinese experts propose that the global carbon budget is shared by an equal per capita distribution of cumulative emissions (including past and future emissions).
- ▶ **Historical responsibility.** In the Brazilian experts' approach, mitigation effort is shared in accordance with countries' relative historical contributions to temperature increase. Historical emissions must therefore be taken into account in determining the balance of a country's efforts to bend the curve of emissions downward.

► **Responsibility, capability and sustainable development.** The South African experts, following the principles in Articles 3.1 and 3.4 of the UNFCCC, propose using criteria that reflect a country's responsibility for historical cumulative emissions, capability to mitigate (quantified in terms of GDP per capita and other aspects of human development) and their right to sustainable development.

A *formula plus* approach could further be used to allow for the particular resource endowments and other national circumstances of particular countries.

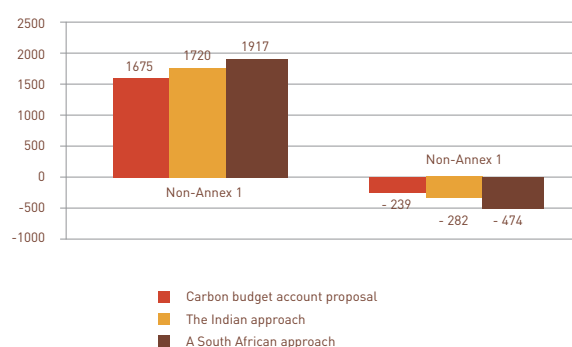
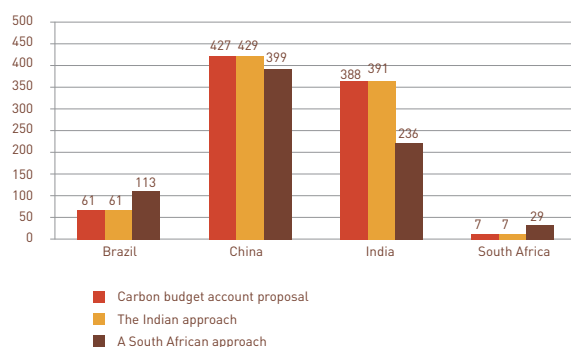
The EASD Report applies these different equitable approaches to assess the share of the global carbon budget to which each country would be entitled. They used both 1850 as the year commonly taken to start assessing historical emissions as well as a more recent year, 1970. Figure 1 compares the results of their analyses.

## Financial transfers and South-South cooperation

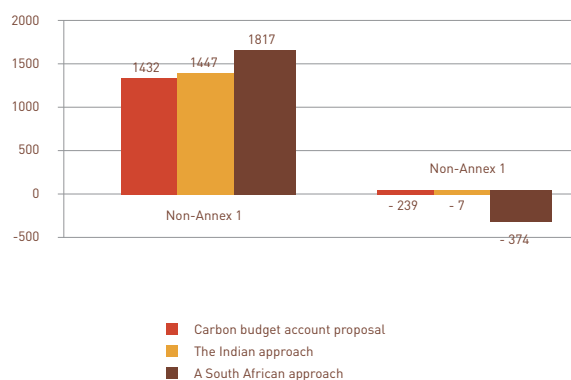
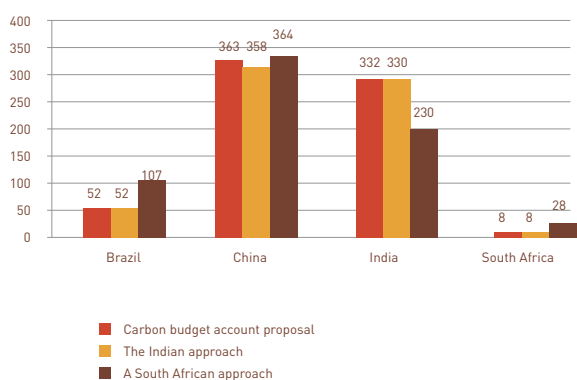
If developed countries cannot reduce emissions to stay within fair carbon budgets, they should pay for mitigation in developing countries. BASIC experts have calculated the financial transfers that are implied: depending on the carbon price, South African experts reach a figure of between US\$231 and US\$2 058 billion per year and the Chinese between US\$8.04 trillion and US\$20.1 trillion as a one-time payment. In all cases, the financial transfers are much larger than the \$100 billion per year that Northern countries pledged to mobilise in Copenhagen in 2009.

Some developing countries have cumulative emissions that have already reached 50% or more of their entitlements for the entire period 1850-2050. BASIC experts have thus proposed novel financial mechanisms for South-South cooperation. South-South transfers can assist these countries to gain access to the needed emission space for their sustainable development. Given that these Southern

**FIGURE 1:**  
**FUTURE CARBON BUDGETS COMPARED, USING VARIOUS APPROACHES TO ENSURE EQUITABLE ACCESS TO SUSTAINABLE DEVELOPMENT, IN GIGATONNES (GT) OF CO<sub>2</sub>**



*For starting years 1850, excluding LULUCF*



*For starting years 1970, excluding LULUCF*

## Key points:

- ▶ BASIC experts propose different approaches to the equitable sharing of carbon space but all recognise (1) the right of developing countries to sustainable development, (2) the need for developed countries to take responsibility for historical emissions and (3) the equal right of every person.
- ▶ Developed countries must take the initiative but developing countries must also assume their due responsibility for ensuring a sustainable future.
- ▶ While starting from different analytical approaches, BASIC experts arrived at various carbon budgets and fair shares of effort, but consistently found a need for much higher commitments from developed countries than pledged.
- ▶ Developing countries should implement the actions pledged and Annex I countries should work within the constraints of the remainder of the carbon space, not the other way around.
- ▶ Annex 1 countries have negative available global carbon space remaining. The only way to provide equitable space to developing countries is through financial flows and equity around the question: who pays?
- ▶ South-South transfers can enable those developing countries that have already used up a large portion of their carbon budget to gain access to the needed emission space for their sustainable development.

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countries' contribution to total global emissions is only 3.36%, the future entitlement to be addressed by mutual cooperation would be limited to 19.6 Gigatonnes CO<sub>2</sub>.

Equity in sustainable development also applies to climate change adaptation (i.e. responses to the impacts of climate change). Insufficient investment in mitigation – both with regard to emissions and to financial cooperation – will serve to increase the costs of adaptation, particularly for poor countries and communities. On the other hand, improved levels of development enhance the capacity to adapt. Meanwhile, making development more sustainable contributes to both adaptation and mitigation.

The framework summarised in this brief is based on objective criteria of what is required by science, what is good for development and what is fair. An equity-based reference framework should link mitigation, adaptation and the means to implement both.

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- For more on MAPS see <http://www.mapsprogramme.org/>.
  - Equitable Access to Sustainable Development: Contribution to the Body of Scientific Knowledge (BASIC expert group, Beijing, Brasilia, Cape Town and Mumbai, 2011). See the EASD Report for more information on the topics in this brief (available at [http://www.erc.uct.ac.za/Basic\\_Experts\\_Paper.pdf](http://www.erc.uct.ac.za/Basic_Experts_Paper.pdf)).
  - M. Meinshausen, et al. (2009). "Greenhouse gas emission targets for limiting global warming to 2°C", Nature Letters 265-279.

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