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PAPER

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## Negotiating Adaptation: International issues of Equity and Finance



Copenhagen Discussion Series



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This briefing note was prepared drafted jointly by Emily Massawa of United Nations Environment Programme, and Tom Downing of Stockholm Environment Institute. Saleemul Huq and Mozaharul Alam from International Institute for Environment and Development and other colleagues from UNEP reviewed and provided inputs to the note. UNEP, SEI and IIED will continue to work together to produce regular policy briefing to support deliberations towards COP15 in Copenhagen in December 2009

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## NEGOTIATING ADAPTATION: INTERNATIONAL ISSUES OF EQUITY AND FINANCE

A shared vision was agreed in the Bali Roadmap and Action Plan in December 2007 by COP13/CMP3. The Bali Action Plan outlines in broad parameters the shape of the climate regime after 2012. It attaches equal importance to mitigation and adaptation, and identifies technology and finance as the key mechanisms to enable developing countries to respond to climate change. The action plan is founded on a shared vision for long-term cooperative action:

*a shared vision for long-term cooperative action, including a long-term global goal for emission reductions, to achieve the ultimate objective of the convention, in accordance with the provisions and principles of the convention, in particular the principle of common but differentiated responsibilities and respective capabilities, taking into account social and economic conditions and other relevant factors (Para 1(a)).*

Both adaptation and mitigation are essential, as is the right to development. Adaptation does not substitute for reducing greenhouse gas emissions, nor does it 'buy time' for mitigation measures to be successful. Without concerted mitigation--many now realize that global warming of 2 degrees C might still be dangerous--adaptation will not be wholly successful. Mitigation is supported by enabling means and recognized commitments by developed countries in the Bali Action Plan. This is not so for adaptation actions.

The long-term aim of avoiding dangerous climate change and the shared vision goal for emission reductions is based on science. Article 2 of the Convention sets the ultimate objective in the stabilization of GHG concentrations in the atmosphere and provides an aspirational goal. The sustainable development is provided here in terms of adaptation, food security, ecosystem management, biodiversity conservation and sustainable economic development.

The shared vision must recognize the right to development along with the centrality of sharing the 'carbon space' and the 'atmospheric resource'. Thus, the deal on 'ecological space' needs to be balanced with 'development space'. A core balance on the Copenhagen deal has to be struck between the imperatives of development and climate.

### DEFINING ADAPTATION

In the broad sweep of human development, adaptation is an integral part of using environmental services, securing water, producing food and adapting settlements. In many arenas, adaptive management is a way to live with uncertainty and complex socio-ecological systems. Disaster risk reduction is a more specialized term referring to efforts to prepare for, cope with and reduce the burden of natural hazards. These senses apply as well to climate, from the use of existing climatic resources, climatic hazards and changing conditions.

With anthropogenic climate change, adaptation takes on a somewhat different definition. What we might call climate change adaptation is the additional effort required to reduce the impact of the additional climate change caused by the enhanced greenhouse effect. The most obvious case is sea level rise and low lying islands that will be inundated in the future. Or indeed, coastal erosion and inundation in polar regions related to melting permafrost, which is already forcing people to move their settlements.

It is this sense of additional adaptation with at least some of its root causes in the historic emissions from industrialized countries that impels issues of equity and finance. While there is not a consensus definition--and some material uses the term in more than one meaning--it is worth noting that a technical definition may be essential for some purposes. This is particularly true in estimating the cost of adaptation and the provision of appropriate finance.

A shared vision: all countries, and most peoples, will be affected by climate change. Adaptation has been brought to the fore in current international efforts, as a matter of need as climate change is already underway. The shared vision for adaptation needs to present a coherent framework for collaborative action, that:

- massively scales up commitment, delivery of adaptation resources and capacity
- is informed by science in setting realistic targets and understanding vulnerability
- ensures that ecosystems are adapting and global food security is not threatened, and
- achieves equitable and sustainable economic development in all countries,

Adaptation costs will be significant across the world. It is imperative that we share lessons learned, building effective and enduring knowledge networks and platforms.

Vulnerability is already critical in some countries and poor countries have less capacity to adapt. The Intergovernmental Panel on Climate Change notes that regions such as the Arctic, Sub-Saharan Africa, small islands and mega deltas will be affected by climate change more than others. For vulnerable regions that are already experiencing adverse climate impacts, a global target of 20 C will bring additional costs, and possibly quite severe consequences. This is important because the shared vision is also about dealing with the challenges already being felt by many developing countries. A comprehensive, long term approach to adaptation to climate change needs to address poverty in ways that reduce climate risk and vulnerability.

With these four points of introduction, we look more closely at issues of equity and finance for adaptation. Nowhere in climate change policy are equity considerations (distribution of costs and benefits) as stark as for vulnerability, impacts and adaptation.

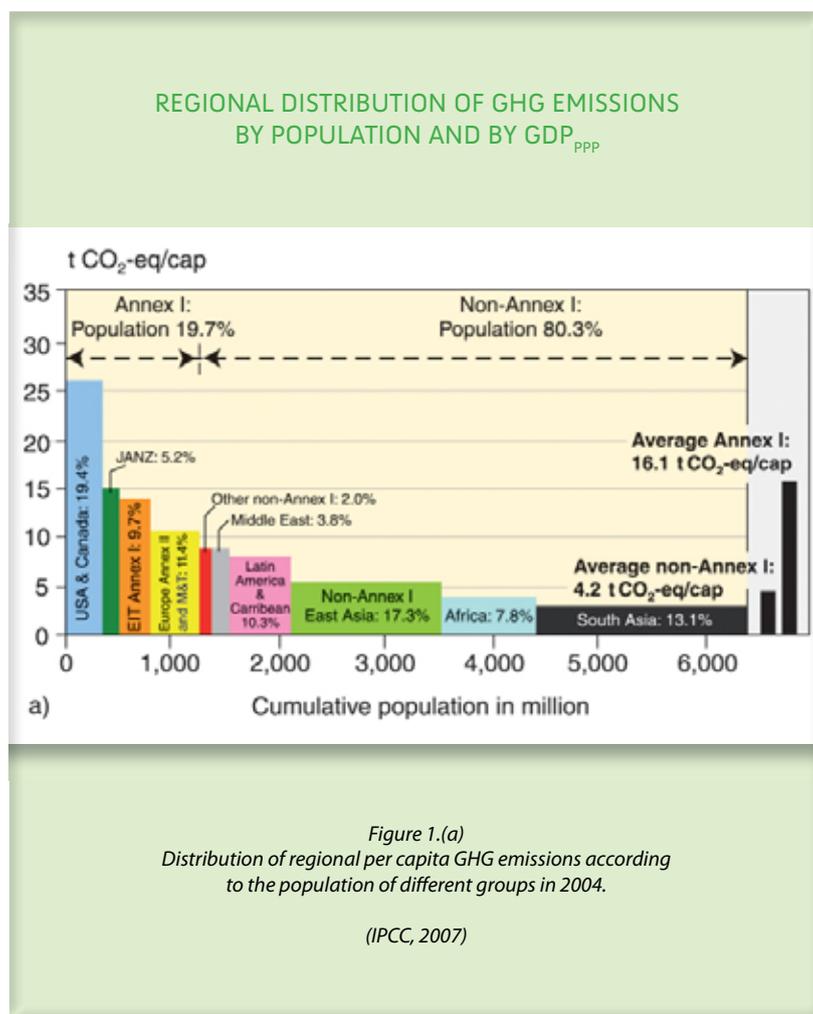
Responding to climate change is based on common but differential responsibilities. A key element of the equity issue is that the impacts of climate change fall disproportionately on those least able to bear them and who have reaped few benefits from historical emissions.

Ensuring adequate adaptation in developing countries is a condition for further progress on mitigation. Substantial new mitigation commitments post-2012 may be politically feasible only if accompanied by stronger support for adaptation. Ambitious mitigation efforts can lessen, but not prevent, future climate change.

Differences in per capita income, per capita emissions and energy intensities among countries are significant (see below). In 2004, Annex 1 countries held 20% of world population, had average emissions of 16.1tCO<sub>2</sub>-eq/cap, produced 57% of the world's Gross Domestic Product based on Purchasing Power Parity (GDPPPP) and accounted for 46% of global greenhouse gas emissions. In contrast, average per capita emissions in non-annex 1 countries were about a fourth of the Annex 1 levels. There is therefore a strong case for financing adaptation internationally.

Differential responsibilities have been calculated in various ways both by academic circles and Parties to the UNFCCC, primarily in terms of financing mitigation. These include (1) the multi-stage approach, with a gradual increase in the number of Parties involved and their level of commitment according to participation and differentiation rules,(2) the convergence approach, with universal participation and a convergence of per capita emissions;(3) the Triptych approach, a sector and technology-oriented approach;(4) the Greenhouse Development Rights (GDR) approach .The GDR approach is cited here as an example and should not be seen as a reflection of endorsement of this particular proposal.

The GDR approach assumes a per capita poverty line as the minimum threshold for accepting responsibility for historic and future emissions. The population above the poverty line is estimated using standard data on income distribution. The wealth of that population comprises a country's share of the global responsibility. Not surprisingly, one third of the burden of dealing with climate change would fall to the US, and one quarter to the European Union. The fraction that would be the responsibility of developing countries is much less: China (5.5%), South Africa (1.0%), India (0.5%) and all least developed countries (0.007%). (See <http://www.seib.org/climate-and-energy/GDR.html>).



## REGIONAL DISTRIBUTION OF GHG EMISSIONS BY POPULATION AND BY GDP<sub>PPP</sub>

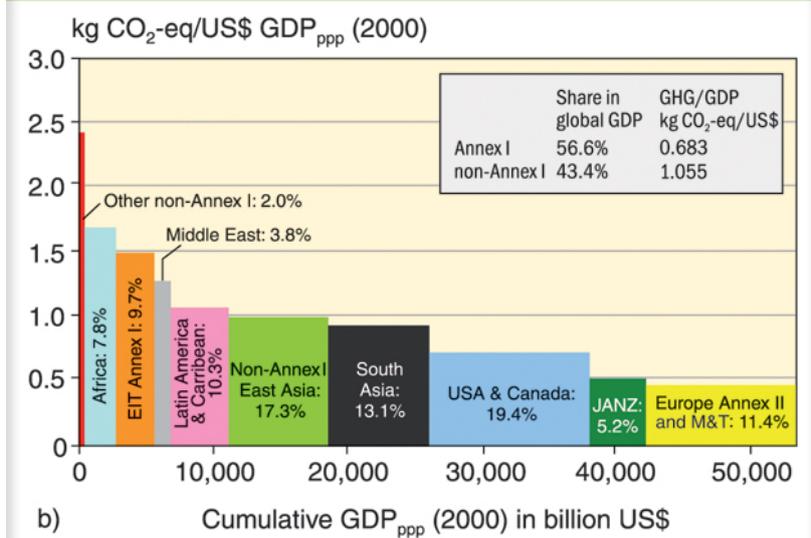


Figure 1.(b)  
Distribution of regional per US\$ of GDP of different country groupings in 2004. The percentages in bars in both panels indicate a region's share in global GHG emissions.

(IPCC, 2007)

Requirements for adaptation finance in developing countries is substantial. Adaptation will bring with it additional costs, beyond the plans for development. Calculating the cost of climate change impacts and adaptation is a difficult issue involving the current baseline and projecting vulnerability, impacts (and climate change itself) and adaptation strategies and actions some decades into the future. The picture is further complicated for developing countries due to the paucity of data and peer-reviewed evidence. And not least, we are still learning what effective adaptation might be, and hence the associated costs and expected outcomes.

Existing estimates for all developing countries and for Africa are shown in the table 1 below. These must be considered only the first generation of 'what if' estimates. A number of studies are due to report in 2009 that should better bracket the estimates and provide a clear line of evidence from the framing assumptions to economic valuation and policy implications.

A high priority is therefore to be placed on strengthening the knowledge base of developing countries with better data and modeling to understand possible future impacts, and with early insights from the field on the most effective responses.

Table 1. Adaptation costs, US\$ billion per year

Assessment	Developing countries	Africa	Benchmark year
UNDP, 2007	86 - 109	17.1 - 24.2	2015
UNFCCC, 2007	28 - 67	3.5 - 10 *	2030
World Bank, 2006	9 - 41	1.8 - 5.3	Present
Oxfam, 2007	> 50	4.6 - 17.3	Present
Stern Review, 2006	4 - 37	0.5 - 3.9	Present

Source: WRI (2008, p.3)  
\* SEI interpretation of UNFCCC figures for developing countries to Africa.

A range of funding sources are available, but an adaptation funding deficit remains. The current available channels for adaptation funding are through the GEF Trust Fund's Strategic Priority for Adaptation and the two GEF-managed funds established at COP7 in 2001, dedicated fully or in part to supporting adaptation, the Least Developed Countries Fund and the Special Climate Change Fund, along with several bilateral initiatives (see Table 2). Multilateral and bilateral adaptation initiatives have received more funding than the funding currently available under the GEF. Many of the funds are just getting underway. Tellingly, it has been difficult to spend the funds available: global expenditure has been about 10% of the pledged budgets (as of the end of 2008). A possible reason is the proliferation of funds and the consequent pressure on the management capacity of developing countries. This creates a problem in getting useful lessons learnt to contribute in the finance discussions in the post 2012 climate change regime.

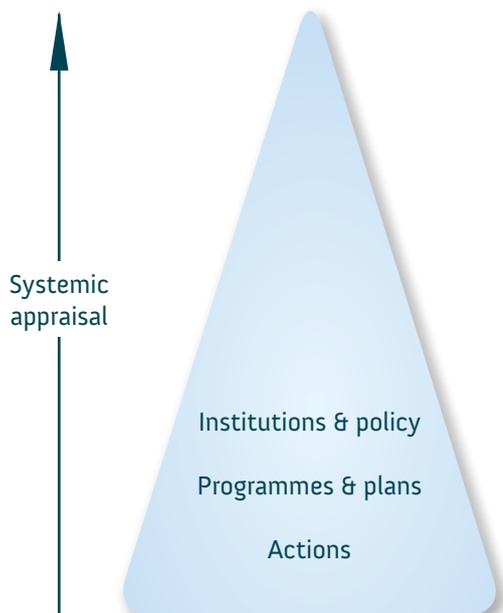
The Adaptation Fund (AF) established under Article 12 of Kyoto Protocol is the first financial instrument that is not based on voluntary contributions from donor countries. It receives a 2% share of proceeds from activities under the Clean Development Mechanism and can also receive funds from other sources for concrete adaptation projects. The estimated level of funding is \$400-1,500M in the period 2008-2012 with a nominal annual level of funding estimated at \$80-300M.

The AF is governed by a Board that has a majority of its members from developing countries and has made a commitment to be transparent in its decision-making. It is working to make funding accessible directly to developing countries, with minimum transaction costs. The AF is an innovative funding model that is already influencing the governance of other adaptation funds. It should be fully operational by COP15. The Board has reached agreement on the most important operational elements and was endowed with legal capacity at COP14. It is important that the Board continues its work after 2012 and that the resources that flow through the fund grow. Given estimates of annual adaptation costs in Africa of at least \$1 billion per year now and on the order of at least \$7 billion per year by 2030 (or sooner), the current global total of \$3 billion in adaptation funding will not meet all of the perceived needs. A substantial adaptation deficit remains.

Table 2. Adaptation funding, US\$, million

FUND	BUDGET	EXPENDITURE
Adaptation Fund (AFB)	33	0
Least Developed Countries Fund, LDCF (GEF)	182.44	47
Special Climate Change Fund, SCCF (GEF)	106.57	59.8
Strategic Priority on Adaptation, SPA (GEF)	50	50
MDG Achievement Fund, MDG-F (UN-Spain)	388.46	85.5
Global Climate Change Alliance, GCCA (EC)	77.6	0
International Climate Initiative, ICI (BMU, Germany))	147.1	40.5
Cool Earth Partnership (Japan)	2000	0
Climate Change and Development – Adapting by REducing Vulnerability (UNEP/UNDP/Denmark Foreign Ministry)	9	0.6
Africa Adaptation Programme (UNDP/Japan)	92	?
Pilot Program for Climate Resilience, PPCR (World Bank-CIF)	240	0

*Note that the Adaptation Fund has received some pledges and accumulated credits. Once operational it is expected to have annual budget of \$100 million or so. Source: <http://www.climatefundsupdate.org/listing>*



*Setting quantitative targets for adaptation (or measuring the adaptation deficit) is not as easy as for mitigation. The outcomes — reduced climate impacts — will not be known for decades to come. The enabling conditions of institutions, policy, programmes and plans are embedded in many other processes. However, systematic appraisal can monitor capacity and longitudinal studies will help define what works best.*

Institutional capacity is required, at all levels. A question that is often raised is why the need for more funds when those currently available are not being fully utilized. The answers to this are complex but include lack of both institutional and human capacity, governance and the enabling environment. Also almost of the existing the funding initiatives tend to target the same countries (Burkina, Uganda, Ghana, Tanzania, Malawi, etc) while many of the countries needing the funding are left out. This may be due to governance issues but for equity a greater number of countries would need to be involved.

The Convention Preamble asserts that “change in the earth’s climate and its adverse effects are a common concern of humankind”. In the course of 2009, negotiators will need to come to a coherent and balanced policy framework for a future climate change regime. One that takes on board the development needs of vulnerable countries and that passes the test of equity to reflect the principle of common but differentiated responsibilities of each Party.

UN Climate Change Conference 2009

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