Climate & Development Knowledge Network

SPECIAL ISSUE

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Regional implications of the AGF recommendations: Africa

Key messages

- The AGF report presents many opportunities for climate compatible development in Africa – development that mininises the harm caused by climate impacts while maximising the human development opportunities presented by a low emissions, more resilient future.
- Africa must ensure it receives a sufficient proportion of public money for climate finance, and that it is able to make good use of it.
- The AGF report emphasises the need to raise revenues in a way that provides incentives for developed countries to reduce emissions. This is welcome, but introduces risks concerning the reliability of these revenues. These concerns can be relieved by robust, credible commitments by developed countries to reduce emissions.
- Africa should participate fully in discussions to ensure that any negative impacts from raising revenue are compensated. However, it seems likely that these impacts will be small.
- Regulatory reforms that facilitate private-sector investment are crucial to Africa's development.

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The Advisory Group on Climate Finance (AGF) was set up to identify an additional US$100 billion per year in climate finance from developed countries, to support climate change adaptation and mitigation actions in developing countries. The recent AGF report concluded that finding the extra money was "challenging but feasible"[1]. However, turning the report's recommendations into tangible flows of new finance will require political leadership at a senior level. This report aims to alert senior policy-makers to the importance of the AGF's recommendations, and the opportunities (and challenges) they create for Africa.

This report was written by Vivid Economics and funded by the Climate and Development Knowledge Network (CDKN). It was requested by AGF members to help developing country decision-makers to respond to their recommendations. The African Development Bank played an important role in supporting this report, and provided a valuable regional review. CDKN would also like to thank all the other reviewers who contributed their time and valuable insights to help shape this series of regional briefing reports.

The AGF report

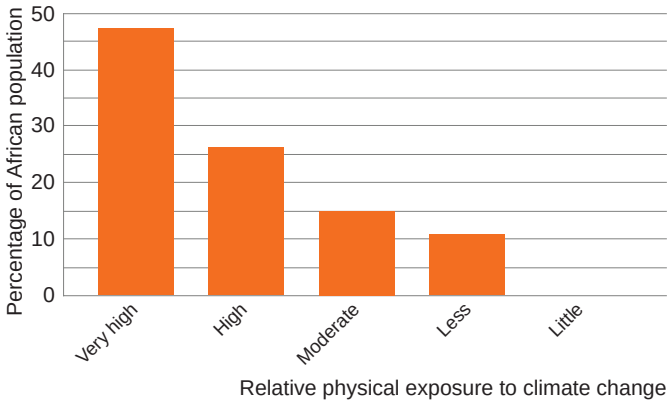
Building on the Copenhagen Accord, the United Nations Secretary's High-Level Advisory Group on Climate Change Finance (AGF) was set up in February 2010 to identify how industrialised countries could mobilise US$100 billion of resources per year by 2020, to support climate-resilient development in the developing world. The Group consisted of 21 members, from the public and private sectors and from the developed and developing worlds. It was co-chaired by the Meles Zenawi, Prime Minister of Ethiopia, and Jens Stoltenberg, Prime Minister of Norway. Working through most of 2010, it has analysed a wide range of options for raising this money from both public and private sources. The AGF reported in November 2010 that reaching the goal of US$100 billion was 'challenging but feasible'.

Table 1: A climate change profile of Africa

Climate exposure profile

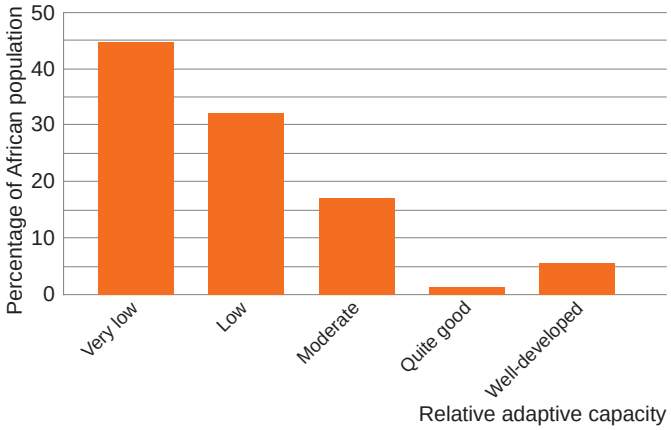
Physical exposure

Africa is more vulnerable to the physical impacts of climate change than any other continent. Almost 50% of Africa's population live in countries that are the most highly exposed to climate change; a further 25% live in countries rated as 'highly exposed'. Benin, Guinea-Bissau and Mauritania are particularly exposed countries.



Adaptive capacity

Africa's physical exposure is compounded by limited 'adaptive capacity' – insufficient resources to respond to the physical impacts of climate change, so as to reduce its social and economic consequences. Almost 45% of Africa's population live in the bottom-ranked set of countries for adaptive capacity.



Emissions profile

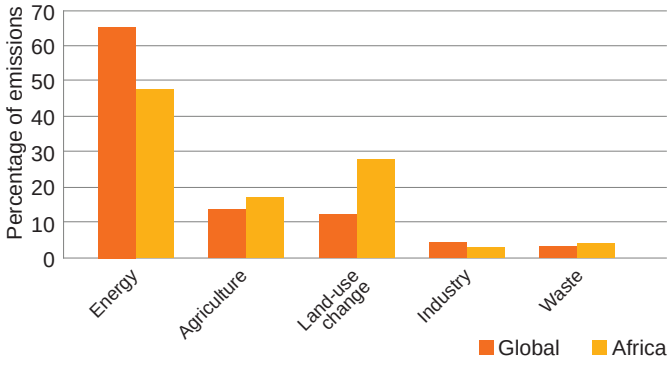
Contribution to global greenhouse gas emissions (CO_2e)

Africa accounts for a small proportion of global emissions – just under 7% in 2005. Its contribution to historic emissions is even lower and it has not contributed significantly to the recent growth in emissions. Emissions per capita of 3.2 tonnes of CO_2 equivalent (tCO_2e) are 33% lower than the non-Annex I average.

Share of global emissions (2005)	6.7%
Contribution to growth in emissions 1990–2005	7.6%
Emissions per capita (tCO_2e)	3.2

Sectoral breakdown

Emissions from land-use change are more important in Africa than elsewhere in the world. Agricultural emissions are also proportionally more important. The energy sector is Africa's largest source of emissions.



Source: Barr, Fankhauser and Hamilton, 2010[2]; WRI CAIT v7.0[3]; Vivid Economics

Climate change investment requirements

How much investment does Africa need and in what areas?

Africa's priority for investment is climate change adaptation. A recent World Bank study suggests that by 2030, Africa's annual adaptation costs may be around US$18–19 billion[4] – about 1.4% of Africa's gross domestic product (GDP). Investment requirements as a proportion of GDP are much higher in some African countries; in the Democratic Republic of Congo, the requirement is 28% of GDP and in Guinea-Bissau, the requirement is more than 60% of GDP.

Building adaptive capacity is a crucial first requirement. Given the high proportion of least developed countries (LDCs) – 33 of the world's 49 LDCs are in Africa – the most pressing adaption need is to build basic adaptive capabilities, including investments in public health, literacy, institutional development, and micro-credit institutions. Ensuring the region's continued economic development is crucial for increasing its ability to deal with climate change. Table 1 shows the region's limited adaptive capacity.

The Africa Progress Panel reports that Africa requires US$13–26 billion per year of mitigation investment[5]. A disproportionate amount of this will be required to reduce emissions from land-use change and agriculture (see Table 1). Cutting these emissions is recognised as one of the most cost-effective ways to reduce global emissions. However, the energy sector still accounts for the most emissions in Africa and this is likely to grow as efforts to close Africa's massive energy gap take place[6]. Greater use of biomass is likely to provide the greatest emission-reduction opportunities in the energy sector[7].

Current climate change investment flows in the region are massively short of what will be required. The annual requirements for mitigation are approximately US$13 billion, but cumulative mitigation investment in the period 2003–2010 was less than US$2 billion. The annual adaptation expenditure required by 2030 will be US$18–19 billion, but cumulative adaptation investment to date has been less than US$150 million[8].

What sort of funding does Africa need?

The bulk of adaptation assistance will need to be public grants. Many adaptations require public grant funding, as they do not generate returns for private investors. Africa's low level of development and high vulnerability to climate change make grant assistance an imperative, although this may sometimes be supplemented by concessional loans.

There is scope for enhanced private-sector involvement, especially in providing energy infrastructure, but in the short term most resources for emission reductions will need to be provided on concessional terms. Africa accounts for almost 12% of the Clean Development Mechanism's (CDM) market potential[9], but so far it has only acquired just over 3% of this market. This reflects both the nature of the emission-reduction opportunities in Africa (which tend to be small-scale and have high transaction costs), a challenging business environment, and restricted revenue opportunities. Concessional finance – to improve the business environment, make direct investments, or leverage private-sector investment in specific projects – will help to overcome these problems.

Both public and private resources will be needed to target reductions in emissions from land-use change in Africa. This is starting to be developed under the Reduced Emissions from Deforestation and Degradation (REDD+) strand of the United Nations Framework Convention on Climate Change negotiations. It seems likely that public resources will predominate at first, with private resources flowing once the market and institutional framework is established. If managed well, these resources have the potential to facilitate adaptation within the continent as well.

Table 2 (on page 4) summarises Africa's investment needs, priority investments and likely sources of finance.

Table 2: Climate change investment needs in Africa by 2030

Investment type	Possible amount required (annual, US$)	Priority investments	Type and source of finance
Adaptation	18–19 billion	• Build adaptive capacity, for example in public health, education and institutional development (especially in LDCs)	• Grants from public revenue sources
Mitigation	13–26 billion	• Ensure increasing energy demands are not provided by high-carbon alternatives • Reduce emissions from land-use changes	• Private flows from carbon markets (subject to regulatory reform and sufficient demand from Annex I countries), potentially supported by public-sector risk-reduction measures • Concessional public finance

Source: Africa Progress Panel, 2010[10]; Vivid Economics; World Bank, 2010[11]

An oil refinery in Morocco. Africa's energy sector is responsible for the highest share of its emissions.

Opportunities provided by the AGF recommendations

Public funding sources

The AGF report emphasises three potential public funding instruments.

- *Auction emission allowances in developed countries/new carbon taxes*. Under the Kyoto Protocol arrangements, developed countries have their emission targets expressed as Assigned Amount Units (AAUs). To date, AAUs have been provided to countries for free. This proposal would involve countries paying for a proportion of these allowances and the money being committed to international climate finance[12]. An alternative arrangement, which would have a similar effect, would be to introduce a carbon tax in the developed world. The AGF report suggests that this could raise about US$30 billion annually.
- *Redirect fossil fuel subsidies*. These policies would mean developed countries no longer subsidise fossil fuel production and consumption, and divert the revenues saved to international climate finance. The report estimates that this may raise US$10–15 billion per year[13].
- *Carbon pricing of international transport*. This would involve a fuel levy or an emissions trading scheme in the international aviation or maritime sectors. In the case of a trading scheme, a proportion of the allowances in the scheme would be auctioned. Alternatively, an international ticket tax (a tax paid on each ticket sold) could be introduced in the aviation sector. The report estimates that this could generate around US$10 billion per year (after adjusting for any incidence in developing countries).

The high revenue potential of these alternatives makes them attractive sources of public revenue for Africa. Further, they all create financial incentives for developed countries to reduce emissions. This is a welcome development, given Africa's vulnerability to the impacts of climate change.

The emphasis on auctioning emission allowances and redirecting fossil fuel subsidies/revenues is also attractive, as this is unlikely to have a negative incidence in Africa. Auctioning emission allowances within developed countries represents a tax on emissions there, while diverting fossil fuel subsidies is effectively a transfer from taxpayers in the developed world to Africa.

The AGF recognises the importance of flexibility in delivering public resources. It expects that "direct budget contributions will also play a key role in climate financing in the long term". The AGF anticipates that about half of the US$100 billion target will come either from private sources or from scaled-up direct budget contributions. Africa's interests will be best met by the bulk of this US$50 billion being met from further public sources; Africa currently receives around 44% of all official development assistance (ODA) flows, and direct budget contributions towards climate finance could follow similar geographical patterns.

The AGF recognises the role of development banks in raising and disbursing climate finance; this is important for Africa. As outlined above, a lot of priority climate expenditure will be operationally indistinguishable from traditional development activity (although the funding required as a result of climate change is additional to baseline development needs). Existing development institutions have a comparative advantage in these activities; for Africa's benefit, it is sensible to realise this.

The AGF report shows that allocating US$10 billion of public revenues to multilateral development banks can result in US$30–40 billion of lending activity by these institutions. Recognising the role of development banks is especially important for Africa, in the context of the African Development Bank's proposed 'Africa Green Fund'. This has the potential to ensure that decisions on the allocation and use of climate-investment funds are made with reference to the African (rather than global) context.

The AGF report recognises that "grants and highly concessional loans are crucial for adaptation in the most vulnerable developing [regions], such as ... Africa'. This is particularly important and concurs with the analysis above. It is critical to implement this, potentially through an explicit fund, or window within a fund, established for this purpose.

Private sources

The AGF report notes that enhanced private funding flows will be essential for economic transformation towards low-carbon growth. Within certain sectors of Africa, there is already evidence that the private sector can generate investment and employment, and facilitate the region's transition to a low-carbon economy. For instance, the CDM has had some success in generating investment flows into Africa for landfill gas and biomass energy projects.

The report recommends that "carbon markets are further strengthened and developed". The report estimates that globally, the carbon offset market could abate 1.5–2 gigatonnes of carbon per year; this could lead to US$120–150 billion of investment. This implies an ambitious level of mitigation by developed countries: under these projections, the offset market would be five to seven times its 2009 size[14]. However, Africa requires regulatory reform to benefit from these scaled-up investment flows. For example, the region's current emissions profile is disproportionately focused on emissions from land-use change. Projects to reduce these have proved difficult to integrate into the current architecture of carbon markets. Africa has much to gain if this recommendation leads to arrangements that overcome these challenges. Several other reforms, such as more standardised approaches within the CDM to reduce costs and regulatory risks, would also strengthen carbon markets in Africa[15].

Farmers in Kenya discuss the use of terraces to conserve water for agriculture.
© Tim Woods

Further initiatives can boost private-sector investment in Africa. African governments could initiate several policies, potentially with financial support from the developed world, to increase low-carbon investment from the private sector. This could include improving the investor climate and establishing Nationally Appropriate Mitigation Actions. African governments can also engage with parts of the private sector whose interests align most naturally with the continent's climate-resilient opportunities, for example agribusiness, forest management companies and energy producers, as well as investors who focus on these sectors.

Challenges from the AGF recommendations and possible responses

Africa's key challenge will be ensuring that the AGF recommendations gather momentum and result in additional financial flows that the continent can absorb. There are many steps to overcome before the scale of financial resources that the AGF report envisages can be mobilised. These include agreeing the appropriate sources of funding, developing clear and practical recommendations for mobilising these resources, achieving consensus on the arrangements for disbursing climate finance, and ensuring that Africa's institutional capacity is in place to make the most productive use of the additional resources.

Africa must ensure that its needs are not overlooked, particularly when it comes to grants and private investment. Existing patterns of Foreign Direct Investment (FDI) demonstrate that achieving significant private-sector flows on the continent, especially within LDCs, will be a challenge. Africa attracts only half as much FDI as Latin America and only one-fifth as much as Asia. Similarly, Africa may want a guaranteed proportion of public revenues to be hypothecated to the needs of the region, and for these to be clearly identifiable as additional to existing ODA flows.

It will be important to understand the scale of appropriate compensation for any negative impacts on trade from taxing international transport. However, this impact is likely to be small. The AGF report acknowledges that transport levies will have some negative implications for developing countries, but its estimate of the resources that can be mobilised is adjusted for this. However, this

estimate will need to be refined, and the arrangements for delivering any compensation will need to be designed. African airlines account for only 1.4% of global air freight travel and 2.0% of air passengers, and just 2.6% of container traffic movements take place in Africa. It seems plausible therefore that sufficient revenues can be raised to compensate the region[16]. Africa will also want to ensure that a sufficient proportion of the revenues raised from this mechanism are allocated to climate finance rather than other uses.

A key challenge for Africa will be to ensure that revenues from carbon-based sources are reliable. Like other commodities, carbon is subject to price volatility, and policy influences can accentuate this. Africa will want to ensure that the AGF report's emphasis on carbon-based mechanisms does not expose it to too much revenue volatility. This can be best achieved through robust, legally binding emission-reduction targets in the developed world. The report notes that to reach the target of US$100 billion, developed world emission-reduction targets must be sufficiently tough to deliver a reliable price of US$20–25/tonne of carbon. The ways in which policies are designed can further complement revenue reliability.

The Copenhagen Accord target of US$100 billion is unlikely to be sufficient to fully meet the developing world's climate change financing needs, even if it is met from entirely new and additional sources. The AGF report explicitly notes that its Terms of Reference excluded considering the total needs for climate financing in developing countries. However, most independent sources suggest that much more than US$100 billion will be required annually; the World Development Report[17] suggests a financing requirement range of US$295–665 billion[18]. Further, given its urgent requirements, Africa will want to ensure that rapid acceleration towards this target is achieved in the early part of the next decade, even though the Copenhagen Accord target relates to 2020.

Next steps

- Africa should build on the momentum developed by the AGF report to reach consensus on the appropriate sources — and means of mobilising — new and additional revenue for climate finance, and to develop arrangements for disbursing climate finance, especially through the proposed Africa Green Fund.
- Africa should emphasise the AGF's recognition that "grants and highly concessional loans are crucial for adaptation in the most vulnerable developing countries" and identify institutional options to achieve this.
- Africa should promote low-carbon investment by the private sector, especially to help close its energy gap. Improving the investor climate, together with regulatory reform to carbon markets, are crucial. Incorporating emissions from land-use change within the carbon market could facilitate significant private-sector investment flows.
- African representatives should participate in discussions about designing and quantifying the compensation required from international transport levies.
- Africa should emphasise, especially in international negotiations, the AGF's finding that reducing developed country emissions to a level sufficient to achieve a carbon price of US$20—25/tonne are crucial for reaching the US$100 billion target.

Notes

1. High-Level Advisory Group on Climate Change Financing (2010) *Report of the Secretary General's High-level Advisory Group on Climate Change Financing*. 5th November.
2. Barr, R., Fankhauser, S. and Hamilton, K. (2010) Adaptation investments: a resource allocation framework. *Mitigation and Adaptation Strategies for Global Change*, 15(8): 843–858.
3. World Resources Institute Climate Analysis Indicators Tool. http://cait.wri.org
4. Data collected as part of World Bank's 2010 report, *Economics of the Adaptation to Climate Change*.
5. Africa Progress Panel (2010) *Finance for climate resilient development in Africa: An agenda for action following Copenhagen*. This estimate is broadly consistent with the findings of a World Bank study into low-carbon energy projects in sub-Saharan Africa, which identified a portfolio of potential projects whose total capital cost is estimated to exceed US$200 billion. See: de Gouvello, C., Dayo, F. and Thioye, M. (2008) *Low-carbon Energy Projects for Development in Sub-Saharan Africa*. International Bank for Reconstruction and Development/The World Bank.
6. It is estimated that Africa requires 7000 megawatts of new generation capacity each year to keep pace with demand, and that the funding costs associated with providing this energy infrastructure are around US$40 billion per year. See: Africa Infrastructure Country Diagnostic (2009) *Africa's Infrastructure: A Time for Transformation*.
7. de Gouvello, C. et al. (2008) *op. Cit*.
8. Actual values taken as the sum of disbursement from climate funds and investment associated with the CDM. Disbursement of resources from climate funds taken from www.climatefundsupdate.org, accessed on 25th October 2010. Not all entries on this website have an estimate of resources disbursed to a particular programme. Resources to geographically generic programmes are not included. Investment associated with the CDM taken from UNEP Risoe CDM/JI Pipeline Analysis and Database, 1st October 2010.
9. Market potential is calculated as the proportion of non land-use change emissions from non-Annex I countries in Africa in 2005. Actual market share is calculated as the expected percentage of Certified Emission Reductions to 2012 associated with projects in Africa, from UNEP RISOE database.
10. Africa Progress Panel (2010) *op. Cit.*
11. World Bank (2010) *op. Cit.*
12. For countries/regions that have domestic emission-trading schemes, this could be implemented by auctioning the allowances to individual companies or installations.
13. The report suggests that, as an alternative, an international financial transaction tax could raise similar funds.
14. The World Bank reports that the size of the Kyoto offset markets (and voluntary markets) was 283 $MtCO_2e$ in 2009, and 486 $MtCO_2e$ in 2008. See: World Bank (2010) *State and Trends of the Carbon Market 2010*.
15. See, for instance, Africa Progress Panel (2009) *Kick-starting Africa's Carbon Markets: The Potential for Programmatic CDM*.
16. These figures are intended to provide an indicative assessment of potential compensation requirements. They should not be interpreted as providing an accurate assessment of the incidence of any transport levies; this would require more detailed assessment, taking into account cost pass-through and demand-change impacts, which may vary by commodity (for freight movements) and route. For comparison, the AGF assessment that perhaps US$10 billion could be raised from this source assumes that developing country incidence is 30% and that a further 20–45% of revenues raised are used for purposes other than climate finance.
17. World Bank (2009) *World Development Report 2010: Development and Climate Change*.
18. The AGF document contains a discussion about how the US$100 billion target should be interpreted. Some of these (narrow) interpretations would imply substantially higher gross investment flows than US$100 billion, although these are likely to still be lower than, for instance, the US$295–665 billion financing requirement range outlined in the World Bank's 2010 *World Development Report*, on climate change investment needs in the developing world in 2030.

How can CDKN help developing countries?

The Climate and Development Knowledge Network (CDKN) aims to help decision-makers in developing countries design and deliver climate compatible development. We do this by providing demand-led research and technical assistance, and channelling the best available knowledge on climate change and development to support policy processes at the country level.

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