Climate & Development Knowledge Network

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Regional implications of the AGF recommendations: Latin America and Caribbean region

Key messages

- The AGF report recognises the crucial role that the private sector can play in fostering low-carbon development. For Latin America, this requires rapid progress on establishing a framework for reducing emissions from deforestation and land-use change.
- The region should build on the recommendation that the public sector must catalyse private investment and achieve 'transformational investments'.
- The report emphasises the need to raise revenues in a way that provides incentives for developed countries to reduce their emissions. This is welcome, but introduces risks concerning the reliability of revenues. These concerns can be relieved by robust, credible commitments to reduce emissions by developed countries.
- There is concern that some of the revenue sources identified by the AGF could impede the LAC region's development. However, compensation arrangements can be devised.
- The region will want to ensure that its investment requirements, especially for adaptation, are not overlooked.

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The Advisory Group on Climate Finance (AGF) was set up to identify an additional US$100 billion 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]. The AGF report provides opportunities to promote LAC countries' climate compatible development – development that minimises the harm caused by climate impacts while maximising the human development opportunities presented by a low emissions, more resilient future.

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 recommendations and the opportunities (and challenges) they create for Latin American and Caribbean (LAC) countries.

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 Office of the President of the Republic of Guyana played a particular 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

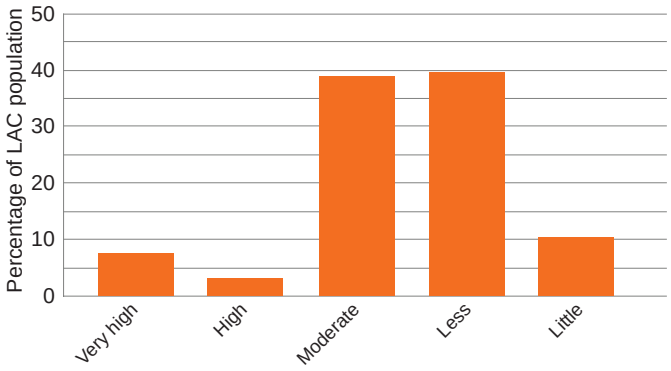
Building on the Copenhagen Accord, the United Nations Secretary's High-Level Advisory Group on Climate Change Finance (AGF) was set up in February 2010 to identify how industrialised countries could mobilise US$100 billion of resources per year by 2020, to support climate-resilient development in the 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 the Latin America and Caribbean region

Climate exposure profile

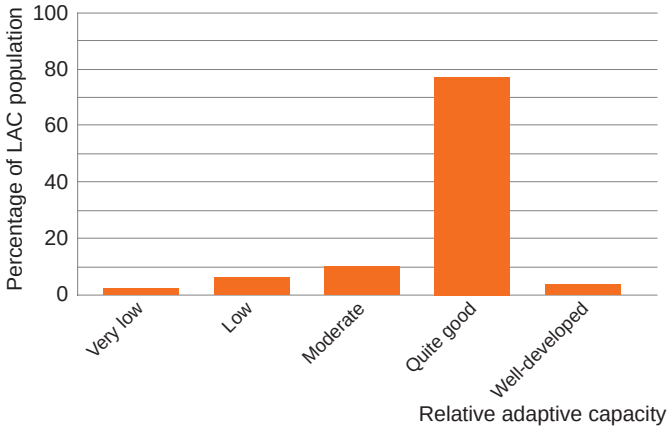
Physical exposure

Some countries within the LAC region face very high exposure to the physical impacts of climate change, notably countries sharing a Caribbean coastline. These include Honduras – judged by Barr et al. (2010) to be the most vulnerable country in the world to climate change – along with Guyana, Suriname and Venezuela. The rest of the region is less vulnerable.



Adaptive capacity

Much of the LAC region is relatively well developed, which promotes adaptive capacity – the resources needed to respond to the physical impacts of climate change, to reduce its social and economic consequences. This capacity helps to ease physical exposure to climate change. Only Haiti is within the 20% of countries judged to have the lowest capacity to deal with the consequences of climate change.



Emissions profile

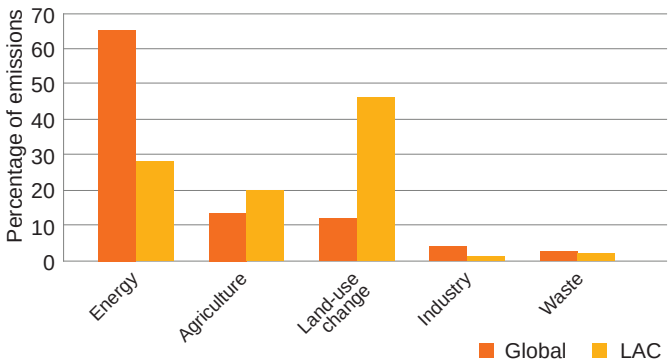
Contribution to global greenhouse gas emissions (CO_2e)

There is scope for the region to reduce its emissions. Latin America accounted for only 13% of global emissions in 2005, and its contribution to historic emissions is even lower. But its current emissions per capita are 10 tonnes of CO_2 equivalent (tCO_2e) per year, similar to the European average. The region has also contributed more than a quarter of the growth in emissions since 1990.

Share of global emissions (2005)	13%
Contribution to growth in emissions 1990–2005	28%
Emissions per capita (tCO_2e)	10

Sectoral breakdown

The LAC region is unique in having more emissions from land-use change than from energy sources. Agricultural emissions are also important. These figures are driven largely by South America; in Central America and the Caribbean, energy emissions are much more important (around 66% of total emissions).



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

Climate change investment requirements

How much investment does LAC need and in what areas?

The LAC region's mitigation investment needs may be between US$40–80 billion per year by 2030. This is based on the estimate by Nicholas Stern that 1–2% of global gross domestic product (GDP) will need to be diverted towards climate change investment by 2030[4]. This represents 10–20% of the developing world's total investment requirement[5].

Investment will largely be required to reduce emissions from land-use change and agriculture. Table 1 shows the significance of these emissions in the region. The cost of reducing emissions from deforestation in Latin America is estimated to be lower than in Asia but considerably higher than in Africa[6]. However, emissions from energy combustion have increased at a rate of just under 3% per year between 1990 and 2005; this suggests that a greater focus on mitigating these emissions will be required in the future. Energy emissions are more important within Central America and the Caribbean, where they account for two-thirds of emissions.

Annual adaptation investment costs may be between US$18–21 billion by 2030 (around 0.5% of current GDP). Some countries, notably those with Caribbean coastlines, have much higher adaptation needs; Belize, Guyana and Nicaragua all have an investment requirement in excess of 5% of current GDP, and potentially in excess of 10%. As many countries already have a reasonably well-developed adaptive capacity, these resources can move swiftly to provide actual adaptation investments. Throughout the region, but especially within Central America and the Caribbean, coastal protection and investments in the water sector will be the priority. In South America, climate-proofing existing and new investments will also be important[7].

Current climate change investment flows in the region are massively short of what will be required. By 2030, the LAC region will require an annual mitigation investment of US$40–80 billion, but cumulative mitigation investment in the period 2003–2010 is estimated to be around US$7.5 billion. Annual adaptation investment requirements are US$18–21 billion, but over the period 2003–2010, cumulative payments were only US$60 million[8].

What sort of funding does the LAC region require?

The dominance of land-use change emissions, particularly in South America, means that a mechanism for mitigating these emissions – one that combines public and private capital – is a priority. 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 (UNFCCC) negotiations. It seems likely that public resources will be required to establish this framework, and in the early years of its implementation; private resources will flow when the market and institutional framework is established.

For energy and industrial emissions, private investment leveraged through carbon markets could deliver most of the investment required. To date, the LAC region has achieved a Clean Development Mechanism market share that is comparable with its share of non-Annex I countries' emissions[9]. More broadly, the region has secured a disproportionate share of private-sector foreign direct investment[10]. This indicates that the region is well positioned to capture scaled-up low-carbon investment flows from the private sector.

Adaptation to climate change will predominately require additional funding from grants, sourced from public funds; more developed countries in the region may want to complement this with other sources. Most adaptation investment will not generate returns for the private sector, for example building flood defences and improving land-use planning. We can therefore expect a reliance predominately on grants to fund or co-fund adaptation, especially in the more physically vulnerable countries (those with Caribbean coastlines). Some middle-income countries in the region may also use their own resources, or borrow from multilateral banks, to accelerate and deepen adaptation investments. Countries particularly vulnerable to extreme weather events – Caribbean islands and parts of Central America, as well as countries affected by El Niño – may explore private insurance to help manage these risks.

Table 2 (on page 4) summarises the LAC region's investment needs, priority investments and potential sources of finance.

Opportunities provided by the AGF recommendations

Public 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.

Table 2: Climate change investment needs in Latin America and the Caribbean by 2030

Investment type	Possible amount required (annual, US$)	Priority investments	Type and source of finance
Adaptation	18–21 billion	• Coastal protection • Water sector • Climate-proofing investments, especially in South America	• Adaptation grants, especially in more vulnerable countries • Lending from multilateral institutions • Own national resources • Private sector, especially insurance
Mitigation	40–80 billion	• Reduce emissions from land-use change, especially deforestation • Reduce carbon intensity of energy mix, especially in Central America and the Caribbean	• Public/private co-investment to reduce emissions from deforestation • Private investment through carbon markets

Source: Stern, N., 2009[11]; World Bank, 2010[12]; World Development Indicators[13]; Vivid Economics

In the Amazon, 60–70% of deforestation is due to cattle ranching and soyabean cultivation.

This proposal would involve countries paying for a proportion of these allowances and the money being committed to international climate finance[14]. 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[15].
- *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 on developing countries).

The high revenue potential of these alternatives makes them attractive sources of public revenue. Further, they all create financial incentives for developed countries to reduce emissions. This is a welcome development, given the vulnerability of some parts of the LAC region 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 the LAC region. Auctioning emission allowances within developed countries represents a tax on emissions there; it seems unlikely that this will have significant negative consequences for LAC citizens. Diverting fossil fuel subsidies would effectively be a transfer from taxpayers in the developed world to the LAC region.

Private sources

The AGF report recognises that enhanced private flows will be essential for low-carbon growth. This is important for the LAC region. In some parts of the region, private flows have already provided investment and employment, and facilitated the start of the region's transition to a low-carbon economy. This is especially true for renewable energy generation (from biomass and hydro sources) as well as landfill gas projects. The region is well placed to benefit from any expansion of carbon markets in the coming decades.

To mobilise significant low-carbon investment from the private sector, the region will need to focus on how this investment can help reduce deforestation. Almost 50% of the region's emissions come from land-use change – four times the global average. To date, investment to reduce these emissions has not proved an attractive investment opportunity for the private sector. This is partly due to the uncertainty over the associated institutional arrangements, although progress is now being made on this under the REDD+ strand of the UNFCCC negotiations. The LAC region can gain significantly from generating private capital investment in these emissions-reduction opportunities.

One significant option for attracting this investment will be to integrate emissions from land-use change into the carbon market architecture; the AGF projections suggest these markets could abate 1.5–2 gigatonnes of carbon per year; this could lead to US$120–150 billion of associated investment (an increase in the market of five to seven times its 2009 value[16]; this implies an ambitious level of effort by developed countries).

The emphasis on public-private partnerships for achieving 'transformational investments', especially in deforestation and land-use change, is important for Latin America. A common theme in the AGF report is the important role that the public sector can play in facilitating private-sector investment through targeted financial interventions (public finance mechanisms), such as policy-risk cover. Analysis in the AGF paper suggests that every dollar spent on leveraging private investment (for example, through mitigating policy risks) could generate three dollars of private investment; other reports have suggested the ratio may be as high as 1:15[17]. Given the demonstrated interest of international investors in the region, these mechanisms provide exciting opportunities to achieve a transition to low-carbon development. In consultation with agribusiness and forest management companies and associated investors, the region should focus particularly on how these mechanisms can be used for land-use change and deforestation projects where there are particular challenges to private investment[18]. This could be led by the regional development banks operating in the region, such as the Inter-American Development Bank or the Corporación Andina de Fomento, given their strong regional knowledge.

Challenges from the AGF recommendations and possible responses

The key challenge for Latin America will be to ensure that the opportunities identified by the AGF gather momentum and ultimately result in new financial flows. Many steps need to be taken to mobilise the scale of financial resources envisaged in the AGF report. These include achieving agreement on the appropriate sources of finance, developing clear and practical recommendations for mobilising these sources, and achieving consensus on the arrangements for disbursement.

The level of compensation for any negative impacts on trade from taxing international transport needs to be better understood. However, these may be small enough to make compensation easily achievable. The AGF report acknowledges that transport levies will have some negative implications for developing countries, for example increasing the cost of trade; its estimate of the resources that can be mobilised from this source is adjusted to account for this. However, this estimate will need to be refined and the arrangements by which any compensation is delivered must be designed. Airlines registered in the LAC region account for 6% of global air passenger travel and 3% of air freight travel, and 7% of container traffic movements take place in the region; it seems plausible therefore that sufficient revenues can be raised to compensate the region for any negative impacts[19].

A key challenge will be the reliability of revenues from carbon-based sources. Like other commodities, the price of carbon is subject to volatility. This can be accentuated by policy influences. Countries will want to ensure that the AGF report's emphasis on carbon-based mechanisms does not expose the region to too much revenue volatility. This can be best achieved through robust and 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 LAC region must receive an appropriate share of investment flows. South American countries in particular may have concerns about adaptation funding. On a per capita basis, the region has a higher adaptation investment requirement (US$34 per person per year) than either Africa (US$18) or Asia (US$11). As discussed above, the expectation is that much adaptation investment will need to (and should) be funded through grants sourced from public revenue. However, the current disbursement of official development assistance (ODA) suggests that LAC countries risk missing out. While its adaptation needs are about 21–22% of the total for the developing world, the region only receives around 8% of ODA. The region will want to ensure that it is not overlooked in disbursement patterns for adaptation funds. This can be achieved most successfully by ensuring that the developed world raises sufficient new and additional funds.

South America needs investment for mitigation, such as this reforestation project in Brazil.

The energy sector contributes around 66% of total emissions in Central America and the Caribbean, but there is potential for more renewable energy, such as this wind farm in Aruba.

Next steps

- The LAC region should build on the momentum developed by the AGF 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.
- To exploit the opportunities for low-carbon investment from the private sector, special attention is required to build on the existing momentum to ensure the rapid development of a framework to reduce emissions from deforestation.
- The region should build on the recommendation that the public sector catalyses private investment to achieve 'transformational investments'. In particular, the region should consider how they can encourage private-sector investment in projects that reduce emissions from deforestation.
- LAC representatives should participate in discussions about designing and quantifying the compensation required from international transport levies.
- The region will must ensure that its investment requirements, especially for adaptation, are not overlooked. Replicating existing patterns of ODA funding could leave it with insufficient resources.

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. Stern, N. (2009) *The Global Deal. Climate Change and the Creation of a New Era of Progress and Prosperity*. PublicAffairs, New York, USA.
5. World Bank (2009) *World Development Report 2010: Development and Climate Change*. Washington, D.C, USA.
6. Sathaye, J.A., Andransko, K. and Ravindranath, N.H. (2006) *Land modelling using GCOMAP: Deforestation, transaction costs, regional disaggregation*. Presentation at the EMF-22 Land Modeling Subgroup, 14th December 2006.
7. All adaptation cost estimates are taken from data collected for: World Bank (2010) *Economics of Adaptation to Climate Change*.
8. Actual values are 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 in 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 is taken from UNEP's Risoe CDM/JI Pipeline Analysis and Database, 1st October 2010.
9. This applies both to the region as a whole and also to South America, and Central America and the Caribbean, as two separate regions.
10. Relative to its population.
11. Stern, N. (2009) *op. Cit*
12. World Bank (2010) *op. Cit*
13. http://data.worldbank.org/indicator
14. For those countries/regions that have domestic emission-trading schemes, this could be implemented by auctioning the allowances to individual companies or installations.
15. The report suggests that, as an alternative, an international financial transaction tax could raise similar funds.
16. 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*.
17. UNEP-SEFI (2008) *Public Finance Mechanisms to Mobilise Investment in Climate Change Mitigation*.
18. See Forum for the Future's (2009) *Forest investment review* for more discussion on this.
19. 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 transportation 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.

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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