

# Financing for Developing Countries

Deborah Murphy  
John Drexhage  
Dennis Tirpak  
Philip Gass

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International Institute for Sustainable  
Development  
161 Portage Avenue East, 6th Floor  
Winnipeg, Manitoba  
Canada R3B 0Y4  
Tel: +1 (204) 958-7700  
Fax: +1 (204) 958-7710  
Email: [info@iisd.ca](mailto:info@iisd.ca)  
Website: <http://www.iisd.org/>

## Abbreviations and acronyms

AAU	assigned amount unit
CDM	Clean Development Mechanism
CO <sub>2</sub>	carbon dioxide
COP	Conference of the Parties
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
IPCC	Intergovernmental Panel on Climate Change
LDC	least developed country
Mt	megatonne (millions of tonnes)
MRV	measurable, reportable and verifiable
NAMA	nationally appropriate mitigation action
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
REDD	reducing emissions from deforestation and forest degradation in developing countries
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

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## 1.0 Introduction

The goal of the United Nations Framework Convention on Climate Change (UNFCCC) is “to achieve...stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (Article 2). The UNFCCC, which was ratified in 1994, sets out an overall framework for international efforts to tackle the challenge of climate change. The Kyoto Protocol, which entered into force in 2005, is an addition to this treaty that sets legally binding targets for reducing greenhouse gas (GHG) emissions for 37 developed nations and the European Community. These targets amount to an average of a 5% reduction in GHG emissions from 1990 levels over the five-year period from 2008 through 2012.

Countries have entered into formal negotiations on a climate change agreement to take effect after 2012, when the Kyoto Protocol’s first commitment period ends. The negotiating countries expect that a comprehensive, post-2012 climate agreement will be adopted at the 15th Conference of the Parties (COP 15) in Copenhagen in December 2009. Considerable uncertainty surrounds what this post-2012 regime will look like and what market instruments and mechanisms could be employed within it. The Bali Action Plan, adopted in December 2007, set out broad parameters to guide the two-year negotiating process, including mitigation, adaptation, technology and financing. In regard to financing, the plan emphasized “enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation” including consideration of improved access to “adequate, predictable and sustainable” financial resources and the provision of new and additional resources (“additional” refers to projects that would not have occurred in the absence of financing under the convention). Innovative means of funding to assist developing countries and mobilization of public and private sector funding are important issues set out in the Bali Action Plan (UNFCCC, 2007a, p. 3).

The 23-page chapter on “Enhanced action on the provision of financial resources and investment” in the June 2009 revised negotiating text of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention includes sections on objectives, scope and guiding principles, provision of financial resources and institutional arrangements, including funds (UNFCCC, 2009, pp. 146–169). Countries will be grappling with these and other issues in the three weeks of negotiations prior to COP 15 in December 2009 (two weeks in Bangkok from September 28 to October 9, and one week in Barcelona from November 2 to 6).

This paper discusses the following critical issues in the financing negotiations:

- What money is required to address climate change in developing countries, and where will it come from?
- How can signatories best govern climate change funds? How should the funds be managed and accounted for under the UNFCCC, and what should be left to other processes?

- How can the agreement account for the strong interlinkages between climate change and traditional development activities? Can the incremental costs associated with climate change activities be distinguished from development efforts?

This background paper provides an overview of the financing negotiations. The paper first reviews the need for financing for developing countries, then examines a range of possible funding mechanisms that could be considered in the negotiations and discusses the governance structures. The concluding section discusses critical issues that will need to be considered in choosing and further developing financing mechanisms for a new climate regime.

## 2.0 Financing for climate change action in developing countries

The mobilization of additional funding will be a central aspect of any post-2012 climate change agreement reached at COP 15. Addressing climate change will require significant shifts and an overall increase in global investment and financial flows, with half of the increase in investment and financial flows needed in developing countries. Mitigation investments in developing countries are more cost-effective; larger emission reductions can be generated per dollar of investment. Existing commitments and disbursements fall far short of what current needs estimates call for.

### 2.1 Quantifying financing needs

A high degree of uncertainty exists over future mitigation costs, but estimates are increasingly converging on the order of US\$100 billion to US\$200 billion per year for developing countries and around US\$200 billion to US\$400 billion per annum for global costs by 2020–2030 (Pendelton and Retallack, 2009).

The UNFCCC's *Investment and Financial Flows to Address Climate Change* puts the total additional funding required to return GHG emissions to 2005 levels between US\$200 and US\$210 billion in 2030. This sum represents an increase over the amount committed in previous periods, with the added costs resulting from reduced investment in fossil fuels and large shifts in electricity generation investment. The largest increases in investment are needed in renewables, nuclear, and carbon capture and storage technologies—an estimated US\$148 billion in 2030, with 50% to 55% invested in developing countries. Other important sectors requiring new investment are energy efficiency, transportation, forestry, agriculture, and energy research and development (UNFCCC 2007b, pp. 92–93).

Large new and additional investments and other financial flows are also needed for adaptation to climate change. Areas of greatest global need will be agriculture, water supply, coastal protection and infrastructure. Estimates of costs vary in amount and approach, but all are consistent in estimating the need in the range of at least tens of billions of dollars. Estimates include:

- UNFCCC (2007b). Between US\$49 billion to US\$171 billion globally in 2030, with US\$28 billion to US\$67 billion needed in developing countries.
- World Bank (2006, Table K.1). US\$9 billion to US\$41 billion per year (current needs, based on the share of investment that is estimated to be climate sensitive).
- Oxford Institute for Energy Studies (Müller and Hepburn, 2006, p. 14). US\$2 billion to US\$17 billion per year (current needs, based on extrapolations of least developed country [LDC] national adaptation programmes of action).

- Oxfam (2007, p. 3). Greater than US\$50 billion per year (current needs, based on extrapolations of national adaptation programmes of action).
- UNDP (Watkins, 2007). US\$86 billion per year by 2015.

## 2.2 Current funding levels

Public funding for climate change currently includes direct funding from national budgets through bilateral channels, budget contributions to multilateral funds, resources raised from capital markets backed by government guarantees, and a share of government taxes or revenues earmarked at the national level for a climate fund. Funds collected internationally without going through national budgets are another source of public finance. Estimates of current public funding are in the neighbourhood of US\$22 billion to US\$32 billion, including sources both under and outside the convention (Tirpak and Parry, 2009). Funding under the UNFCCC is provided under the Global Environment Facility (GEF) (including the Special Climate Change Fund and the LDC Fund) and the Adaptation Fund. The largest existing pool outside the convention is the US\$6.3 billion pledged by twelve developed countries to the World Bank's Climate Investment Funds.<sup>1</sup> Official development assistance (ODA) from countries of the Organisation for Economic Co-operation and Development (OECD) for all purposes totalled US\$119.8 billion in 2008 (OECD, 2009). An OECD analysis in 2007 suggested that more than 60% of overall ODA could be relevant to adaptive capacity and adaptation (Levina, 2007).

The UNEP Sustainable Energy Financing Initiative and the analyst firm New Energy Finance report that private finance for sustainable energy climbed from US\$33 billion to US\$155 billion between 2004 and 2008 (five to seven times the level of public financing) (Greenwood, Usher & Sonntag-O'Brien, 2009, p. 15). The pace of growth slowed in 2008 and early 2009, reflecting the global economic downturn. Wind, solar, biofuel, biomass and waste dominate clean energy funding initiatives. Most private financing is concentrated in a limited number of nations, indicating that development of clean energy systems is not happening on a global basis.

## 2.3 Engaging developing countries

Engaging developing countries will be critical to success in reaching the goal of the UNFCCC. Although historical GHG emissions contributing to climate change have been mainly from developed countries, an increasing share is coming from developing countries. The OECD (2008) reports that two-thirds of GHG emissions in 2009 are caused by economic activities in non-OECD countries, and this share is predicted to grow significantly if no new policies and measures are

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<sup>1</sup> The twelve countries and their commitments in US\$ million are: Australia (97), Canada (67), France (262), Germany (711), Japan (1,200), Netherlands (50), Norway (50), Spain (103), Sweden (72), Switzerland (20), United Kingdom (1,100) and United States (2,000) (World Bank, 2009, p. 5).

introduced to limit this growth. Actions by developed countries will be insufficient in preventing dangerous interference with the climate system.

There is growing consensus that global GHG emissions need to peak in the next 10 to 15 years and be reduced to below half of the 2000 level by 2050. Halving emissions must occur in a world where population is expected to grow from 6.1 to 9.2 billion between 2000 and 2050, with 8 billion of that total living in developing countries (United Nations, 2007). Per capita emissions will have to fall from 6.37 to 2.11 tonnes of carbon dioxide equivalent. Developing countries will need to make progress in standards of living and economic growth in a world that is significantly less GHG intensive than when the industrialized world realized its development path.

Developing countries will need incentives to undertake the required emission reductions. In aggregate, developing countries have huge populations and rising GHG emissions (and many have large wealth); but on a per capita basis their incomes and emissions remain far below those of developed countries (see Table 1). World Bank statistics show that 2.6 billion people live on less than US\$2 per day (Chen & Ravallion, 2008, p. 24).

**Table 1: Select indicators, 2006**

Country	Population (million)	GDP (billion 2000\$)	GDP per capita	CO <sub>2</sub> emissions (Mt of CO <sub>2</sub> ) (from fuel combustion only)	CO <sub>2</sub> emissions share of world total (%)	CO <sub>2</sub> emissions per capita (Mt)
<b>OECD</b>	1,178	29,169	24,761	12,874	46.0	10.93
<b>Middle East</b>	189	838	4,434	1,291	4.6	6.82
<b>Former USSR</b>	284	568	2,000	2,395	8.6	8.42
<b>Non-OECD</b>	54	162	3,000	271	1.0	5.07
<b>Europe</b>						
<b>China</b>	1,319	2,315	1,755	5,648	20.2	4.28
<b>Asia</b>	2,120	2,139	1,009	2,718	9.7	1.28
<b>Latin America</b>	455	1,796	3,947	972	3.5	2.14
<b>Africa</b>	937	773	825	854	3.0	0.91
<b>World</b>	6,536	37,759	5,777	28,003	100.0	4.28
<b>Canada</b>	33	845	25,606	539	1.9	16.52

Source: International Energy Agency, 2008.

Developed countries are obliged to provide financial resources to assist developing countries in implementing the convention. Article 4.3 states that the “agreed full incremental costs” in developing countries should be met by finance and technology from developed countries. The need for environmental effectiveness in mitigation and adaptation policies also supports the argument that developed countries will have to support developing country efforts. Lack of capacity, technology, infrastructure and financial resources are considerable hurdles for developing countries looking to implement effective GHG reduction policies and programs. Developed countries will

need to lead by example—implementing effective emission reduction policies themselves—as well as provide international financial assistance.

In particular, LDCs and other poorer countries lack technology and infrastructure for climate change actions, as they already struggle to provide basic services including food security, health, education and poverty reduction. This raises the issue of “differentiation,” or treating developing countries differently under a new climate change agreement depending on their level of development. The LDCs are at a very different level of development than many other developing countries, such as the major developing economies with large emissions and growing wealth (including China, Brazil, Mexico and South Korea), and many oil-producing nations with high per capita emissions and GDP (such as Kuwait, Qatar and the United Arab Emirates). Some developed countries, including Canada, have suggested in the negotiations that access to climate change funds be differentiated, with poorest countries the main focus for funding. Most developing countries reject any such proposals.

### 3.0 Proposals for new sources of funds

If the funding available under the financial mechanism of the UNFCCC remains at its current level and continues to rely on voluntary contributions, it will fall far short of the estimated future financial flows needed for mitigation and adaptation. Signatories will need to improve and find an optimal combination of funding mechanisms—such as carbon markets, financial mechanisms of the convention, ODA, national policies, and new and additional resources—to mobilize the necessary financial and investment flows to address climate change.

Parties to the convention have proposed a number of options for generating additional funds, which are represented in the current negotiating text. These options can be divided into three broad categories:

1. *National budgetary allocations.* Consist of commitments such as a certain percentage of national GDP that a country will contribute to new or existing financial mechanisms such as the GEF or World Bank. Unfortunately this approach has typically underdelivered on the amount of required funding. That said, some proposals in the current negotiating text call for national budgetary allocation approaches to financing, with more stringent and mandated commitments.

The negotiating text includes proposals for a mandated percentage of GDP per year from developed-country parties—ranging from 0.5% to 2%. This assessed contribution could be based on agreed criteria, with the text stating a number of options for such criteria, including the principles of equity, common but differentiated responsibilities and respective capabilities, current emission levels, the polluter-pays principle, GDP, GDP per capita, historical responsibility and ability to pay. Other proposals are similar, but leave it to the Conference of the Parties to determine the exact percentage at a later time. Mexico’s “green fund” proposal could be considered in this category.

2. *National market-based levies.* Predictably generated over a period of years, these types of levies would be generated independent of national budgetary processes, but the revenue would be collected by national governments. The negotiating text mentions a percentage of the auctioning of assigned amount units (AAUs) of Annex I Parties at domestic levels.<sup>2</sup> Examples include levies on the auction of emission permits such as those introduced by the European Union Emission Trading System and currently proposed by the United States in the American Clean Energy and Security Act.

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<sup>2</sup> Parties with commitments under the Kyoto Protocol have accepted targets for limiting or reducing emissions. These targets are expressed as levels of allowed emissions, or “assigned amounts,” over the 2008–2012 commitment period. The allowed emissions are divided into AAUs equal to one metric tonne of carbon dioxide equivalent.

3. *International market-based levies.* Financial resources can be collected at the international level. Proposals in the negotiating text include Norway's proposal for auctioning of AAUs at the international level; Switzerland's proposal of a levy of US\$2 per tonne of carbon dioxide for all fossil fuel emissions; levies on emissions from international aviation and maritime transport; a share of proceeds of the Clean Development Mechanism (CDM), joint implementation, emissions trading and other market-based mechanisms; and a 2% levy on international financial market transactions.

Other proposals in the negotiating text include mandatory fiscal penalties on developed countries that fail to reach reduction targets or financing commitments, external debt swaps or relief, use of special drawing rights and establishment of a set-aside reserve. Offset mechanisms, such as the CDM, market mechanisms for reducing emissions from deforestation and forest degradation (REDD), sector-based crediting mechanisms, or credits for nationally appropriate mitigation actions (NAMAs), also offer means to provide financing to developing nations.

To this list of options must be added recognition of the critical role of developing country governments in financing mitigation and adaptation efforts through their existing resources. National budgets in all countries need to be examined to determine the degree to which existing financial flows are investing in measures that contribute to sustainable development objectives while helping to reduce GHG emissions and increasing resilience to climate change impacts.

A number of critical proposals in the negotiations are discussed in greater detail below.

### **3.1 Mexico's green fund**

Mexico has proposed a green fund for both mitigation and adaptation activities, operating under the aegis of the COP with an inclusive and transparent governance system. The fund would be designed to generate no less than US\$10 billion per year and could be accessed by all countries. Contributions would be collected from both developed and developing countries (LDCs and countries of the Association of Small Island States would be exempt from making payments) based on a formula that takes into consideration GHG emissions, population and GDP. All disbursements from the fund would be subject to a 2% levy that would finance adaptation actions. The model predicts that developed countries would be net contributors and developing countries would be net beneficiaries. The contributions would be divided among mitigation, adaptation and clean technology as agreed by the members. The fund could be administered by an existing multilateral institution agreed to by the COP (Mexico, 2008).

The proposal has attracted some support, including from the European Union, but a major political obstacle is that it requires contributions from developing countries in addition to developed countries. The Group of 77 and China negotiating bloc is resistant to this.

### 3.2 Group of 77 and China's proposal for defined budgetary contributions

The Group of 77 and China have proposed that developed countries contribute 0.5% of GDP for climate change, almost US\$170 billion per year. The funds could come from various sources, including auctioned allowances, in addition to government contributions. The money would support enhanced action on mitigation, adaptation and technological cooperation by establishing specialized funds, such as a multilateral technology acquisition fund (Huang & Zhu, 2008).

China has been one of the leaders pushing in its negotiations for this mandated percentage of GDP from developed countries. China's proposal would require OECD countries to almost quadruple their ODA, which seems very unlikely given their persistent failure to meet the 0.7% target.<sup>3</sup>

### 3.3 Switzerland's global carbon levy

Switzerland has proposed a global carbon levy of US\$2 per tonne of carbon dioxide. Every country except those with per capita emissions of less than 1.5 tonne of carbon dioxide would impose and collect the tax and forward part of the revenue to a multilateral adaptation fund. The tax would generate an estimated US\$48.5 billion per year. Low-, medium- and high-income countries would forward 15%, 35% and 60%, respectively, of the tax revenue collected. The remaining tax revenue (US\$30.1 billion globally) would go into each country's national climate change fund. The tax revenue forwarded to the multilateral adaptation fund (US\$18.4 billion) would be divided equally between a prevention pillar and an insurance pillar (Kolly, 2008).

There is considerable resistance to a carbon tax, especially if the tax has to be collected nationally for external use. The United States is not supportive of a global carbon levy.

### 3.4 Norway's upstream auction revenue (AAU holdback)

Norway has proposed that 2% of the AAUs of each country with an emission reduction commitment be held back at the international level and auctioned to raise revenue for adaptation. The holdback would be mandatory for all developed countries, and the AAUs to be auctioned would not be issued to countries. They would be sold by a financial institution on behalf of the Adaptation Fund, and the revenue would go directly to the fund. A target reduction for developed countries of 25% to 40% from 1990 emissions in 2020 would mean an assigned amount of total allowable emissions by these countries of 10 to 13 billion tonnes of carbon dioxide equivalent per

<sup>3</sup> In 2006, ODA by OECD countries totalled US\$104 billion, which amounted to 0.31% of their gross national income (about the same as GDP). This means that ODA would have had to be US\$130 billion higher to reach the 0.7% target. At 0.5%, the climate change contribution would have been almost US\$170 billion.

year. If 2% of that amount were auctioned with an average price of US\$25 per tonne, the revenue would be US\$5 billion to US\$6.5 billion per year. As national commitments become more stringent, the revenue generated falls unless the price rises or additional countries adopt commitments.

Auctioning of allowances appears relatively well-accepted in many countries, and the European Union has aligned its position with that of Norway. But this proposal could be resisted by developed countries because costs would be passed on to consumers, while levies would be captured internationally. The United States opposes such an approach, viewing international expropriation of finance as violating that country's Constitution.

### 3.5 International levy on emissions from aviation and maritime transport

This mechanism would raise funds by charging individuals and companies based on their responsibility for emissions and/or their ability to pay. The levies could be applied to air travel, aviation emissions or maritime emissions. Proposals for this mechanism include the International Air Passenger Adaptation Levy on fuels, which was put forward by the Maldives on behalf of the Group of LDCs and recommends that the levy be collected in the form of a set fee per airline ticket. Fees would be differentiated by class of travel. An average levy of US\$6.50 per passenger would generate approximately US\$13 billion annually. The International Maritime Emissions Reduction Scheme includes a carbon levy on fuel used for carrying cargo to destinations within developed countries. Tuvalu's Burden Sharing Mechanism would raise funding through levies on emissions trading and international aviation and maritime transport. Specifically, Tuvalu proposes a 0.01% levy on international airfares and maritime transport freight charges operated by Annex II countries,<sup>4</sup> a 0.001% levy on international airfares and maritime transport freight charges operated by non-Annex I countries, and exemptions for LDCs and Association of Small Island States countries (Africa Partnership Forum, 2009, p. 5).

There is some support for levies on aviation and maritime transport. Various organizations, including the UNFCCC and UNDP, have reviewed and broadly endorsed the International Maritime Emissions Reduction Scheme (Africa Partnership Forum, 2009, p. 7).

### 3.6 Offset mechanisms

The flow of finance could be increased through the CDM or other proposed market mechanisms, such as a REDD crediting mechanism, a sector-based crediting mechanism or crediting for NAMAs. This depends on ambitious targets for developed countries to drive a more aggressive offset market, and developed countries might have to relax limits on the proportion of domestic reductions that

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<sup>4</sup> Annex II countries are developed countries that under the UNFCCC are expected to financially assist developing countries in meeting their emission reduction targets.

can be offset by purchasing external credits. The UNFCCC (2007b, p. 158) estimated that the post-2012 market is likely to be between US\$25 billion and US\$100 billion per year.

Most countries, developed and developing, support the use of offset mechanisms. Different options have varying levels of support—for example, in regard to REDD, some developing countries want only grant funding, not an offset mechanism. Some form of the CDM, and perhaps other mechanisms such as those mentioned in the previous paragraph, are likely to be part of a new regime. But developing countries are unlikely to accept an increase in offsets as a sole or even majority source of climate change finance.

### 3.7 Extension of the share of proceeds

The 2% CDM levy currently in place to raise funds for the Adaptation Fund is an example of a levy based on the carbon market. Some proposals have suggested increasing the levy up to 5%. A number of countries have proposed extending the levy to joint implementation, international emissions trading and other market-based mechanisms (ranging from 2% to 12%). The estimate of the revenue raised depends on the commitments adopted. A 2% share of the proceeds from CDM projects could be worth between US\$100 million and US\$2.5 billion per year (UNFCCC, 2007b, p. 203).

Countries at COP 14 were unable to reach consensus on extending the share of proceeds to joint implementation and international emissions trading. Developing countries are generally supportive of this option, with developed countries resistant to levies on international emissions trading. There could be some traction for extending the share of proceeds to joint implementation projects.

### 3.8 Revenue from domestic auction permits

The underlying funding principle of this mechanism is to auction a certain share of AAUs to generate revenues, rather than giving them out for free to domestic firms that have to comply with emission caps. Two such initiatives are described below.

- *Germany's International Climate Initiative.* Since early 2008 Germany has raised funds by auctioning 9% of its nationally allocated carbon allowances for the second phase (2008–2012) of the European Union Emission Trading System. Of the €800 million in annual revenue expected from the auctions, €400 million will go to climate initiatives, and €120 million of this will be allocated internationally to developing countries. Half of this amount will be directed toward adaptation and forest protection (Fuentes, 2008).

- *American Clean Energy and Security Act (previously known as the Waxman-Markey climate and energy bill)*. The proposed act includes a provision for approximately 10% of allowances to be allocated to help support the transition to a clean economy, adaptation, prevention of tropical deforestation and international technology transfer. The free allocation for preventing deforestation in developing countries would be 5% through 2025, then 3% through to 2030 and 2% thereafter. The free allocation for international adaptation and clean technology would be 2% through 2021, then 4% through to 2026 and 8% thereafter (Pew Center on Global Climate Change, 2009, pp. 42 and 93).

There appears to be considerable support for such proposals in many developed countries, including the European Union and the United States. Revenues from auctioning are uncertain because the price polluters will pay depends on demand. National governments capture the revenues and might not use them to fund climate change activities in developing countries.

## 4.0 Governance of climate change funds

Governance of climate funds is a controversial topic in the negotiations. The diversity of developing country economies and needs with respect to support for climate change action will require an institutional structure that manages a range of funding requirements, forms and channels in a manner that is accountable, transparent, resistant to gaming, and fair for both developed and developing countries. Key governance questions include forming new bodies and boards, the role of the GEF in a future agreement, the role of implementing agencies, and the alignment of bilateral and multilateral funds for climate change.

A number of countries have put forward proposals outlining governance structures. The Group of 77 and China have proposed the establishment of overarching institutional arrangements for the operationalization of a financial mechanism under the authority and guidance of the COP. It would include a board with equitable and balanced representation of all parties and assistance from a secretariat. The COP and the board would establish specialized funds and funding windows under its guidance and a mechanism to link various funds. Each of the funds could be advised by an expert group and supported by a technical panel or panels. To ensure transparency, other possible elements could include a consultative or advisory group of all relevant stakeholders and an independent assessment panel (Philippines on behalf of G-77 and China, 2008). Mexico's green fund would be led by an executive council, composed of representatives of all participant countries grouped in a balanced and practical way. The council would have three independent counsellors—a scientific counsellor, one from the multilateral development banks and one from social organizations. In addition, a scientific committee and multilateral banks committee would support the functioning of the council. The fund could be administered by an existing multilateral institution agreed upon by the COP (Mexico, 2008).

Many developing countries support a multi-window financial mechanism that includes a series of discrete funds. The specialized funds mentioned in the negotiating text include a convention adaptation fund, multilateral adaptation fund for low- and medium-income countries, climate insurance fund, mitigation fund, REDD fund, multilateral technology acquisition fund, technology risk facility, technology grant programme, capital venture fund and capacity-building fund. Negotiators will need to determine if funds should be managed in a centralized or decentralized manner, and in a streamlined manner or through a series of discrete funds.

Proposals in the negotiating text also suggest that funds be governed under a new body. Proposals include that all funds be directly administered under the COP, with external independent oversight instituted under an executive board, or under a new board or executive body appointed by the COP and directly charged with management and oversight functions. The COP could also establish funds and funding windows, which would then be administered by trustees.

A point of contention is whether climate change funds should be administered by a new or existing institution. The arguments for a new institution are that it would provide an opportunity to rethink existing financial mechanisms to better meet climate change needs; may gain support from major developing economies, such as India and China, that are not part of the old power relationships of the Bretton Woods Institutions; would signal additionality to current ODA commitments in a clear and effective manner; and would focus on carbon finance, bringing in new expertise and functional competencies that would be distinct from those of traditional institutions.

The advantage of using an existing institution is that all countries would be familiar with its roles, responsibilities and existing governance structures. The expertise of organizations already adept in the areas of lending and raising capital, such as the World Bank and the GEF, would be exploited. The time and effort needed to create a new institution cannot be overlooked; using an established institution would reduce the issues to be negotiated and might be more achievable within the Copenhagen timeline.

In general, developing countries have called for an equitable governance regime with a financial mechanism under COP guidance that provides direct and easy access to resources. Developing countries tend to favour the establishment of a new institutional framework under the UNFCCC because of their dissatisfaction with the operations of the GEF and World Bank. Developing countries often feel they have little if any ownership over decisions that are dominated by donor concerns. Many developing countries have indicated that they will accept nothing less than the governance structure of the Adaptation Fund, where a board functions as the operating entity of the fund, the GEF as the secretariat and the World Bank as trustee to the fund. Another important element of the Adaptation Fund is that developing countries have direct access to the fund, meaning that developing country executing agencies, which can include government agencies, can directly submit proposals to the board without having to rely on intermediary organizations.

Developed countries, in general, want to build new financial mechanisms on the basis of existing institutions, including the GEF and World Bank.

## 5.0 Critical issues

The critical issues being addressed in the negotiations are:

- Developed country governments, individually and collectively, need to decide what new sources of funds will be used to support an expanded mitigation technology program and how to provide some certainty that funds will be available over time. The parties need to determine the specific level of funding and give consideration to the mix of ODA, auction revenues and other sources that might be made available and whether countries would have flexibility to raise funds using different sources.
- All governments need to decide what needs would be covered with any new funds and how such funds will be linked to developing country actions in the case of mitigation (including REDD) and adaptation. For example, will funding be contingent on developing countries preparing adaptation, low-carbon development or NAMA plans? Will all stages of the technology innovation cycle be addressed in the case of mitigation? Governments need to find common ground on what problems and barriers are to be addressed, and their significance.
- All governments need to decide how such funds should be managed within the UNFCCC and what should be left to other processes. A key issue will be governance. Should technology funds be managed with a centralized or decentralized approach, or in some compromise fashion? Should the management of funds differ for adaptation, REDD, mitigation and technology? Will different funds be established to address different needs? Should any new mechanism(s) have the flexibility—or indeed, be encouraged—to use a variety of public finance mechanisms to leverage private funds?
- Finally, all governments need to decide on an accounting system to monitor, report and verify (MRV) what money has been made available, how it has been spent and what it has accomplished. An MRV system needs to be efficient as well as effective. The GEF has been criticized for spending too large a share of resources on tracking and accounting for activities rather than on implementation.

These are difficult and complex issues, and there are divergent views, especially between developed and developing countries, on a number of issues.

These issues are compounded by a number of considerations, not the least of which being reluctance on the part of developed countries to commit to specific amounts of grant funding. The Commission of the European Communities (2009) has made the first move in this regard, recently setting out its expected contribution in *Stepping up International Climate Finance: A European Blueprint for the Copenhagen Deal*. The communication notes that finance is expected to come from three main sources: domestic finance (public and private) in developing countries, the international carbon market and international public finance. In regard to the last, industrialized and economically more advanced developing countries should make international public finance in the range of €22 billion

to €50 billion per year available beginning in 2020. The European Union's contribution to international public funding for developing countries from 2013 onward would be between 10% (reflecting the European Union's share of global emissions) and 30% (its share of global GDP) of the global total, or contributions of €900 million to €3.9 billion in 2013 (10% to 30% of €9 billion to €13 billion globally) and €2 billion to €15 billion per year by 2020 (10% to 30% of €22 billion to €50 billion globally). A significant proportion of the European Union's contribution could be covered by revenues from the auctioning of European Union Emission Trading System allowances. This proposal should stimulate debate and discussion, and may help to break the impasse on financing.

The European Commission proposal notes that much of the public financing will be generated through auction revenues. While this will likely attract criticism from developing countries, it reflects the need for innovative mechanisms in a time of global economic downturn. The reality of the global economy means that developed countries do not have the resources on hand for large international contributions. In addition, developed countries' governments are also dealing with negative public perceptions of wealth transfers to trade competitors (especially China). A major issue is how to deal with major developing economies and differentiation of access to funds. Principles for effective financing will be needed, and fairness within the Group of 77 requires some means to insure that funding is granted according to an accepted set of criteria. Many poor developing countries will likely need a readiness and capacity-building phase to increase absorptive capacity to access and effectively utilize funding.

This raises the necessity of addressing developing country needs, which will vary across nations, and aligning financing with genuine priorities. The parties will need to ensure that climate change funding is complementary to ODA and contributes to poverty reduction and development objectives. This could prove contentious, as the Group of 77 and China are opposed to confusing climate change funding with development assistance money. The convention calls for "new and additional" funding for developing countries, reflecting developing country concerns that ODA will be diverted from pressing development priorities to climate change. This situation reinforces the tendency to distinguish between funding for development and climate change, despite the clear overlap between the two.

Another issue is incremental financing, because the convention requires developed countries to cover the "incremental costs," or the additional costs associated with transforming a project with national benefits into one with global environmental benefits (such as reduction in GHG emissions). Developing countries stress their difficulties in determining incremental costs and their struggles in accessing financing under the GEF. This concept of incremental costs is particularly problematic in regard to adaptation projects, such as strengthening local governance structures or increasing resilience to current and future climate change, where determination of additional costs can be very difficult.

## 6.0 Moving toward Copenhagen

Money is at the heart of the post-2012 negotiations. On the one side are developed country governments, which are feeling stretched by the global financial crisis, and many of which are concerned about wealth transfers to perceived major trade competitors and the effectiveness of large-scale funding flows through international institutions. On the other side are developing countries, which are the most vulnerable to climate risks and the least responsible for historical emissions, have the fewest resources to address the issue, and argue that they have a right to grow and achieve the economic prosperity of developed countries without paying significant climate costs. Squaring this circle will be one of the make-or-break issues of the negotiations.

Several questions need to be answered as the world comes closer to elaborating a post-2012 regime for international action on climate change, including:

- What options exist to fill the anticipated gap in funding for developing country actions?
- How should the funds be used—for example, for program or project approaches?
- Should there be a differentiation in access to funds among developing countries?
- What institutions and governance structures are needed to ensure the effective use of funds?
- How should financing be measured, reported on and verified?
- How should the linkages between climate change and traditional development activities be accounted for? Can the incremental costs associated with climate change activities be distinguished from development efforts?
- Are there opportunities for Canadian firms? What can be done to encourage firms to act on these opportunities?

## Glossary

### **Adaptation Fund**

The Adaptation Fund finances adaptation projects in developing countries that are particularly vulnerable to the adverse effects of climate change. The fund is financed by a 2% levy on credits issued through CDM projects.

### **Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol**

This group, agreed to at COP 11 in Montreal in 2005, is discussing future commitments for industrialized countries under the Kyoto Protocol. Membership includes all countries that have ratified or approved the Kyoto Protocol. Notably, the United States is not a member of this group.

### **Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention**

This group, formed under the Bali Action Plan, is undertaking a dialogue to analyze approaches for long-term cooperative action to address climate change, including mitigation, adaptation, technology, and financing and investment. Membership includes all nations that have signed the UNFCCC.

### **Annex B countries**

These are developed nations, as well as countries in Central and Eastern Europe, that committed to GHG emission reductions at Kyoto. “Annex” refers to an appendix to the Kyoto Protocol document. Canada is one of the Annex B countries. The United States has not ratified the Kyoto Protocol.

### **Annex I countries**

These are the OECD countries (except for Mexico and South Korea) and those making the transition to a market economy, such as Russia and the former Eastern Bloc countries, that are signatories to the UNFCCC.

### **Annex II countries**

Those countries listed in Annex II to the convention that have a special obligation to provide financial resources and facilitate technology transfer to developing countries. Annex II countries include the 24 original OECD members plus the European Union.

### **anthropogenic greenhouse gas (GHG) emissions**

GHG emissions that result from the activities of human beings, such as burning of fossil fuels.

**assigned amount unit (AAU)**

Annex I Parties are issued AAUs up to the level of their assigned amount, corresponding to the quantity of GHGs they can release in accordance with the Kyoto Protocol during the first commitment period. One AAU is equal to one tonne of carbon dioxide equivalent.

**Certified Emission Reduction (CER)**

A credit for GHG emission reductions achieved by a CDM project. The credit is registered and can be used by developed countries to count toward their GHG emission reduction commitments.

**Clean Development Mechanism (CDM)**

A market-based mechanism under the Kyoto Protocol wherein a single project or a program of activities to mitigate climate change in a developing country can generate credits (CERs) that can be used by an Annex I Party to help meet its GHG emission reduction commitment.

**European Union Emission Trading System**

The largest multinational GHG emissions trading scheme in the world and a cornerstone of EU climate policy.

**Global Environment Facility (GEF)**

The GEF is the financial mechanism of the UNFCCC, with the COP providing regular guidance on policies, program priorities and eligibility criteria for funding. The GEF is the operating entity of the Special Climate Change Fund and the LDC Fund under the convention and provides secretariat services to the Adaptation Fund.

**greenhouse gas (GHG)**

Gases that accumulate in the Earth's atmosphere and trap heat, contributing to the greenhouse effect. The six greenhouse gases covered under the Kyoto Protocol are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

**Intergovernmental Panel on Climate Change (IPCC)**

A body made up of the world's leading climate experts, established in 1988 by the UNEP and the World Meteorological Organization, to assess the scientific research on climate change and its environmental and economic impacts. Most notably the IPCC publishes, at regular intervals, assessment reports on the latest knowledge on climate change.

**international emissions trading**

A market-based mechanism under the Kyoto Protocol that allows Annex B countries to buy and sell parts of each country's allowed GHG emissions, which are divided into AAUs. This increases the allowable GHG emissions in the recipient country and reduces those of the seller country.

**joint implementation (JI)**

An international project, involving joint action by Annex B countries, that results in real, measurable reductions in net GHG emissions in a host country.

**Kyoto Protocol**

An international agreement linked to the UNFCCC that sets binding targets for 37 industrialized countries and the European Community for reducing GHG emissions. These targets total an average 5% reduction from 1990 levels over the five-year period from 2008 to 2012. The protocol was adopted in 1997, and entered into force in February 2005.

**United Nations Framework Convention on Climate Change (UNFCCC)**

The agreement signed by 192 countries at the Earth Summit in Rio in June 1992, under which climate change is monitored and addressed globally.

## References

Africa Partnership Forum. (2009). *Financing climate change adaptation and mitigation in Africa: Key issues and options for policy-makers and negotiators*. Policy Brief. Prepared for the Third Financing Development Conference on Climate Change, Kigali, Rwanda, May 21–22, and the African Ministerial Conference on the Environment (AMCEN) Special Session on Climate Change, Nairobi, Kenya, May 25–29.

Chen, S., & Ravallion, M. (2008). *The developing world is poorer than we thought, but no less successful in the fight against poverty*. Policy Research Working Paper 4703. Washington, D.C.: World Bank.

Commission of the European Communities. (2009). *Stepping up international climate finance: A European blueprint for the Copenhagen deal*. Brussels: Commission of the European Communities.

Fuentes, U. (2008). Innovative finance mechanisms: The German International Climate Initiative. Annex I Expert Group Seminar. Paris, May 5–6. Retrieved from <http://www.oecd.org/dataoecd/38/61/40633487.pdf>

Greenwood, C., Usher, E., & Sonntag-O'Brien, V. (Eds.). (2009). *Global trends in sustainable energy investment 2009*. Nairobi: UNEP Sustainable Energy Finance Initiative and New Energy Finance.

Huang, W., & Zhu, L. (2008). *Preliminary ideas on enhancing action on the provision of financial resources*. Retrieved from [http://www.unfccc.int/files/meetings/ad\\_hoc\\_working\\_groups/lca/application/pdf/china.pdf](http://www.unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/china.pdf)

International Energy Agency. (2008). *World Energy Outlook 2008*. Paris: IEA.

Kolly, T. (2008). *Funding scheme for Bali Action Plan: A Swiss proposal for global solidarity in financing adaptation*. Retrieved from [http://www.unfccc.int/files/meetings/ad\\_hoc\\_working\\_groups/lca/application/pdf/switzerland.pdf](http://www.unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/switzerland.pdf)

Levina, E. (2007). *Adaptation to climate change: International agreements for local needs*. Paris: OECD.

Mexico. (2008). Paper No. 3: Mexico. Enhanced action on the provision of financial resources and investment to support action and mitigation and adaptation and technology cooperation. In UNFCCC, *Ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan* (pp. 40–45).

Müller, B., & Hepburn, C. (2006). *An "International Air Travel Adaptation Levy" (LATAL): An outline proposal for an International Air Travel Adaptation Levy*. Paper EV 36. Oxford: Oxford Institute for Energy Studies.

Organisation for Economic Co-operation and Development. (2008). *Climate change mitigation: What do we do?* Paris: OECD.

Organisation for Economic Co-operation and Development. (2009). *Development aid at its highest level ever in 2008*. Paris: OECD. Retrieved from [http://www.oecd.org/document/35/0,3343,en\\_2649\\_34487\\_42458595\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/35/0,3343,en_2649_34487_42458595_1_1_1_1,00.html)

Oxfam. (2007). *Financing adaptation: Why the UN's Bali Climate Conference must mandate the search for new funds*. Oxford: Oxfam.

Pendelton, A., & Retallack, S. (2009). *Fairness in global climate change finance*. London: Institute for Public Policy Research.

Pew Center on Global Climate Change. (2009). *Pew Center summary of H.R. 2454: American Clean Energy and Security Act of 2009 (Waxman-Markey)*. Retrieved from <http://www.pewclimate.org/acesa>

Philippines on Behalf of G-77 and China. (2008). Financial mechanism for meeting financial commitments under the convention. In UNFCCC, *Ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan* (pp. 35–37).

Tirpak, D., & Parry, J. (2009). *Financing mitigation and adaptation in developing countries: New options and mechanisms*. Winnipeg: IISD.

United Nations. (2007). *World population prospects—the 2006 revision: Executive summary*. New York: United Nations.

United Nations Framework Convention on Climate Change. (2007a, December). *Bali Action Plan*. Decision adopted by COP 13 and CMP 3. Retrieved from [http://unfccc.int/files/meetings/cop\\_13/application/pdf/cp\\_bali\\_action.pdf](http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_action.pdf)

United Nations Framework Convention on Climate Change. (2007b). *Investment and financial flows to address climate change*. Bonn: UNFCCC Secretariat.

United Nations Framework Convention on Climate Change. (2009). *Revised negotiating text*. Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention, Sixth Session. Bonn, June 1–12.

Watkins, K. (2007). *Human development report 2007/2008: Fighting climate change: Human solidarity in a divided world*. New York: UNDP.

World Bank. (2006). *Clean energy and development: Towards an investment framework*. Washington D.C.: Development Committee (Joint Ministerial Committee of the Boards of Governors of the World Bank and the International Monetary Fund on the Transfer of Real Resources to Developing Countries).

World Bank. (2009). *Climate investment finds: Financial status as of January 26, 2009*. Retrieved from [http://siteresources.worldbank.org/INTCC/Resources/CIF\\_Financial\\_Status\\_Jan\\_26\\_2009.pdf](http://siteresources.worldbank.org/INTCC/Resources/CIF_Financial_Status_Jan_26_2009.pdf)