Africa Partnership Forum

SPECIAL SESSION ON CLIMATE CHANGE

Hosted by UN Economic Commission for Africa

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Carbon Finance in Africa

Contents

EXECUTIVE SUMMARY

1. This cover note provides a quick overview of two short further notes on accessing climate finance for Africa, prepared as a background reference document for the APF Special Session on Climate Change in Addis, 3 September 2009.

THE CLEAN DEVELOPMENT MECHANISM (CDM)

2. The CDM has been successful in generating emissions reduction projects in several developing countries. The attached note is a synthesis of points drawn from a larger study, undertaken by consultants and co-managed by UNECA, the NEPAD Secretariat and the APF Support Unit (available at: http://www.africapartnershipforum.org/dataoecd/40/15/41646964.pdf). It argues that there is potential for significantly increasing the contribution that the CDM and potential future carbon market mechanisms can make to Africa's development. Key recommendations fall into four categories:

(i) Actions that can be taken by African governments with Nairobi Framework partners to improve institutional capacity to take advantage of the CDM within the current framework;

(ii) Actions that can be taken by the CDM Executive Board and Parties to the Kyoto Protocol to improve the procedures governing the CDM within the current framework;

(iii) Actions that can be taken under the COP discussions to broaden the CDM approach and coverage in the new post-2012 framework, in a way which would increase the potential benefits for Africa;

(iv) Actions that can be taken by multilateral organisations and development partners, in order to make core finance more readily available for CDM projects in Africa.

BEYOND THE CDM: NEW PROPOSALS FOR GENERATING ADDITIONAL CARBON-BASED REVENUE

3. While the CDM is potentially an important contributor to accessing carbon finance and should be reformed to improve applicability for Africa, there is a large possibility for the continent to tap into new and additional financial resources for both mitigation and adaptation.

4. The second paper takes a broader look at various proposals for generating additional revenue, either from the current carbon finance market or through broader charges, levies or taxes, which would be included in a post-2012 agreement. It is intended to be a synthesis of the main elements in these proposals, which it groups into six categories:

(i) Auctions of emissions allowances, either at international or regional/national level;

(ii) A global tax on CO_2 emissions;

(iii) Levies on emissions from international maritime transport and on air travel;

(iv) Carbon market-based levies (such as extending the current 2% CDM levy to emissions trading more broadly);

(v) Issuance of bonds; and

(vi) Frameworks for assessed contributions.

5. A common feature of most of these proposals is that they are based on generating revenue through market-based mechanisms, or more broadly through carbon or international travel-related taxes or levies, as distinct from conventional ODA funding sources derived from public financing (typically funded from domestic revenue streams and part of national budgets).

6. A number of these proposals are currently receiving broad international attention, in the context of the UNFCCC negotiating process leading up to Copenhagen in December 2009.

The Clean Development Mechanism[1] (CDM) was established under the Kyoto Protocol to assist non-Annex I Parties[2] to the UN Framework Convention on Climate Change (UNFCCC) in promoting sustainable development through low-carbon projects and to facilitate Annex I Parties in complying with their emissions reduction commitments. While the recent financial crisis and softer energy prices caused a dip in the value of CDM transactions in 2008[3], the CDM market remains an important and useful mechanism for investing in mitigation activities in developing countries and a significant source of finance to help promote sustainable development. But although the CDM has proven successful in generating emissions reduction projects in several developing countries, and more particularly in large emerging economies, Africa currently holds less than 3% of registered CDM projects. It is therefore imperative that African governments both capitalise on existing carbon market opportunities and develop a clear African position for post-2012 negotiations in order to capture larger flows of carbon finance.

Challenges and recommendations

There are many reasons why Africa's share of CDM transactions is still relatively small. These include factors related specifically to how the CDM is structured and to complex and stringent procedures to safeguard the integrity of emissions reduction credits, but also reasons attributable to the African context itself, such as the small size (and therefore small volume) in relative global terms of emissions reductions that could be generated by projects in Africa, perceptions of investment risk, lack of institutional capacity, lack of financing and information, etc.

The purpose of this paper is to summarise key barriers related to CDM activities in Africa, with the objective of highlighting recommendations that African policymakers, negotiators and experts can use, in concert with development partners, to make the changes necessary to expand CDM activities in the African context. This paper draws on the main findings from a longer analysis available at: http://www.africapartnershipforum.org/dataoecd/40/15/41646964.pdf. The barriers (and accompanying recommendations) are divided into four sections:

(i) Barriers associated with weak national institutional capacity;

(ii) Barriers related to CDM procedures and modalities within the current Kyoto framework (before 2012);

(iii) Barriers related to constraints on the types of projects eligible for the CDM, to be addressed in the negotiations of a post-2012 framework; and

(iv) Barriers related to financing CDM projects.

I. Institutional and Capacity Barriers

Institutional capacity within host countries is an important factor that can help or hinder development of CDM projects. Many complex legal, financial, procedural and technical issues require assessment and understanding, and most developing countries with limited institutional capacity will face challenges in taking a proactive stance towards CDM project development. Some countries have devoted significant resources to support CDM activities and created CDM promotion offices that work separately from but in coordination with the office of the CDM Designated National Authority (DNA). Some countries with stronger capacity, such as Egypt and South Africa, have organised awareness programmes on the CDM within government. Others, such as Zambia and Swaziland, are focusing efforts on organising capacity training and have established a governmental CDM office/committee to ensure that the CDM is incorporated and integrated within government policies and priorities. Timely and transparent completion of CDM transactions also plays an important role in expediting the approval process.

MAIN PRIORITIES: African Governments, with Nairobi Framework Partners

The Nairobi Framework[4] (NF) has identified five pillars in its support to African countries to enhance participation in the CDM. These include:

- Build and enhance the capacity of DNAs;
- Build capacity in developing CDM project activities;
- Promote investment opportunities for projects;
- Improve information sharing, outreach, education and training; and
- Improve interagency coordination.

These pillars of the NF continue to be some of the main priorities for African governments and supporting multilateral agencies. To ensure effective implementation of the NF, it will be important to address other needs of African countries and involve pan-African and regional African institutions in this dialogue, e.g. the African Development Bank (AfDB), the UN Economic Commission for Africa (UNECA), the African Union Commission (AUC), the New Partnership for Africa's Development (NEPAD) and the regional economic commissions. In addition to those outlined above, other priorities for African governments include:

- Refine the NF to provide more opportunities for South–South transfer of capacity;
- Provide additional capacity building for appropriate government officials outside of the DNA itself, e.g. people working in energy, environment, finance and agriculture;
- Establish national regulatory frameworks conducive to the effective implementation of CDM activities;
- Work to improve the overall domestic investment climate to encourage participation in market-based activities.

II. Barriers Related to CDM Procedures and Modalities: current (pre-2012) changes

The international governance structure agreed for the CDM was intentionally set up to involve several steps, actors and checks, and includes detailed guidelines on specific methodologies and proving additionality[5]. While the process is required to ensure the integrity of this market-based mechanism, the working of the CDM approval process has been criticised for being too rigid and cumbersome, and involving high transaction costs for poor developing countries. Two initiatives that have been launched – small-scale CDM and programmatic CDM – are designed to allow for more flexible procedures and modalities, and to reduce transaction costs for CDM project development.

Small-scale CDM allows for a simplified application of the general CDM procedures in order to reduce the development costs for projects with emissions reductions below the threshold of 60,000 tonnes of CO_2 equivalent. A set of "simplified procedures" was developed allowing for the use of simplified project design documents, streamlined methodologies and reduced registration costs. This development boded well for Africa, given that the majority of abatement potential is in smaller-scale projects. But the impact has so far been minimal. Recent information shows that sub-Saharan Africa only accounted for less than 1% of the small-scale projects listed. Part of the lack of progress owes to higher transaction costs and the preference of project developers, brokers and traders (mainly from Annex I countries) for projects with larger carbon revenue potential at the expense of small-scale projects.

Programmatic CDM (pCDM) is a relatively new concept which allows project developers to create programmes involving many smaller project activities of the same kind, which can be bundled together into a larger programme. New project activities that fit the programme can simply be added on at a later date, using a simplified documentation and approval process. Programmatic CDM is still in its infancy, and only four programmes of activities have been submitted for validation from African countries. The South African national energy efficiency programme, through the phased expansion of solar water heaters and energy efficient light bulbs, is such an example of pCDM. Currently, the main barrier to the increased use of pCDM is simply lack of

knowledge and experience. Interim financing for pCDM could help develop knowledge capacity and scoping studies.

While engaging in the negotiations on a post-Kyoto treaty, African countries should press for a number of short-term goals, listed below, that can be adopted and implemented before 2012, and prepare the way for a more comprehensive post-Kyoto deal.

MAIN PRIORITIES: CDM Executive Board and Conference of the Parties (COP) to:

- Encourage the development of additional simplified methodologies for sectors with high potential in Africa;
- Encourage bundling of small-scale projects to be more attractive to investors;
- Further simplify the requirements of small-scale CDM activities and standardise baselines to reduce transaction costs;
- Develop an interim financing facility for pCDM to provide seed capital.

III. Barriers related to future CDM approach and scope: post-2012 considerations

Sectoral CDM is a new approach, being actively discussed, which would allow countries to shift from a project-based to a sector-based approach, by establishing sectoral baselines and granting carbon credits for emissions reductions relative to these. In addition to providing an easier path to quantifying emission reductions, sectoral CDM would encourage policy interventions aimed at emission-intensive sectors such as cement, chemicals or transport, and allow governments to reward high-achieving companies. By reducing the transaction costs for individual companies, this new approach would provide new financing opportunities for sectors that are presently underrepresented under the CDM in Africa. However, there are still many controversies over the use of sectoral approaches to mitigation, as some developing countries fear that they could potentially be used as a way to replace national overall targets (for Annex I countries) or lead to trade restrictions.

A major inhibiting factor to the growth of the CDM in Africa is the limitation on types of activities currently eligible for the CDM. The land use sector holds the greatest potential for carbon finance in most African countries. Under the current rules, however, project activities implemented in agricultural, forestry and other land use sectors (AFOLU) are limited to narrowly defined afforestation/reforestation (A/R) activities. The lack of AFOLU projects under the Kyoto Protocol owes primarily to the fact that rules and methodologies for crediting these activities are very complex (involving issues such as the permanence of credits and "ring fencing" projects), and A/R credits are not currently an eligible asset class in the European Union (EU) Emissions Trading Scheme (ETS), the largest market of carbon credit buyers.

On the international level, there is increasing recognition of the importance of the forestry and agricultural sectors for any successful climate policy. The negotiations leading up to Copenhagen have continued to focus on reducing emissions from deforestation and forest degradation (REDD) in developing countries. While the specific methodological requirements and incentive structures remain unknown, it is clear that the momentum behind REDD remains strong; discussions now include "REDD+", a mechanism which includes not only deforestation and degradation but also incentives to support sustainable forest management, conservation and enhancement of carbon stocks in existing forests. Many argue that an agreement in Copenhagen may not transpire without the inclusion of such a mechanism. The inclusion of REDD (or REDD+) will allow Africa's role in carbon abatement and as an actor in global carbon markets to be greatly enhanced. However, the mechanism needs to be designed in such a way that it accommodates different national circumstances and respective capabilities. Efforts to address inadequate technical capacity in the management of REDD will need to be realised.

MAIN PRIORITIES: COP to:

- Support the concept of sectoral CDM in post-2012 negotiations to promote CDM activities and help Africa to achieve emission reductions in a more cost-effective manner;

- Support a REDD or REDD+ agreement to augment the role of Africa in global carbon markets, designed in such a way as to accommodate for different national circumstances and respective capabilities;

- In the meantime, establish pilot projects that could be rewarded for early action.

IV. Financial Barriers

Lack of financing is a common barrier to project development. As previously mentioned, the majority of Africa's CDM potential will be in smaller-scale projects, for which it is difficult to attract funding given the smaller returns on emissions reductions. Many projects often have long lead times, and are perceived to have higher financial risks. In addition, transaction costs, including negotiation of purchase agreements, preparation of documents for registration and payments for validation and registration, are incurred at an early stage in the lifecycle of a CDM project, whereas carbon revenues are available only annually, following verification. Moreover, the recent financial crisis has made project financing extremely difficult to obtain.

There are a number of initiatives to make finance for CDM projects in Africa more readily available. Buyers of CDM credits, especially large institutional or national carbon funds, have helped CDM developers overcome this barrier by offering different types of advance payments. Regional institutions are also beginning to play an important role. For example, the **Economic Community of West African States** (ECOWAS) has established an African investment fund that can purchase carbon credits upfront. The Central African States Development Bank (BDEAC) has also developed instruments to facilitate access by CDM project developers to funding. The Millennium Development Goal (MDG) Carbon Facility represents an innovative collaboration between the UN Development Program (UNDP) and an international financial services provider, Fortis Bank, offering prospective emission reduction projects a comprehensive "one-stop-shop" package of services, with UNDP providing project development services and Fortis purchasing and marketing emission offsets.

But the amount is insufficient, and other financing mechanisms, including insurance against non-delivery of emission credits, need to be considered. There is a need to find ways to help CDM project developers access additional finance. These include the use of official development assistance (ODA), insurance mechanisms and export credit guarantees. The Marrakech Accord of 2001 stipulates that support for climate change in general and for CDM activities must not result in a diversion of ODA. Investment guarantee agencies have recently started to offer services to mitigate CDM risk in developing countries. For example, the Multilateral Investment Guarantee Agency (MIGA) of the World Bank Group has provided coverage against the risk that a CDM project in El Salvador fails to deliver the agreed upon amounts of certified emissions reductions (CERs). Guarantees by bilateral export credit agencies could provide another form of risk insurance. The ongoing review of the Organisation for Economic Co-operation and Development (OECD) Recommendation on Common Approaches on the Environment and Export Credits will hopefully result in more favourable treatment of exports of renewable energy equipment by OECD countries.

MAIN PRIORITIES: Development and Nairobi Framework Partners to:

- Further develop guarantee products and guidelines;
- Seek private sector organisations to partner in guarantee products;
- Increase budgets available for DNAs;
- Spread knowledge about the CDM to financial intermediaries and work to diminish investment risk through education and information sharing.

NEW & INNOVATIVE FUNDING FOR CLIMATE CHANGE

I. Introduction

While the CDM has proven to be an innovative financing mechanism for climate change mitigation in some developing countries, it has a limited role in providing the finance needed for mitigation activities, and overlooks adaptation completely. The expected future costs of climate change for developing countries are high, estimated in the hundreds of billions of dollars per annum. Mitigation and adaptation funding raised to date (including the CDM) will cover a trivial amount of total projected costs. Against this background have been a number of bilateral and multilateral proposals to raise additional revenue to address climate change in developing countries. These proposals aim to generate income by tapping into some of the revenue from the carbon market, or more broadly through carbon or international travel-related taxes or levies, rather than from conventional ODA funding sources derived from public expenditure (typically funded from domestic revenue streams and part of national budgets). At present, most international climate funding instruments, with the exception of the Kyoto Protocol's Adaptation Fund, which is financed through a 2% levy on CDM proceeds, rely on the latter – conventional ODA. The following proposals are distinct and noteworthy because they involve a degree of automaticity and autonomy. They relate to wider discussions on innovative financing schemes in the context of the UNFCCC, on both the implementation of the Bali Action Plan and a post-Kyoto framework beyond 2012.

This paper details and distils the various current proposals for climate financing. It does not attempt to provide a critique or assess the robustness of revenue estimates, both of which would need to be the subject of a separate exercise.

The rest of the paper is organised as follows. Section II offers a categorisation of the recent finance proposals, while Section III describes each proposal, using a table to illustrate the key elements of each scheme. Section IV discusses some options for the emerging institutional arrangements of international climate finance, followed by Section V, which conveys recent political support for certain financing proposals. Section VI provides useful criteria for evaluating the different climate finance proposals. The paper concludes in Section VII with a brief discussion of relevant issues pertaining to the implementation of climate change funding.

II. Categorising proposals on revenue raising

Financing proposals can be grouped into six categories:

i. **Auctioning of assigned amounts or emission allowances:** Each Annex I country receives a number of greenhouse gas units to release and/or trade (assigned amount units, AAUs), in accordance with the Kyoto Protocol, during the 2008-2012 commitment period. The underlying principle of this scheme is to auction a certain share of AAUs to generate revenue, rather than giving them out for free to Annex I domestic firms that have to comply with emissions reductions. This plan to auction AAUs is represented in the Norwegian proposal.

ii. **A uniform global tax on CO_2 emissions:** Funds are raised by placing a global tax on all carbon emissions, but with a per capita exemption for least developed countries (LDCs). This revenue raising mechanism is the basis for the Swiss Global Carbon Adaptation Tax.

iii. **Levies on emissions from international maritime transport and on air travel:** Funds are raised by charging individuals and companies, based on their responsibility for climate change and/or their capability to pay. The charges or levies could be applied to international aviation and maritime transport or air travel. Charge/levy schemes include:
   - The International Air Passenger Adaptation Levy on fuels (IAPAL);
   - The International Maritime Emissions Reduction Scheme (IMERS); and
   - Tuvalu's Burden Sharing Mechanism (BSM) (Adaptation Blueprint).

iv. **Carbon market-based levies:** Funding can be generated by applying a levy to the Kyoto Protocol's tradable units generated from the CDM, Joint Implementation (JI) or emissions trading (a form of "climate currency", with each tradable unit representing one metric tonne of CO_2 equivalent). The 2% CDM levy mechanism used to raise funds for the Kyoto Protocol's Adaptation Fund is an example of a carbon market-based levy. There is interest in extending or increasing the levy to other aspects of the carbon market. Proposals include:
   - Extending the levy to JI and/or International Emissions Trading (IET)[vi]; and
   - Pakistan's proposal to raise the CDM levy from 2% to 3-5%.

v. **Issuance of bonds:** Funds can be raised through bonds issued on the international markets available for immediate use. The EU's Global Capital Fund Mechanism (GCFM) proposes such a mechanism.

vi. **Frameworks for assessed contributions:** There are two other important proposals, which do not recommend a specific revenue raising mechanism but are often grouped in with the above proposals, given that they propose a framework for contribution assessment. Such proposals include Mexico's World Climate Change Fund (WCCF or the "Green Fund") and the G77 plus China's Enhanced Financial Mechanism.

Each proposal is discussed below.

III. Description of proposals on revenue raising

AUCTIONING OF ASSIGNED AMOUNTS OR EMISSIONS ALLOWANCES

- **The Norwegian proposal to auction AAUs:** Norway has designed a proposal to generate finance through auctioning a portion of emission permits. The auction would occur at the international level before the AAUs are allocated to national registries, and would be auctioned by an appropriate international institution. The resulting revenue would then be placed in a fund. The Norwegian Ministry of Foreign Affairs (MFA) projects that revenue to be raised is of the order of US$20-30 billion per annum. This figure is based on assumptions that 2% of AAUs are auctioned and all developed countries take on quantified economy-wide commitments corresponding to the mitigation actions required, according to the scenarios of the Intergovernmental Panel on Climate Change (IPCC), to prevent warming in excess of 2°c scenario.

- An auction of allowances can also occur domestically, as is the case in the EU ETS. However, while the money raised from the domestic auction could go towards climate finance in developing

countries, as is the case with Germany's International Climate Initiative, this is by no means guaranteed. This is because the use of the revenue generated from domestic auctioning of allowances is at the discretion of each individual national government that raises the money, and cannot be subject to any international mandate.

A UNIFORM GLOBAL TAX ON CO_2 EMISSIONS

- **The Swiss Global Carbon Adaptation Tax:** Switzerland has put forward a proposal to finance climate change policy programmes and measures. This proposal would establish a low-level financing tax on worldwide emissions from the production and use of fossil fuels. The revenue for this proposal would be raised through a uniform global levy on carbon of US$2 per tonne of CO_2 on all fossil fuel emissions. This corresponds to a burden of about 0.5 US cents per litre of liquid fuel. A free emission level of 1.5 tonnes of CO^2 per capita would be applied to all countries, creating an exemption for those with extremely low emissions levels (primarily the LDCs). The revenue generated from this tax, which is expected to be around US$48.5 billion per annum, would flow into: (1) National Climate Change Funds (NCCF) established in all countries that contribute payment (all but LDCs), to be used according to domestic priorities; and (2) a Multilateral Adaptation Fund (MAF), where funds would be spent exclusively on adaptation in low-income and middle-income countries (LIC/MICs)[vii]. The MAF is further divided into two pillars: an insurance pillar and a prevention pillar. The share of MAF revenues generated depends on the economic situation of the countries, with high-income countries (HICs) paying the most.

- While the Swiss propose a uniform global tax, there is a possibility to consider a graduated carbon tax depending on the level of income and development. Such a proposal could be more attractive to emerging economies.

LEVIES ON EMISSIONS FROM INTERNATIONAL MARITIME TRANSPORT AND AVIATION OR ON AIR TRAVEL

- **The International Air Passenger Adaptation Levy on fuels:** The IAPAL (previously known as the International Air Travel Adaptation Levy, IATAL) was proposed by the Maldives on behalf of the Group of LDCs within the Framework of the UNFCCC Bali Action Plan on 12 December 2008. The IAPAL recommends that a fee per international airline ticket be adopted, set at US$6 per economy class ticket and US$62 per business/first class ticket. The set fee addresses both "personal responsibility", with all international air travellers paying regardless of their origin, and "personal capability", which is demonstrated by the ability to bear the costs of flying internationally and differentiated by class of travel. The main objective of the IAPAL is to raise revenue to compensate for the impacts of air travel emissions, with revenue collected by airlines and then paid to the Kyoto Protocol Adaptation Fund. The IAPAL would have minimum impact on demand for air travel, and this would enhance its political acceptability. (A comparable model is provided by the similarly structured French "solidarity" airline tax that finances UNITAID, the international drug purchase facility.)

- **The International Maritime Emissions Reduction Scheme:** Under the proposed scheme, a carbon levy on fuel used for carrying cargo to destinations with emissions reduction commitments (currently Annex I countries) is established. IMERS proposes to establish the levy using the global average price of carbon. IMERS could raise US$9 billion annually for climate action if applied worldwide and collected centrally (bypassing national coffers).

- **Tuvalu's Burden Sharing Mechanism (Adaptation Blueprint):** Tuvalu proposes a mechanism whereby funding would be raised through levies on international aviation and maritime transport. Specifically, Tuvalu's BSM proposes:

    1. A 0.01% levy on international airfares and maritime transport freight charges operated by Annex II countries (a subset of Annex I countries mandated to provide financial resources to developing countries);
    2. A 0.001% levy on international airfares and maritime transport freight charges operated by non-Annex I countries; and
    3. Exemptions to (1) and (2) would apply to all flights and maritime freight to and from LDCs and Small Island Development States (SIDS).

CARBON MARKET-BASED LEVIES

- **Extending the levy to Joint Implementation and/or International Emissions Trading:** As the current levy on the CDM is used to raise funds for adaptation, a levy on JI or IET could similarly be applied. Most assessments of these options assume a 2% levy would be applied to mirror the CDM levy. Some countries, such as Costa Rica and South Africa, are in favour of including a levy on both JI and emissions trading. Other countries, like New Zealand, have stated reservations about applying a levy to JI and IET, as this could lead to market distortions. This was a hot topic at the December 2008 COP 14 in Poznan. However, parties were unable to reach consensus on a levy on either the JI or the EIT. According to the UNFCCC Executive Secretary, failure to reach consensus was because countries that host JI projects thought a levy might make the projects more expensive and therefore create a market disincentive.

- **Pakistan's proposal to increase the CDM levy:** In March 2008, Pakistan submitted a proposal to the UNFCCC to increase the current levy on the issuance of CDM credits from 2% to 3-5%. The proceeds would go to the Kyoto Adaptation Fund to finance developing country adaptation.

BONDS

- **The EU's Global Capital Fund Mechanism:** This proposal applies the idea of an International Financing Facility (IFF) – a tool that has, to date, been used to address urgent large-scale vaccination funding needs – to fund climate change. To raise funds, a bond would be issued on the international markets by an appropriate financial institution, enabling 'frontloading' of funding for immediate use. Future repayment over a long period (e.g. 20 years) would be financed through revenue of EU Member States derived from the future auctioning of emission rights. The idea has been recommended in the context of the European Commission's (EC's) initiated Global Climate Change Alliance (GCCA). The possibility of putting this idea into action is being explored in collaboration with the World Bank and the European Investment Bank. A fund of €1 billion (US$1.3) billion per year for five years would justify the overhead costs. The funds could be channelled for disbursement to existing initiatives such as the Adaptation Fund, the World Bank's Climate Investment Funds or the GCCA.

FRAMEWORKS FOR ASSESSED CONTRIBUTIONS

- **Mexico's World Climate Change Fund:** Mexico's proposal for the Green Fund recommends that countries contribute on the basis of their historical emissions, population and income. Put forward within the framework of the Bali Action Plan, Mexico suggests the creation of a new fund (at least US$10 billion per annum for mitigation in the initial start-up phase, increasing over time). Some of the money could be raised through budgetary contributions from each country determined by the above criteria, and some could come from new financial resources, such as auctioning permits in domestic cap and trade systems, taxing air travel, etc, to avoid putting excessive pressure on public financing. In this way, the Green Fund offers a framework for effort sharing rather than proposing a new mechanism to raise revenue.

- **G77 plus China's Enhanced Financial Mechanism:** The G77 plus China's proposal is the main proposal put forward by the constituent governments from developing countries, including the African Group. The group proposes that developed (Annex I) countries should contribute no less than 0.5% of gross national product (GNP). The funds would reflect Annex I commitments under Article 4.3 of the UNFCCC and would go towards mitigation; deployment and diffusion of low-carbon technologies; research and development; capacity building; preparations of national action plans; patents; and adaptation for developing countries. The proposal does not suggest any specific revenue raising mechanism, but it does suggest the revenue would be channelled through national budget agencies.

Table of proposal attributes[viii]

PROPOSAL	SOURCES OF FUNDS	CLIMATE FUNDS FOR DEVELOPING COUNTRIES PER YEAR IN BILLIONS (US$)	SOURCE OF ANNUAL FUNDING ESTIMATE	MITIGATION VS. ADAPTATION	REVENUE FLOWS TO NEWLY CREATED VS. EXISTING FUNDS
AUCTIONS OF EMISSIONS ALLOWANCES					
Norway's auctioning of AAUs	Annex I allowances withheld, auctioned by international body	US$20-30 annually	Proposal originator (Norwegian MFA) (assumes 2% levy, Annex I commitments correspond to IPCC's lowest emission scenarios)	Primarily adaptation, but does not rule out mitigation and technology transfer	Unclear where the money would be transferred/held
A UNIFORM GLOBAL TAX ON CO_2 EMISSIONS					
Swiss Global Carbon Adaptation Tax	Tax (US$2/t CO2) on emissions from fuels ≤1.5 t CO2/capita exempt	NCCF: US$20.7 MAF: US$18.4	Proposal originator (Swiss Confederation) based on 2010 data	NCCF: Both MAF: Adaptation	NCCF: national governance MAF: existing; Kyoto Protocol Adaptation Fund
LEVIES ON EMISSIONS FROM INTERNATIONAL MARITIME AND AVIATION TRANSPORT, OR ON AIR TRAVEL					
IAPAL	US$6 per ticket fee (economy class), US$62 per ticket fee (business/first class)	US$8-10 annually, for first five years of operation	LDC Group (based on International Air Travel Association figures and French levy estimates on travel class breakdown)	Adaptation	Existing: Kyoto Protocol Adaptation Fund
IMERS	Emission charge, "cap and charge" for Annex I	US$9+ (assumes US$15 as price of carbon using anticipated price in US economy-wide cap-and-trade scheme. The lower growth of emissions	Proposal originator (Stochniol)	Adaptation	Existing: Kyoto Protocol Adaptation Fund

		owing to the current downturn has been reflected, with total emissions for international shipping estimated at around 1 billion tons of CO2 in 2013			
Tuvalu's BSM	(1) 0.01% levy on international airfares, maritime transport freight charges operated by Annex II (2) 0.001% levy on international airfares, maritime transport freight charges operated by non-Annex I (LDCs/SIDS exempt)	US$0.04 from Annex II; US$0.003 from non-Annex I	Müller (based on total UN Conference on Trade and Development (UNCTAD) 2007 freight costs for 2005)	Adaptation	Existing: Special Climate Change Fund (SCCF) and LDC Fund (LDCF)
CARBON MARKET-BASED LEVIES					
Extending the levy to JI and/or IET	Levy on JI and/or IET	2008-2012: US$5.5-8.5; 2013-2020: US$3.5-7.0 (based on unit issuance, AAUs only)	UNFCCC (2008) Funding Adaptation in Developing Countries	Adaptation	Existing: Kyoto Protocol Adaptation Fund
Pakistan's CDM levy	3-5% levy on CDM	US$0.2-0.5 at levy of 5%	World Resources Institute (WRI)	Adaptation	Existing: Kyoto Protocol Adaptation Fund
BONDS					
GCFM	High rated bonds, as stopgap until other finance is operable	US$1.3 for next five years	Proposal originator (EC)	Adaptation	Existing
ASSESSED CONTRIBUTIONS					
G77 plus China	0.5% to 1% of Annex I countries' GNP – unspecified revenue raising mechanism	US$201-402	UNFCCC (2008) Investment and Financial Flows to Address Climate Change: An Update	Both, primarily mitigation	New
Mexico's WCCF	Multiple sources	Initially US$10 for mitigation, scaling up to US$95 in 2030 (plus a 2% adaptation levy per annum fund)	Proposal originator (Mexico Secretary of the Environment)	US$10-95: mitigation; US$0.2 - 1.9: adaptation	Existing: Kyoto Protocol Adaptation Fund

IV. Institutional arrangements

A separate but equally important consideration for meeting climate finance commitments surrounds the institutional arrangements involved, including the structure, governance, allocation and disbursement of the funds.

Parties to the UNFCCC have proposed numerous options for the future financial framework. The proposals can be roughly divided into: (1) proposals that support the creation of a new institutional arrangement, including funds, which is fully accountable to and potentially managed by the COP; and (2) proposals which prefer to use existing institutional arrangements by "making efficient and effective use of current

institutions, including the Global Environmental Facility [GEF], multilateral development banks, specialized UN institutions and other existing funds ... with financial support provided by developed country Parties and availed of by developing country Parties through bilateral, regional and other multilateral channels"[ix]. The latter therefore includes financial institutions which are "outside" the COP. It is also possible that a future financial mechanism relies on existing institutional arrangements, but also commands institutional reform as well as a degree of new institution building as well.

In relation to the decision on institutional arrangements of climate finance, another important consideration is how the required finance should be both aggregated and delivered. There are two very different systems that can deliver climate finance which reflect how funds will be used by recipient countries: one option is an *integrated approach* to delivering funding; another is a *disaggregated approach*, which links funding directly to sector-specific needs. The advantage of an integrated approach is flexibility in allocating funds, with less dependence on individual fund flows and better coordination to ensure consistency with national development strategies. In contrast, a disaggregated approach with self-standing vertical funds, each with their own dedicated funding uses (with separate funds for technology, adaptation, etc), can fit more easily with existing institutional structures and avoids the need to create new institutions.

The Bangladeshi Multi-donor Trust Fund (MDTF) offers an example of an *integrated* approach to climate finance, where the financial disbursement for climate change is at a scale that makes it possible to have a country-led programmatic approach aligned with national development plans. The Bangladeshi MDTF Model supports the implementation of Bangladesh's Climate Change Strategy and Action Plan, which was launched on 10 September 2008. According to the MDTF Concept Note, benefits of the fund include: high-level coordination, elimination of overlaps, donor harmonisation, flexibility in fund management and transparency[x]. The MDTF is designed to be a "one-stop" mechanism for large-scale climate change financing in Bangladesh and creates the potential to strongly ally the funding with national development plans. Similar approaches could be considered for African countries. However, this supposes that countries have clear strategies on climate change, which many LDCs currently do not.

V. State of play on financing proposals

Many national governments and regional/economic coalitions have come out in support of certain proposals for a future international climate finance mechanism. At the recent Major Economies Forum on Energy and Climate, which included the G8, the declaration of the leaders included the following statement on the future of climate finance:

> "The expertise of existing institutions should be drawn upon, and such institutions should work in an inclusive way and should be made more responsive to developing country needs. Climate financing should complement efforts to promote development in accordance with national priorities and may include both program-based and project-based approaches. The governance of mechanisms disbursing funds should be transparent, fair, effective, efficient, and reflect balanced representation. Accountability in the use of resources should be ensured. An arrangement to match diverse funding needs and resources should be created, and utilize where appropriate, public and private expertise. We agreed to further consider proposals for the establishment of international funding arrangements, including the proposal by Mexico for a Green Fund."

At the conclusion of the meeting, US Special Envoy for Climate Change Todd Stern conveyed both support for the Mexican proposal as well as sustained interest in the Norwegian proposal. The support for the Mexican Green Fund is based partly on its ability to take advantage of existing institutions, such as the World Bank. Stern reported "I think they [the World Bank and other international financial institutions] have good notions about governance which in our view ought to be fair and balanced between developed and developing countries, and they have good ideas about accountability of funding."

In a recent statement made by the British government, Gordon Brown indicated that the country is willing to support an international mechanism for the setting aside and auctioning of a small percentage of national emissions allowances, as Norway has proposed. Brown also mentioned interest in exploring other means of raising international finance, such as through aviation and maritime emissions, as well as the use of "forest-backed bonds" to bring early finance into sustainable forest management.

On the governance considerations of a future climate finance mechanism, the 2009 G8 Statement promoted efforts to ensure that the governance of mechanisms disbursing funds is transparent, fair, effective, efficient and of balanced representation among developed and developing countries. The statement also stressed the importance of "building on existing instruments and institutions, such as the GEF, multilateral development banks, adaptation funds and bilateral assistance agencies and the Climate Investment Funds" for a future international climate finance mechanism.

VI. Criteria for evaluating proposals

In order to ensure that proposals for revenue raising are internationally acceptable, they must satisfy the UNFCCC's criteria of being adequate, predictable, additional to current ODA funding commitments and based on the "polluter pays principle". These criteria were further emphasised in the Bali Action Plan and in the African Group's submission to the UNFCCC in April 2009. As such, an assessment of the proposals against these criteria is essential.

- **Adequacy:** Funds generated are equal to the scale of the task identified;
- **Predictability:** Funding is secure (without unexpected fluctuations) over the medium term;
- **Additionality:** Funds provided are more than existing aid commitments;
- **Polluter pays:** Financial contributions are relative to the quantity of emissions produced.

Similarly, in order to understand the full implications of the proposed institutional arrangements for climate finance, the different options can be evaluated according to their accountability, representation, transparency and coordination. These criteria are described here:

- **Accountability:** Fund management is accountable to the COP;
- **Equitable representation:** There is a balanced representation of stakeholders involved in the decision making of the funds;
- **Transparency:** All information regarding the financial institution and its decision making processes are clear and available to the public;
- **Coordination:** Funding streams are coordinated with other sources of funding, to avoid fragmentation and overlap.

VII. Issues for consideration

A few crosscutting issues relevant to Africa are important to highlight when considering the future of climate finance.

COORDINATING CONVENTION AND NON-CONVENTION FUNDS

Given the current momentum of both bilateral and multilateral climate funds established outside the UNFCCC and the preference of some donor countries for channelling funds according to their own priorities, it is likely that there will be a coexistence of both Convention and non-Convention funds available for Africa. As such, African governments may need to manage multiple funding streams, creating an environment not dissimilar to the current flows of development assistance, leading to high transaction costs to the recipients. Closer harmonisation of the various funding efforts will need to be closely managed and monitored.

BUILDING CAPACITY

Within the context of "scaling up" financial flows for climate change, institutional capacity needs to be built up in the recipient country so that it can absorb and use new funds effectively. Even when adequate funds are raised and properly allocated to countries most in need, institutional, technical or managerial capacity constraints can prevent successful implementation. This should be taken into account in the design and implementation of any new financial framework of the post-2012 regime. Aside from this, the issue of procedural complexity common to international funding instruments merits some attention. A move towards simplification in access to funding could be beneficial.

Moreover, given that financing needs are likely to outweigh available resources significantly, Africa will be competing with other regions for a limited pot of funds. Building capacity, including sharing information on funding alternatives and procedures, is one way African governments can gain a competitive advantage to attract such funds.

INTEGRATING ADAPTATION FINANCE WITH DEVELOPMENT FINANCE

There are strong links between adaptation and development, from both a theoretical and a financial perspective. Development is an essential component of adaptation, as it enhances resilience and increases capacity. More often than not, adaptation to climate change will be carried out alongside development interventions. Lord Nicholas Stern argues that funding for development and for adaptation should be complementary, given that "adaptation is essentially development in a more hostile climate". He states: "It is disruptive, and practically and conceptually confusing, to attempt a rigid and comprehensive separation of elements of investments in physical or human capital which are marked for 'development' or 'adaptation'". Efforts to streamline adaptation finance with ODA should be made, while avoiding displacement of current ODA streams essential for development.

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Acronyms

Key Acronyms	
AAU – Assigned Amount Unit	JI – Joint Implementation
AfDB – African Development Bank	LDC – Least Developed Country
AFOLU – Agricultural, Forestry and Other Land Use	LDCF – LDC Fund
A/R – Afforestation/Reforestation	LIC – Low-income Country
AUC – African Union Commission	MAF – Multilateral Adaptation Fund
BDEAC – Central African States Development Bank	MDG – Millennium Development Goal
BSM – Burden Sharing Mechanism	MDTF – Multi-donor Trust Fund
CDM – Clean Development Mechanism	MFA – Ministry of Foreign Affairs
CER – Certified Emission Reduction	MIC – Middle-income Country
COP – Conference of the Parties	MIGA – Multilateral Investment Guarantee Agency
DNA – Designated National Authority	NCCF – National Climate Change Funds
EC – European Commission	NEPAD – New Partnership for Africa's Development
ECOWAS – Economic Community of West African States	NF – Nairobi Framework
ETS – Emissions Trading Scheme	ODA – Official Development Assistance
EU – European Union	OECD – Organisation for Economic Co-operation and Development
GCCA – Global Climate Change Alliance	pCDM – Programmatic CDM
GCFM – Global Capital Fund Mechanism	REDD – Reducing Emissions from Deforestation and Forest Degradation
GEF – Global Environment Facility	SCCF – Special Climate Change Fund
GNP – Gross National Product	SIDS – Small Island Development State
HIC – High-income Country	UNCTAD – UN Conference on Trade and Development
IAPAL – International Air Passenger Adaptation Levy on fuels	UNDP – UN Development Program
IATAL – International Air Travel Adaptation Levy	UNECA – UN Economic Commission for Africa
IET – International Emissions Trading	UNFCCC – UN Framework Convention on Climate Change
IFF – International Financing Facility	WCCF – World Climate Change Fund
IMERS – International Maritime Emissions Reduction Scheme	WRI – World Resources Institute
IPCC – Intergovernmental Panel on Climate Change	

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[1] Under the CDM, buyers from developed countries acquire Certified Emission Reductions (CERs) for each tonne of greenhouse gas that is prevented from entering the atmosphere through the CDM project. The CDM provides companies and governments which have legally binding greenhouse gas targets under the Kyoto Protocol the option to buy verified CERs.

[2] Non-Annex I Parties to the UNFCCC are mainly developing countries which, unlike Annex I Parties, are not subject to emissions reduction commitments under the Kyoto Protocol.

[3] CDM transactions declined 12% to around US$6.5 billion, compared with US$7.4 billion reported in 2007.

[4] A multi-donor initiative set up under the aegis of the UNFCCC to provide support to Africa in CDM activities.

[5] For a CDM project, emissions reductions must be beyond – *or in addition to* – what would have happened in the absence of the project.

[vi] IET forms one part of the three emissions trading schemes allowed under the Kyoto Protocol − the other two mechanisms are the CDM and JI – through which Annex I countries can exchange carbon credits.

[vii] The Swiss MAF is proposed to become part of the financial architecture developed under the Bali Action Plan, and would be able to operate complementarily with other similar facilities. It would be governed by the already existing structure under the Kyoto Protocol Adaptation Fund, at least in the start-up phase.

[viii] It is important to note that each proposal uses its own unique set of assumptions (e.g. carbon price, carbon cap, etc) when estimating revenue figures. While streamlining the assumptions can create a truer comparison, the current figures provide a general idea of the sheer scale of funds likely to be generated from each proposal.

[ix] From the AWG/LCA.6 Finance Text, 2009.

[x] The Major Economies Forum on Energy and Climate includes the leaders of Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, South Africa, the United Kingdom and the United States.