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EUROPEAN COMMISSION

Brussels, 08.04.2011  
SEC(2011) 487 final

**COMMISSION STAFF WORKING DOCUMENT**

**Scaling up international climate finance after 2012**

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## LIST OF ACCRONYMS

AAU	Assigned Amount Unit
AGF	UN Secretary-General's High-level Advisory Group on Climate Change Financing
AMC	Advance Market Commitment
BFI	Bilateral Financial Institution
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO <sub>2</sub>	Carbon dioxide
DAC	Development Assistance Committee (of the OECD)
DCI	Development Cooperation Instrument
ECOFIN	Economic and Financial Affairs Council
EFC	Economic and Financial Committee
EPC	Economic Policy Committee
EIB	European Investment Bank
ETS	Emission trading scheme
EU	European Union
EU-27	European Union of 27 member states
EUR	Euro
FI	Financial Institution
FTT	Financial transactions tax
G-20	Group of 20
GDP	Gross domestic product
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GIIF	Global Index Insurance Facility
GNI	Gross national income
ICAO	International Civil Aviation Organisation
IFC	International Finance Corporation
IMF	International Monetary Fund
IMO	International Maritime Organisation
JWG	Joint EFC/EPC Working Group on international financial aspects of climate change
MDB	Multilateral Development Bank
MFF	Multiannual Financial Framework (of the EU budget)
MRV	Measurement, reporting and verification
NAMA	Nationally appropriate mitigation action
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
REDD+	Reducing Emissions from Deforestation and Forest Degradation, including the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
SDR	Special Drawing Right
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNFCCC	United Nations Framework Convention for Climate Change
US	United States of America

## EXECUTIVE SUMMARY

The ECOFIN of December 2010 invited the Commission to prepare a detailed analysis setting out the key elements needed to deliver scaled-up climate finance to developing countries after 2012. In Cancún in December 2010 developed countries committed to a **goal of mobilizing jointly USD 100 billion per year by 2020** to address the needs of developing countries in the context of meaningful mitigation action and transparency on implementation. This Staff Working Document provides an assessment, from an EU policy perspective, of the potential sources for scaling up climate finance, with a more detailed analysis in the Annex, and elaborates on the key elements of a governance framework for implementing such finance on the basis of the report by the UN Secretary-General's High-level Advisory Group on Climate Change Financing (AGF). This assessment broadly confirms the AGF report's overall conclusion that it will be "**challenging but feasible**" to meet the goal of mobilising USD 100 billion per year by 2020, assuming that the **EU's share could be about one third** of this amount. A mix of **public finance, carbon market finance and private finance** – and some of these sources leveraged by **development banks** - will be required to deliver this amount of funding.

Several of the **public sources** related to carbon pricing assessed in the AGF report are already in place in the EU or will be increasingly used in the next years, even if severe fiscal constraints in most Member States imply that there will be competing uses for their revenues. The largest source of innovative finance in the EU is the **auction revenues** under the EU Emission Trading System (ETS) which could potentially deliver revenues of more than EUR 20 billion per year by 2020, of which Member States should use at least half to tackle climate change in the EU and third countries. Furthermore, several Member States have already introduced **carbon taxes** or are planning to do so, even if these are usually a general source of budget revenue.

At the global level, **international maritime and aviation transport** could be promising new sources for raising climate finance. The AGF report estimates that, if applied globally, revenues from schemes addressing aviation and maritime transport could – under certain assumptions – generate up to USD 24 billion worldwide, assuming a carbon price of 50 USD per tonne of CO<sub>2</sub>. Furthermore, a **tax on financial transactions** would have a significant revenue-raising potential. However, for revenues from these sources a global approach would be the preferred solution – which so far has not been achieved.

The **carbon market**, with a robust carbon price, is at the centre of the AGF's analysis and a precondition for delivering funding at the required scale. In order to achieve this, globally more ambitious emissions reduction targets and an expansion of emission trading schemes will be required. Significant financial flows have already been generated through the Clean Development Mechanism (CDM), notably from the EU. Current EU legislation allows for carbon offsets which could generate up to EUR 3 billion of financial flows to developing countries per year in the period 2013-2020, not taking into account additional flows triggered by investments underlying CDM projects. In order to fully use the potential of the carbon market for low-carbon investment in developing countries, a step-wise move to sectoral carbon market mechanisms is required. In the absence of an ambitious international climate agreement, the EU ETS will allow new CDM projects only from Least Developed Countries as of 2013.

**Private finance** will have a key role in scaling up international climate finance. Foreign direct investment in climate-related business sectors in developing countries is already in the order of USD 20 billion per year worldwide, and even higher if more broadly defined, but the net benefits of such flows for the climate are likely to be much lower. The main prerequisite for further scaling up such private flows will be improved general business and policy frameworks in developing countries. As a complement, public instruments (e.g. guarantees, risk-sharing instruments, technical assistance, or concessional loans) can help to leverage private finance for climate actions in developing countries.

**Multilateral and other development banks** can play an important role in broadening the sources of and access to climate finance. They exert a substantial leverage which goes beyond the purely financial domain through providing technical assistance as well as financial and sector expertise alongside funding. They can play a catalysing role in channelling funds from public and private sources to important climate investment projects (“crowding-in”). In countries outside the EU the EIB financed EUR 2 billion for climate action in 2010, and this amount is likely to increase further until 2013 due to additional initiatives to strengthen the EIB's lending capacity for external climate action projects.

It is equally important that the funds raised and channelled to developing countries are **spent wisely** within a sound governance framework which ensures an efficient implementation of scaled up climate finance. For a maximum of coherence between development aid and climate finance, the most important approach in each country or region will be to integrate development and climate change challenges in **one single low-carbon development strategy**. To improve their absorption capacity, recipient countries need to enhance their **capacity for managing climate projects** financed by a predictable and gradual build-up of climate finance flows.

Strong international and European **coordination** will be required on various issues of governance and delivery. In particular, a **fair international burden-sharing** among developed countries needs to be found. If based on greenhouse gas emissions and the ability to pay, the EU's share would be about one third if both criteria were given an equal weight. In the context of meaningful mitigation action and transparency on implementation, it will be important to **maintain global funding levels after 2012** at least at the level of the fast-start financing period. The **trajectory of scaling up from 2013 to 2020** will depend largely on the actual climate actions taken in developing countries and on further progress in the international negotiations. Furthermore, the measurement, reporting and verification (“MRV”) of scaling up needs further work, including the difficult issue of monitoring and accounting climate-related private financial flows.

In complementing Member States efforts and depending on the approach taken for the post-2013 EU multiannual financial framework, the **EU budget after 2013** could take a more prominent role in channelling EU climate finance to developing countries. Current funding of climate-relevant projects in the EU budget for external actions is about EUR 400 million per year in the period 2007 to 2013. Decisions will be required on the design of delivery mechanisms and financial instruments in the EU budget to deliver climate finance to developing countries. The pros and cons of an EU budget contribution to the Green Climate Fund need to be further considered.

## 1. CONTEXT

**In Cancún in December 2010 the 16<sup>th</sup> Conference of the Parties (COP16) to the United Nations Framework Convention for Climate Change (UNFCCC), developed countries promised a significant scaling up of climate finance to developing countries.** In taking up most of the elements of the December 2009 Copenhagen Accord, the COP16 recognised that "developed country Parties commit, in the context of meaningful mitigation actions and transparency on implementation, to a goal of mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries". These funds would come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources. International funds would complement domestic financial sources mobilised in developing countries. The scale of the support would also depend on the financial capability of developing countries.

**In November 2010, the UN Secretary-General's High-level Advisory Group on Climate Change Financing (AGF)<sup>1</sup> presented a report on potential sources of revenue.** The AGF developed practical proposals on how to significantly scale-up long-term financing from various public private sources as well as carbon markets and development banks, and how best to deliver it. The Group also examined the need for new and innovative long-term sources of finance, in order to fill the gap in international climate financing. The AGF report concluded that it is "challenging but feasible" to meet the goal of mobilising USD 100 billion per year by 2020.

**EU Finance Ministers asked the Commission and the EFC/EPC to prepare a detailed analysis based on the AGF report.<sup>2</sup>** In the conclusions of 7 December 2010 the ECOFIN Council took note of the AGF report and invited "the Commission and the EFC/EPC to prepare a detailed analysis based on the AGF report setting out the key elements of the mix of international and national, public and private finance instruments needed to deliver scaled-up financial flows after 2012 in the context of a binding and comprehensive global agreement." Following a request from the G20 Seoul Summit of November 2010, G20 Finance Ministers also discussed the AGF report at their meeting in February 2011 and agreed to pursue discussions on mobilizing sources of financing.

**This Commission Staff Working Document responds to the ECOFIN invitation of December 2010.** This document provides an assessment, from an EU policy perspective and based on the options considered in the AGF report, of the potential sources of revenues for scaling up climate finance (section 2); a more detailed analysis on the various sources is presented in the Annex. The document further elaborates on the key elements of a governance framework for implementing such scaled up finance or, in the words of the AGF report, how to spend such funds wisely (section 3). To facilitate discussions in the EU about the way forward, the more concrete actions suggested in this document are summarised in section 4.

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<sup>1</sup> Co-Chairs were Meles Zenawi, Prime Minister of Ethiopia, and Jens Stoltenberg, Prime Minister of Norway.

<sup>2</sup> ECOFIN Council conclusions on climate finance of 7 December, point 8.

## 2. POTENTIAL SOURCES OF REVENUES FOR SCALING UP CLIMATE FINANCE

**The debate on sources for long-term climate finance needs to be seen in the context of the wider search for new sources of financing to address both domestic and global challenges.** In an April 2010 Staff Working Document on "Innovative financing at a global level"<sup>3</sup>, the European Commission assessed the different options for raising revenues from innovative sources of financing related to the financial sector, climate change and development as the key global challenges. The document also noted that the global economic and financial crisis has created important needs for fiscal consolidation in EU countries and around the world. It found that, while reductions in expenditure and improvements in existing tax systems should be the main responses to these fiscal and global challenges, new non-traditional ways of raising public finance – 'innovative finance' - can make a significant contribution. The Commission used as assessment criteria the revenue-raising potential, the efficiency and stability of markets, effects on equity and income distribution, as well as legal and administrative aspects. The AGF report applied similar criteria, while adding acceptability, additionality and reliability, even if its focus is primarily on the revenue potential. In March 2011, the European Parliament adopted a resolution on "Innovative financing at a global and European level" recommending a taxation of the financial sector, Eurobonds and European project bonds, a carbon tax, as well as innovative sources of financing for development.

**Public finance alone will not be able to shoulder the burden of international climate finance.** Even if parts of the private sector also have to undergo processes of debt deleveraging, the 2008/2009 financial and economic crisis implied a substantial increase in sovereign debt in many developed countries, requiring continued efforts to consolidate public finance and to ensure long-term fiscal sustainability in the years to come. As public sources of revenue already play an important role in tackling climate change, an adequate mix of public and private finance needs to be found for further significant increases.

**In September 2009 the Commission, in the context of the overarching objective of keeping the global average temperature increase below 2 degrees Celsius, estimated the financing requirements for adaptation and mitigation actions in developing countries at roughly EUR 100 billion per year by 2020 (at 2005 prices).**<sup>4</sup> This amount was derived from the sectoral financing needs for mitigation actions in energy and industry (EUR 71 billion), agriculture (EUR 5 billion) and deforestation (EUR 18 billion), as well as needs for adaptation (EUR 10-24 billion). The main sources to finance these needs were estimated to be about EUR 38 billion from international carbon markets (if properly designed including new market mechanisms), between EUR 22 and 50 billion from international public funding, and the remainder from private and public finance in developing countries. These estimates, which were endorsed by the European Council in October 2010, are higher than the Cancún commitments mainly because they include developing countries' own financial efforts.

**The assessment of sources in this document, based on further detailed analysis presented in the Annex, broadly confirms the AGF report's overall conclusion that it will be "challenging but feasible" to meet the goal of mobilising USD 100 billion per year by**

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<sup>3</sup> SEC(2010) 409 of 1 April 2010

<sup>4</sup> Communication on "Stepping up international climate finance: A European blueprint for the Copenhagen deal"; COM(2009)475



**2020 to address climate change in developing countries, assuming that the EU's share – public and private combined – could be about one third of this amount (cf. section 3.2 for details on this estimation).** This is contingent upon a number of conditions which need to be in place. As stated in the Cancún Agreements, a variety of sources needs to be mobilised, including private finance which will have an important role to play. Furthermore, the commitment only holds in the context of meaningful mitigation actions and transparency on implementation. Both developed and developing countries need to put in place and implement actions that will deliver on the global objective of staying below 2 degrees Celsius. However, countries' current emission reduction pledges made under the Copenhagen Accord and the Cancún Agreements fall short of what will be needed to stay within this global objective. This means that it is questionable whether at the currently insufficient level of ambition it would be necessary to mobilise financial flows on the envisaged scale, especially for mitigation. Provided that the overall level of ambition will be increased in the foreseeable future and actually be implemented, more widespread and systematic pricing of greenhouse gas emissions will be necessary to attract greater flows of climate finance. The AGF also noted the role of a better investment climate in developing countries, and emphasised the importance of a carbon price in increasing the size of private and public flows.

## **2.1. Public sources**

**Referring to specific public sources in order to use their revenues for specific public expenditures, such as climate change policies, implies the application of some form of earmarking (or hypothecation) of such revenues.** As a general principle, revenues from specific taxes should not be earmarked to specific public expenditure but used to finance general government spending. Governments usually follow this principle and use earmarking only in special cases, and in some countries earmarking is even forbidden by the budget law since it can lead to budgetary inflexibility by restricting the decision-making powers of the current and future governments. Moreover, the revenue generated from a particular source or sources may be greater than - or less than - the desired or appropriate level of spending on climate change. Nor can earmarking ensure that revenues from a new source are additional spending, as the new revenues may simply replace spending previously financed from other public revenues. In the absence of any explicit earmarking it can also be argued that new revenue sources contribute to creating the fiscal space which allows a government to increase expenditure on specific items. Strong earmarking would also be complicated by the fact that different sectoral policies are looking at similar sources of financing. The EU Development Ministers concluded in June 2010 that the EU should consider innovative sources of financing for development “with significant revenue generation potential”. The UN Convention on Biodiversity also includes financial commitments from developed countries for which new sources of finance are being considered, even if there is a significant potential for synergies between biodiversity and climate actions.

**However, under specific circumstances earmarking, in particular from innovative financing instruments, can provide more stable and more predictable finance and a higher political visibility.** Specifying the public good for which revenues will be used may increase the acceptance by taxpayers for innovative finance instruments. Examples of earmarking can be found in many countries, in particular for taxes and other market-based instruments in the area of environment. In many cases, earmarking only reflects a political commitment (soft or weak earmarking).

**Governments that are unwilling to introduce new taxes or to increase the overall tax burden in their countries will prefer direct budget contributions to scale up public sources for international climate action.** Such contributions would need to be financed by increasing the revenues from existing sources, reducing public expenditure for other purposes, or incurring more public debt. Considering that governments are currently already exploring all these options in their efforts towards restoring fiscal sustainability, this is an equally ambitious approach as introducing new sources and should also be taken into account as a relevant option. However, given the need for fiscal consolidation, spending on new areas may be extremely difficult without using new sources of revenue, or at least additional revenues from existing sources.

**Several of the public sources related to carbon pricing assessed in the AGF report are already in place in the EU or will be increasingly used in the next years, notably those related to the EU Emission Trading System (ETS).** The EU's ambitious objectives for reducing greenhouse gas emissions provide it with an explicit carbon price which provides a new source of public revenues. The largest source is the auction revenues under the EU ETS. ETS auctions of allowances for greenhouse gas emission sources in energy and industry could deliver revenues of more than EUR 20 billion per year by 2020. According to the ETS Directive, Member States should spend at least half of these amounts on activities related to climate change, energy and low-emission transport, including in developing countries. Emissions from aviation will be included in the EU ETS from 2012. The revenues from the 15% of the allowances to be auctioned, which Member States should use to tackle climate change in the EU and third countries, could be around EUR 600 million per year.<sup>5</sup> Furthermore, according to recital 3 of the 2009 amendment of the ETS Directive, the Commission should make a proposal to include international maritime emissions in the EU reduction commitment with effect from 2013 if no international agreement including these emissions has been reached by the end of 2011. Such a proposal should minimise any negative impact on the Community's competitiveness while taking into account the potential environmental benefits. Furthermore, several Member States have already introduced carbon taxes or are planning to do so, even if these are usually a general source of budget revenue.

**Other sources discussed in the AGF report would require enhanced global cooperation.** Notably, the proposal to sell or auction a share of Assigned Amount Units (AAUs) is unlikely to be a relevant source of revenues. It would require addressing the issue of surplus AAUs from the first commitment period. In addition, this source of finance is uncertain and the US and emerging market economies would not contribute. Putting a price on greenhouse gas emissions from international maritime and aviation transport could also provide sizeable revenues, but making full use of the global revenue-raising potential of these sources will depend on international agreement in the relevant organisations (UNFCCC, ICAO and IMO). In view of major risks of relocation, a broad-based tax on financial transactions would be most effective under a global agreement, at least among the main financial centres, which has so far proved impossible to achieve. The Commission is therefore assessing the impact of different options of financial sector taxation. The cumulative effects of all measures directed at the financial sector – both taxation and regulation - must also be taken into account. For the revenues from these sources, as for others, it would still remain to be decided whether they would be used for international climate financing.

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<sup>5</sup> Assuming a carbon price of EUR 20 per tonne of CO<sub>2</sub>.

## 2.2. Carbon markets

**The carbon market is both an important source of climate finance and, with a robust carbon price, is likely to deliver a substantial contribution to emissions abatement also in developing countries.** Commission estimates show that establishing a carbon market for the group of developed countries would cut global mitigation costs significantly. These gains from cost reductions could be used to stimulate own appropriate action in developing countries

**Financial flows delivered by the carbon market depend on a number of key architectural elements of the international climate agreement.** Commission analysis shows that with current pledges, allowing the full banking of the Assigned Amount Unit surplus and choosing the Kyoto Protocol target as a starting level for the emission reduction paths for the period 2013-2020 would result in no demand for international credits additional to what has already been enabled by the current legislation and in the cap-and-trade systems planned by other developed countries. The price signal would not be sufficiently strong. In such a scenario, a larger share of the incremental costs of abatement measures would need to be financed by public finance, which is not feasible in current economic circumstances and also questionable as an option in better economic times.

**The carbon market already generates important financial flows to developing countries through the Clean Development Mechanism (CDM), but it urgently needs to be reformed.** The USD 7 billion invested each year so far were mainly concentrated in a few emerging market economies. To achieve a better geographical balance and increase finance for the poorest countries, a reform is needed to provide a new and more ambitious carbon market mechanism, while over time increasingly focusing the CDM on the Least Developed Countries. The EU has been incentivising this development through its domestic legislation by prohibiting the use of credits from certain industrial gas projects in the post-2012 EU ETS. The CDM, as a pure offsetting and project-based mechanism, will not be able to scale up efforts to the level necessary to pursue emission pathways consistent with the 2 degrees Celsius objective. The focus should be on using opportunities for emission reductions in developing countries beyond low-cost options. To achieve this, a move away from the CDM towards new and more ambitious carbon market mechanisms is needed, in particular in the economically more advanced developing countries and internationally competitive sectors. Therefore a step-wise move to a new market mechanism at sectoral level is needed in addition to incremental CDM improvements. The EU will argue for the establishment of new carbon market mechanisms with a sectoral or broad coverage at COP 17 in Durban.

**The EU, having the world's largest cap-and-trade system, generates a substantial demand for international emission reduction credits from third countries.** Since its launch in 2005 the EU Emission Trading System has rapidly established itself as the main driver of the emerging international carbon market. The total volume of transactions in carbon markets worldwide amounted to EUR 103 billion in 2009, of which EUR 89 billion was traded in the EU ETS. Current EU legislation allows for carbon offsets which could generate roughly EUR 3 billion of financial flows to developing countries per year,<sup>6</sup> not taking into account additional flows triggered by investments underlying CDM projects. As of 2013, the EU ETS allows credits from new CDM projects registered only in Least Developed Countries

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<sup>6</sup> Assuming the current price for CDM credits of some EUR 13 per tonne of CO<sub>2</sub>.

in the absence of an ambitious international climate agreement. EU legislation gives continued recognition of CDM credits in the ETS even in the absence of a second commitment period under the Kyoto Protocol. The example of the EU ETS could help countries planning to set up domestic cap-and-trade systems which could then be linked together to create a stronger international carbon market.

### 2.3. Private finance

**Developing countries' transition towards low-carbon climate-resilient economies requires significant investment of which a major share will have to be financed by private sources.** Leveraging private finance from developed countries to complement domestic private finance in developing countries will be important in view of their restricted access to finance and the potential to transfer technology. In addition to the serious constraints on public finance in most developed countries, private finance is important because private actors are usually better than the public sector at detecting the best uses for scarce capital. At the same time, developed countries' investors, in particular institutional ones, have considerable interest in identifying good investment opportunities with a longer-term horizon and an interesting risk/return profile. Finally, due to possible absorption problems of significant aid inflows (see also section 3.1) it is in developing countries' own interest to attract private flows which, in addition to addressing challenges of climate change and complemented by growth-oriented development aid, can at the same time increase the productive capacity of their economies.

**The AGF report adequately describes the main barriers for private investment and the options for public interventions.** A difficult business investment climate, project risks, inadequate access to finance and insufficient risk-adjusted returns are identified as key barriers to private investment. Public interventions can address these barriers by strengthening the general business investment climate, supporting risk-mitigating instruments, providing better access to finance, and giving revenue support through concessional instruments. The AGF estimates the potential scale of international private investment in mitigation at USD 100 to 200 billion per year, recognising the uncertainty surrounding the embedded assumptions as well as the need to distinguish between these gross flows and the net benefits with a view to tackling climate change.

**Private financial flows will depend largely on developing countries' capability to create a general business environment which is attractive for domestic and international investment.** International public support to leverage private finance will not be able to compensate for policy failures in these respects. The international and domestic policy framework on climate change should also provide the main incentives for private investment in mitigation and adaptation. However, in Least Developed Countries (LDCs) international public finance might have to play an important role in leveraging private finance, in particular for adaptation projects.

**Foreign direct investment (FDI) in low-carbon industries already accounts for significant financial flows into developing countries.** UNCTAD estimates that low-carbon FDI flowing into developing countries was nearly USD 20 billion per year on average

between 2003 and 2009.<sup>7</sup> The OECD estimates annual green FDI in developing countries at USD 7.6 billion if narrowly defined and at almost USD 190 billion if broadly defined.<sup>8</sup> In view of this wide range of estimations and their implication for the Cancún commitment on climate finance, more progress will be needed to find on an operational definition.

**However, there is currently no internationally agreed approach for monitoring and accounting the net benefits of international financial flows from the private sector to climate actions in developing countries.** The AGF acknowledges that significant work will be required to develop an acceptable approach. For gross private flows of USD 200 billion per year, the AGF report provides an example for the calculation of net flows which would amount to USD 20 to 24 billion per year.<sup>9</sup> The available options on the monitoring and accounting of private climate funding need to be further analysed, possibly in cooperation with relevant international organisations such as UNCTAD and OECD.

**Public sector support, financial or non-financial, can promote international private investment on climate action in developing countries to address a number of specific barriers and risks which private investors will be reluctant to take on.** In using such instruments the main difficulty is, as for all subsidies, to determine the adequate design and size of the public contribution. In theory, the share of public financing should be limited to the correction of market failures or externalities, such as for example the incremental costs of mitigation measures. In practice, this is very difficult to quantify with some precision and may vary significantly between countries and markets. There is thus a need to identify the extent to which public support is required to stimulate private investment in order to compensate for the provision of public goods related to the global climate and embedded in private investment projects. On the other hand, to ensure that taxpayers receive good value for money, such public support must be designed in a way that avoids creating deadweight and moral hazard effects as well as crowding out private activities. The latter can be a particular problem in developing countries where nascent markets and small firms are very fragile and may collapse upon excessively strong public interventions.

**Various instruments are available to leverage private finance for climate actions in developing countries (see Annex for further details).** Instruments to improve the risk-return profile include the provision of guarantees, technical assistance or interest rate subsidies to support the issuance of debt for climate projects. Public-Private Partnerships (PPPs) can spread the costs and risks of financing of public goods over the lifetime of the asset which can considerably alleviate the short to medium-term pressure on public budgets. Using public funds to inject equity capital into companies or projects can be another mechanism to mobilise private investment. Public support for the use of market-based insurance schemes covering natural disasters can leverage sizeable amounts of private finance for adaptation.

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<sup>7</sup> This takes into account FDI into three key low-carbon business areas (renewables, recycling and low-carbon technology manufacturing). UNCTAD World Investment Report 2010 - Investing in a low-carbon economy; New York and Geneva 2010.

<sup>8</sup> The estimates are annual averages between 2005 and 2007. The narrow definition includes only FDI in electricity, gas and water sectors and the broad definition FDI in all mitigation-relevant sectors. OECD: Defining and Measuring Green FDI: Preliminary Findings and Issues for Discussion; COM/DAF/INV/ENV/EPOC(2011)3; Paris, January 2011.

<sup>9</sup> This is based on applying a 2% lower return expectation, a project lifetime of 10 years, and a cost of capital between 10% and 15%. The annual cash flow of USD 4 billion would in this case have a net present value of USD 20 to 24 billion.

Other examples of innovative mechanisms that could raise private finance for climate actions are Advance Market Commitments (AMCs), tax discounts, access to finance, or standards of corporate social responsibility.

**The provision of guarantees by the public or semi-public sector is an important instrument to support the issuance of debt for climate projects.** In the area of foreign trade in general this can take the form of export credit guarantees and trade finance. Several proposals on 'green bonds' to finance climate or energy projects also refer to guarantees in the form of Special Drawing Rights (SDRs), guarantees by international financial institutions, or default guarantees for a 'green bank'.<sup>10</sup>

**Practical steps could be envisaged to further advance the conditions required for a more significant scaling up of private investment in climate action in developing countries.** In particular, public-private sector dialogues could be stepped up to identify common interests, the scope for cooperation and the appropriate design of public sector support instruments. The UK government already took such an initiative in 2010 by launching the Capital Markets Climate Initiative.

## 2.4. Development Banks

**Multilateral and other development banks can play an important role in leveraging the sources of and access to climate finance.** According to UNEP, total public climate financing is estimated to have reached nearly USD 30 billion in 2009 of which Multilateral Development Banks (MDBs) accounted for more than half (about USD 16.5bn).<sup>11</sup> The AGF report estimates that a balance sheet leverage factor of 3 to 4 of lending per paid-in resource could be delivered for gross flows and of 1.1 for net flows. In addition, development banks can exert a substantial leverage which goes beyond the purely financial domain through providing technical assistance as well as financial and sector expertise alongside funding. They therefore play a catalysing role to channel funds from public and private origin to important investment projects ("crowding-in"). Given its significant combined voting power in the different institutions, the EU has a unique opportunity to shape the debate by agreeing on a common EU stance prior to the discussions with global partners.

**MDBs including the European Investment Bank (EIB) and bigger Bilateral Financial Institutions (BFIs)<sup>12</sup> have been stepping up their programmes, expertise and facilities in the area of climate investments over the last years.** In countries outside the EU the EIB financed EUR 2 billion for climate action in 2010. This amount is likely to increase further until 2013 due to the agreed increase in the Energy Sustainability Facility from EUR 3 to 4.5

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<sup>10</sup> Hugh Bredenkamp and Catherine Pattillo: Financing the Response to Climate Change, IMF Staff Position Note SPN10/06 of 25 March 2010; Green Sectoral Bonds – Draft Concept Note for Review & Discussion, IETA Position Paper of 25 May 2010.

<sup>11</sup> UNEP (United Nations Environment Programme), "Bilateral Finance Institutions and Climate Change – A Mapping of 2009 Climate Financial Flows to Developing Countries", 2010

<sup>12</sup> Very active BFIs on a global scale are the French Agence Française de Développement (AFD), the German Kreditanstalt fuer Wiederaufbau (KfW), the Nordic Environment Finance Corporation (NEFCO) and the Japan International Cooperation Agency (JICA).

billion and the Commission proposal to allocate an additional EUR 2 billion until 2013 across different regions for financing climate action projects.<sup>13</sup>

**Innovative financial instruments can have a catalytic effect and help bridge some of the financing gaps.** The blending of grants and loans as well as equity and quasi-equity constitute innovative mechanisms to enhance support to EU external priorities and to multiply the impact of EU external assistance. In the current context of scarce resources, exacerbated by the financial and economic crisis, these mechanisms can help to achieve easier and faster access to financing, higher financial and political leverage and more flexibility. Additionally, while optimising financing packages for beneficiaries, blending is instrumental for increased donor cooperation and helps enhancing the visibility of European external assistance.

**At the same time, the use of innovative financial instruments has certain limits.** The design and implementation of new innovative financial instruments should be based on some key principles and conditions. In particular, they should be implemented in order to address sub-optimal investment situations, including high innovation risk or market failures that give rise to insufficient funding from market sources. Innovative financial instruments need to ensure added value, coherence and coordination, efficiency, as well as timeliness and flexibility. Finally, financial instruments should have a multiplier effect. Enhanced use of blending and innovative financial instruments also calls for a clearer division of labour between the various stakeholders. One option could be to delegate tasks to institutions with more specific expertise, thereby ensuring a better, more targeted and faster absorption of budgetary resources.

### **3. KEY ELEMENTS OF A GOVERNANCE FRAMEWORK TO IMPLEMENT SCALED-UP CLIMATE FINANCE**

**Activating the sources analysed above to scale-up international climate finance to developing countries can only be justified if these are channelled and implemented in an efficient way.** Without sufficient confidence that this will be the case, the mobilisation of sources of finance on the scale envisaged in the Cancún Agreements will not be feasible. In other words, there is a considerable responsibility vis-à-vis taxpayers in developed countries, the providers of private capital, and the citizens of recipient countries to ensure that tackling the challenges of climate change delivers good 'value for money'. There are a number of key elements which deserve particular attention. First, implementation will require coherence between climate finance and development aid. Second, there are several governance issues which need to be coordinated at international and/or European level. Third, the potential role of the EU budget in the implementation of scaled-up climate finance needs to be explored, bearing in mind the currently ongoing preparations for proposals on the post-2013 multiannual financial framework.

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<sup>13</sup> COM (2010) 174. The proposal is currently discussed by the European Parliament and the Council under the co-decision procedure.

### 3.1. Coherence between climate and development finance

**The activities needed to cope with climate change cannot be disentangled from general development efforts.** For example, better water management is a key element of adapting to climate change, but it is also needed to improve food security and ecosystem services that are of particular value to the poor. It will be important not to create parallel channels of delivery of climate and development finance, and to have a single development strategy that is climate-compatible covering both adaptation and mitigation aspects. Indeed, as noted in the Cancún Agreements, developing countries should be encouraged to develop low emission development strategies in the context of sustainable development.

**As the world's largest donor the EU and its Member States accounted for about 54% (over USD 70 billion) of the global annual official development assistance (ODA) flows in 2010.**<sup>14</sup> The EU and the Member States have taken decisive action to gradually integrate climate change issues into their development co-operation. Climate proofing and climate integration are an increasing part of the EU cooperation with partner countries and with international agencies. In many cases donor-financed climate projects will also contribute to development and therefore qualify as ODA according to the definition of the OECD Development Assistance Committee (DAC).

**The Cancún Agreements stress the need for new and additional finance.** Climate support for adaptation and mitigation should contribute to sustainable development and, as expressed by the European Council in October 2009, should not undermine or jeopardise the fight against poverty and continued progress towards the Millennium Development Goals. However, there is no internationally agreed methodology on how "new and additional" can be monitored.

**In order to ensure effectiveness and efficiency, climate finance should take on board the lessons from long-term development cooperation.** These lessons are summarised in the principles of aid effectiveness as reflected in the Paris Declaration on Aid Effectiveness and the subsequent Accra Agenda for Action. These principles include ownership by developing countries, alignment with partner countries' strategies and using their delivery systems, harmonisation of procedures, effective division of labour, and mutual accountability. Donor coordination, in particular at partner country level, will be essential to avoid overburdening the governments of developing countries.

**Whenever feasible, direct access by the beneficiary countries and implementation through budget support can also increase aid effectiveness and respond to country preferences.** The use of national systems and direct access enhances transparency and accountability towards domestic constituencies and taxpayers in developed countries. As a precondition for direct access, public finance management systems and accountability in national institutions must meet certain fiduciary and accountability standards. However, there is currently no agreed methodology for the accounting of budget support as climate finance. In view of the desirability of this aid modality to enhance aid effectiveness, progress towards agreeing on such a methodology will be important.

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<sup>14</sup> According to preliminary data by the OECD, including only those fifteen EU Member States that are members of the OECD Development Assistance Committee (DAC). According to Commission data, total ODA from the EU-27 was EUR 53.8 billion in 2010.



**The scaling up of climate finance also requires that recipient countries are able to absorb increased funding.** In particular in low-income countries the increased inflows of climate finance could be significant relative to the size of their economies and exceed the limits of their absorption capacity, notably planning and public finance management capacities. As noted above, the absorption of private finance will largely depend on the policy framework and the general business environment. Some of the finance should therefore be used to increase administrative and institutional capacities for policy implementation. Application of the principles of aid effectiveness will also help to overcome administrative absorption capacity constraints.

**The macroeconomic absorption of capital inflows, including climate funds, may create risks for growth and stability arising from a real exchange rate appreciation.** Any surge in foreign capital inflows – for example because of more development aid, commodity exports, remittances or portfolio investments - can cause a real exchange rate appreciation if the inflows are absorbed (i.e. not used for imports but translated into domestic demand). This real exchange rate appreciation can result from a nominal exchange rate appreciation and/or higher inflation. For example, shortages in skilled labour can translate into wage and price inflation. A real exchange rate appreciation implies a reallocation of resources from the tradables sector towards the non-tradables sector, usually interpreted as a loss of external competitiveness. Given that such a reallocation comes with costly adjustment processes (e.g. job losses in the tradables sector), a key question for the adequate policy response is whether such inflows are temporary or permanent. In the first case a macroeconomic policy response should try to avoid the temporary real exchange rate misalignment, in the latter case the change in economic fundamentals makes an adjustment in resource allocation desirable.<sup>15</sup>

**The main policy implications with a view to the absorption capacity are the need to ensure (i) a predictable and gradual building up of climate and development finance and (ii) an enhanced capacity of partner countries to manage such an increase in flows.** Good donor coordination within countries will be important to avoid volatile aid inflows. Evaluating the country-specific macroeconomic impact of aid inflows could be a further useful instrument in order to identify and avoid possible problems. The IMF and World Bank have started in 2005 some analysis of scenarios for scaled up aid inflows. These institutions could be asked to transfer such analyses to scaled-up flows of climate finance and integrate relevant results into their country programmes and policy advice.

### **3.2. Effective international and European coordination**

**Several important governance issues need to be well coordinated at international and European level.** Such issues include the trajectory from the fast-start finance period ending in 2012 towards the goal of USD 100 billion per year by 2020, the arrangements for a fair international burden-sharing, the implementation of the governance provisions in the Cancún Agreements including the Green Climate Fund, as well as the measurement, reporting and verification (MRV) of climate finance and actions.

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<sup>15</sup> The latter case is often related to commodity booms and labelled as "Dutch disease effect". See for example Nicolás Magud and Sebastián Sosa: When and why worry about real exchange rate appreciation? The missing link between Dutch Disease and growth; IMF Working Paper WP/10/271 of December 2010.

**At the Cancún conference all key developed countries reported on their progress in the implementation of fast-start finance commitments.** The swift and effective implementation of USD 30 billion of fast-start funding from 2010 to 2012 as committed in Copenhagen, in partnership with developing countries, is a critical step in equipping developing countries with the capacity to deal with the adverse effects of climate change. The reports provided a comprehensive overview of the types of activities prioritised by donors, the vehicles used for deployment of these funds and the progress made to date. In addition, developing countries were able to access information on the funds available in different regions and for different countries. These reports also contributed to a constructive atmosphere throughout the negotiations.

**Fast start funding needs to be used decisively to prepare for the efficient implementation of a new climate regime and scaled-up financial flows in the future.** Furthermore, lessons learnt from the implementation of fast-start finance need to feed into a strategy for post-2012. First, the need and importance of setting up an efficient system of monitoring and reporting of EU climate finance was generally recognised. It will be important to further address any remaining shortcomings detected in this respect in the period of fast-start finance for the period after 2012. Second, there seems to be scope for further ex ante coordination with a view to the geographic and sectoral balance of climate action among Member States. Third, the large majority of bilateral actions are rather small, pointing to possible efficiency losses due to fragmentation, increasing the burden for beneficiary countries. Therefore, possibilities of joint actions among Member States, such as the Global Climate Change Alliance, could be worth exploring to enhance the efficiency of climate projects.<sup>16</sup>

**The Cancún Agreements do not provide targets or trajectories between the 2010-12 period of fast-start finance and the 2020 long-term goal for international climate finance.** The level of climate finance in 2013 and the trajectory up to 2020 will to a large extent depend on the actual climate actions taken in developing countries and on the further progress in the international negotiations in increasing the currently insufficient pledges. The coming years will be crucial in developing a pipeline of bankable policies, programmes and projects that are consistent with the national low emission development strategies. In this context, however, it should be noted that in many donor countries the public climate finance contribution for the year 2013 will have to be proposed in early 2012, i.e. shortly after the next COP in Durban. In the context of meaningful mitigation action and transparency on implementation, it will be important to maintain global funding levels after 2012 at least at the level of the fast-start financing period. Furthermore, private financial flows might also be more volatile as they are sensitive to business cycles.

**As climate finance will need to be substantial and will come in different forms and via different channels, arrangements for a fair international burden-sharing will have to be found.** To ensure that overall contributions add up to what is required, an agreement on long-term financing should include a common scale based on agreed principles to determine financial contributions by different countries. The European Council set out in October 2009 that financial contributions should be based on countries' ability to pay (i.e. GDP) and responsibility for greenhouse gas emissions (without prejudice to internal EU burden-

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<sup>16</sup> The Global Climate Change Alliance (GCCA) has been created in 2008 as a channel for joint actions and to gain experience with effective approaches to climate finance in the most climate-vulnerable developing countries.

sharing). There should be a considerable weight on emissions which should increase over time to allow for adjustments of economies. In addition, it was highlighted that any contribution key should be 'universal', i.e. not limited to developed countries as the responsibility for emissions today is shared and that Least Developed Countries should be exempted from any financial commitment.

**While a financial contribution of advanced developing countries to climate financing in other developing countries would be desirable, the long-term finance commitment in the Cancún Agreements is made by developed countries.** Assuming for reasons of data availability that the group of developed countries would be identical to the group of Annex 1 countries, the EU's share could range from about 29% (if the only criterion used is greenhouse gas emissions) to about 38% (if the only criterion used is GDP at current exchange rates), and it would be about a third if both criteria were given an equal weight. The actual EU contribution would depend on the relative weight given to each of the two criteria in such a burden sharing agreement. Giving more weight to emissions as compared to GDP could provide an additional incentive to cut emissions, and acknowledge early action to reduce emissions. However, given the inclusion of private finance, such contribution shares might be difficult to achieve in practice and would have more of an indicative character.

*Annex 1 countries' shares of financial contributions in %, based on a global key including different weights of greenhouse gas (GHG) emissions and gross domestic product (GDP)*

	GHG (Gg CO <sub>2</sub> eq.)	GDP (bn USD)	GHG weight			GDP weight	
			100	75/25	50/50	25/75	100
United States	6 016 408	14624	38	37	36	35	34
EU-27	4 529 841	16107	29	31	33	36	38
Russian Federation	1 690 974	1477	11	9	7	5	3
Japan	1 203 076	5391	8	9	10	11	13
Canada	721 740	1564	5	4	4	4	4
Australia	618 058	1220	4	4	3	3	3
Other	912 535	2065	6	6	5	5	5
Total	15 692 633	42 447	100	100	100	100	100

Note: GHG emissions including LULUCF, 2008; GDP in USD at market exchange rates, 2010; 'other' includes Ukraine, Belarus, Switzerland, New Zealand, Norway, Croatia, Iceland.

Source: Own calculations based on UNFCCC for GHG emissions and IMF WEO for GDP data

**The Standing Committee agreed in Cancún can provide some degree of coordination within the financial mechanism of the UNFCCC.** The Cancún Agreements foresee to "establish a Standing Committee under the Conference of the Parties to assist the Conference of the Parties in exercising its functions with respect to the financial mechanism of the Convention". To be efficient, the role of the Standing Committee should be as light as possible and provide guidance or recommendations that are visible, have political weight and create sufficient ownership of the actors involved over the guidance/recommendations. In addition, information exchange on ongoing and planned actions could support better donor coordination.

**The new Green Climate Fund (GCF) could become a key component of international climate finance.** With the right governance structure, it is likely to become bigger than the existing funds under the Financial Mechanism of the Convention and offers an opportunity to

rationalise these funds as well as the implementing agencies. The GCF should add value to the existing system of climate finance by further developing innovative financing models according to the financing objectives. It could develop instruments or cooperate with existing facilities to leverage private sector investment in low-carbon and climate-resilient infrastructure.

**The specific mix of financial instruments and delivery channels will have to take into account different dimensions.** Projects and preferred instruments, such as grants and loans, can be expected to vary by – and tailored to the needs of – different types of countries, notably middle-income and low-income countries. Furthermore, the Cancún Agreements require that the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change are taken into account. Public climate finance will be delivered by a wide range of bilateral and multilateral channels, generally in the framework of established relationships and coordination mechanisms, which have gained valuable experience and will continue to play an important role in climate financing. The sectoral composition, notably mitigation, adaptation, and REDD+, should reflect the respective commitments in the Cancún Agreements. In particular, a significant share of new multilateral funding for adaptation should flow through the Green Climate Fund.

**Transparent, comprehensive, comparable and accurate monitoring and reporting on financial support for climate actions in developing countries will be a key challenge in the international climate finance architecture.** It will be important to measure both funds delivered by developed countries and funds received by developing countries, the latter being linked to mitigation, REDD+ or adaptation action. Tracking financial flows will be challenging, as the types and sources are broad, including both public and private support, investments leveraged through public support, support from multilateral institutions, and the carbon market. The European Council of October 2009 concluded that a comprehensive set of statistics for climate financing and support should be established, preferably by building on existing reporting mechanisms such as the OECD-DAC system for monitoring financial flows to developing countries, including ODA, based on proper engagement of developing countries. The statistics should be fully consistent and transparent and thus able to assist identifying any risk to poverty reduction efforts and efforts towards the Millennium Development Goals. Pending work on a harmonized global reporting system and further satisfactory progress in addressing their main methodological shortcomings, notably the country coverage and the weighting of Rio-marked ODA for which climate actions are only a significant but not the principal objective, EU reports should be increasingly based on the OECD/DAC Rio Markers for climate change mitigation and adaptation.<sup>17</sup>

**To ensure maximum benefits, one of the principles in setting up a registry for measurement, reporting and verification (MRV) should be that finance provided by**

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<sup>17</sup> The OECD adopted in 2009 a new Rio marker for adaptation-related aid. Under the OECD/DAC countries report on how they spend their official development aid, and a series of "markers" are used in order to create an overview of spending in different sectors, including those of the Rio Conventions. If climate change is the main objective for development aid, it will be reported with a "Rio marker 2". If the aid significantly contributes to the fight against climate change objectives, but is not the sole objective, it will be reported with a "Rio marker 1". Accounting for "Rio marker 2" actions is simply 100% of the action budget. However, there is no agreement on how to quantify the amount related to climate change in "Rio marker 1" actions. For its own reporting the European Commission uses a weight of 40% for accounting contributions of actions under Rio marker 1.

**developed countries should be mirrored by actions by developing countries.** An MRV system for supported nationally appropriate mitigation actions (NAMAs) should ensure comparability of information and – in the case of mitigation – provide information on the emission reductions achieved. The Cancún Agreements decided to set up a registry to record NAMAs seeking international support and to facilitate matching of finance, technology and capacity-building of such actions. It is evident that a clear differentiation between requirements of MRV for public financing and reporting and analysis for private financial flows is needed. Information on the private sector investments and carbon markets will be necessary to have a complete picture, and standardised reporting formats should be agreed in line with reporting on public finance. Particular emphasis should be placed on reporting on policies implemented to incentivise private financial flows for climate in developing countries.

**A new major challenge in the context of long-term climate finance will be the monitoring and accounting of private flows.** There are no established monitoring procedures or accounting methodologies on climate-related private financial flows yet. The AGF report's assumption of applying a rate of investors' lowered return expectation on climate projects is only one example among many other possible approaches. Asking relevant international organisations to develop methodological options, for example by building on UNCTAD's experience in monitoring foreign direct investment (FDI) and the OECD's experience in monitoring international financial flows to developing countries, could provide a way forward.

### **3.3. The possible role of the EU budget**

**Along with Member States' budgets and depending on the approach taken for the post-2013 EU multiannual financial framework, the EU budget could take a more prominent role in channelling EU climate finance to developing countries.** Current climate funding for climate-relevant projects under the EU budget for external actions is already sizeable, but could be considered to be further increased. As for the instruments in the EU budget to deliver climate finance to developing countries, decisions will be required on the future programming of instruments.

#### *Current EU funding of international climate action*

**The funding of climate-related actions in developing countries has gained increasing attention in the EU budget and the European Development Fund (EDF).** Commitments on such actions have gradually increased from an annual average of roughly EUR 175 million from 2002 to 2006 to an expected annual average of about EUR 400 million per year in the period 2007 to 2013. This includes the EUR 50 million per year provided in the period 2010 to 2012 in the context of the EU commitment on fast-start finance made in Copenhagen in December 2009.

**Most of this funding is spent through multiannual indicative programmes for specific geographical regions and countries.** The European Development Fund (EDF) is the EU's main instrument for providing development aid in the African, Caribbean and Pacific (ACP) countries and the overseas countries and territories (OCTs). The current 10<sup>th</sup> EDF has a total volume of EUR 22.7 billion for the period 2008 to 2013. The EDF is funded outside the EU budget by Member States according to a contribution key that is somewhat different to the

overall EU budget, and is subject to its own financial rules. Within the 2007-2013 Multiannual Financial Framework (MFF) of the EU budget, and according to the latest financial programming, a total of EUR 57 billion is available for external actions ("Heading IV") of which more than EUR 17 billion for the Instrument for Development Cooperation (DCI). In addition to its geographic programmes of about EUR 10 billion, the DCI also contains a number of subsidiary thematic programmes, including "Environment and sustainable management of natural resources including energy" (ENRTP) with a total amount of approximately EUR 1.1 billion. The ENRTP covers the additional budget allocation granted for fast-start climate change funding and the allocation for the Global Climate Change Alliance (GCCA).

**The EU budget provides primarily grants which can, however, be used to support finance from development banks.** As outlined in section 2.4, there are also a number of innovative financial instruments through which the EU budget can be leveraged in cooperation with development finance institutions. Furthermore, the EU budget provides a guarantee for loans of nearly EUR 28 billion under the EIB external mandate. This amount assumes that the Commission proposal to activate the EUR 2 billion of an optional mandate for climate change projects until 2013 is adopted at the end of the ongoing legislative procedure.<sup>18</sup>

**For the "transition year" 2013, which is still within the current MFF but already in the post-2012 scaling-up period, the margins for providing additional climate funding from the EU budget are limited.** In response to new needs, including for climate change, programmed margins have been largely exhausted. Since 2007, at the end of the annual procedure, margins for the year have been fully used and in order to finance all necessary and urgent actions recourse to the Flexibility Instrument and/or the Emergency Aid Reserve has been needed every year. Therefore only little additional climate finance would be available from the EU budget in 2013. In order to avoid such a situation in the future, the post-2013 MFF should foresee sufficient flexibility for new challenges such as international climate finance.

#### *Options for future EU budget instruments for international climate action*

**The future EU and Member States budgets need to reflect the increasing demand for climate finance in developing countries.** While EU budget spending on climate change has increased significantly during the current MFF, the scale-up has not happened at a pace consistent with the levels that may be needed after 2013. The need for the EU and its Member States to deliver on international climate finance commitments was clearly highlighted as a key global issue in the Commission's Budget Review Communication.<sup>19</sup> As stated in the Communication, this deserves a separate reflection which will be influenced by the progress of international climate negotiations, taking into account that the current level of ambition of mitigation pledges is not consistent with the 2 degrees objective.

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<sup>18</sup> COM (2010) 174. The proposal is currently discussed by the European Parliament and the Council under the co-decision procedure.

<sup>19</sup> COM(2010)700 of 19 October 2010

## **Two complementary approaches could be envisaged for future EU budget interventions:**

- (1) The approach of **mainstreaming climate aspects into the geographical programmes** could be improved, which per se would increase climate finance in the EU budget and best guarantees the respect of agreed principles of aid effectiveness. While respecting the aid effectiveness principle of ownership, this will require strong guidance on policy priorities at the start of the geographic programming process. In this context, respect of the principle of additionality would need to be monitored and should build on the “Rio markers” system which is already used to screen and mark climate change-related aid. If the current share of climate-relevant projects in ODA managed by the Commission of about 4% was tripled to 12%, this would imply an increase of climate financing from the EU budget to a significant amount of about EUR 1.2 billion per year. Furthermore, additional climate-specific funding could be allocated under the EU budget. Such increased climate-specific funding could also be channelled via climate windows under a number of existing or new investment facilities and could include a mix of grants and loans as appropriate.
- (2) The **thematic spending related to climate change** could be stepped up. This would help bridge the financing gap between fast start climate finance (2010-2012) and the longer term commitment of contributing towards the USD 100 billion. Because of the complementarities and synergies between climate finance and other environmental finance related to biodiversity, forest conservation and combating desertification, thematic climate finance could be scaled up within the successor of the thematic programme on environment and sustainable management of natural resources (ENRTP). Such climate spending should be (i) sufficiently visible, (ii) additional to existing commitments and (iii) not creating a new set of procedures for the administration of programmes.

Additionally, it will have to be examined for both approaches which delivery mechanisms (including grants and financial instruments) are best suited to achieve the objectives of future EU budget interventions. Synergies with other policies, notably sustainable development, will also have to be taken into account. The Commission's preferred approach will be clarified in the context of its proposals for the post-2013 Multiannual Financial Framework. The EU should also explore whether and to what extent EU support to the Green Climate Fund (GCF) should best be channelled through the EU budget or come directly from Member States budgets.

## **4. THE WAY FORWARD**

**To facilitate the follow-up work, this section summarises the concrete actions, as suggested throughout this document, which the EU could consider.** These action items are heterogeneous and, in view of the nature of a Commission Staff Working Document, do not constitute Commission proposals, even if many of them are established Commission or EU positions. They are meant to provide points of reference for the work of the Joint EFC/EPC Working Group on International Financial Aspects of Climate Change, as well as other relevant EU bodies, towards identifying the key elements of the mix of international and national, public and private finance instruments needed to deliver scaled-up financial flows after 2012 in the context of the international negotiations. Again, as emphasised in this document, the most important will be the context of meaningful climate actions and progress

towards an ambitious, comprehensive and legally-binding international agreement on climate change.

**With a view to potential sources of climate finance, the following actions mentioned in this document could be considered:**

- On carbon pricing of international aviation and maritime transportation, to pursue further progress in the International Civil Aviation Organisation (ICAO) and the International Maritime Organisation (IMO);
- Regarding the financial transaction tax, to make further progress based on the orientations taken in the Commission Communication on financial sector taxation in October 2010 and the impact assessment on options for financial sector taxation;
- For an increased potential of international carbon markets, to work with other developed countries interested in setting up cap-and-trade systems, to make progress on the reform of the Clean Development Mechanism, and to promote a sectoral crediting mechanism;
- With a view to clarifying the role and scope of private finance in scaling up climate finance, to step up the public-private sector dialogue, and to further assess the potential of new proposals such as Advance Market Commitments related to climate change and of standards of corporate social responsibility for foreign investors on climate change;
- To work with development finance institutions, based on positions coordinated within the EU, to explore their scope for climate action and to promote the use of innovative financing instruments to leverage public and private finance.
- To urgently start estimating the amount of international and EU public finance required in 2013 as budgetary proposals will have to be made in early 2012, taking into account the pipeline of actual policies, programmes and projects as well as progress in implementation.

**With a view to a governance framework of climate finance, the following actions mentioned in this document could be considered:**

- Regarding potential limits to the absorption capacity of recipient countries, to ask IMF and World Bank to analyse policy options for donor and recipient countries to address possible absorption problems, taking into account different delivery modalities including budget support;
- To make progress in the UNFCCC negotiations and other relevant international fora on the operationalisation of the Cancún Agreements' attributes of long-term finance such as 'predictable and adequate', 'new and additional', and 'urgent and immediate needs' of vulnerable countries;
- To discuss with developed country partners the options for assessing a fair international burden-sharing, in particular the scope for a global contribution key based on greenhouse gas emissions and the ability to pay;
- To support progress in the Transitional Committee towards establishing the Green Climate Fund;



- To strengthen the monitoring and reporting of climate finance flows by pursuing further progress in the OECD Development Assistance Committee (DAC) towards improving the Rio markers on climate-relevant ODA, including budget support, and by analysing the available options, in cooperation with relevant international organisations such as UNCTAD and OECD, on the monitoring and accounting of private climate funding;
- To assess the options for the role of the EU budget in scaling up international climate finance, in view of the orientations presented in the Commission's Budget Review communication of October 2010 and the Commission's forthcoming proposals for the EU's post-2013 Multiannual Financial Framework.

## 1. Public sources

### 1.1 Sources related to carbon pricing

The AGF developed three scenarios for international action to reduce greenhouse gas emissions up to 2020. They used these to ensure consistency in their assessment of the potential of different sources to contribute towards developed countries' goal of mobilising the targeted USD 100 billion per year by 2020. The paper on carbon market public revenues that accompanied the AGF report<sup>20</sup> describes the three scenarios as follows:

- “The **low carbon price scenario** is based on the lower bound of pledges made by countries to the UNFCCC in January 2010 in response to the Copenhagen Accord. It assumes there is no AAU market, and that some developed countries cap their emissions in line with their pledges and introduce domestic carbon markets based on these targets while others do not commit to caps. The assumed abatement is 5 GtCO<sub>2</sub>e resulting in global emissions of 53 Gt in 2020 after abatement. The assumed market size is 5.4 GtCO<sub>2</sub>e for emission trading systems and 0.5-0.8 GtCO<sub>2</sub>e for the offset market.
- The second scenario, **medium carbon price**, is based on the upper bound of pledges made by countries, such as the EU's 30% below 1990 target and the proposed US 17% below 2005 emission cap. Abatement rises to 9.2 GtCO<sub>2</sub>e and 2020 emissions fall to 49 GtCO<sub>2</sub>e. This scenario assumes a market size of 15.2, 8 and 1.5-2.0 GtCO<sub>2</sub>e for AAUs, ETSs and offsets respectively.
- The **high carbon price scenario** assumes a 25% cap below 1990 across developed countries, and that all developed countries have introduced emissions trading schemes. Abatement rises to 14 GtCO<sub>2</sub>e and in 2020 emissions fall to 44 GtCO<sub>2</sub>e. The estimated market size is 14.0 GtCO<sub>2</sub>e for AAU market, 8 Gt for emission trading and 3 GtCO<sub>2</sub>e for the offset market.”

**The price per tonne of CO<sub>2</sub> (“carbon price”) resulting from these scenarios is USD 15, USD 25, and USD 50, respectively.** Annex II to the AGF report describes the low and medium-price scenarios as being broadly consistent with the range of pledges made by countries under the Copenhagen Accord. Of the three scenarios, only the high carbon price scenario is clearly consistent with the goal of limiting the worldwide increase in temperature to 2°C. The level of ambition of developed countries as group and the resulting carbon price in this scenario are similar to the “global action” scenario assessed in the Staff Working Document accompanying the Commission's recent Communication on a roadmap to a low-carbon economy by 2050. It is important to note that this Commission analysis is conducted under the assumption that AAUs will be neither traded nor auctioned.

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<sup>20</sup> At the same time as the AGF's report was issued, a number of background papers were released. Each of these carries the disclaimer “This paper is the result of the analysis carried out by a sub-group within the AGF. However, the paper does not purport to represent the views or the official policy of any member of the AGF.” References in this Staff Working Document to “the AGF” or “the AGF report” do not otherwise distinguish between the AGF report and the background papers.

**In addition, the Commission analysed a “fragmented action” scenario, under which developed countries’ emissions from energy and industry would be reduced to about 25% below 1990 levels by 2020, to about 12.5 billion tonnes of CO<sub>2</sub><sup>21</sup>.** In line with the AGF’s medium carbon price scenario, this should yield a carbon price of about USD 25/tCO<sub>2</sub>. Assuming that all of the emissions were indeed subject to this price, either through auctioning of ETS allowances, carbon taxation, or a combination of both instruments, and that up to 10% of the revenues were allocated to finance action on climate change in developing countries, the gross revenues available from this source would be up to USD 30 billion per year by 2020.

### *1.1.1 Auctions of Assigned Amount Units*

**The AGF report assessed the potential of Assigned Amount Units (AAUs) as a source of revenues.** Countries that accepted limits on their emissions during 2008-2012, the first commitment period of the Kyoto Protocol, were each issued with a quantity of AAUs equal to their allowed emissions in tonnes of CO<sub>2</sub>-equivalent during the first commitment period. The AGF considered the revenues that could be raised if, under a second commitment period of the Kyoto Protocol, or as part of an agreement under the UNFCCC in which developed countries accepted quantitative ceilings on their greenhouse gas emissions, a part of the total amount of AAUs was retained by the UNFCCC and auctioned or sold into the carbon market.

**However, there are a number of important barriers to this approach:**

- Due to falling emissions, to a large extent resulting from the restructuring of industry in the early 1990s, the accounting framework under the Kyoto Protocol means that over 10 billion AAUs will likely remain unused during the 2008 to 2012 commitment period, especially in Russia and Ukraine, and to a lesser extent in countries in Central and Eastern Europe. Simply continuing the Kyoto Protocol would mean banking this "surplus" into a next commitment period, with the effect that headline cuts and the integrity of a future agreement would be seriously undermined.
- Furthermore, surplus AAUs would inevitably and severely put at risk the functioning of an emerging OECD-wide carbon market. Auctioning AAUs is therefore not a viable option to raise climate finance as the existence of the massive surplus would first and foremost depress the international carbon price, thereby diverting financial flows generated by the recognition of offsets in the EU ETS and other carbon markets from developing countries towards major surplus holders.
- In the past, proposals to auction or sell AAUs have lacked wider support. If the current accounting framework under the Kyoto Protocol were to be continued, the proposal would only include contributions from developed countries covered by the Kyoto Protocol, thus excluding the United States and emerging market economies.
- Other disadvantages of the proposal include the lack of predictability in relation to the revenue potential as the amount of financing available will only be known after the auctions or sales. If demand is low, for instance through a Party's choice to buy CERs

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<sup>21</sup> According to the UNFCCC Annex I emissions from energy and industry were 16.66 billion tonnes CO<sub>2</sub> in 1990.

rather than participate in the auctions, there is a risk that very little revenue would be raised.

For these reasons, AAUs are unlikely to become a relevant source of revenues.

### *1.1.2 Revenues from domestic emissions trading schemes*

**The AGF considered that developed countries which would not participate in AAU auctions could make an important contribution by auctioning allowances under their own emissions trading schemes (ETS), and committing to making an agreed percentage of auction revenues available to finance climate action in developing countries.** This would require that developed countries would accept, as part of the UN agreement, (1) an absolute ceiling on their emissions, (2) conditions on the policy instruments they would use to meet their target, and (3) to earmark a specified share of the resulting revenues.

**Overall, domestic emission trading schemes may have a significant potential as a new source of public revenue to fund climate action – a source with a higher environmental integrity and a more sustainable revenue stream than AAU auctions.** The EU ETS directive<sup>22</sup>, for example, suggests that from 2013 Member States should allocate amounts equivalent to at least 50% of revenues from allowance auctions to activities related to climate change. The December 2008 European Council also noted that, in the context of an international agreement on climate change, part of this amount would finance action on climate change in developing countries. If an ambitious international agreement is reached, revenues from ETS auctions are likely to be more than EUR 20 billion per year by 2020, assuming a carbon price of EUR 30 per tonne of CO<sub>2</sub>. Using a part of these revenues for action in developing countries would contribute towards the EU's long-term financing commitments.

**The AGF did not fully consider the potential role of domestic ETS or carbon taxes<sup>23</sup> as a source of scaled-up financial flows for climate change action in developing countries.** As experience in some EU Member States shows, these instruments can be used in parallel to tackle climate change, with the ETS covering larger sources of greenhouse gas emissions, and carbon taxation levied on smaller sources. Based on the staff working paper accompanying the Commission's roadmap for a low-carbon economy by 2050, it is possible to make some estimate of the potential for raising revenue by putting a price on developed country greenhouse gas emissions from energy and industry.

### *1.1.3 Offset levies*

**Levies on the use of offset mechanisms are another source of revenues.** An offset mechanism allows countries that have agreed ceilings on their greenhouse emissions to meet their obligations by funding emission reductions in other countries. The Clean Development Mechanism (CDM) of the Kyoto Protocol is such an offset mechanism. The CDM mobilises public and private sector financial flows from developed countries for mitigation projects in developing countries. The CDM generates finance for the Adaptation Fund established under

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<sup>22</sup> Directive 2009/29 of the Council and European Parliament, 23 April 2009, OJ L140 of 5 June 2009

<sup>23</sup> See below for the AGF's consideration of carbon taxes.

the UNFCCC, through a 2% levy on all Certified Emission Reduction (CER) credits issued in respect of approved CDM projects.

**The AGF noted that such an offset levy is inefficient, as it is a form of tax on emission reductions, rather than a tax on emissions.** However, it also noted that as long as the levy remained relatively small (up to 10%) the size of the efficiency loss would be relatively minor. The AGF estimated the size of the offset market in 2020 at 500 to 800 million tCO<sub>2</sub>e in its low carbon price scenario, 1,500 to 2,000 million tCO<sub>2</sub>e in its medium carbon price scenario, and 3,000 million tonnes in its high carbon price scenario. With the levy on CERs at its current rate of 2%, these volumes of offsets would generate annual revenues of USD 0.15 to USD 0.24 billion, USD 0.75 to USD 1 billion, and USD 3 billion, respectively.

**If achieved, these sums would be a sizeable scaling-up compared with the current situation.** At present, the CDM levy provides finance for the Adaptation Fund in the order of magnitude of EUR 20 million per year (based on annual issuance of CERs of about 100 million and a primary CER price of about EUR 10). Under an ambitious international agreement, higher marginal abatement costs in developed countries would be expected to result in increased demand for CERs.

**However, the AGF's estimates of the potential revenues that could be raised through offset levies may be too optimistic as the supply of CERs may be unable to keep pace with potential demand.** Under the current UN arrangements for approving CDM projects the annual volume of CERs appears to have stabilised at between 100 to 150 million per year<sup>24</sup>. Moreover, of the total number of CERs issued to date, more than half have come from fewer than 40 projects relating to emissions of industrial gases.<sup>25</sup> The Commission has recently decided that the EU ETS will not accept credits from such projects beyond the first commitment period of the Kyoto Protocol. This is because of concerns about whether they were delivering real emission reductions, and because their low cost means that they should be undertaken by more advanced developing countries themselves, as part of their contribution to limiting climate change. Therefore, it is necessary to develop and implement new carbon market mechanisms that are able to deliver emission reductions at the scale required.

#### *1.1.4 International maritime and aviation sector measures*

**The AGF reports that in 2007, greenhouse gas emissions from international aviation and shipping were conservatively estimated to amount to 2.5% of world emissions.** For comparison, this is roughly equivalent to the annual emissions of Brazil or Germany. Without effective action to tackle international shipping and aviation emissions, their role in climate change will increase. The emission reduction commitments under the Kyoto Protocol do not cover emissions from international aviation and shipping.

**The AGF examined alternative approaches that would put a price on these sizeable, mostly unregulated greenhouse gas emissions, and thereby raise revenues that could be**

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<sup>24</sup> The rate of issuance of CERs accelerated sharply in January 2011, but it is too soon to judge if this higher volume will be sustained.

<sup>25</sup> Trifluoromethane (HFC-23) and nitrous oxide (N<sub>2</sub>O) from adipic acid production.

**used to help developing countries tackle climate change.** It considered an emissions trading scheme, a fuel levy, and an aviation passenger ticket tax:

- The AGF assessed the options of an ETS and a fuel levy separately for each of aviation and maritime transport, but there is a large overlap between its conclusions for both instruments and sectors. It judged that, if a price is to be placed on emissions from international shipping or aviation, it should apply uniformly to all emissions from the sector. Differentiation between emissions – based on excluding particular routes or destinations from the scope of the measure, for example – would lead to behavioural changes to evade the measure. This would be economically inefficient and reduce the potential revenues that the measure could raise for action on climate change in developing countries. The report noted some AGF members were of the view "that universal application of instruments on international transportation was necessary, inter alia, in order to avoid significant competitiveness issues".
- As regards an aviation ticket tax, the AGF noted that it would be less effective than either an ETS or a fuel tax from an environmental perspective as it would not incentivise more efficient fuel use or reductions in emissions.

**To ensure respect for the UNFCCC principle of common but differentiated responsibilities, some members of the AGF suggested that a proportion of the revenues raised from international aviation and shipping could be directly returned to developing countries.** This would be based on an agreed formula that would aim to reflect the incidence of the measure on individual developing countries. As the calculations in the AGF report show, this would substantially reduce the potential revenues from these sources. In the aviation sector, the AGF estimates of the available revenue exclude revenues from emissions due to flights between developing countries, and one-half of revenues from emissions due to flights between developed and developing countries. The AGF also considered all emissions relating to domestic flights and flights between EU Member States as coming from “domestic” aviation and so outside the scope of the measure. The remaining emissions were estimated at 250 MtCO<sub>2</sub>, out of a total of 800 MtCO<sub>2</sub>. In the international maritime sector the AGF revenue estimates assume that the refund of revenues to developing countries would be based on their share of the value of world imports, currently about 30%. In both sectors, it was assumed that between one-quarter and one-half of the resulting revenues would be earmarked for climate finance in developing countries, and that, if the chosen measure was an ETS, all allowances would be auctioned. In the medium carbon price scenario considered by the AGF, these assumptions lead to revenue estimates in 2020 of USD 1.6 to USD 3.1 billion from international aviation emissions, and USD 3.9 to USD 8.8 billion from international maritime emissions.

**The UNFCCC process gives a prominent role to the ICAO and IMO in addressing greenhouse gas emissions from international transport.** The Kyoto Protocol commits Annex I parties to work through the International Civil Aviation Organisation (ICAO) and the International Maritime Organisation (IMO) to tackle greenhouse gas emissions from these sectors.<sup>26</sup> Both organisations agree that measures applied to the sectors they represent should apply uniformly to all emissions from the sector. That is, a fuel levy, or an ETS should not distinguish between emissions from developed and developing countries.

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<sup>26</sup> Cf. Article 2 (2) of the Kyoto Protocol.

**Commission estimates confirm the feasibility of the AGF’s estimates of the amount of funding that could be mobilised from these sectors to finance climate change action in developing countries.** In its Staff Working Document “Innovative financing at a global level”<sup>27</sup>, the Commission estimated that global revenues from putting a price on international aviation and maritime emissions could be in the range of EUR 20 to 30 billion per year, based on a CO<sub>2</sub> price of EUR 20 to EUR 30 per tonne and emission targets of 20% below 2005 levels for shipping and 10% below 2005 levels for aviation.

**In the EU, emissions from aviation will be included in the EU ETS from 2012.** With a limited number of exceptions, all flights landing or taking off within the EU are covered. 15% of the allowances will be auctioned. At a carbon price of EUR 20 to EUR 30 per tonne of CO<sub>2</sub>, annual revenues should be from EUR 0.6 to EUR 0.9 billion per year. EU legislation specifies that Member States are to decide how these revenues are used and that they should use them to tackle climate change in the EU and third countries.<sup>28</sup> In both sectors, the EU continues to work for effective international action to reduce their greenhouse gas emissions. Regarding maritime transport, the amendment of the EU ETS Directive states in recital 3 that "in the event that no international agreement which includes international maritime emissions in its reduction targets through the International Maritime Organisation has been approved by the Member States or no such agreement through the UNFCCC has been approved by the Community by 31 December 2011, the Commission should make a proposal to include international maritime emissions according to harmonised modalities in the Community reduction commitment, with the aim of the proposed act entering into force by 2013. Such a proposal should minimise any negative impact on the Community’s competitiveness while taking into account the potential environmental benefits."<sup>29</sup>

#### *1.1.5 A carbon tax or “wires charge”*

**The AGF made some “broad brush” calculations of the potential revenues that could result from implementing a global carbon tax.** In the UNFCCC negotiations, Switzerland has proposed a global carbon tax on emissions from fossil fuel use at a rate of USD 2 per tonne of CO<sub>2</sub>, with an exemption for the first 1.5 tonnes of emissions per head. According to AGF calculations, if all energy-related CO<sub>2</sub> emissions worldwide were subject to the tax, it would raise about USD 30 billion in 2020 for every dollar of tax per tonne of emissions. If the tax were to be levied only in “OECD+” countries<sup>30</sup>, gross revenue would be about USD 10 billion for every dollar of tax per tonne of emissions.

**The AGF also considered a “wires charge”, which it describes as a variant on a carbon tax, with the coverage restricted to electricity generation.** Based on the International Energy Agency’s outlook of developments in electricity generation in OECD countries, a “wires charge” levied at a rate of USD 0.0004 per kilowatt-hour (equivalent to USD 1 per tCO<sub>2</sub>) in OECD countries would raise USD 5 billion in 2020.

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<sup>27</sup> SEC(2010)409 final. For data assumptions see SEC(2009) 1172/2, Section 9.

<sup>28</sup> Cf. Article 3d (4) of Directive 2003/87/EC.

<sup>29</sup> Cf. recital 3 of Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.

<sup>30</sup> Defined by the AGF as OECD countries and other non-OECD European Union countries.

**In looking at these two sources, the AGF did not apply the approach it applied to the sources discussed above.** The revenue estimates do not use the three carbon price scenarios developed by the AGF, and their scope does not correspond exactly to Annex I countries. The “OECD+” grouping used in the AGF report includes countries such as Mexico or South Korea that may not consider themselves part of the collective commitment by developed countries to work to scale up climate finance for developing countries, and omits Russia and Ukraine, which are members of Annex I. The AGF report explains that this is due to a lack of the necessary data. Nevertheless, this makes it difficult to assess the potential of these sources compared to the other sources examined by the AGF. The AGF caution against adding together the revenue potential from different sources seems especially relevant in the case of these sources, as the existence of the EU ETS effectively excludes a part of developed country emissions from the scope of a carbon tax or wires charge.

**Carbon taxes are already applied in several EU Member States as a general source of budget revenue.** The three Nordic countries introduced CO<sub>2</sub> taxes in the context of green tax reforms in the early 1990s (Finland 1990, Sweden 1991 and Denmark 1992-3). CO<sub>2</sub> taxes complement the conventional energy tax system in which the rates are based on energy content. Currently, the rate of the CO<sub>2</sub> tax is EUR 12 per tonne of CO<sub>2</sub> in Denmark, EUR 108 per tonne of CO<sub>2</sub> in Sweden and EUR 20 per tonne of CO<sub>2</sub> in Finland. In 2007 tax revenues generated by CO<sub>2</sub> taxes as percentage of GDP were 0.3 % in Denmark, 0.81 % in Sweden and 0.29 % in Finland. Beyond explicit carbon taxes, over the last decade the UK, the Netherlands and Germany have also introduced green tax reforms, in which taxes on carbon-based energy products play a predominant role. Ireland introduced a carbon tax on most energy-related greenhouse gas emissions outside the EU ETS in 2010 at a rate of EUR 15, and doubled the rate to EUR 30 per tonne of CO<sub>2</sub> in 2011. The tax is expected to yield EUR 330 million annually.

**The Commission intends to come forward, during the second quarter of 2011, with a proposal for a revision of the Energy Taxation Directive (ETD)<sup>31</sup> to bring it more closely in line with the EU's energy and climate change objectives.** The proposal will aim at, on the one hand, integrating an explicitly CO<sub>2</sub>-related element into the energy taxation system which would be applicable outside the EU ETS and, on the other hand, putting the remaining part of energy taxation on a neutral basis by linking it to the energy content of the products subject to taxation. In doing so, it will ensure consistent treatment of energy sources within the ETD in order to provide a genuine level playing field between energy consumers independent of the energy source used. Moreover, it will provide an adapted framework for the taxation of renewable energies and provide a framework for the use of CO<sub>2</sub> taxation to complement the carbon price signal established by the ETS while avoiding overlaps between the two instruments.

#### *1.1.6 Fossil fuel extraction royalties or taxes and fossil fuel subsidies*

**The AGF noted that royalties that are collected by some developed countries on fossil fuel extraction could be redirected towards spending on climate change.** However, these would not be additional public revenues, so that their use for climate change would require extra taxation from some other source to replace them in public budgets. The AGF was unable

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<sup>31</sup> Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity (OJ L 283, 31.10.2003, p.51)



to give a precise estimate of the potential revenue from this source, beyond noting that it “could provide billions – and perhaps tens of billions – of dollars in climate finance”. This potential source differs from others considered by the AGF, as it is only relevant to a subset of developed countries. Just five countries account for about 90% of fossil fuel production in developed countries.

**The G20 summit in Pittsburgh in 2009 committed to phase out and rationalise over the medium-term inefficient fossil fuel subsidies.** Although most such subsidies are granted in developing countries, as part of this G-20 commitment developed countries undertook to phase out about USD 8 billion per year in fossil fuel subsidies. As is the case for fossil fuel extraction royalties, the phasing out of fossil fuel subsidies would only free up potential funding in some developed countries.

**In addition, the AGF noted that these subsidies may contribute to energy security, so that developed countries might reallocate at least part of the money saved by phasing out fossil fuel subsidies to other ways of enhancing energy security.** The AGF also noted that phasing out of fossil fuel subsidies does not provide a “scalable” source of climate finance from developed to developing countries: its level is capped by the current level of fossil fuel subsidies. In the EU, state aid to the coal sector was about EUR 3 billion on annual average from 2007 to 2009, mostly in Germany and Spain, and is to be phased out by 2018. Last but not least, the AGF observed that if developing countries are to spend scaled-up flows of climate finance effectively, it is essential that they rationalise and phase out their inefficient fossil fuel subsidies. This remark is valid whatever the source of the finance from developed countries.

## *1.2 Financial sector taxation*

**The AGF report considers a financial transactions tax (FTT), with a focus on currency transactions, as essentially the only source not related to greenhouse gas emissions.** The revenue potential is estimated to be between USD 2 and 27 billion per year in 2020. This was based on the assumptions of USD 3000 billion of foreign exchange trading per day, a tax rate between 0.001 and 0.01 % with tax elasticities of 3-6% and 21-37% respectively, an 8.5% compensation for incidence on developing countries, as well as a use of 25-40% of the revenues for climate change. It is acknowledged that there is currently a lack of political acceptability at international level, with implications for its efficiency, and that further work would be needed to overcome cooperative issues, even if some AGF members expressed the opinion that a financial transaction tax was feasible among interested countries at the national or regional level.

**A global FTT could indeed bring high revenues, but estimates are very uncertain due to possible adjustments of behaviour to avoid such a tax.** Using realistic assumptions in terms of tax rates (0.1%) and product coverage (stocks, bonds) gives estimated revenues of about EUR 60 billion at a global level. Estimates of even ten times this amount are cited by some studies if derivatives and currencies are included, although the Commission considers these latter figures to be highly uncertain. It is also often argued that an FTT could help stabilise financial markets by reducing "speculative" trading by constraining undesirable financial market transactions. But this is not certain as an FTT may in fact increase price volatility in specific markets by reducing the number of transactions and liquidity, in particular in market segments that are important for hedging purposes. Also, with the tax base being more mobile

for financial market transactions, this instrument can be expected to have more marked business relocation effects. For these reasons, based on a preliminary analysis, the Commission supports a further exploration and development of the FTT and its variants at the global level in the October 2010 Communication on financial sector taxation.

**In the EU, various options for the taxation of the financial sector are under consideration and are already applied in some Member States.** So far, the revenues of these taxes are not considered to be an earmarked source of finance for climate actions. Beyond raising revenues, additional objectives are pursued, notably to have a fair and substantial contribution of the financial sector to budget consolidation efforts, costs of avoiding financial systemic risks which should not fall exclusively on taxpayers, as well as to discourage excessive risk-taking activities. There is also a case for pursuing such objectives at a global level or, in the absence of such, at EU level rather than only at national level so as to avoid double or no taxation and market distortions and obstacles. In April 2010, the Commission assessed instruments to price leverage and risk-taking (also commonly known as 'bank levies'), and to tax financial transactions, bonuses or profits.<sup>32</sup> In May 2010, the Commission proposed to establish *ex ante* bank resolution funds, funded by a levy on banks, to facilitate the resolution of failing banks in ways which avoid contagion, allow the bank to be wound down in an orderly manner and in a timeframe which avoids the "fire sale" of assets.<sup>33</sup> In October 2010, the Commission further assessed the feasibility of a financial activities tax on profits and salaries, as well as of a financial transaction tax. The Commission announced its intention to present a more detailed impact assessment on these latter two instruments by summer 2011. Additional analysis is also taking place in view of further developing the EU budget's own resources system.

**Additional aspects need to be taken into account for new instruments of financial sector taxation.** A particular concern is the possible cumulative effect that regulatory measures and additional taxes could have on the competitiveness of the EU financial sector. Furthermore, additional taxation of the financial sector raises challenges with respect to moral hazard as investors might regard this as an implicit insurance against insolvency by the public sector.

**Several legal, administrative and distributional aspects would have to be considered in further detail.** Serious doubts have been raised regarding the compatibility of any currency transaction tax in the EU with the treaty provision regarding the free movement of capital (Art. 63 TFEU). Furthermore, there may be issues of ensuring international coordination to avoid double or non taxation. With a view to effects on equity and income distribution, taxes on the financial sector are likely to lead to higher costs and lower revenues for banks. This could imply higher costs for consumers or lower returns for investors or a combination of both. However, these costs could be justified if they would lead to a more efficient and stable financial system. As the tax burden is likely to be partly rolled over to clients, this could have a progressive effect if it falls disproportionately on high-income people, but middle and lower-income earners would also be affected to some extent. Moreover, it might be easier for wealthy investors, borrowers or lenders to escape taxation by relocating to other markets while institutional investors, and with them the smaller-income client base, remain in the taxed markets.

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<sup>32</sup> SEC(2010) 409 of 1 April 2010

<sup>33</sup> COM(2010) 254 of 26 May 2010

## 2. Carbon markets

**Carbon markets can deliver a substantial contribution to emissions abatement and, with a robust carbon price, are an important part of the solution to climate finance.** Apart from ensuring demand as a fundamental driver of the carbon market, it must be ensured that the legal framework to underpin the market is in place. Commission estimates show that establishing a carbon market with a 30% reduction target for the group of developed countries would cut global mitigation costs by about a quarter by 2020. The carbon market not only compensates costs but generates also rents on achieved reductions. These rents could be used to stimulate own appropriate action in developing countries.

**The AGF estimates that increased carbon market flows could generate USD 30 billion to USD 50 billion annually for developing countries, “if and when carbon markets are further developed and deepened”.** This implies that these financial flows will not happen automatically. Financial flows delivered by the carbon market depend on a number of key architectural elements of the international climate agreement:

- (1) Ambitious emission reduction targets from developed countries;
- (2) Ambitious appropriate own mitigation actions by developing countries;
- (3) Properly taking into account or retiring the expected huge surplus of Assigned Amount Units from the first Kyoto commitment;
- (4) Setting ambitious starting levels for the emission reduction paths for the period 2013-2020.
- (5) Introduction of new carbon market mechanisms that go beyond a project-by-project approach and provide credits against emission reduction thresholds that are set below business-as-usual emissions.

**These elements are crucial for ensuring demand for international credits.** Commission analysis shows that with current pledges, allowing the full banking of the Assigned Amount Unit surplus and choosing the Kyoto Protocol target as a starting level for the emission reduction paths for the period 2013-2020 would result in no demand for international credits additional to what has already been enabled by the current legislation and in the cap-and-trade systems planned by other developed countries. The price signal would not be sufficiently strong. In such a scenario, a larger share of abatement measures would need to be covered by public finance, which is not feasible in current circumstances and also questionable to succeed in better economic times.

**The carbon market already generates important financial flows through the Clean Development Mechanism (CDM), but it urgently needs to be reformed.** About USD 7 billion are invested each year so far and mainly concentrated in a few emerging market economies. To achieve a better geographical balance and increase finance for the poorest countries, a reform is needed to provide a new and more ambitious carbon market mechanism. The EU has been incentivising this development through its domestic legislation by prohibiting the use of credits from certain industrial gas projects in the post-2012 EU ETS and by allowing new CDM projects only from Least Developed Countries as of 2013. Once there is an international agreement on climate change, only CDM or other approved credits from third countries that have ratified this agreement can be used in the EU ETS. The EU is

interested in engaging with third countries on robust and well designed pilots in support of international rule making on sectoral carbon market mechanisms. The World Bank programme “Partnership for Markets Readiness” could play an important role in this.

**To scale up the carbon market flows to developing countries the focus should be on reductions beyond low cost options.** Low-cost options should be undertaken by developing countries based on their respective capabilities. To achieve this, a move away from the CDM towards new and more ambitious carbon market mechanisms is needed, in particular, in the economically more advanced developing countries and internationally competitive sectors. The CDM, as a pure offsetting and project-based mechanism, will not be able to scale up efforts to the level necessary to pursue emission pathways consistent with the 2 degrees target. Therefore a step-wise move to new market mechanisms, including at sectoral level, is needed in addition to incremental CDM improvements. It will be important to establish new carbon market mechanisms at the COP 17 in Durban.

**The EU, having the world's largest cap-and-trade system, generates a substantial demand for international emission reduction credits from third countries.** Since its launch in 2005 the EU Emission Trading System has rapidly established itself as the main driver of the emerging international carbon market. The total volume of transactions in carbon markets worldwide amounted to EUR 103 billion in 2009, of which EUR 89 billion was for trade under the EU ETS. Current EU ETS legislation allows for carbon offsets of about 1.6-1.7 Gt of CO<sub>2</sub> in the period 2008-2020 (i.e. about 130 Mt of CO<sub>2</sub> per year). Additional demand for credits will come from the sectors outside the EU ETS amounting up to approximately 700 Mt over the period of 2013-2020, i.e. roughly 88 Mt of CO<sub>2</sub> per year until 2020. At the current price for CDM credits of some EUR 13 per tonne of CO<sub>2</sub>, the demand by the EU could generate roughly EUR 3 billion of financial flows to developing countries per year, not taking into account additional flows triggered by investments underlying CDM projects. EU legislation gives continued recognition of CDM credits in the ETS even in the absence of a second commitment period under the Kyoto Protocol. The example of the EU ETS could help countries that are contemplating setting up domestic cap-and-trade systems which could then be linked together to create a stronger international carbon market.

### 3. Private finance

**The AGF report presents a very rough estimate of the potential scale of international private investment in mitigation of USD 100 to 200 billion per year, recognising the uncertainty surrounding the embedded assumptions.** This estimate is the sum of "negative cost" mitigation measures and the expected leverage (with a factor of 3) from carbon market revenues and multilateral development banks and/or public flows, and assuming that up to 50% of this total comes from domestic sources. The report also gives a qualitative discussion of the potential sources of private capital investment in adaptation-related activities.

**Estimates on foreign direct investment (FDI) in low-carbon industries into developing countries vary considerably, depending on the definition.** UNCTAD estimates that between 2003 and 2009 low-carbon FDI into three key low-carbon business areas (renewables, recycling and low-carbon technology manufacturing) alone amounted to USD 344 billion. From this amount nearly USD 136 billion (i.e. nearly USD 20 billion per year on

average) were flowing into developing countries.<sup>34</sup> This does not take into account low-carbon investments in other industries and the participation of transnational corporations through non-equity forms. The OECD estimated green FDI in developing countries on annual average between 2005 and 2007 at USD 7.6 billion if narrowly defined (in electricity, gas and water sectors) and at almost USD 190 billion if broadly defined (in all mitigation-relevant sectors).<sup>35</sup> In order to maximise benefits and minimise risks, UNCTAD suggests a global partnership to promote low-carbon investment which could establish clean-investment promotion strategies, enable the dissemination of clean technology, secure international investment agreements' contribution to climate change mitigation, harmonise corporate greenhouse gas emissions disclosure practice, and set up an international low-carbon technical assistance centre.

**The AGF acknowledges that significant work will be required to develop an acceptable approach for monitoring and accounting the net benefits of the international financial flows from the private sector to climate actions in developing countries.** The AGF proposes the value of the lower required return of international risk-mitigating investment in developing countries relative to alternative opportunities. For gross private flows of USD 200 billion per year, the AGF report provides an example for the calculation of net flows which would amount to USD 20 to 24 billion per year.<sup>36</sup> In practice, this creates at least two practical problems which are partly acknowledged in the AGF report. First, an investment project's incremental costs related to mitigation or adaptation would need to be known. Second, lower return expectations are difficult to measure and may be associated with other reasons such as higher risks or restricted access to finance in a developing country.

**Public sector support, financial or non-financial, can promote international private investment on climate action in developing countries to address a number of specific barriers and risks which private investors will be reluctant to take on.** In using such instruments the main difficulty is, as for all subsidies, to determine the adequate design and size of the public contribution. In theory, the share of public financing should be limited to the correction of market failures or externalities, such as for example the incremental costs of mitigation measures. In practice, this is very difficult to quantify with some precision and may vary significantly between countries and markets. There is thus a need to identify the extent to which public support is required to stimulate private investment in order to compensate for the provision of public goods related to the global climate and embedded in private investment projects. On the other hand, to ensure that taxpayers receive good value for money, such public support must be designed in a way that avoids creating deadweight and moral hazard effects as well as crowding out private activities. The latter problem would also distort competition which can be a particular problem in developing countries where nascent markets and small firms can be very fragile and may collapse upon excessively strong public interventions.

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<sup>34</sup> UNCTAD World Investment Report 2010 - Investing in a low-carbon economy; New York and Geneva 2010.

<sup>35</sup> OECD: Defining and Measuring Green FDI: Preliminary Findings and Issues for Discussion; COM/DAF/INV/ENV/EPOC(2011)3; Paris, January 2011.

<sup>36</sup> This is based on applying a 2% lower return expectation, a project lifetime of 10 years, and a cost of capital between 10% and 15%. The annual cash flow of USD 4 billion would in this case have a net present value of USD 20 to 24 billion.

### *3.1 Instruments to improve the risk-return profile*

**The provision of guarantees by the public or semi-public sector is an important instrument to support the issuance of debt for climate projects.** In the area of foreign trade in general this can take the form of export credit guarantees and trade finance. Several proposals on 'green bonds' to finance climate or energy projects also refer to guarantees in the form of Special Drawing Rights (SDRs), international financial institutions' guarantees, or default guarantees for a 'green bank'.<sup>37</sup> The SDR proposal found little support in the IMF Board of Executive Directors because of concerns about creating a precedent for using SDRs other than for their original purposes of balance of payments support because they might ultimately spur global inflation if the SDR guarantee were to be called on to a larger extent. Similarly, development banks or other international financial institutions also need to take a measured approach to guarantees to avoid jeopardising their core mandate by calls on guarantees of a significant size.

**The German government's initiative for a Global Climate Partnership Fund (GCPF) intends to achieve significant leverage of public funds by mobilising additional financial resources for public and private investments in climate-relevant projects in selected countries.** It provides local financial institutions with credit lines with which they can offer loans for investments in renewable energy, energy efficiency and reducing greenhouse gas emissions. While the focus is currently on Brazil, India, China, South Africa, Indonesia, Vietnam, the Philippines, Chile, Mexico, Turkey, Tunisia, Morocco and Ukraine, further countries can be included at a later date. The total grant component is currently EUR 22.5 million.

**The attractiveness of debt-financed private investment in developing countries can be further improved through other measures.** Technical assistance can help provide the project information and preparation needed to raise the interest of private investors. Interest rate subsidies can also help improve the risk-return profile of an investment. Such an increase in the concessionality of debt can be justified by the higher risks or the public goods character of climate projects.

**Public-Private Partnerships (PPPs) can spread the costs and risks of financing of public goods over the lifetime of the asset which can considerably alleviate the pressure on public budgets.** As they change the risk sharing between parties, they can lead to more efficient risk management and thus help to reduce the overall costs of projects. This is particularly relevant for energy, transport and other infrastructure projects with a long life span (e.g. 30 to 50 years). PPPs usually operate through a competitive process where public parties define performance criteria.

**Using public funds to inject equity capital into companies or projects can be another important mechanism to mobilise private investment.** The EU's Global Energy Efficiency and Renewable Energy Fund (GEEREF) is a risk capital fund which aims to provide new risk-sharing and co-financing options in small scale energy efficiency and renewable energy projects in developing countries and economies in transition. Priority is given to deploying

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<sup>37</sup> Hugh Bredenkamp and Catherine Pattillo: Financing the Response to Climate Change, IMF Staff Position Note SPN10/06 of 25 March 2010; Green Sectoral Bonds – Draft Concept Note for Review & Discussion, IETA Position Paper of 25 May 2010.

environmentally sound technologies with a proven technical track record. GEEREF invests in regional sub-funds and has a focus on investments below EUR 10 million as these are mostly ignored by commercial investors and international finance institutions. The Commission put EUR 80 million into GEEREF in 2007-2010, and Germany and Norway are also contributing. According to the ETS Directive, contributions to GEEREF are among the purposes for which Member States should use their auction revenues.

### *3.2 Insurance mechanisms*

**Public support for the use of market-based insurance schemes covering natural disasters can leverage sizeable amounts of private finance for adaptation.** The frequent inability of the private sector to cope with the impact of a disaster can become a source of budgetary pressure. Therefore, one useful strategy involves promoting, facilitating, enforcing or subsidising the purchase of insurance by private sector parties (e.g. property insurance for homeowners or crop insurance for farmers) to limit a government's contingent liabilities. Alternatively, or as a complementary strategy, a government can also insure itself directly against disaster-related budgetary risks. At a micro level, well designed insurance policies provide incentives to reduce the exposure to risks.

**Capital markets are offering more and more risk capital that can be used by reinsurers and countries themselves by using insurance-linked securities.** By allocating risks (and potential losses) efficiently over a large pool of investors, insurance through capital markets offers encouraging prospects of reducing the premium volatility associated with traditional reinsurance.

**For example, a catastrophe bond is a high-yield debt instrument that is usually insurance-linked and meant to raise money in case of a catastrophe such as an earthquake, a hurricane, or other adverse weather conditions.** It has a special condition which states that if the issuer (government, insurer or reinsurer) suffers a loss from a particular pre-defined disaster, then the issuer's obligation to pay interest and/or repay the principal is either deferred or completely forgiven. Supporting developing countries' governments with technical assistance to enable them to become issuers of such bonds helps shifting country level risks out of developing countries towards private investors.

**A parametric insurance uses objective variables that are exogenous to the policy holder but have a strong correlation with losses against which insurance is desired.** The payout is determined upfront and is conditional on an exogenous variable reaching a preset threshold within a certain time period. Examples of parametric insurance are so-called weather derivatives, which link payouts to the occurrence of a specified weather event (such as rainfall below a certain threshold). The incentive structure of parametric insurance tends to be quite favourable, in contrast to indemnity-based insurance. Since payout and actual damage are not directly linked, moral hazard is limited and the insured party retains incentives for prevention and mitigation of risks. Another key advantage of parametric insurance contracts is their relative simplicity and transparency. The use of an exogenous variable greatly reduces the information asymmetries associated with traditional insurance and eliminates the need for an assessment or verification of actual damage. Consequently, transaction costs are relatively low. A related advantage is the potential speed of payout, which, in contrast to indemnity-based insurance, can be a matter of weeks or even days after the threshold for pay-outs is reached.

**There are already several examples of parametric insurances against natural disasters.** The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is designed to limit the financial impact on Caribbean governments of catastrophic hurricanes and earthquakes by quickly providing short term liquidity. The CCRIF has been operational for a few years and the European Commission has contributed EUR 12.5 million through regional programmes. The European Commission was also the first donor to the Global Index Insurance Facility (GIIF), providing EUR 24.5 million in funding. It aims to mitigate weather and catastrophic risks, mainly in the agricultural sector, in African, Caribbean and Pacific (ACP) countries through an index insurance scheme. Index insurance solutions guarantee beneficiaries, including smallholders, rapid payments following natural disasters once a pre-determined index (e.g. centimetres of rainfall, variation of temperature, wind-speed or seismic activity on Richter scale) has been triggered. Their application will allow ACP countries to mitigate the increasing risks from natural hazards due to climate change and to reduce the vulnerability of their populations. The GIIF is implemented by the World Bank's International Finance Corporation (IFC).

### *3.3 Other mechanisms*

**The idea of an Advance Market Commitment (AMC) was developed in recent years and could be used to stimulate and accelerate the development and deployment of innovative solutions to climate-related challenges.** In an AMC donors would guarantee a set envelope of funding to purchase or subsidise a new product at a given price that meets specified requirements, thus creating the potential for a viable future market. In June 2009, the governments of Italy, the United Kingdom, Canada, the Russian Federation, Norway and the Bill & Melinda Gates Foundation launched a pilot AMC to develop a vaccine against pneumococcal disease with a collective USD 1.5 billion commitment (the AMC funds). In 2010, the first two companies made long-term commitments to supply new vaccines against pneumococcal disease in developing countries so as to receive support from the AMC scheme.

**Tax discounts may provide incentives for private funding of climate action in developing countries.** If built into the tax regime and targeted at companies that have business exposure in developing countries, it could be another source of leveraging private finance. Tax discounts on domestic spending on energy efficiency, renewable energy or charity donations already exist in most countries.

**Access to finance is an important tool for climate change adaptation in developing countries.** The availability of opportunities for savings, loans and insurance at a micro-level are an important element of adaptation strategies in developing countries. In this respect, donor support for microfinance institutions (MFIs) could also be regarded as climate finance to some extent, even if MFIs are becoming increasingly viable and less dependent on donor support. Following a G20 initiative in 2010, the Global Partnership on Financial Inclusion was established to coordinate work on improving access to finance for the poorest and SMEs.

**Multinational corporations investing in developing countries may voluntarily exceed the legal environmental and social standards required by host countries.** Even if for many investors this is in their own interest so as to avoid reputational risks in their home country, the formulation of guidelines or principles for responsible investment and corporate social responsibility can provide investors with clearer benchmarks and additional protection from



criticism. Examples include the principles set out in the UN Global Compact (covering human rights, labour standards, environment and anti-corruption) and the OECD Guidelines for Multinational Enterprises (covering business ethics and corporate social responsibility). The OECD Guidelines for Multinational Enterprises already recommend that multinational enterprises have an environmental management system, such as the EU's Eco-management and Audit Scheme (EMAS). Such approaches could be further developed with a view to climate actions in developing countries.

#### 4. Development Banks

**Multilateral development banks (MDBs)<sup>38</sup> have a mandate to cater for sustainable economic growth and poverty reduction in their countries of operation<sup>39</sup>.** Within this mandate, they provide financial and technical assistance to countries and projects in areas that are conducive to the development of the countries concerned and allow risks to be shared with domestic and international investors. MDB involvement is located at the interface of political objectives and financial feasibility. The value added of interventions by MDBs is to exert a substantial leverage (political and financial) and catalysing role to channel funds from public and private origin to important investment projects (crowding-in). Climate change implies significant risks for growth, development and poverty reduction in developing countries. Financing climate-related investment therefore lies in the core of the MDBs' mandate and value added.

**The AGF report treats MDBs as a secondary source/channel for generating additional flows rather than as a source in its own right.** The report identifies in principle three basic instruments of development banks: using their current balance sheet headroom, further replenishments and paid-in capital contributions as well as potential contributions to a fund dedicated to climate-related investments. MDBs could also play an important role in the development of innovative financial instruments for climate investment. The report's estimates suggest that a balance sheet leverage factor of 3 to 4 of lending per paid-in resource could be delivered for gross flows and of 1.1 for net flows. These ratios do not take into account public and private capital that is likely to co-invest with MDBs. Hence, the leverage of MDB engagement goes well beyond the pure balance sheet leverage. The leverage ratio is sensitive to assumptions about external factors such as the carbon price and the availability of grant resources for engineering the level of concessionality needed. In principle, MDB contributions should be based on new and additional resources provided by developed countries. Against this background, the AGF report argues that the capacity of these banks should be strengthened through additional resources in the course of the next decade.

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<sup>38</sup> The term MDBs covers the World Bank and the Regional Development Banks, namely the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), the African Development Bank (AfDB), the Asian Development Bank (ADB) and the Inter-American Development Bank (IDB).

<sup>39</sup> In the case of the EBRD the focus is on fostering economic transition.

#### *4.1 MDB activities in support of climate investments*

**MDBs including the EIB and bigger Bilateral Financial Institutions (BFIs)<sup>40</sup> have been stepping up their programmes, expertise and facilities in the area of climate investments over the last years.** Depending on the region, financial support covers energy efficiency and renewable energy investments, reforestation and sustainable forest management, water resource, river basin and coastal zone management, climate resilient development, and development of carbon markets. Climate related issues feed also in other sectors of activity such as transport and urban development. In parallel to the contribution from their own balance sheet, there is a growing number of donor trust funds managed by MDBs and BFIs. This is coupled with considerable research activities by the banks and ensuing dissemination of knowledge as a growing business of MDBs.

**According to UNEP, total public climate financing is estimated to have reached approximately USD 29.5 billion in 2009 of which MDBs accounted for more than half (about USD 16.5 billion).<sup>41</sup>** However, data availability and consistency on climate investment financing appear uneven and incomplete. Despite these great uncertainties, some patterns emerge from available data:

- Climate investment financing is increasing at an impressive pace and the individual MDBs have set rather ambitious targets for future climate financing activities. Awareness and importance of climate change issues has grown: they have become integral part of country and sector assessments and are reflected in sector and country strategies of MDBs.
- MDBs are thereby using their broad range of financing instruments including sovereign and sovereign-guaranteed loans, sub-sovereign loans, non-sovereign loans, equity, guarantees and grant funded technical assistance. It seems though that lending still makes up for the majority of financial activities of which most is concessional lending.
- The majority of committed climate finance has been for mitigation and only a considerably smaller part for adaptation. Financing activities have been increasingly accompanied by advisory policy and capacity building services.
- In terms of distribution, most climate financing takes place in Asia while financing in Africa, in particular Sub-Saharan Africa, remains relatively low. Overall, a majority of climate investments is financed in the energy and transport sectors.

#### *4.2 Key challenges for MDBs on climate action financing*

**There is no "one-size-fits-all" approach to financing climate investments.** Considerable differences and specific distinct features exist depending on the geographic region, economic sector, level of development of the countries (LDCs, LICs, MICs) and type of investment

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<sup>40</sup> Very active BFIs on a global scale are the French Agence Française de Développement (AFD), the German Kreditanstalt fuer Wiederaufbau (KfW), the Nordic Environment Finance Corporation (NEFCO) and the Japan International Cooperation Agency (JICA).

<sup>41</sup> UNEP (United Nations Environment Programme), "Bilateral Finance Institutions and Climate Change – A Mapping of 2009 Climate Financial Flows to Developing Countries", 2010

(mitigation, adaptation). In this regard, experience of the last years has shown that BFIs play a very powerful role alongside MDBs<sup>42</sup>.

**Further progress is needed to explore commercial finance opportunities in supporting adaptation activities.** These are currently perceived as less commercially interesting and hence requiring grant support to go ahead. Given a dearth of grant funds, adaptation action financing lags considerably behind mitigation financing.

**Financial institutions (FIs) should endeavour to apply the full range of existing financial instruments to develop bankable projects.** In particular, they should develop further innovative financial instruments (such as subordinated debt, equity-type investments, and guarantees) so as to be able to address better specific challenges in financing climate investments in order to leverage private sector investors. The full potential leverage of FI will unfold only when the private sector can be engaged. This has been achieved already to some extent but is largely confined to mitigation action and within that area to energy and energy efficiency projects. To unlock this potential, more needs to be done to attract private investors including to engage local financial intermediaries.

**While the above concerns the availability of funds for climate investments (supply-side), there is also an issue of absorption of funds (demand-side).** Financing climate investments requires the support, political willingness and adequate capacity on the recipient side. FIs have been confronted with certain constraints and barriers in these areas. This is compounded by often higher political country risks which are an impediment to attracting investors, in particular from the private sector.

**Addressing these challenges and overcoming barriers calls for an enhanced co-operation between the different financial actors.** The effectiveness of the managed financial flows would benefit from sharing experience and greater harmonisation of their efforts.

#### *4.3 Implications for shareholders of MDBs*

**The increased focus on climate investments may shift the balance of MDB activities within the remaining headroom under existing capital provision with the risk of reducing finance for other development areas (e.g. poverty reduction) or even of exploiting faster the available headroom when continuing with all other activities at the same pace.** In both cases, the situation is likely to result in calls to shareholders for reinforcing the capital base of the different institutions<sup>43</sup>. The pressure will be in particular on developed countries, also to strengthen the character of additionality of funds in favour of developing countries. In parallel, an increase in climate investment finance will require more grant funds so as to achieve the level of concessionality commensurate to the needs and level of development of the region concerned. Given its significant combined voting power in the different institutions, the EU has a unique opportunity to shape the debate by agreeing on a common EU stance prior to the discussions with global partners.

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<sup>42</sup> According to the UNEP report, four bilateral institutions (AFD, JICA, KfW and NEFCO) accounted for 38% of total public finance commitments in 2009.

<sup>43</sup> Any change in the balance sheet mix – as regards areas of activity as well as financial instrument used - of a given institutions may also have an impact on risk exposure calling for additional risk provisioning and/or increasing the probability for callable capital being called from shareholders.

**Public finance is already used to promote additional investments by the European Investment Bank (EIB).** The EIB's lending in the area of climate change enables partner countries to access and attract further risk-sharing and financial sources that would have otherwise not been at their disposal. In countries outside the EU the EIB financed EUR 2 billion for climate action in 2010.<sup>44</sup> This amount is likely to increase further until 2013 due to the agreed increase in the Energy Sustainability Facility from EUR 3 to 4.5 billion and the Commission proposal for the mid-term review of EIB's external mandate<sup>45</sup> to allocate an additional EUR 2 billion until 2013 across different regions for financing climate action projects.

#### *4.4 The potential of MDBs using innovative financial instruments*

**Innovative financial instruments have a catalytic effect which – together with the necessary measures to create an enabling financing environment and the appropriate capacity building technical assistance programmes – can help bridge some of the financing gaps.** The blending of grants and loans as well as equity and quasi-equity constitute innovative mechanisms to enhance support to EU external priorities and to multiply the impact of EU external assistance. In the current context of scarcity of resources (also exacerbated by the financial and economic crisis), these mechanisms should benefit both beneficiaries and donors in helping to achieve easier and faster access to financing, high (financial and political) leverage effect and more flexibility to adapt to changing conditions. Additionally, while optimising financing packages for beneficiaries, blending is instrumental for increased donor cooperation and helps enhancing the visibility of European external assistance. While maintaining focus on sustainability criteria and the policy context, this reinforces the overarching objective of increasing aid effectiveness. A similar view is also emerging among EU Member States and International Financial Institutions (IFIs) as witnessed by the working group on blending mechanisms (concluded in December 2009), the Group of Wise Persons ("Camdessus group") on the EIB external mandate and the ensuing Council and EP discussions on the Commission proposal for an amended mandate<sup>46</sup>.

**Under the current multi-annual financial framework, the EU has established investment facilities covering almost all regions of the world, which have made significant climate relevant investments.** Several projects linked to climate change are already being financed, and significant funding has been leveraged. For instance, since May 2008, the Neighbourhood Investment Facility (NIF) has approved more than EUR 100 million of grants for climate related projects, leveraging total investments reaching more than EUR 3.5 billion – a leverage effect of roughly 1:33.

**In future cooperation with financial institutions (FIs), EU donors have various options.** These are in particular (i) the use of FI expertise in providing technical assistance paid for by EU donors ("fees for service"), (ii) partnership with FIs in instruments where they put their own balance sheet at risk on projects supported by donor budgets and (iii) the pooling of resources from smaller FIs to manage them without investing own capital. All of these aspects are equally crucial to help achieving the ambitious financing targets set by the international

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<sup>44</sup> If lending to high-income countries (EFTA, Russia, Israel) is excluded, the amount is EUR 1.58 billion.

<sup>45</sup> COM (2010) 174. The proposal is currently discussed by the European Parliament and the Council under the co-decision procedure.

<sup>46</sup> COM (2010) 174

community, the first addressing the need to create sufficient qualitative demand, the second ensuring the necessary leverage and alignment of interest.

**At the same time, the use of innovative financial instruments has limits within which their use can be justified.** There is also a need to increase consistency and coherence of actions and instruments on the basis of key principles on which the design and implementation of new innovative financial instruments should be based:

- **Response to market needs:** Innovative financial instruments should be based on a clear identification of the public good aspect of the underlying project or policy objective and of the market failures that would give rise to an insufficient funding from market sources.
- **Added value:** The use of innovative financial instruments is only justified if identified market needs are more appropriately addressed through public funding intervention than by other types of intervention such as regulation, liberalisation, reform or other policy action. It should also be ensured that the additional benefits through public funding intervention clearly outweigh possible costs of market distortions and that there is no crowding-out of private funding.
- **Coherence and coordination:** If innovative financial instruments are part of a strategy that comprises several existing or planned, also non-financial, public measures, it should be demonstrated that the financial instrument is coherent with these measures.
- **Efficiency:** Financial instruments should be designed to address specific market needs in a cost-efficient way.
- **Timeliness and flexibility:** New innovative financial instruments should respond to market needs in a timely manner and be sufficiently flexible to respond to changing macro-economic conditions or inadequate instrument implementation. Innovative financial instruments should be scalable to respond to increasing market needs and also include exit strategies in the case of decreasing market needs.

**Enhanced use of blending and innovative financial instruments may require a clearer partition of tasks between the various stakeholders.** One option for the EU could be to delegate tasks which other institutions can do at least as good as the Commission or even potentially better thanks to specific expertise, thereby ensuring better, more targeted and faster absorption of budgetary resources. Furthermore, the involvement of institutions closer to the beneficiaries could provide enhanced incentives to better performance, including greater financial discipline at the level of supported projects.

**Thanks to their historic and political background, all MDBs and BFIs have comparative advantages such as diverging access and expertise as regards regions and/or economic sectors.** The delegation of tasks to multilateral and bilateral financial institutions allows exploiting better their proximity and access to relevant market participants such as financial actors, project developers and sponsors. It also allows using more their specific expertise in project assessment (financial, legal, technical, environmental and social standards) as well as in project preparation, financing, monitoring and implementation.

**It also has to be recognised that the financial and economic crisis has severely limited access to private financing worldwide.** In this context, MDBs and other financial institutions have a crucial role to play to ease and facilitate the use of private sources of financing and to act as market maker including to re-start important niche markets. Greater responsibility for delegated funds will strengthen the incentives to work closer with other banks so as to reach out to other sectors and/or regions, to better manage risk exposures in and between regions and/or sectors and to progress on mutual reliance (i.e. streamlined and homogeneous rules and procedures). The EU should ensure an alignment of interest between the EU and the implementing institution, so that the latter has an interest in achieving the policy objectives defined for a financial instrument. This can be achieved through specific measures such as co-investments, risk sharing mechanisms, fee incentives, sanction mechanisms, etc.

**Finally, if designed properly, this type of innovative financial instrument could help to promote EU visibility.** Facilitating joint interventions by the various grant donors and finance institutions within the EU also represents a powerful means to structure and co-ordinate European development assistance. In addition to improved coordination on key policy messages, higher financial volumes (both overall and of single operations), increased and more visible transfer of know-how, and/or increasing concessionality should be instrumental in this respect. This would also enable to reach the critical financial mass and ensure the strategic consistency which is a necessary condition to achieve major and highly visible policy initiatives in financing climate investments.