

A stylized world map composed of a grid of dots. Most dots are light gray, but several are colored red, notably in North America, Europe, and East Asia.

A Shot in the Arm for Climate Finance?

New Directions for Delivering on International Pledges and Development

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- While a large number of mechanisms for financing climate change mitigation and adaptation have started to develop at the global level, the total level of financial resources falls far short of what is actually needed. A system for monitoring, reporting and verifying climate finance flows will be important to enhance the credibility of climate funds.
- Industrial nations have pledged assistance in fast start financing and committed to the goal of mobilising jointly 100 billion US dollars a year by 2020. The report of the UN Secretary-General's High-level Advisory Group sends a very strong signal that scaling-up climate financing is challenging but feasible. Timely mobilisation of resources could help generate progress in the current climate negotiations.
- While the urgency of climate change requires accommodating a wide variety of financial flows, political agreement between developed and developing countries is needed on what should be actually counted. Fundamental issues such as equity and burden-sharing can only be resolved through longer-term negotiations in the UNFCCC process.



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1. Introduction

Climate change presents an enormous challenge, especially to developing countries. While it is widely acknowledged that developed countries must take the lead in combating climate change, holding the average global temperature rise to no more than 2 degrees Celsius above pre-industrial levels will also require adjustments in growth patterns in developing nations. Such a policy shift will carry heavy investments costs. Long-term sustainable development paths will be those that protect the natural resource base in an equitable manner without compromising poverty eradication, job creation and economic growth. In this sense, mitigation and adaptation activities cannot be seen as »add-ons« to development and investment plans but integral purposes of them. The responsibility of developed countries for having caused most of the climate damage will require not just adding resources to existing official development assistance (ODA) budgets, but comprehensive changes to their core activities in economic development. Recognising that most developing countries do not currently have – and in all likelihood will not have in the foreseeable future – the financial resources and institutional capacities to cope with climate change, financing these investments will be among the big constraints for building capacity in the shift to lower-carbon and climate-resilient economies.

In addition to financing constraints, the international community has recognised that poor countries will be hit earlier and harder by climate change. The impacts of global warming in several areas of relevance to human development have already become manifest, and in particular the poorest developing countries will be affected most by its worst impacts, because of their geography, weak coping capacities, high concentrations of poverty and more vulnerable social, institutional and physical infrastructures. Thus, climate policies need in particular to address funding for adaptation in the most vulnerable countries.

The provision of new, adequate, predictable and sustainable financial resources by industrialised nations for adaptation and mitigation efforts in developing countries will ultimately depend on the creation of a new comprehensive global framework in the context of the climate negotiations of the United Nations Framework Convention on Climate Change (UNFCCC), but progress towards such an agreement has not been commensurate with the urgency for climate action.

Developing countries are only responsible for a relatively small part of the current accumulated stock and per capita contributions to emissions of greenhouse gases, and equity is an integral part of climate change policy – as reflected in the principle of common but differentiated responsibilities (CBDR) and respective capabilities, as agreed in the UNFCCC. Flows of climate finance – both fiscal transfers and market transactions – from developed to developing countries represent the principal way to reconcile equity with effectiveness and efficiency in dealing with the climate problem (World Bank 2010). While there is general agreement that CBDR can be interpreted as developed countries' financial responsibility to address the damage caused by climate externalities, there is disagreement over how »responsibility« and »capability« should be defined and distributed, and what role (if any) developing countries should play in revenue generation.

What seems certain is that time is of the essence when it comes to the potential costs of climate change financing. The Stern Review (Stern 2006), for example, comes to the conclusion that the costs of stabilising the climate are significant but manageable, whereas delaying action would be dangerous and much more costly. But there is another imperative for acting now on climate financing. The timely mobilisation of new and additional climate resources could help to strengthen trust among countries and generate progress in the current climate negotiations. Several developing countries have questioned the sincerity of rich countries' commitments to provide financial support for climate change action – they are disillusioned by the failure to deliver on past promises and are deeply concerned about the inequity of the current situation.

At the UN Climate Change Conference in Copenhagen in 2009, developed countries made the collective commitment to provide new and additional resources to help developing countries in their responses to climate change. Industrial nations pledged assistance in fast start financing approaching 30 billion US dollars for the period 2010 to 2012 and committed themselves to the goal of mobilising jointly 100 billion US dollars a year by 2020. However, in times of budget constraints in many developed countries, it is not clear how such large amounts of resources can be easily mobilised. In an effort to help build political momentum for long-term financing commitments, the UN Secretary-General established in

February 2010 a High-level Advisory Group on Climate Change Financing (AGF), which was tasked to conduct a study on potential sources of revenue for the scaling-up of new and additional resources – including from innovative funding mechanisms – from developed countries for financing actions in developing countries. The report of the Advisory Group was submitted to UN member states in early November 2010 with the objective to muster political will on the delivery of climate financing and to inform climate negotiations in the run-up to COP 16, that took place from 29 November – 10 December 2010 in Cancun, Mexico.

The purpose of this paper is to give an introduction to the overall challenge of climate change financing in developing countries. It describes the scale of financing needed, the current level of commitment from industrialised nations and addresses the lack of clarity regarding the tracking and disbursement of climate funds. This is followed by a set of common criteria for the assessment of sources – derived from core principles that have emerged within the UNFCCC climate change negotiations – taking into account the broader development context as well as equity considerations. The paper then discusses the pros and cons of potential sources of revenue for industrialised nations to fulfil their pledges of new and additional resources for adaptation and mitigation action in developing countries. They are presented within a broader structure, classified with respect to their revenue potential and assessed along the dimension of political feasibility. The analysis follows closely the methodology and proposals brought forward by the AGF. The paper concludes by briefly discussing the potential impact the work of the AGF might have on government decision-makers and how it could help strengthening trust among countries to support both agreement and climate action.

2. Estimating the Scale of Finance and Existing Funding Mechanisms

2.1 How much is needed?

While getting the scale and sources of climate finance right is one of the key objectives in the UNFCCC negotiations, in reality there is limited information about the total financing needs for climate change mitigation and adaptation in developing countries. Current estimates

are uncertain, differ widely and reflect several uncertainties associated with potential climate change scenarios and their likely impacts (see Sharan 2008). Most importantly, estimated investment and financial flows for climate protection are distinct from actual development needs. The actual core development needs in developing countries, for instance to increase access to basic services such as electricity and water, are much higher. Under the UNFCCC, developed countries are only responsible for meeting »the agreed full incremental costs« of climate action in developing countries (UNFCCC 1992: Art. 4, §3). The UNFCCC defines these as the »costs required to equalise the costs of a project having global environmental benefits with those of a project designed to achieve the same developmental benefits but without the global environmental benefits«. In other words, these are the additional costs incurred by climate action in a developing country, such as covering the difference between investments over a given lifecycle in a more expensive renewable energy plant compared to a cheaper fossil fuel-fired facility. Thus, incremental costs will be mainly those that help remove barriers that prevent clean technologies from being implemented. The concept does not take into account actual development objectives such as reducing the number of people without access to energy services. Thus, the application of the concept of incremental costs raises difficult issues concerning which sets of benefits and costs are to be included and what assumptions are to be made about the climate change scenario. Additionally, actual upfront investments required in developing countries are much higher than expressed as incremental costs for a low-carbon project over its lifetime (McKinsey and Company 2009). This is the case because many of the savings from the lower operating costs associated with renewable energy and energy-efficiency gains only materialise over time. For financially constrained developing countries, high up-front capital costs can therefore present a significant disincentive to invest in low-carbon technologies (World Bank 2010).

Depending on the methodology applied to estimate financing costs and incremental costs in developing countries, recent analysis points to a range of financing required for climate change mitigation and adaptation in developing countries by 2020 per annum in the order of hundreds of billions of US dollars.¹

1. See for example World Bank (2010)

2.2 Dedicated funding and channels

While a large number of mechanisms for financing climate change mitigation and adaptation, which differ widely in terms of purposes and amounts mobilised, have started to develop at the global level, the total level of financial resources fall far short of what is actually needed. Climate-related financial funds available to developing countries currently are of the order of 10 billion US dollars per year for mitigation, and around 1 billion US dollars per year for adaptation.

Table 1: Current dedicated resources for climate change in developing countries

Mitigation (US\$ billions)		Adaptation (US\$ billions)	
Global Environment Facility	0.25 P.A.	Least Developed Countries Fund & Special Climate Change Fund	0.3 P.A.
Carbon Markets (incl. CDM)	8+ P.A.	Adaptation Fund	0.1 P.A.
Climate Investment Funds (World Bank)	5+ Total	Climate Investment Funds (World Bank)	approx. 0.6 Total
		Other (incl. bilateral sources)	0.6+ P.A.
Total	10 P.A.	Total	approx. 1.0 P.A.

Source: UNDP (2009) based on World Bank data.

As shown in Table 1, the main dedicated financing sources for mitigation at the global level are from carbon markets such as the Clean Development Mechanism (CDM) and various dedicated funds managed by the Global Environment Facility (GEF) and the World Bank. The available data suggests further that most of the resources flow only to a few countries. For instance, 75 per cent of the emission reductions through CDM projects are expected to occur in China, India and Brazil (Haites 2008). The geographic distribution of bilateral and multilateral aid, including the GEF, is much broader. The current allocation of CDM projects also shows that market mechanisms are not effective for some types of mitigation measures. The CDM supports only a small number of energy-efficiency projects that are outside large industrial facilities and few transport sector projects. Thus, more public funds are likely to be needed to increase access for the majority of developing countries to mitigation financing.

International funding for adaptation action in developing countries comes mainly from funding mechanisms that are under the UNFCCC. These include the Special Climate Change Fund (SCCF), the Least Developed Countries Fund (LDCF) – both managed by the GEF – and the Adaptation Fund. While most of these funds have received contributions from developed country governments, over 20 per cent of total resources have been raised for the Adaptation Fund through a share of proceeds issued on certified emission reductions (CERs) of CDM projects. Adaptation requires financial support since there is no market mechanism for adaptation measures. However, given that only a relatively modest amount of resources have been raised to date, the different funding mechanisms have only been able to finance a limited number of adaptation projects in developing countries. The SCCF has committed to date its available funding to 21 projects, covering 34 countries. Additional projects are approved only as new funds are received. As of September 2009, the SCCF waiting list includes projects seeking funding of 242 million US dollars, almost three times the amount it has received for adaptation to date. The LDCF has funded the preparation of National Adaptation Programmes of Action (NAPAs) for virtually all least developed countries (LDCs). A review of 38 NAPAs identified 430 »urgent and immediate« priority adaptation projects, of which the cost of 385 has been evaluated UNFCCC (2008). A recent evaluation of the LDCF concluded that disbursement of funds for priority projects has been of an insignificant scale compared to adaptation needs in LDCs and that funding has not been predictable or adequate (DANIDA 2009). The Adaptation Fund, which was established in December 2007 and collects about 100 million US dollars per year from CDM projects, has so far not disbursed any funds. The main reason for this is that it took some time for the Board of this new entity to agree on its operational policies and guidelines. The first call of the Adaptation Fund for project and programme proposals was issued in April 2010. In comparison to other climate finance entities, the Adaptation Fund has very innovative direct access procedures and, because of its stable funding base from CDM projects, it is expected that it will play an increasingly important role in the years to come.

2.3 Financing arrangements and accountability

Despite the relatively small amounts raised to address adaptation and mitigation in developing countries, funding is spread over multiple entities whose roles are not clearly distinguished. A clearer definition of the respective roles, better coordination, or consolidation of some of the entities funding adaptation and mitigation might be appropriate in order to avoid a fragmentation of the global response to climate change. Moreover, over the last years, an increased number of new climate financing initiatives has been established outside of the UNFCCC. The largest portfolio of non-UNFCCC instruments are the Climate Change Investments Funds administered by the World Bank and a number of new bilateral financing initiatives by donor governments (see Table 2).

Table 2: New bilateral climate funds

Fund	Total amount pledged (US\$ millions)
Bilateral Initiatives	
Cool Earth Partnerships (Japan)	10,000 (adaptation and mitigation)
ETF-IW (United Kingdom)	1,182 (adaptation and mitigation)
Climate and Forest Initiative (Norway)	2,250
MDG Achievement Fund (Spain)	22 (adaptation) 92 (mitigation)
GCCA (European Commission)	84 (adaptation) 76 (mitigation)
International Climate Initiative (Germany)	200 (adaptation) 564 (mitigation)
IFCI (Australia)	160 (mitigation)

Source: data extracted from World Bank (2010: 263).

While funding instruments outside of the UNFCCC process give donor countries the highest possible leverage to ensure that their taxpayers' dollars are spent effectively, developing countries are increasingly questioning the legitimacy of the balance of power between contributors and recipients in the context of such financing arrangements and have demanded a greater say in how priorities are set as well as how funds are disbursed and accounted for (Ballesteros et al. 2009). A system for monitoring, reporting and verifying climate finance flows will be important to enhance the credibility of these climate funds. Progress on the Copenhagen commitment by industrial nations to provide developing

countries 30 billion US dollars in fast start finance for the period from 2010-2012 – with balanced allocation for adaptation and mitigation – is of critical importance for moving the climate negotiations forward. Reporting practices on fast start finance have been mostly voluntary and predominantly focussed on pledges made by developed countries for the 2010-2012 period rather than on the actual delivery of funds. This gives the impression that developed nations are already collectively approaching the 30 billion US dollar target, as set in the Copenhagen Accord. In reality, the major share of pledges is still subject to approval in national budget negotiations. The current reporting practice on fast start finance has not bolstered confidence on the part of developing countries that pledged resources are predictable and will be fully realised. Several reform proposals for new institutional arrangements under the UNFCCC have been brought forward by developing countries, suggesting a new centralised framework on how finance should be delivered and accounted for at the international level, either through the Conference of the Parties (COP) or a representative high-level body. As both the power and responsibility of developing countries in development finance grow, questions arise as to how these terms will be renegotiated in the upcoming UNFCCC negotiations.

3. Equity and Criteria for New Sources of Climate Finance

3.1 Fairness and equity in climate financing

One reason for the slow progress in the UNFCCC negotiations is that the issue of equity in climate change and the actual financial obligations for developed countries resulting from this principle cannot be easily established. The preamble of the Convention (UNFCCC 1992: preamble) calls for »the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions«. There is, however, currently no agreed means at the Convention level by which to quantify, and therefore differentiate between, levels of action beyond a crude division of developed (Annex 1) countries and developing (non-Annex 1) countries (Pendleton and Rettallack 2003). It will be necessary for UNFCCC parties to find overall agreement for a burden-sharing arrange-

ment under the Convention and to determine concrete measures of responsibility and capability.

While there is some consensus that developed countries should take the lead on climate financing – as they are responsible for the main share of the current accumulated stock and per capita contributions to emissions of greenhouse gases – and that the poorest countries should not be required to take on any financial burdens, there is substantial disagreement over whether the Convention's current definitions of developed and developing country parties accurately reflect relevant distinctions in responsibility and capability. The choice of the appropriate weighting of burden-sharing has become highly politicised, and developed countries have taken the position that any comprehensive climate change agreement needs to take into account that developing countries will contribute substantially and increasingly to the future growth of emissions. Government leaders in developing countries fear that a stringent global climate agreement will impose unacceptable costs and constrain their efforts to advance poverty eradication, job creation and economic growth. They feel strongly that any climate change proposal would have to safeguard the right to development, since otherwise they would have more to lose than to gain from earnest engagement in the climate change negotiations (Baer et al. 2010). To this end, any agreement must cut the emissions of the already wealthy and, at the same time, prevent the unbounded emissions growth of those rising out of poverty without stifling their development aspirations.

In the Convention, Article 4.3 states that developed countries »... shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations....« While the key words »agreed full costs« state that the full incremental costs of mitigation and adaptation actions in developing countries should be paid by developed nations, this also implies that the volume of these have first to be agreed upon by UNFCCC parties. Thus, as long as the flows of climate finance from developed to developing countries have not been determined in the climate negotiations, it will be difficult to reconcile equity with responsibility and capability in dealing with the climate problem. Consequently, developing countries will remain dependent on voluntary contributions raised by developed countries' parliaments and finance ministries, which are by their very nature somewhat un-

predictable. While developing country adaptation and mitigation costs represent only a small fraction of developed country wealth, the delivery of climate funding may prove particularly uncertain in times of economic hardship and budget constraints.

3.2 Newness and additionality

The concept of additionality is another important principle that is firmly grounded in the UNFCCC, as it calls for developed countries to provide »new and additional« climate change financing to developing countries (Ballesteros 2010). The term »new« generally refers to the fact that climate finance should represent an increase over past and existing climate-related funds. Developing countries further insist that financing is »additional«, because they are concerned that aid could be otherwise substituted or diverted from other crucial development needs such as healthcare, education, agriculture and food security. Several methods have been proposed for assessing additionality, but this is difficult given the substantial overlap between climate change projects and traditional development aid. The process of determining additionality is further complicated by the inherent difficulty to constitute a counterfactual: it is hard to know with certainty what countries would have given as development assistance under a business-as-usual scenario in the absence of climate financial transfers (ibid.). The complexity of the concept of additionality becomes apparent when applied to the Copenhagen commitments by developed countries to provide 30 billion US dollars in fast start finance for the period from 2010-2012, and 100 billion US dollars a year by 2020 in long-term climate financing (Roberts et al. 2010). While the Copenhagen Accord (UNFCCC 2009) recognises that financial commitments by industrialised countries should be »new and additional«, no clear baseline was established from which fast start funding would be additional. Moreover, for long-term finance it is difficult to be precise about a baseline that defines how much ODA would have been provided by developed countries in 2020 if a climate change agreement had not existed. The Copenhagen Accord is also unclear about whether new funding should only include non-debt-creating grant financing, or also loans. This is further complicated by the fact that the Accord states that funding for climate finance will include both private and public sources. Private investment involving mitigation and adaptation will be a key driver of climate change action and essential for

the transition to a low-carbon world. However, to what extent private investment can be counted towards developed countries' financing responsibilities is not a straightforward issue. Gross private flows would need to be adjusted for associated servicing obligations that are carried by developing countries. Otherwise, there is the risk of overstating what is actually provided as additional support to developing nations. Thus, while the urgency of climate change requires accommodating a wide variety of financial flows, political agreement between developing and developed countries on what should be actually counted as additional finance flows will be a viable part of any climate change framework.

3.3 AGF criteria for new financial sources

The High-level Advisory Group on Climate Change Financing of the UN Secretary-General was tasked to conduct a study on potential sources of revenue for the scaling-up of long-term climate financing in developing countries. The report of the Advisory Group was submitted to UN member states in early November 2010 with the objective to muster political will on the delivery of climate financing and to inform UNFCCC parties in the run-up to COP 16, that took place from 29 November – 10 December 2010 in Cancun, Mexico. The work of the Group was guided by the political commitments of developed countries made in Copenhagen to mobilise jointly 100 billion US dollars per annum by 2020. While the AGF was not a negotiation group, with its members serving in their personal capacity, it was hoped that the analysis of the Advisory Group might inform climate change negotiations and help clarify technical concepts and approaches that are subject to the UNFCCC. In accordance with its terms of reference (United Nations 2010: Annex I), the AGF evaluated different potential sources against commonly agreed definitions and measures and applied the following criteria in its analysis:

- **Additionality** – assessing the extent to which new resources add to the existing level of resources and result in a greater aggregate level of resources. Given the lack of a precise baseline and the inherent difficulty of determining a reference scenario for 2020, the AGF applied newness of a source as a proxy for additionality.
- **Revenue** – assessing the potential financial contribution of the individual sources of finance in 2020;

the ability to make the sources operational relatively quickly and the key assumptions underpinning the analysis.

- **Efficiency** – assessing the relation between the source of finance and its impacts on cost, imperfections and growth. For instance, this included how bad or good a given source contributes to creating a carbon price to correct environmental externalities. Moreover, this also included a qualitative assessment of what potential impacts a given source will have on economic growth.
- **Equity** – assessing the distributional impact that a given source will have on countries. Since the AGF focussed only on individual sources that will be raised by developed countries, equity was addressed under the incidence criteria.
- **Incidence** – assessing the fairness in the burden of the source of finance among nations. Revenue for each source was estimated to recognise potential primary incidence on developing countries, and if a given source would raise revenue in a developing country, this was excluded from the total revenue estimate for this source.
- **Practicality** – assessing the feasibility of implementation and how rapidly the instrument could be made operational.
- **Acceptability** – assessing the political acceptability of a source to both developing and developed countries.
- **Reliability** – assessing to which extent the source of finance leads to predictable revenue streams.

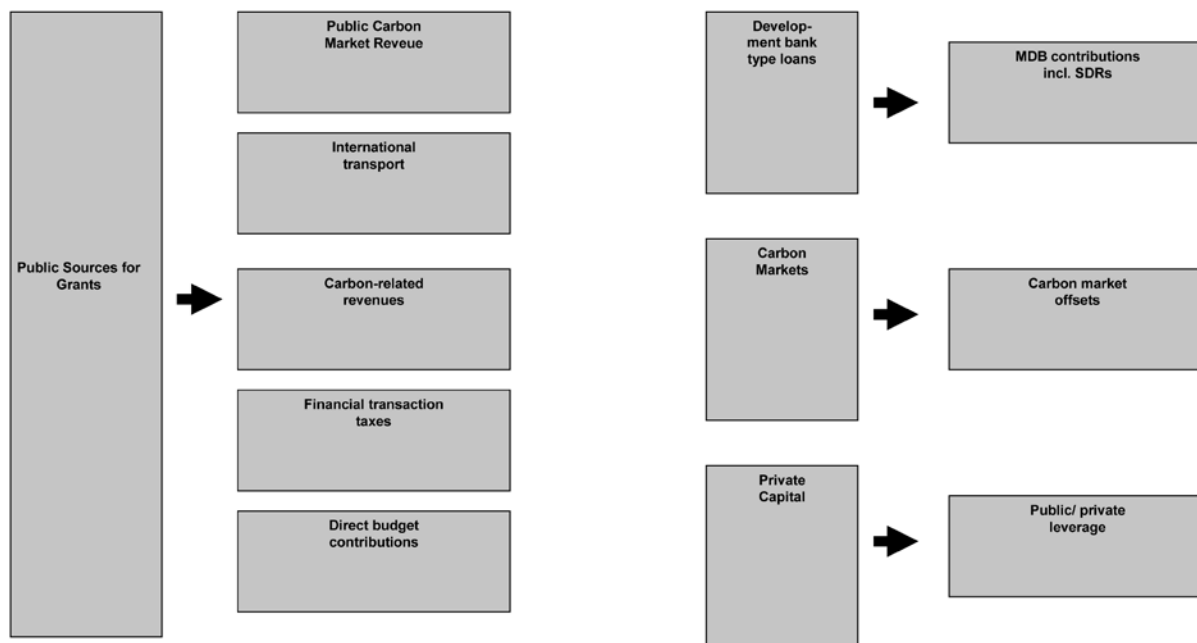
4. Findings from the AGF Analysis

4.1 Different sources and forms of funding

The Advisory Group did not access the total needs for climate financing in developing countries, however it stated that the analysis is intended to be helpful for any envisaged scale of resource mobilisation (ibid.: 8). The AGF report recognises that the 100 billion US dollars per year by 2020 in climate financing pledged by developed countries are unlikely to come from a single source of



Chart 1: Four categories for potential sources of climate finance



Source: United Nations (2010: 18).

finance, but rather from a portfolio of different sources. Different kinds of finance will be required for different uses. The AGF acknowledged that given the purpose of the resources, which is to support both adaptation and mitigation in developing countries, both public and private sources, as well as both grants and loans, would be necessary (ibid.: 12). The Group also recognised that recipient countries will differ in their needs and capacities, which must be recognised in any fair distribution. All these aspects stated by the AGF will have implications for the sources of financing and the forms it takes.

In terms of sources, the following categories were identified by the AGF:

- public finance for grants
- development bank-type loans
- finance generated through the carbon market
- private investment

As can be seen in Chart 1, options identified by the AGF include a total of eight sources; of which two were private (carbon markets, private capital) and six were public. The different sources were examined and assessed against the agreed criteria and the key findings of the analysis are briefly synthesised in the following section (ibid.: Annex II, chaps. II and IV):

Public carbon market revenues

Both international auctioning of emissions allowances and auctioning of allowances in domestic trading schemes are identified as sources of revenue for new and additional resources for climate finance. The AGF focussed on three potential financing mechanisms:

- Assigned amount unit (AAUs) auctions: this would involve withholding AAUs from Annex I countries and auctioning them off to the Annex I countries to raise revenues;
- Emission Trading Scheme (ETS) auctions: this would involve auctioning of domestic credits (e.g., as done in the EU ETS phase III) and committing the revenues;
- Offset levies: share of offset carbon credits that are withheld by international institutions (UNFCCC for CDM).

Under the present Kyoto Protocol arrangements, developed countries have their emission targets expressed as AAUs, and to date, these AAUs have been provided to countries for free. The auctioning of AAUs would involve countries having to pay for a proportion of these allowances and to dedicate these resources towards international climate finance. Developed countries participating in these new and innovative mechanisms will bear the full costs, and there is no direct incidence on developing

countries. These mechanisms are efficient in the sense that they realise a valuable asset created in the carbon market, which is also the case for offset levies. In addition, switching from a free-of-charge allocation to auctioning has significant potential efficiency gains. While AAU auctioning would be the option for Kyoto Protocol countries, developed countries outside the Kyoto Protocol could make a comparable contribution through ETS auctions. Additionally, offset levies would function as fiscal disincentives for investments. Public revenue flow from these auctions would be more reliable than alternative sources, such as revenues from national budgets, pledges, donations and contributions, which are not carbon- or market-related.

Revenues from international transport

Currently, the environmental externality associated with emissions from fossil fuel-use in both the international maritime and aviation sectors is untaxed at the global level. Market-based measures to price this externality could deliver environmental benefits, whilst also raising significant public revenues to enable and support climate change action in developing countries. The AGF outlined three possible approaches in this area:

- Maritime/aviation levies: levy on maritime bunker/aviation jet fuels for international trips
- Maritime/aviation ETS: emission trading scheme covering international maritime/aviation emissions; revenues raised by auctioning or selling credits
- Passenger ticket levy: levy raised on passenger tickets of international flights

Universal application of these measures would reduce distortions, whereas a differentiated approach could result in evasive behaviour to minimise liability. The latter would compromise the environmental integrity and economic effectiveness of the measures, and would substantially reduce potential revenues. The universal application of these instruments may, however, present challenges in terms of political acceptability and incidence on developing countries. Compensating particularly affected developing countries – consistent with the principle of common but differentiated responsibility – will therefore be an important element of such measures. In order to clarify technical concepts regarding revenues from international transport further work would need to be taken forward to the International Maritime Or-

ganization and International Civil Aviation Organization in this area.

Carbon-related revenues

This category covers several measures for domestic application that, in effect, tax carbon emissions. Potential instruments analysed by the AGF include:

- Carbon taxes: a tax on carbon emissions raised on a US-dollar per-ton-emitted basis
- Fossil-energy subsidies: budget commitments freed up by removal of fossil-energy subsidies, which can be diverted towards climate finance
- Taxes on royalty payments: a tax on royalties of fossil fuel extraction
- Wire charges: charge on electricity generation, either on kWh produced or linked to carbon emission per kWh produced

The political acceptance of carbon taxation will vary by country, as reflected by varying success in past efforts to raise similar taxes. While redirecting fossil subsidies is budget-neutral, redirecting existing royalties would worsen a country's budget position. With regard to the removal of fossil subsidies in developed countries, opportunities include: G20 political momentum to phase out fossil fuel subsidies; recognition of the economic benefits of reform; and environmental appeal. There are, however, potential issues of double counting when combining these measures.

Revenues from financial transactions taxes

A financial transaction tax would be a new source, ensuring additionality without diverting from other development- or climate-related financing. As a non-climate-related source, it does not correct any climate externality. The lack of political acceptability and unresolved issues of incidence make it difficult to implement such a measure universally. One perspective in the AGF was that further work is needed to overcome cooperative issues, while a different perspective was that it would only be feasible among interested countries at the national or regional level.

Direct budget contributions

As a public finance source, direct budget contributions are qualitatively different from other sources, as they do not refer to any particular instrument. Some members of the AGF made reference to a proposal in the UNFCCC negotiations to dedicate between 0.5 and 1.0 per cent of developed countries' GDPs to long-term climate financing. Others believed that direct budget contributions would continue to play a role as they had in the past and as determined by national circumstances. To address potential difficulties in the timely implementation of new instruments, governments may prefer to increase budget contributions.

Contributions from multilateral development banks and Special Drawing Rights

Multilateral development banks (MDBs) do not represent a source of finance, but the MDBs and the United Nations are likely to play a key role both in fostering low-carbon growth and in meeting adaptation needs of developing countries. Working in close cooperation with the UN, the MDBs can play a multiplier role, leveraging significant additional green investment by integrating climate action into overall development programmes. The AGF placed particular focus on the following instruments:

- Channelling contributions through the MDBs to leverage additional financial flows
- A new climate fund based on special drawing rights (SDRs)

The AGF acknowledged that the MDBs can leverage substantial amounts of financing for climate-related activities and catalyse additional private finance. The Group estimated that for every 10 billion US dollars in additional resources, the MDBs could deliver between 30 billion and 40 billion US dollars in additional gross flows. Taking into account that gross flows contain servicing obligations that are to be paid by developing countries, the leverage factor in terms of net flows is 1.1 based on paid-in resources. Political acceptability for the proposal to create a new climate fund based on SDRs was found to be limited in the AGF, mainly due to a lack of consensus on the appropriate role of SDRs in the international monetary system.

Public interventions to stimulate private finance for climate change action

Public policy, both national and international, can be designed to foster private investment for the transition to a low-carbon world. Potential measures include risk-mitigation instruments and capacity-building. The Group estimated that revenue potential from private finance can be generated with a leverage factor between 2 and 4 on public flows. A key question, however, was to what extent these gross private flows should be counted as additional resources. There is no analytically or empirically agreed basis to do net private calculations for these financial flows.

Revenues from carbon offset markets

Revenues from carbon offset markets are related to the purchase of offsets in developing countries. The scale of resources is dependent on the emission-reduction commitments in developed countries and on carbon market design. The scope of carbon markets could be expanded by increasing demand from developed countries, building capacity in developing countries and assisting their market readiness, and implementing measures to reduce risks to offset project investors. Carbon finance flows pose challenges in terms of their additionality, given that they are likely mobilised largely by developed countries in order to meet their own emission reductions. There were different perspectives in the AGF if they should count towards the 100 billion US dollar goal.

4.2 Estimating the sources for different scenarios

The Advisory Group came to the conclusion that pricing carbon emissions will be a key driver in generating a real shift in investor behaviour and substantial fiscal revenue. While a long-term carbon price can encourage greater efficiency in the use of energy and make alternatives to fossil fuels more cost-competitive, the driving force for the carbon price is leadership from developed countries, both to deliver and expand on their mitigation commitments. The 2020 carbon price was a key driver of AGF revenue estimates across multiple sources. This was relevant both for sources directly related to carbon prices (such as AAU/ETS auction revenues) and for those

Table 3: AGF calculation of sources¹ (2020 estimates)	Low carbon price	Medium carbon price	High carbon price
1. Public carbon market revenues (US\$ billions)			
<i>AAUs and ETSs</i>	2-8	8-38	14-70
<i>Offset levies</i>	0-1	1-5	3-15
2. International transport (\$ billions)			
<i>Maritime</i>	2-6	4-9	8-19
<i>Aviation</i>	1-2	2-3	3-6
3. Carbon-related revenues (\$ billions)			
<i>Carbon tax</i>	←————— 10 —————→		
<i>Wires charge</i>	←————— 5 —————→		
<i>Removal of fossil subsidies</i>	←————— 3-8 —————→		
<i>Redirection of fossil royalties</i>	←————— 10 —————→		
4. Development bank instruments	Leverage factor 3.5 (gross) and 1.1 (net)		
5. Financial transaction taxes (\$ billions)	←————— 2-27 —————→		
6. Direct budget contributions (\$ billions)	←————— 200-400 ² —————→		
7. Private capital (gross flows in \$ billions)	←————— 100-200 —————→		
8. Carbon market offsets (\$ billions)	8-12	38-50	150

1 Based on the analysis of the Advisory Group; source: United Nations (2010: Annex II).

2 Based on a reference made by some members of the Advisory Group to a proposal in the UNFCCC negotiations to dedicate between 0.5 and 1 per cent of the GDP of developed countries to long-term climate financing, which would correspond to between 200 and 400 billion US dollars.

indirectly related to carbon prices (e.g., bunker fuel taxes). Therefore, the Advisory Group created possible scenarios around three carbon prices for these sources: a low-carbon price (US\$15 per tonne of CO₂); a medium-carbon price (US\$25 per tonne of CO₂); and a higher-price scenario (US\$50 per tonne of CO₂). The scenarios were built around a simple set of illustrative quantities and related prices, informed by the literature review of a broad range of models (United Nations 2010: 25). Table 3 (see next page) summarises the estimated revenue potential under each scenario.

As can be seen in the table, all public and private financial flows, however measured or motivated, will be essential to generate 100 billion US dollars annually by 2020 to enable the transition to a low-carbon economy. According to the analysis of the AGF, none of the sources is large enough on its own, and a variety of sources analysed will be needed if they are to benefit from diversification, which would allow different countries to contribute in different ways within a common framework. Very few sources, if any, will be politically acceptable to all parties.

While there is no clear guidance from the UNFCCC negotiations on the interpretation of the pledged 100 billion US dollars of annual financial flows by 2020, the Advisory Group did not seek an agreed formula on which financing flows should count and which should not count. UNFCCC parties may take different interpretations of the precise accounting of the 100 billion US dollars or any other envisaged scale of revenues. The AGF has not sought to put forward a resolution to this issue on the basis that it is not a purely technical issue, but instead a political decision for UNFCCC parties to take. Moreover, the Advisory Group took the view that its analysis can be useful to parties and decision-makers as it reflects different perspectives. The flexibility provided by this approach might be beneficial for negotiators and policymakers, but it also means that there is no straightforward package or portfolio. It will be impossible to maintain support for raising such vast amounts without confidence that the money will be effectively spent. Moreover, the Group stated that the credibility of both developed and developing countries in raising and using resources will be greatly increased if this funding can be quickly accessed, prioritised for the most vulnerable countries and produce results. For this reason, the

AGF examined cases covering key areas related to adaptation and mitigation action in developing countries. Governance issues and institutional arrangements on how the money should be spent and accounted for were not addressed by the AGF and not part of its terms of reference. The Group concluded its work by stating that the mobilisation of 100 billion US dollars by 2020 will be challenging but feasible.

5. Conclusion

The report of the Secretary-General's High-level Advisory Group sends a very strong signal to policymakers by stating that scaling-up climate financing to support developing countries in mitigating and adapting to climate change can be achieved. The group has presented a rigorous technical analysis for a range of potential instruments and presents many opportunities for developing countries. The report emphasises sources that would incentivise developed-country emission reductions and this could contribute to realising a double dividend, in terms of both correcting climate externalities and raising much-needed funding for developing countries. By putting an explicit price on carbon, the analysis of the Advisory Group also establishes a clear link to the UNFCCC negotiations on emission reductions. This is the case because without a far-reaching agreement on substantial emission-reduction targets, the suggested carbon prices that would generate the presented level of public sources cannot be achieved.

A key immediate challenge is how to get a scaled-up climate finance system up and running. The report recognises the importance of flexibility in delivering public resources. While several of the sources need time to be built and to develop the capacity to deliver new flows of funds, developed countries have the option to draw in the transition period resources from existing revenues. This will be particularly important for ensuring that fast start funding, which ends in 2012, transforms itself into a trajectory starting in 2013 that scales up to 100 billion US dollars annually by 2020.

The mobilisation of climate change financing for developing nations is seen as key to reaching a global climate

agreement, and the report's analysis is relevant for national policymaking, as it provides national governments different options for raising revenues in support of mitigation and adaptation action in developing countries. At the same time, the AGF signals that innovative sources of finance that have been previously considered controversial are now being regarded as viable. This is good news for developed countries in times of economic hardship and budget constraints, since many of the innovative sources offer alternative ways for raising revenue without negative budget implications.

Many of the more fundamental issues such as equity and burden-sharing were not resolved by the Advisory Group. This was not to be expected, since the AGF was not a negotiation group and not in a position to prejudice UNFCCC negotiations. Political agreement between developing and developed countries on what should be actually counted as new and additional finance flows will ultimately have to be decided by UNFCCC parties. The report's analysis and the presentation of different perspectives on these issues within the Advisory Group might help, however, to move the discussion forward. Equally important, the Advisory Group addressed the importance of developing country ownership and tackling demand-side constraints. A major challenge in terms of climate change finance is not only the supply of financing, but also generating the demand for and the capacity to absorb and deploy the financing. This is an important issue, as access to funds needs to be significantly improved, given that currently climate financing is skewed towards a small group of developing nations. This raises in particular the importance of the role of the United Nations in assisting developing countries in building capacity and hereby improving access to climate funding.

While a comprehensive agreement on climate change involves much more than finance, the timely provision of new and additional climate resources could help strengthening trust among countries and generate progress in the current climate negotiations. Further delay would be dangerous and much more costly, and therefore the translation of AGF recommendations into political commitments would be highly desirable.



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