

Simon Wolf, PhD candidate

Helmholtz Centre for Environmental Research, Leipzig/University of Kassel

[simon.wolf@ufz.de](mailto:simon.wolf@ufz.de)

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**From economic rationality to climate politics as investment:  
An analysis of the discourse on financing mitigation and adaptation**

*-- First draft: Please do not quote or circulate! --*

Climate politics has turned into an issue of finance and investment, as scaling up the financial support for developing countries is said to be crucial for successfully meeting the climate challenge. While the focus of climate finance for long was on the adaptation needs of developing countries, and rather subordinated on the political agenda, the debate gained massive attention recently due to its new role in financing emission reductions.

Informed by an economic understanding of climate change that was primarily established by the Stern Review, the new climate finance discourse compares abatement opportunities across sectors and world regions along their cost-effectiveness, and concludes that a large share of global emission reductions must happen in developing countries. One consequence of this rationality is the urgency that is given to implementing a financial mechanism for reducing emissions from deforestation and degradation (REDD). As the larger share of developing countries in global emission reductions requires levels of climate finance that by far exceed the resources currently available from the funding mechanisms under the UNFCCC and beyond, a central role is ascribed to the private sector. The role of governments, accordingly, is to incentivise private finance flows by creating conducive investment environments and overcoming investment barriers through regulation and Public Finance Mechanisms.

An alternative framing of the climate finance issue, that would start from political objectives rather than economic rationalities and constraints, would reveal that traditional forms of regulation such as standard setting or taxes could be used for redirecting existing financial flows rather than hectically searching for new sources of funding. This would, at the same time, not only address some of the root causes of climate change, but provide governments with a new stream of income that could be used for policies and measures that are not deemed attractive by private investors, but are desirable from a societal point of view.

## **1 Introduction**

Climate politics in the Post-Kyoto-Phase apparently has turned into an issue of finance and investments: At COP 15 in Copenhagen, enhancing north-south financial flows was one of the sticking points for an agreement between developing and developed countries; following the unsatisfactory outcome of the Copenhagen conference, the UN Secretary General launched a High Level Advisory Group on Climate Finance to determine the required levels of finance and the potential of different sources; the World Bank and many national governments have launched new climate finance instruments, and a whole new range of actors contributes to a discussion on how to meet the climate challenge through scaling up climate finance.

### *New emphasis on investments*

While the provision of financial resources for developing countries has long been an issue of adaptation in the first place, and was rather subordinated on the political agenda, the finance issue has massively gained importance due to a new attention for climate protection in developing countries. The main reasons given for this new importance are the globally required scale of emission reductions, the quickly rising emissions in some developing countries, and the comparably cheap abatement opportunities in the global south.

What becomes apparent when looking at many of the recent developments is the new emphasis that is given to raising and stimulation investments for climate protection. The central question in the dominant climate finance discourse is how to achieve the required level of funding for realizing the emission reductions needed globally, and for emission reductions in developing countries in particular. Given the magnitude of the challenge, the conclusion is drawn that all available sources of money must be used, and that the vast majority of financial flows will have to come from the private sector. The role of the public sector, in consequence, is to finance the measures that are not deemed attractive by private investors, and to change their preferences: The role of public funding ‘is essential to generate the enabling environment for private sector financing fast enough to make a difference in current investment decisions’ (World Bank 2008a: 3, Schalteck 2009).

Much of the climate finance debate and the initial political regulation, in consequence, focus on this objective: Proposals for Public Finance Mechanisms discuss how to increase the leverage effect of public spending on private investments, by providing guarantees, loans and grants (Maclean et al. 2008). The World Bank Climate Investment Funds, by far the most important of the new climate finance instruments, accordingly aim less at financing mitigation directly, but rather at incentivising private finance flows into renewable energies and clean technologies; the carbon market discussion has shifted from the capacity of markets to identify cost-efficient emission reductions to their potential to stimulate private investments;

and while a general consensus exists that a REDD mechanism should give financial incentives to lowering deforestation rates, one of the most contentious issues is if and how markets and private investments can be generated for this objective.

While many practitioners like government departments, NGOs, and consultancy firms have taken up the issue, the analytical social science literature on finance in climate politics almost entirely remains focused on carbon markets, weighing their pros and cons against the background of the Kyoto situation. But while the focus was on emission reductions in developed countries then and financing emission reductions was only a minor issue delegated to the CDM, the situation has dramatically changed in recent years, as developing country mitigation and north-south financial transfers have moved the heart of the climate agenda.

This raises the question whether the heavy criticism of the marketization of climate politics' should be revisited according to these developments, that is, whether the changing context adds new legitimation to the use of market and investment instruments; or, to the contrary, whether the urgency and indispensability that accompanies the calls for raising climate finance and incentivising private investments relies on a narrow problem framing, that rashly neglects alternative approaches and solutions.

To answer these questions, this paper describes the emergence of the climate finance debate and analyses the dominant problem understanding. In particular, it will look at how the focus on raising investments has evolved, and what solutions are offered and implemented accordingly. It will The paper argue that the climate finance debate, rather than aiming at generating the funds for politically defined objectives, takes an active role in shaping needs and priorities. The paper starts by describing the old climate finance discourse (section 2) and the economic rationality in climate politics that makes climate change legible and manageable as an economic problem (section 3). Much of the current climate finance debate is organized according to this logic, calling for cost-effective mitigation and incentivising private investment (section 4). The examples of Public Finance mechanisms and the REDD mechanism emphasize the dominant finance logic in climate politics (chapter 5). The final section (6) will reflect the dominant climate finance logic by describing alternative framings.

### *Some remarks on theory and methodology*

The paper presents and discusses some of the (preliminary) findings of a PhD project that analyses the climate finance discourse. Some remarks on the theoretical perspective of the project, its key concepts and relation to other theoretical approaches will help to understand the objectives of this research and the contribution it can make to the debate.

The issues discussed in this paper are of crucial interest from a Political Economy perspective, as the transformation to low-carbon societies aims at the very heart of the organization of capitalist societies as much as international economic governance, and produces and requires new forms of interaction and regulation between governments, markets and economic actors.

The paper, however, focuses on the discursive construction of the climate finance field, asking for the emergence and stabilisation of a particular perspective or *rationality* and possible alternative framings, and questioning the dominant logics in the climate finance discourse. These aspects remain widely unconsidered in the existing literature, but are a precondition for understanding and ultimately evaluating the different proposals and solutions that are offered.

Applying poststructuralist discourse theory, the research strategy combines archeological and genealogical methods: While the archeological dimension of the analysis refers to the form of a dominant perspective or rationality itself, the genealogical dimension refers to the formation of this rationality based on societal practices and changes to these practices (Foucault 1976/1998). Both aspects are most relevant in analysing the current climate finance discourse: On the one hand, it is important to describe when, how and under which circumstances the discourse emerges, and which actors compete and finally succeed with their knowledge claims. On the other hand, it is important to outline the dominant understanding and concepts that inform political action.

In applying this research strategy, the project is also able to overcome the shortcomings of two other approaches that are seen as crucial in analysing political processes in climate politics beyond the governmental level. Contrary to constructivist approaches that are mainly occupied with ‘the role of collectively held or ‘inter-subjective’ ideas and understandings on social life’, but miss a ‘more specific understanding of who the relevant actors are, what they want, and what the content of social structures might be’ (Okereke et al. 2009), the genealogical dimension of the research seeks to account for both the role of actors and structures in establishing a particular perspective . And against governance approaches, that focus on the role of different (state and non-state) actors but lack an explanation for who and what is involved in governance, a poststructuralist approach accounts for the role of power in those processes by challenging the concepts that inform processes of political interaction and set the ‘ground rules for governance’ (Jessop 1999).

## 2 The old climate finance debate

Finance is all but a new issue in climate politics. From the early days of the international negotiations, developing countries pointed to their financial needs for preparing for and adapting to the consequences of climate change. But climate finance was a rather subordinated one on the political agenda, and even more so in the public attention, as was the issue of adaptation in general. The Kyoto negotiations, whose outcome shaped the development of climate politics in the years thereafter, were dominated by a focus on mitigation.

The adaptation issue gained ground after the IPCC assessment reports in 1996 and 2001, that provided evidence on the fact that some changes to the climate were no longer evitable, and described already existing consequences of climate change - a fact that then was strongly supported by the Fourth Assessment Report in 2007: 'Even if, by some miracle, we could stop emitting greenhouse gases today, we will still experience climate change in the next few decades, making adaptation unavoidable' (IPCC 2007).

In political terms, the most important step was the installation of several adaptation funds at the Marrakesh COP in 2001 (Dietz 2006): The Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDC-Fund) depend on voluntary contributions by developed countries, the Adaptation Fund is financed through a levy on the CDM, and therefore could only start operating with the entry into force of the Kyoto Protocol. At the following COPs, the operation design if the funds was concretised, and a number of developed countries made first pledges.

Most important, however, is the background against which these funds were set up: The terminology was mainly one of justice then, and the funds were seen as a form of compensation for the damages and dangers that developing countries would have to face due to the anthropogenic climate change mainly produced by developed countries. The financial support is meant to meet the additional costs of developing countries through climate change, '*(...) additional costs means the costs imposed on vulnerable countries to meet their immediate adaptation needs*' (UNFCCC 2005a). Consequently, it was hardly every questioned that the financial transfers for adaptation had to come from public sources, and should be provided as non-conditional payments. But while there was a strong general agreement on the function and form the adaptation funds should have – different perspectives regarding their institutional structure, access to the funds and use of the resources notwithstanding – the actual deposit of resources to these funds remained scarce over the years.

The climate finance issue massively gained importance in recent years, and changed in scope and focus as well, due to a number of reasons. On the one hand, adaptation in general began

climbing up the political agenda, as not only the magnitude of the potential consequences of climate change became clearer, but the attention for the vulnerability of developed countries heightened as well. One early landmark here is a 2007 green paper of the European Commission, calling on EU member states to prepare for the consequences of climate change (European Commission 2007).

Adding to these direct consequences of climate change, industrialized countries increasingly worried about indirect threats through the impacts of climate change in other world regions, leading to increased migration, political instability and conflicts, or threats to energy supply and transport routes. While this attention for climate change as a 'security thread' has faded after a short boom triggered by studies in the US and the EU (European Commission 2008 WBGU 2007, CNA 2007), adaptation planning has established in many developed countries, focusing on sectors such as agriculture, energy production or tourism (Jacob 2008, European Commission 2009).

The growing awareness for the consequences of climate change may have increased the willingness in some developed countries to support developing countries financially as well. The stronger push for the climate finance topic, however, came through a new emphasis on the need for emission reductions in developing countries, and consequently the need to enhance financial transfers. Three main reasons for this need to realize emission reduction in developing countries can be found in the literature:

*First* of all is a growing attention for the need to reduce emissions on a global scale. The IPCC's fourth assessment report, emphasized that previous efforts were not sufficient for preventing dangerous climate change. The G8 meeting in Gleneagles in 2005, the Nobel Prize for the IPCC and Al Gore, among others, helped moving the climate topic to the core of the (international) political agenda (Egner 2007, Luks 2008).

A *second* important reason are the growing emissions in some developing countries. Fast emerging economies, such as China and India, are already responsible for a substantial share of absolute global greenhouse gas production, and the share of developing countries is expected to rise sharply due to further economic and populating growth.

While only a small number of countries plays an important role here so far, it is *third* the availability of comparably cheap emission reductions that turns the spotlight to other developing countries.

#### *Changing logic, changing terminology*

This last argument hints to the way in which the climate finance issue has been framed most recently. While all developments outlined here play an important role for the new importance

of climate finance, it is a parallel development that provides the logic and terminology in which the climate finance discourse evolves: The reframing of climate change as an economic problem provides not only the framework for an understanding of climate politics that seeks to realizing emission reductions along their cost-effectiveness on a global scale, but opened up the discursive field for a whole new range of actors, considerations and policy forms that together shape the current, investment focused climate finance discourse.

### **3 The Economics of climate change**

Economic considerations, perspectives and strategies are all but new in climate politics. As early as 1992, William Cline published his book “The Economics of Global Warming”, and ever since, the economic consequences of climate change have been a topic within academia (Cline 1992); business organizations were one important lobby group from the early days of international climate negotiations, and achieved to prevent stronger regulation in many cases (Levy and Egan 2003); the UNFCCC, agreed on in 1992, already states that ‘policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost’ (UNFCCC 1992); five years later, the Kyoto Protocol introduced three flexible mechanisms that aim at enhancing the cost-effectiveness of climate protection through the efficiency of markets (UNFCCC 1997); and the development of the global carbon market in the following years opened a lucrative playing field for project developers, investment companies and consultancy firms.

#### ***3.1 Reframing climate change as an economic problem***

Against this background, it seems disputable to claim that the publication of the Stern Review on the *Economics of Climate Change* in 2006 (Stern 2006), and its intensive discussion thereafter, reframed climate change as an economic problem. However, the report marks a crucial turning point in the climate politics discourse, by establishing a certain economic rationality thinking in climate politics.

Though it certainly was not the Stern Review on its own that brought about these changes, there can be no doubt regarding its massive influence on the public and policy debate: The report heavily resonated in mainstream and expert media, and in particular the global uptake came as a huge surprise even to the authors. Nicholas Stern, not particularly an expert in climate politics until then, is today ‘the global authority on climate change’ (The Guardian), and until today policy makers and scientists alike rely on his work to add legitimacy to their arguments.

The question remains, however, what caused this massive resonance, as Stern and his team do by no means present an entirely new perspective. Rather, they review, reflect, takes up and reinforce a changing understanding of the climate change problem that certainly would have broken ground sooner or later without anyway.

### *Making climate protection economically rational*

To adequately understand the importance of the Stern Review, we have to distinguish between its main message that was widely taken up in the public and heatedly discussed in expert circles, and the particular approach to climate politics the Stern Review establishes, that subsequently informs much of the international climate politics debate and the climate finance debate in particular.

The main message of the Stern Review is that climate protection is economically rational; Stern and his team compare the global macroeconomic costs of climate change, with and without mitigation policies, outlined for time horizons of 50, 100 and 200 years (Stern 2006). The core message is that the economic consequences of uncontrolled climate change far outweigh the costs of limiting climate change to an acceptable degree: mitigating climate change, therefore, is perfectly rational from an economic point of view.

It is this message that was strongly taken up and almost entirely welcomed in the public debate. However, it is a political rather than a scientific argument, and of limited value only for concrete policy debates. The constraints to the – scientific – relevance of the approach become apparent when looking at the critical debate among economists that followed the publication of the review (for a more detailed discussion, see Wolf 2009). While many issues were raised regarding the chosen methodology, the debate culminated around the choice of the discount rate.<sup>1</sup>

The Stern Report chooses a significantly lower than rate than comparable studies, and in consequence, today's climate protection efforts have a higher value in the Stern Report than in most other models (Weitzmann 2007, Spash 2007). This is heavily criticized by other economists who that a higher discount rate would have caused far less clear conclusions about the costs and benefits of climate protection.<sup>2</sup>

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<sup>1</sup>This factor, put very simplistic, diminishes the value of present investment over time, as first money loses its value through inflation, and second future generations are expected to be wealthier through economic growth. For more detail on discounting in the Stern Report, see Spash 2007; on discounting in general, see Price 1993.

<sup>2</sup> They also accuse Stern and his team of only taking into consideration the most pessimistic forecasts of climate damages, which further elevates the value of climate protection efforts. This argument is countered by Arrow (2007). He agrees that Stern's results differ considerably from other studies. But, even choosing a much higher

What is important here is that the choice of the discount rate and other important parameters in economic modelling cannot be justified through scientific reasoning but rather reflect particular a whole range of assumptions as much as world-views and beliefs (Ackermann 2007): ‘Modelling over many decades, regions and possible outcomes demands that we make distributional and ethical judgements systematically and explicitly. Attaching little weight to the future, simply because it is in the future (‘pure time discounting’), would produce low estimates of cost – but if you care little for the future you will not wish to take action on climate change’ (Stern 2006: 143).<sup>3</sup>

The main message of the Stern Review, accordingly, was not purely scientific argument, but rather a political one – a point of view that Stern himself supports three years later in his *Blueprint for a safer planet*, suggesting that the estimates should not be mistaken as exact forecasts, but that they fulfilled an important role in rising the awareness for the urgency of climate politics (Stern 2009).

Additionally, the argument is limited value from a practical perspective. Even taking the argument for granted that global climate protection is economically rational in the middle and long run, the situation can be very different from a national policy perspective: Emission reductions of an individual country do not limit the effects of climate change for this same country, and it is by no means certain that the effects of climate change will be economically negative in every case, as rising temperatures improve the economic conditions for some sectors; adaptation policies can have the effect of an economic stimulus, and the growing demand export for climate proof technologies opens up export markets for some countries.

The Stern Review, then, ‘is a standard piece of normative welfare economics which asks the question: assuming a benevolent global player, what would you do?’ (Interview Simon Dietz). A benevolent global player, so he existed, would probably make a strong effort to limit climate change, but turn down economic arguments for much stronger normative motivations. Policy-makers, on the other side, have to take the general decision for climate protection without relying on cost-benefit considerations.

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discount rate (up to 8.5 per cent following his calculations), climate protection measures would still be economically rational (Arrow 2007). Finally, Schneider (2008) hints to another inconsistency within the ‘Economics of Climate Change’: ‘It is unacceptable to compare future costs to the present scale of the economy, [...] since projected growth rates of the economy swamp all mitigation and adaptation costs typically found in the literature’ (Schneider 2008: 3).

<sup>3</sup> This unfruitful debate makes Yohe and Tol (2008) ask whether it is necessary to model the costs and benefits of climate protection, as ‘economic arguments can be made without resorting to dodgy modelling or peculiar assumptions. Taxing greenhouse gas emissions now makes perfect economic sense’ (Yohe and Tol 2008: 237).

### ***3.2 And turning climate politics into an economic challenge***

Nonetheless, the general argument of the Stern Review had great effect on policy debates by supporting those who want to make the case for cuts in emissions by strengthening their arm and power in the government to do the changes they had in mind. This is by no means accidental. The report was commissioned by Gordon Brown, then Chancellor of the Exchequer, and the objective was to only to put as much authority behind the Economics of Climate Change as possible, by making it an official government report written by a former World Bank chief economist, but to make a strong case for the economic dimensions of climate change, to bring finance ministries into the game. The review, then ‘shifted the debate away from polar bears and unseasonal summers, and reframed it in the cold hard language of the balance sheet’ (The Guardian, 30 March 2009).

In consequence, and all objections to the approach taken by Stern and his team notwithstanding, the report was successful in establishing a global economic perspective on climate change, that allows to frame consequence of climate change and benefits of climate protection in monetary terms.

This, however, is not unproblematic, as the modelling techniques reduce the complexity of the various dimensions of damages and risks, to find a common denominator for costs and benefits and to make them fit within economic models (Spash 2007). This involves the valuation of ecosystems and livelihoods and implies, inter alia, the problematic equation of monetary losses in different world regions: what means less luxury consumption to some, may threaten the basic needs of others.

The use of global aggregate values leaves disparities in income distribution unconsidered, or at least cannot serve to problematise them. The only requirement in the Stern Review regarding incomes is that ‘future generations should have the right to a standard of living no lower than the current ones’ (Stern 2006: 42). Future developments, which leave the poor poor and make the rich richer, are fully consistent with this premise.

To be fair with Stern: He is among the most progressive in the economists camp, in refusing high discount rates to play down future consequences of climate change, and even critics acknowledge the sophisticated methodology in shifting ‘from a single-discipline focus cost-benefit analysis to a new inter-disciplinary and multi-disciplinary risk analysis’ (Barker 2008: 174). In adding the factor of risk, Stern and his team take into account the potentially very strong consequences of climate change, what adds value to present climate protection. Nevertheless, after the Stern Review, climate change is legible through economic analysis and modelling.

What the Stern Review combines, then, is a new seriousness for the need to act - after all, it’s global wellbeing that is at stake if climate change is not limited to an acceptable degree - with

a strong sense of opportunity. While governments and International Organisations alike welcomed the message that ‘we must act now’, investors praised the reports emphasis on the compatibility of climate protection and economic growth, and the need for enhancing the scope of markets as ‘huge business opportunity’.<sup>4</sup>

If the ETS was practical because it ‘created a terminology that business could understand’ (Hamilton 2008), the Stern Review delivered the textbook for an economic approach to global climate policy, that strongly resonates in climate politics and is an important basis for the climate finance debate.

## **4 The new climate finance discourse**

The climate finance field is undergoing a process of rapid transformation, and currently consists of different arenas that partially interact with each other. On the one hand, a great number of proposals aims at reforming the current finance architecture under the UNFCCC (Müller and Gomez-Echeverri 2009), seeks to differentiate responsibilities for the scaling up of climate finance (Climate Works 2009), or to identify new sources for mitigation and adaptation finance: levies on air and maritime travel, a tax on emissions trading schemes, or the withdrawal and auctioning of emission permits on the international level are the most prominent proposals here (UNFCCC 2007, Parker, Brown et al. 2009).

### ***4.1 The emergence of the new climate finance discourse***

On the other hand, there is a new climate finance discourse that has its starting point in the estimated level of funds that is required for mitigation and adaptation globally. This debate is partly involved and feeds into the debates and proposals for north-south financial flows within the UNFCCC, but partly occurs beyond this arena as a general change in the logic or rationality of climate politics as well. Most important here is a general shift in the perception of the climate challenge from costs to investments, or from burden to opportunity, that affects and transcends other important issues in climate finance like the role and relative share of public and private money, and the different financing needs of mitigation and adaptation.

#### *Estimating the costs of climate protection*

The common starting point of the climate finance debate in its current form is the level of finance that is needed for mitigation and adaptation, either on a global scale or with a focus in developing countries. Such estimates were first put forward for adaptation needs in

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4 See ‘Expert reaction to climate change’: <http://news.bbc.co.uk/1/hi/business/6098612.stm>

developing countries by the World Bank who in 2006 estimated that US\$ 10-40 billion would be necessary in adaptation finance (World Bank 2006), and the NGO Oxfam that gained much attention with a 2007 study estimating 'that the cost of adaptation in developing countries is likely to be at least US \$50bn each year' (Raworth 2007).

While these numbers differ from study to study and generally tend to grow over the years - more recently, World Bank and Oxfam suggest that developing countries need US \$ 75-100 billion a year by 2020 for adaptation (World Bank 2009, Gore 2010) - the perspective was soon widened to estimate the financial need for mitigation measures as well.

Comparability of these estimations is even more limited in the case of mitigation as most studies calculate the costs of climate protection as a fraction of global GDP, what adds additional variables like the expected rate of economic growth. The Stern Review estimates that the expected annual costs of limiting global warming to 2 degrees (that is, a stabilization of the concentration of GHG in 2050 at 500-550 ppm CO<sub>2</sub>eq) will be somewhere in the range from -1 per cent (net gains) to 3.5 per cent of GDP. The IPCC, in its Fourth Assessment Report published in 2007, estimates the costs of stabilizing GHG at a range of 445-535 ppm CO<sub>2</sub>eq at 3 per cent of global GDP.

Many other studies and estimates likewise predict financial needs on a global scale or for certain sectors and world regions. Such estimates are subject to huge uncertainties, the cost range in the Stern Review, for instance, 'reflects a number of factors, including the pace of technological innovation and the efficiency with which policy is applied across the globe: the faster the innovation and the greater the efficiency, the lower the cost' (Stern 2006: xiv).

What is more important than the huge number of uncertainty factors of these 'rough top-down modelling exercises' (European Commission 2009: 4) is the degree to which these studies create a particular perspective on climate change mitigation and, thereby, their own object. The climate finance debate, in that sense, does not aim at executing political decisions, but takes an active role in constituting needs and opportunities. This '*performativity of economics*' (Mac Kenzie 2007) becomes most apparent where the need for climate finance is derived from an economic analysis of different options.

#### *Priority setting along cost effectiveness*

Of fundamental importance in this regard is the *Global Greenhouse Gas Abatement Cost Curve* elaborated by the global consultancy *Mc Kinsey*, that gains similar attention to the Stern Review in the current climate politics, and in particular in the climate finance debate.

The calculation of the 'Pathways to a low carbon economy' report departs from the insight that mitigation efforts 'close to the full potential' are necessary to remain within 2-degrees

global warming (Mc Kinsey 2009).<sup>5</sup> The *Global Greenhouse Gas Abatement Cost Curve* compares the potential of different sectors and world regions to contribute to this objective.

This approach escapes parts of the criticism of the Stern Report, as it does not compare costs to benefits. The political aims here do not result from the calculations, but are predefined. ‘This is cost-effectiveness, not cost-benefit analysis’ (Pearce 2003: 364).

The authors consider four potential ways of emission reductions: Energy efficiency, low-carbon energy supply, terrestrial carbon (forestry and agriculture), and behaviour changes. Taken together, the first three categories allow for emissions reductions equalling 80 Gt of CO<sub>2</sub>, estimated for the year 2030. Behaviour changes can deliver another 4 Gt.

A set of assumptions and normative standpoints, leading the enquiry, are outlined at its start. As the *Global Greenhouse Gas Abatement Curve* aims at the most efficient reduction opportunities, it makes no difference where these reductions take place; there is no need for a global adjustment of *per capita* emissions in the long run; and the authors only consider mitigation options ‘that do not affect the lifestyles of individuals’ (Mc Kinsey 2009: 36).

This last premise is the main reason for the limited abatement potential through behaviour changes in the industrialised countries: ‘Changing behaviour is difficult [...] and there is a high degree of uncertainty in these estimates’ (ibid.: 29).

The authors identify a much larger abatement potential in the forestry and agriculture sector in developing countries. Though steering these processes is complicated, and ‘educating and mobilizing billions of farmers around the world to change their daily practices is similarly challenging’ (ibid. 34), the authors do not raise general objections against these changes.

The main achievement of the study consists in shaping a global perspective, by reducing the complexity of abatement opportunities to abstract categories. Comparing those opportunities regarding their relative cost-effectiveness, the authors can conclude that two thirds of global emission reductions should take place in developing countries.

Two main reasons are given for these comparative cost advantages. Developing countries have the opportunity to ‘leapfrog’: They can leave out environmental harmful stages of development, and jump directly into more sustainable levels. This level switching is expected to be less costly than the rebuilding of the industrial sectors in the North. The second extensive and low price abatement opportunity can be found in the forestry sector, through afforestation and avoided deforestation.

Successful implementation of the *Global Greenhouse Gas Abatement Cost Curve* is compatible with quite diverse *per capita* emissions in the long run. The calculations for the

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<sup>5</sup> The study was prepared by the consultancy McKinsey, resulting from a common initiative with a number of Think Tanks, companies, and NGOs, among others the Carbon Trust, Climate Works, Shell, Vattenfall, Volvo, and the WWF.

year 2030 result in *per capita* emissions of 7.7 tons CO<sub>2</sub> in industrialised countries; populations in China and India would emit 3.7 tons, and 1.9 tons in developing countries with a significant share of forestry.<sup>6</sup> The authors see no contradiction to equity considerations here, because reduction efforts in the South are expected to be financed by developed countries. Living on less carbon, then, is finally a question of finance.

The analysis done by Mc Kinsey is strongly taken up in the climate finance debate. A strategy paper by the think tanks Climate Works and European Climate Foundation equally starts from the assumption that for limiting climate change to 2 degree, 17 Gt of abatement will have to be reduced against a business as usual scenario until 2020, and ‘Of those 17 Gt, about 12 Gt of abatement will be physically located in developing countries’ (Project Catalyst 2009). According to the Little Climate Finance Book, ‘Of the 17 billion tonnes of emissions reductions required in 2020, 70 % is achievable in developing countries’ (Parker, Brown et al. 2009: 18). Embarking on the argument for cost-effective forest mitigation made by Stern, Mc Kinsey and others, Eric Bettelheim, founder of *Sustainable Forest Management*, suggests that ‘near half of the mitigation actions available in the period to 2020 consists of reducing deforestation and improving agricultural practices in the tropics and sub-tropics’, because ‘developed countries face severe limitations on the cost-effectiveness of mitigation actions they can take by 2020’ (Bettelheim 2009: 90).

### *Equity as finance*

These and similar arguments that justify the urgency of emission reductions in developing countries directly from a comparison of the relative costs are ubiquitous in the current climate finance debate. Two things are particularly remarkable here. First, the fact that the economic foundation of the argument is not present in many cases shows how deeply economic logics have penetrated climate politics. Many argue that deeper emission reductions are ‘achievable’ in developing countries, while developed countries face ‘severe limitations’ in this regard, transforming financial constraints to mitigation in absolute ones.

Second, this logic changes one of the normative fundamentals of climate politics. The basic rationality of the Kyoto Protocol was that the main polluters will have to reduce emissions in the first place, due to historical responsibility as much as economic capacity. However, ‘unavailability of plentiful cost-effective reductions in the developed world challenges the assumptions and dynamics underlying the Kyoto Protocol and the European emissions trading scheme. Both focus overwhelmingly on forcing dramatic and rapid changes to the energy and industrial infrastructure of the developed world – an approach that was based on historical

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<sup>6</sup> The particular low value for these regions results from the fact that avoided deforestation is equalled with negative emissions, resulting in small overall emissions budgets.

responsibility and fairness. Unfortunately, what may have seemed equitable and fitting is neither economically achievable nor environmentally sensible' (Bettelheim 2009: 91). Similarly, Pendleton and Retallack (2009) in a paper for the London based think tank IPPR argue that 'in a world of limited finance, reductions arguably [must] be undertaken wherever they can be made for the lowest cost', and offer an alternative perspective on burden sharing: 'Since emissions reductions in developed countries are insufficient to solve the climate problem, [...] the principles of responsibility and capability might more productively be applied to the financing of global reductions' (Pendleton and Retallack 2009).

The assumption that emission reductions can be organized along a cost-effectiveness agenda is not only problematic due to the high uncertainties involved in the estimated abatement potential and its cost in developing countries, as we will see for the case of reducing emission from deforestation and degradation (chapter 5.2). Taking these estimates for granted contributes to a perspective that identifies the levels of climate finance that can be raised as an indicator for successful climate politics – a perspective that has important implications for the creation of Public Finance Mechanisms (chapter 5.1)

### *Public and private money in climate finance*

One of the most contentious issues in the climate finance debate is the share of public and private money for mitigation and adaptation in developing countries. It is here where the split of the old and new climate finance discourse becomes most apparent.

In the context of UNFCCC negotiations, developing countries repeatedly call for public finance additional to existing ODA flows. Public does not necessarily mean that the money does have to come from national budgets in developed countries: Rather, a whole set of so called innovative sources have been suggested, including international taxes and levies, or intermediary institutions that sell emission allowances from from mitigation activities and feed the revenues back into a publicly managed fund.

The issue of public finance is in particular critical when it comes to adaptation finance. There has been a consensus for long that the adaptation needs of developing countries should be met by non-concessional public grants: Adaptation policies often secure public goods, which does not usually happen along profit maximizing interests (Fankhauser 2006). 'In many cases, market forces are unlikely to lead to efficient adaptation' (Stern 2006).

For many, the need for public finance for adaptation follows directly from the form of financial flows that is required: 'It is the world's poorest and most vulnerable people – on the front line of the climate crisis – that adaptation finance must reach. This includes women farmers [...] Only public finance can be sure to reach these women and other marginalised

communities. The interventions needed [...] will not attract investment from the private sector, since they do not generate internal returns'(Oxfam 2010: 3). For the same reasons, they reject counting payments for adaptation as ODA, as 'climate finance is not aid. It is not an act of charity, or an expression of solidarity with poor countries, but a legal obligation under the UNFCCC' (Oxfam 2010: 3). The need for public money, then, follows from justice rather than from economic considerations.

#### ***4.2 From costs to investment in climate politics***

Much of the climate finance debate beyond the UNFCCC, however, takes another direction. Instead of framing the debate in terms of legal rights and obligations, it starts from the economic analysis presented above: Comparing the magnitude of finance that is needed for mitigation and adaptation to the current financial flows for climate protection and clean development, the conclusion is drawn that all available sources of money must be used, and the bulk of financial flows will have to come from the private sectors.

Beyond the respective shares of the private and public sectors, the current climate finance debate usually does not discriminate between different sources of money. Following the need for massively scaling up climate finance, the focus is clearly on raising these sums, and it is this background against which the financial sources are said to be equal: 'By purchasing offsets to meet their domestic targets, developed country emitters, and their consumers, workers, and shareholders, ultimately finance emissions reductions in developing countries. From the viewpoint of developed countries, these transfers are just as much an expenditure of societal resources as ODA and other public financing mechanisms' (Stewart et al. 2009).

The potentially very different effects of the financial flows are are sidelined as the various sources are grouped as *climate finance*, and the 'requirement for significantly scaled-up finance and investment in the solutions to climate change' (Hamilton 2009), makes it inescapable that private as well as public sources must be part of a mitigation finance mix' (Stewart et al 2009: 2). One main success of the CDM, for instance, is that it 'leveraged more finance into GHG emission-reducing projects in developing countries than any other international mechanism' (Streck 2009: 71).

The climate finance debate, then, ascribes an important role to private investments for climate protection. There are two different narratives that focus on the role of investments but, their different starting points and focus notwithstanding, come to similar conclusions: the role of governments and policy making is essential in stimulating investment for climate protection .

### *The 'need for private investments' narrative*

The need for scaling up climate finance results in a particular role that is ascribed to public spending. The 'Golden rule of public funding [...] suggests that governments should only support those investments that are economically efficient but not financially viable' (Doornbosch and Knight 2008: 24). That means that 'the role of public organizations using valuable taxpayer contributions should be in funding those projects which the market forces will not deem profitable' (Schalatek 2009: 22). It is essential, in this understanding, that public funding does not 'crowd out' private investments.

Rather, the role of public spending is to 'crowd in' investments: Public spending should not only fill the gaps left by the private sector. The role of public funding 'is essential to generate the enabling environment for private sector financing fast enough to make a difference in current investment decisions' (World Bank 2008a: 3). The use for leveraging or incentivising private finance flows is particular high in developing countries, due to the higher risks faced by investors, though 'the investment opportunities are often also greater due to major infrastructure investments and faster economic growth' (Brinkmann 2009).

The higher contribution of developing countries to emission reductions means that 'these countries will not only need to gain financial support from developed countries to cover incremental costs, but also to create a set of coherent policies and regulations that play their part in mobilising private capital' (Project Catalyst 2009). While the argument for cost-effective emission reductions in developing countries is a theoretical-analytical one, a more practical perspective reveals that many of the the low cost abatement opportunities are not yet available but need to be created through 'coherent policies and regulation'.

Developed and developing countries alike have to get their regulatory frameworks right in order to allow for and incentivise investment flows into renewable energy and clean technologies. This form of 'investment grade policy [...] needs to tackle all the relevant factors that financiers assess when looking at a deal' (Hamilton 2009).

Providing regulatory certainty, however, is only one of the core tasks for governments in order to unlock private investments. 'Because only a minority of such investments are inherently financially viable, government-mandated incentives such as carbon pricing, standards, and direct subsidies/feed-in tariffs would be required to generate greater investments in mitigation' (Brinkmann 2009: 135/6, Fulton et al 2009).

Given the scarcity of public funds, in particular in the aftermath of the financial crisis, the assumption is that these resources can be best used to leverage private finance, and thereby, profoundly increase the overall level of financial flows (LSE et al. 2009). Carbon markets are expected to play a crucial role here as well, as they 'can leverage as much as nine-fold underlying investment in some sectors' (World Bank 2008).

### *The 'investment opportunity' narrative*

In the climate finance debate and in climate politics more general, the changing focus from costs to investment reflects a general shift 'from threat to opportunity' for business and investors (Newell and Patterson 2010). Investments into renewable energies and clean technologies have been a success story in several countries, and future expectations to the growth of these sectors are high enough to let investors dream of the 'single largest wealth creation opportunity in world' (Hamilton 2008). The business opportunities for various sectors opened up through the carbon markets further strengthened that expectations.

On the other hand, there is an intentional push to 'reframe[s] the debate in terms of investment benefits rather than mitigation costs. [...] It shows that economic growth and job creation in all major economies can be sustained and even increased under ambitious mitigation scenarios. And it shines a light on the potential benefits from reflat[ing] the global economy through a global green 'New Deal' in Copenhagen' (The Climate Group 2009: 2).

This reflects the fact that the focus of the Stern and Mc Kinsey studies on the most cost effective emissions reductions can only partially inform investment decisions. 'It is worth saying: risk and reward is not the same as cost and benefit' (Hamilton 2008). Investors might choose to fund the opportunities with the lowest capital intensity rather than the ones with the lowest cost over time. The challenge therefore is sometimes rather to find 'effective ways to incentivise and finance the (sometimes considerable) additional upfront expenditure [...]. It becomes clear that the cheapest abatement opportunities are not always those with the lowest capital spend' (Mc Kinsey 2009: 15).

Additionally, realizing investment can be constrained by practical factors as well. In the case of forestry and agriculture, 'both costs and investments are relatively low. Here, the implementation challenges are practical rather than economical' (Mc Kinsey 2009: 16) A similar problem is identified in the housing sector: While builders and owners refrain from making investment into energy efficiency because they do not benefit from the financial savings, tenants are equally reluctant when they are not certain to stay long enough to get back their investment.

In consequence, many voices call for giving more attention to the opportunities of climate protection and addressing the hurdles that investors face. 'There are hundreds of billions of dollars of value that we are not accessing. [...] society as a whole is losing money by investing in an outdated energy infrastructure', because we are 'so focused on the costs, and on who is gonna bear the costs, and how we are gonna raise the costs of pollution'.<sup>7</sup>

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<sup>7</sup> Bracken Hendricks, Center for American Progress, at the conference *The great transformation – Greening the Economy*, at Heinrich Böll Foundation Berlin, Friday, May 28<sup>th</sup> 2010 (own documentation).

Two consequences are drawn from this. On the one hand, ‘The topic of clean energy investment should be positioned as a strategic, economic, industrial and foreign policy issue for the UK, and other countries. [...] We need new analytics in this area, new evidence base bringing forward much more clearly the investment opportunity, and the benefits in short and medium term’ (Hamilton 2008). On the other hand, focusing on investments instead of costs could inform a political agenda that seeks to overcome particular barriers to investment and generally helps creating conducive investment environments. ‘An investment perspective could help tease out the relative importance of these four policy planks [market based instruments, policies to support innovation and accelerate technology development, regulation [...] to overcome market barriers, forestry] and suggests from where investments for them should come’ (Doornbosch and Knight 2008: 5).

## **5 Tracing the investment logic in climate politics**

The climate finance field is under heavy construction, and so it is impossible to determine how a future finance architecture will look like - even more so as it is part of a larger climate politics package that Parties hope to tie at COP 16 in Cancún in December 2010.

The outcome will have consequences for climate finance flows within and beyond the UNFCCC: Greater emission reductions commitments by developed countries will most likely result in an accelerated growth of the carbon markets, and thereby increase the potential level of financial flows to developing countries. A failure to come to an ambitious agreement, to the contrary, could result in further strengthening the role of processes outside the UNFCCC: some governments fear, for example, that without a strong outcome on REDD, initiatives like the Interim REDD+ Partnership initiated by Norway and France might further gain ground and eventually replace an UNFCCC mechanism (Martone 2010).

All uncertainties notwithstanding, important developments are currently underway that reflect the finance and investment focus sketched out above. The remainder of this paper therefore takes a closer look at two of the mechanisms that play an important role in this context: Several proposals and initiatives for Public Finance Mechanisms aim at incentivising private investment into climate protection efforts; and the urgency that is given to a REDD mechanism reflects the focus on cost-effective emission reductions.

### ***5.1 Public Finance Mechanisms: Translating climate policy into investment terms***

Taking up the insight that a) private investment is urgently needed for climate protection, but b) its availability is thus far constrained by many risks, Public Finance Mechanisms (PFM) aim at leveraging private finance by improving investment conditions. The discussion and

implementation of these mechanisms shows how the role of political regulation and intervention looks like if considered from an investor perspective.

The result is no less than a process of translation. Two important interpreters in this context are UNEP's Sustainable Energy Finance Alliance that concentrates on the sector specific aim to enhance the investment into sustainable energies; and a network of British government departments, the London School of Economics, consultancies, banks and investment firms, that takes the somewhat broader approach of 'Meeting the climate challenge [by] Using Public Funds to Leverage Private Investment in Developing Countries ' (LSE et al. 2009).

The discussion that led to the publication of this report was sort of a legacy from the Stern Review consultation. It brought together some of the first addresses in the world of finance, including Deutsche Bank, HSBC, or the investor group P8. The participation of Stern and others in the UN Secretary General's High-level Advisory Group on Climate Change Financing will ensure that the findings of the report will feed into the recommendations that the advisory group will make to COP 16 in December 2010 as well.

The discussion took place in the run up to the Copenhagen conference in 2009, and as the participants expected that finance would be one of the core issues, they focused on the issue they deemed as least understood: the role of private finance in climate mitigation. Most of the proposals made in the discussion paper embody the fundamental idea that much higher levels of investment are needed to meet the climate challenge. As investors face a number of hurdles or risks, governments can and have to help overcoming these hurdles.

This general understanding becomes most apparent when the problem of underinvestment is explained, for instance for the forestry sector: 'The root causes of deforestation are economic in nature, stemming from under-investment in the sustainable production of land-based commodities, including agricultural products and timber. [...] Sustainable forestry and agricultural investments can produce attractive returns for private sector investors, but in many countries there is a significant investment gap between project returns and those required by investors mainly because of high risks regarding political stability and land tenure security' (Romani et al. 2009: 17).

The focus of the recommendations is therefore on leveraging private investments through 'risk mitigation and enhancement instruments, in the form of full or partial guarantees and insurances' (LSE et al. 2009: 10). One instrument that is already used are so called *cornerstone funds*, large commercially fund structures that invest in smaller regional funds, which then again invest in individual projects. These funds blend public and private money, and the public lenders can, like in the case of the European Commission's Global Energy Efficiency and Renewable Energy Fund (GEEREF), partially or completely waive its right for returns in order to enhance those of the private sector. Additionally, multilateral

development banks play a critical role in reducing investment risks by providing risk mitigation instruments such as guarantees or insurances or carbon finance – like in the case of the World Banks Climate Investment Funds (CIFs).

The proposal that most clearly embodies the logic of leveraging private finance was initially put forward by Michael Mainelli and some of his colleagues at London Accord, a platform of mainly London based financial service companies. Indexed bonds identify and simultaneously address two fundamental problems: On the one hand, governments need money to finance the Green New Deal, or, in the context of climate finance, to encourage and support financial flows to the low-carbon economies. On the other hand, investors face political risks, as the profitability of investments in renewable energies and clean technologies depends on political interventions like emission caps, carbon taxes or feed-in tariffs. While some of these systems already work quite successful, investors don't like the idea that governments could change or withdraw that regulation, thereby lowering the returns of certain types of projects.

This is where index-bonds come into play. The 'simple and somewhat subversive' idea is to 'take out a policy confidence blockage and enable private sector investment to flow' by lowering the political risk faced for investors through creating an economic risk for governments.<sup>8</sup> If governments borrow money from financial markets (that is, they give out bonds), these bonds could be indexed to an environmental indicator like the national emissions level or the carbon price. An investor receives an excess return if the issuing country's emissions are above its published government target. 'The bond thus provides a hedge against the risk of the issuing government not delivering on its commitments or targets' (LSE et al, Summary, 13). As a result, governments have stronger incentives to deliver on their targets, and investors have a guarantee in the language they understand: if governments do not deliver favourable investment conditions, because emissions remain high or the carbon price low, they have to pay a penalty to the investors.

## **5.2 REDD**

The discussion on the REDD mechanism emphasizes the importance of the dominant finance logic in climate politics, both through the urgency and importance that is given to emission reductions in the forestry sector, and the role that private investment is expected to play here.

Forestry is not a new issue in climate politics. The UNFCCC already encourages countries to monitor forests as part of sinks, and the Kyoto Protocol's Clean Development Mechanism allows for carbon offsetting through reforestation. Things have changed considerably since then, however. While the role of forests projects within the CDM was strongly limited due to the concerns many Parties had at that time (Bäckstrand and Lövbrand 2006), forests are

8 [http://www.london-accord.co.uk/wiki/index.php/Index-Linked\\_Carbon\\_Bonds](http://www.london-accord.co.uk/wiki/index.php/Index-Linked_Carbon_Bonds)

expected to play a much greater role in climate protection today, and there is little general objection to a forest finance mechanism. In the Copenhagen Accord parties recognize the crucial role of reducing emission from deforestation and forest degradation' (UNFCCC 2009).

### *Need for investments and carbon finance*

The current emphasis on reducing emissions from deforestation and degradation can only be explained for by the expectation of comparative cost advantages, which brought the issue on the agenda of northern governments as much as potential investors. Once again, the Stern Review is important here in showing that, at US \$ 1-5 per tonne CO<sub>2</sub> reduction, mitigation in the forest sector is among the most cost-effective (Stern 2006). Though estimating a higher average carbon price in the forest sector of up to US \$ 15 per tonne CO<sub>2</sub>, the Eliasch Review on *Financing Global Forests* supports the general argument (Eliasch 2008, Bond et al. 2009). 'REDD+ could supply upwards of 30 per cent of most cost-effective mitigation options available in the short-term' (Gutman and Cabarle 2010), it offers 'high potential at low costs' (Dutschke and Wertz-Kanounnikof 2008).

Much of the emphasis given to realizing REDD consequently relies on the same 'benevolent global player' logic as in the Stern Review. With an ambitious REDD mechanism, the Eliasch Review explains, 'the cost of halving global carbon emissions from 1990 levels could be reduced by up to 50 per cent in 2030 and up to 40 per cent in 2050 if the forest sector is included in a global trading system. These lower cost could allow the international community to meet a more ambitious global stabilisation target' (Eliasch 2008: xxi, Lubowski 2008). Consequently, REDD is seen as a 'bridge strategy' that allows to postpone stringent emission reductions in other sectors (Lubowski 2008, Karousakis and Corfee-Morlot 2007).

But the economic logic does more than massively increase the importance that is given to realizing REDD. The cost argument affects on proposals for its implementation as well. As the requested scale of REDD increases the need for forest finance, many suggest that a carbon market based scheme is best suited by attracting private investments. 'Direct carbon market credits lower the cost of reductions globally, and likely have the largest potential to generate funding for REDD' (Union of concerned scientists 2009, Andersen 2008). Additionally, 'mandatory markets [...] are often preferred because they would assure long-term, continuous, and predictable flows of finance for REDD projects contrary to voluntary funds' (Alvarado and Wertz-Kanounnikof 2007, Karousakis and Corfee-Morlot 2007).

The role that is ascribed to the public sector in this context is similar to the one in the general climate finance debate. 'ODA thus must be used strategically to stimulate and complement private investment by helping to provide basic readiness requirements and reinforcing the enabling environment for investment' (Dutschke and Wertz-Kanounnikof 2008). 'It is the

market shaped by the private sector that will ultimately determine the demand for REDD+. It is thus imperative that public financing be deployed in such a way [...] to minimize the risk for the private sector in investing and to maximize the returns without hampering socio-economic and other environmental benefits' (Gutman and Cabarle 2010).

### *Complexity, difficulties and concerns*

There are, however, concerns as well on making forests a subject to carbon markets and investment decisions, as market-based schemes 'might suffer from greater efficiency-equity trade-offs' (Peskest 2008), and 'paying for a carbon service [...] makes it harder to incorporate issues such as biodiversity and poverty considerations' (Scholz and Schmidt 2008). Proposals for so called market-linked schemes therefore aim at lowering this influence by using intermediary banks or funds, or a separate REDD trading scheme in which Annex I countries commit themselves to purchase REDD credits from one or several particular countries (see Schmidt and Scholz 2008).

Additionally, there is much attention for the complexity and uncertainties that a REDD mechanism would have to address. From an environmental perspective, concerns remain high regarding the capacity to calculate the amount of emissions that have been reduced, and to prevent temporal or spatial leakage. The consequences would be most problematic when forestry credits are used as offsets in a market-based scheme, where leakage would globally lead to rising emissions. These concerns are widespread, as discussions within the UNFCCC show, and a study by OECD and IEA concludes that 'Margins of error for changes in carbon emissions are currently too large to support implementation of a market mechanism' (Karousakis and Corfee-Morlot 2007)

A second important area of concern are the social (non-)consequences of a REDD mechanism. Many NGOs call for guaranteeing the rights and safety of local communities and indigenous peoples, and are concerned over the implementation of REDD so far (Martone 2010). Regarding the potential of REDD to contribute to poverty reductions, a study of the Overseas Development Institute concludes that 'In many cases, REDD may do 'no harm' to the poor for the simple reason that REDD-related activities and benefits might never reach them' (Peskest 2008).

All these objections do not question the use of a REDD mechanism in general, and most stakeholders are generally supportive to REDD. But the particular logic that informs financial mechanisms, and the current urgency on realizing REDD, raise additional concerns.

In most general terms, the question arises whether the focus of financing forest protection implies a certain approach, and lowers the attention for alternative approaches. This does not

follow inevitably from the understanding of deforestation as an economic problem. While the Eliasch Review describes deforestation as externalities and the consequences of market failures, it suggests that these externalities can be met by regulation like bans on deforestation or on growing, selling, and purchasing of particular products, as much as by taxes or a cap and trade scheme (Eliasch 2008).

But the emphasis on financing emission reductions in the forestry sector implies a focus on the places where deforestation occurs, and on the forestry sector itself, whereas it is widely acknowledged that ‘most of the underlying causes lie outside the forestry sector’ (Scholz and Schmidt 2008). Addressing these causes would require international action beyond the UNFCCC, that ‘should include revision of international trade policies, introduction of socio-ecological import standards and reform of agro-fuel quotas and other relevant policies in the EU, the US and elsewhere’ (Scholz and Schmidt 2008).

Others argue that the ‘Rush for REDD’ causes problems, as the availability of huge amounts of funding will attract many stakeholders and may change the governance of forests beyond or even contrary to the intended effects. ‘The potential contribution to rural poverty reduction could be immense, but REDD mechanisms may also entail new risks [...] such as elite capture of benefits, potential loss of access to land and lack of voice in decision-making. This is because of the likely scale of the systems envisaged, [...] and the strong environmental, private sector and developed country interests to establish REDD mechanisms quickly’ (Peskett 2008).

One particular concern is the rollback of successful decentralized forest management: ‘With billions of dollars at stake, governments could justify recentralization by portraying themselves as more capable and reliable than local communities at protecting national interest’ (Phelps, Webb and Agrawal 2010: 312-13). In a similar vein, a study by FERN points to the danger that ‘rushing REDD processes’ will undermine the need for time-intensive governance and consultation processes that are part of other policies like the European Union’s FLEGT programme and, in consequence, ‘will not necessarily address the underlying causes of deforestation’ (Leal Riesco and Opoku 2009).

Altogether, the question arises how the paradox between the broad awareness for the complexities and uncertainties in setting up a REDD mechanism, and the great expectations to its scale and the speed of its realization can be explained. Of crucial importance for the support of REDD despite all these difficulties is the role of finance and investments, as REDD seems to present the ideal case of a win-win opportunity. While developing countries hope for the inflow of large amounts of finance, many developed countries seem to be convinced that markets and private investors will soon step in and allow for the most cost-effective emission reductions.

This makes the decisions that will be taken on financial issues one of the most critical issues in the implementation of REDD. While some suggest that ‘Crafting a well-thought-through regime that unlocks substantial capital flows into sustainable forestry will be critical to achieving low-cost mitigation’ (Fulton et al 2009: 150), others are far more critical regarding both the possibility and the desirableness of a massive inflow of funds, as this can distract from taking the necessary political steps. Rather than suggesting that ‘Host countries should identify investment opportunities and partnerships with international investors’, ensuring ‘that the interests of local communities are aligned with REDD+ projects’ (LSE et al. 2009: 17), ‘the approach needs to be turned on its head, and the mechanism subordinated to the problems that it is trying to address’ (Brown and Bird 2008).

## **6 Investments in climate politics – some alternative framings**

Finance has become a crucial issue in current climate politics: the level and direction of finance flows will be decisive for the speed and scope of the transformation to low-carbon economies, and play a crucial role for adaptation and clean development in developing countries. Equally, there can be no doubt that private investments will have a leading part here, as they account for 86 per cent of global financial flows (UNFCCC 2007).

Against this background, it is rather surprising that the role of investment flows in climate politics has not been addressed explicitly at an earlier point in time. The way in which the issue was taken up in recent years, however, result in a narrow framing that focuses on incentivising new investments, instead of starting from the desired political outcomes and asking for the appropriate regulation to achieve these objectives. This framing can only be understood within the context of a general economic understanding of climate change and climate politics that allows to reduce the complexity of climate politics to a range of abstract abatement opportunities. The following will highlight the most problematic consequences of this understanding and point to alternative readings.

First, the very call for massively scaling up the level of climate finance, using all available sources of money, is based on a problematic reduction. Estimating that it will cost US \$ 380 billion in 2030 to return emissions to a 2007 level, the UNFCCC secretariat emphasizes that this sum is only a fraction of 1.1 to 1.7 of total investment and financial flows in 2030. This relation shows that the problem consists less in an absolute scarcity of money but rather in its use, a perspective that is shared within the investment community: ‘Institutional investors are searching for new asset classes and strategies [...] and the climate economy is emerging as an attractive source of long-term returns’ (Robins and Fulton 2009).

The second problematic issue in the run for scaled up climate finance is the non-discrimination of different sources of money. While it may be true in macroeconomic terms

that purchasing offset is from the viewpoint of developed countries ‘just as much an expenditure of societal resources as ODA and other public financing mechanisms’ (Stewart et al 2009: paper, 3), the form of financial transfers definitely makes a difference for the recipients. First, offsets are subject to the investors rationality of maximizing returns, in this case the number of certificates gained for an investment, while the spending of public money can follow political objectives. Second, the use of public money is crucial in important areas of climate politics, like the adaptation of the most vulnerable groups and societies (Fankhauser 2003, Stern 2009, Oxfam 2010). The global level of climate finance flows is therefore an insufficient indicator for what is needed. Rather, it is important to ensure that the policies and measures that are most urgently required receive sufficient financial support.

A third crucial logic in the current climate finance debate is the priority setting along cost-effectiveness, that results in a higher responsibility of developing countries for global emission reductions. This logic is derived from the same macroeconomic considerations that characterise the Stern Review, and relies on a similar reduction of complexity, as becomes obvious with a look at the current REDD debate. One important reason for the rush for REDD is the expectation that emission reductions can be generated here at much lower costs than in other sectors and world regions. The many concerns raised not only by NGOs, and the uncertainties regarding the implementation of REDD as discussed in the UNFCCC negotiations, to the contrary, suggest that ‘it is not going to be as massive an instrument as many expect’ (Peskett interview). While this is not a reason to lower the ambition to a mechanism for reducing deforestation, it questions the assumption that REDD can offer a bridge strategy to postpone emission reductions in particular in developed countries. More realistic expectations to the potential and scale of REDD could offer more fruitful conditions for implementing REDD in a way that considers the interests and concerns of the stakeholders and most affected groups, instead of sidelining these issues for financial reasons.

This leads to a final issue, the role of private finance and the need for incentivising investments. Here, a much more differentiated perspective is needed. It is certainly the case that developing countries need financial support not only for adaptation, but for pursuing cleaner development paths that result in lower emissions. And it follows directly from the large share of private finance in global financial flows that much of the required investment will to come from the private sectors.

The current climate finance debate, however, focuses narrowly on generating additional financial resources and supporting investors through different risk sharing instruments. Much lesser emphasis is given to the role of existing financial flows. ‘The problem is often characterized as ... finding a large pot of money quickly to fill the “finance gap” [...]. A focus on *unlocking* finance by getting the underlying conditions right offers the opportunity to catalyse investment flows “tomorrow”’ (Hamilton 2009). Redirecting current and future

finance flows does not only offer the large pot of money needed, but could tackle some of the fundamental root causes of climate change at the same time.

That does not mean that instruments like Public Finance Mechanisms should play no role in incentivising investments for desired outcomes. From a societal perspective, however, it makes a difference if public resources are used to support local entrepreneurs, as suggested by some development banks; or to lift the returns for large institutional investors to market levels, as intended by the PFMs proposed in the LSE report.

In order to address these large-scale financial flows with the objective of redirecting them to cleaner forms of investment, more traditional forms of regulation could be appropriate. This perspective is generally shared by the so called investment community: ‘Improving regulatory certainty is the lowest-cost option’ for stimulating growing investments (Fulton and Robins 2009). Investors call for ‘Long, Loud and Legal’ policy signals that minimize political risks (or, as Nicholas Stern called it, ‘clear, long, and credible’, see Hamilton 2008) : *loud* to improve returns to make investment commercially more attractive; *long* to reflect the financing horizon of a project; and *legal* to meet investors concerns on changing regulation.

The question that arises, however, is whether these signals inevitably must come as ‘investment grade policies’ that are designed to leverage private investments and provide ‘incentive frameworks’ (Hamilton 2009); or whether more traditional forms like standards and carbon taxes could play a very effective role here.

Investors who are interested in a strong and clear investment perspective for renewable energies and have doubts that governments are ‘really committed to decarbonising the economy’ (Mainelli et al. 2009) could support governments by gathering their allies around the world to make an equally clear and strong plea for ambitious reduction commitments at the next UNFCCC meetings, and for translating these commitments into ambitious regulation through standards, carbon taxes or an ambitious emissions cap. Making the use of fossils fuels and the respective technologies more expensive, this would enhance the the attractiveness of investments into renewable energies and clean technologies.<sup>9</sup>

Instead of increasing government’s debt burdens, carbon taxes or the auctioning of permission rights would generate large amounts of public finance that could be used for financing many of the policies and measures that are beyond the scope of investors, but are very desirable from a societal point of view.

If it is true that through the environmental and financial crisis a ‘rather radical redefinition of the role of government in the market place, and the role of public policy in protecting public

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<sup>9</sup> By and large, a cap and trade system that deserves the former part of its name by setting an ambitious emission cap would have the same effects, if emission rights are auctioned.

interests, feed through into a more active approach to government regulation in climate and energy' (Hamilton 2008: 5), and even investors conclude that 'Increasingly climate change is being viewed as another example of systemic risk failure on capital markets, with the failure to adequately price carbon being compounded by incentive-driven short-termism (Fulton and Robins 2009: 146), the question arises whether the active role of governments has to limit itself to providing preferential investment environments, or could contribute to a much broader transformation.

Instead of accepting a 'Decarbonised Dystopia' (Newell and Patterson 2010) that, through focusing on large scale energy investment projects instead of small renewable energy, delivers low-carbon energy supply through carbon markets but has no or only marginal egalitarian effects, the large levels of public spending that are required in coming years and decades could be used for addressing some of these inequalities, in the national as much as in the north-south context. One fundamental step in that direction would be, as Lohmann (2009) suggests, to strengthen the role of societies in making investment decisions, and to aim at 'locally-focused' energy systems that are oriented in the needs of populations. This alone would not mean to overcome 'climate capitalism' (Newell and Patterson 2010), but could contribute to questioning the role of global finance.

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