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Climate change finance

Key issues before Doha

Jakob Skovgaard

About FORES

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FOREWORD

When the world's environment ministers gather once more this December to agree on a global deal to save the climate, the issue of climate finance will once again be one of the burning issues.

Gone is the time when substantial emission reductions could only be made in developed countries and climate policy in developing countries was largely limited to adaptation to future climate changes. More than half of global emissions are now taking place in developing countries, and that share is increasing. Therefore, it is crucial to find ways to help developing countries to reduce their emissions, and this must be done in addition to the necessary rapid reductions in developed countries.

During recent years, the issue of climate finance has been one of the more important, but also infected, topics in the UN-led negotiations on climate change. The divisions between and within the different groups continue to be substantial, despite agreements on establishing a Green Climate Fund, and the developed countries' commitments to provide 100 billion USD in annual climate finance by 2020.

As in many areas in the climate negotiations, the issue of climate finance is a complex one. In this illuminating policy paper, Jakob Skovgaard, who has extensive experience of climate finance after being part of the Danish Ministry of Finance delegation at several negotiation meetings and who is now undertaking post-doctoral research in political science at Lunds University, elaborates on some of the difficulties which need to be addressed in order for the

parties to move forward in this year's Climate negotiations in Doha.

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EXECUTIVE SUMMARY

Briefly put, climate change finance concerns the financing by developed countries of mitigation and adaptation in developing countries. This financing includes public support, grants and loans from the developed states and multilateral institutions such as the World Bank, different kinds of private investment, and off-set mechanisms. The importance of climate change finance in the negotiations is undisputed: without international financing of (some of the) mitigation efforts in the developing countries, the overall level of mitigation in these countries will be much lower. To achieve mitigation in developing countries is also crucial, as their emissions are rising rapidly and now constitute more than half the global emissions.

In a broad sense, all countries acknowledge the importance of providing some degree of co-financing. Yet there is little consensus when it comes to many of the critical issues:

- How large a part of the costs of mitigation and adaptation should be financed by the developed countries.
- How the provision of finance should be guaranteed.
- What role the carbon market should play.
- Who should contribute to the financing, how much they should contribute, and how the financing should be distributed among developing countries.
- Who should control the financing.

The lack of agreement stems from a range of causes, such as:

- Individual countries wanting to contribute as little as possible or to receive as much as possible.

- Developing countries' indignation about what they perceive as the developed countries' unwillingness to pay for the damage they have caused.
- Developed and developing countries' fear of infringement of their sovereignty.

Developed countries have, in UN-led negotiations, agreed to provide 100 billion USD in climate change finance by 2020, and a significant portion of this should be channelled through the Green Climate Fund. The 100 billion USD should, according to the agreement, come from both public and private sources, but the division between the two kinds of source has not been agreed, and neither have the parties agreed how the commitment should be distributed between the developed countries, nor where the money should come from.

This report focuses on three possible kinds of climate change finance:

Carbon market finance. Financing through the carbon market concerns the delivery of financing in return for credits that can be used for meeting reduction targets in a developed country through, for example, the Clean Development Mechanism (CDM). Another way is to count the so-called infra-marginal rent as climate finance.

Private investment. Curbing global emissions requires investment in the developing world at a level that exceeds the 100 billion dollars. Private finance will need to be part of this investment. In addition, many of the investments will be profitable (especially in the longer run), and thus should, in principle, be covered by private financing. Using private funds to fulfil the 100 billion USD commitment has,

however, been criticized by many developing countries who believe that only funding from public sources should count as climate finance.

Public financing. Public financing is the kind of climate finance which is most frequently discussed in the context of global negotiations. The term often refers to direct budget contributions from developed countries, but there is also a discussion about innovative sources of finance, not least in the light of the report from the High-Level Advisory Group on Climate Change Finance (AGF). This report includes, for example, different levies from off-set mechanisms, international aviation and shipping. But a tax on financial transactions, as well as the earmarking of revenues from domestic carbon pricing in developed countries, are also being discussed. The degree to which the Green Climate Fund succeeds in raising the 100 billion USD a year depends on many things, but in order that public funding is given, one should not underestimate the demand for a governance structure with which the donor countries, and in particular their ministers of finance, feel comfortable.

A significant amount of climate change finance is already flowing. However, in order to create a working system for climate change finance that can handle larger amounts of money and can deliver mitigation and adaptation in a fair and effective fashion acceptable to most parties, it is necessary to take a range of circumstances seriously:

- Whereas the economic crisis does not make climate change finance impossible, it puts the public budgets in most developed countries under serious strain. For this reason it is crucial to realise unused sources of finance, including taxing emissions from international

aviation and shipping as well as removing fossil fuel subsidies. Utilising these sources is a good idea even when there is no crisis, but may be crucial during times of crisis.

- Developed countries should send a credible signal that they are willing to provide the public finance required, by capitalising the Green Climate Fund and stating how much they will provide in climate change finance each year until 2020, stepping up from the current levels.
- Finally, it will be necessary to bring actors outside the negotiations on board and to get them to understand the purpose and necessity of climate change finance. In the end, what matters most is not what is agreed in the negotiations, but how much climate finance is actually provided and how this money is spent. Although the negotiations are probably important for establishing common ground, it is most important that the understandings are shared among actors outside the negotiations, such as finance ministers and private investors.

1. Introduction

The Seventeenth Conference of the Parties (COP17) in Durban saw the states establishing the Green Climate Fund – something widely described as a success for the United Nations Framework Convention on Climate Change (UNFCCC) negotiations. It also saw continued negotiations over how the developed states should increase their financing of mitigation and adaptation in developing countries, so-called climate change finance, and how these financial flows should be governed. In other words, climate change finance continues to be a crucial as well as a contested issue in the negotiations.

Climate change finance plays an important role in the international climate change negotiations, but has often been overlooked in the public debate, especially when compared to the issue of emissions reduction. Put briefly, climate change finance concerns the financing by developed countries¹ of mitigation and adaptation in developing countries. This includes public support from the developed states, grants and loans from multilateral institutions such as the World Bank, different kinds of private investment, and off-set mechanisms such as the Clean Development Mechanism (Haites 2011, Michaelowa 2012). The importance of climate change finance in the negotiations is undisputed: without international financing of (some of the) mitigation efforts in the developing countries, the overall level of mitigation in the developing countries will be much lower. This is crucial, as the emissions of the developing countries are rising rapidly and now constitute more than

¹ More precisely, those countries mentioned in Annex II to the Kyoto Protocol.

half the global emissions. Without the financing of adaptation efforts in developing countries, the unavoidable consequences of climate change will be much worse.

Climate change finance is already flowing from developed to developing countries, but it will have to be increased to meet the target of 100 billion US dollars annually by 2020.

Climate change finance also concerns fairness: it appears unfair that developing countries, with much lower historic emissions and per capita emissions, are not allowed to go through the same phase of industrialisation as the developed countries, but have to cut emissions from a much lower per capita level. On top of that, developing countries also have lower income levels, and hence less money to finance mitigation efforts. It also appears unfair that developing countries should pay for the adaptation to climate change primarily caused by developed countries. In this context, the parties to the (UNFCCC) have agreed that developed countries will provide financing to ‘meet the agreed full incremental costs’ of mitigation and adaptation efforts in developing countries. Although developed country actors have disputed or preferred to ignore this provision, they acknowledge the importance of providing some degree of co-financing for such measures.

Yet the agreement stops at this rather basic level. There is little consensus when it comes to:

- How large a part of the costs of mitigation and adaptation should be financed by the developed countries.
- How the provision of finance should be guaranteed.
- What role the carbon market should play.

- Who should contribute to the financing, how much they should contribute, and how the financing should be distributed among developing countries.
- Who should control the financing.

The lack of agreement stems from a range of causes:

- Individual countries wanting to contribute as little as possible or to receive as much as possible.
- Developing countries' indignation about what they perceive as the developed countries' unwillingness to pay for their own damage.
- Developed and developing countries' fear of infringement of their sovereignty.

One of the most important aspects is that the climate change finance negotiations, from a developed country perspective, are driven as much by the desire to utilise the low cost mitigation options in developing countries, by a fear of loss of competitiveness, and by the necessity of reducing emissions from developing countries as by concerns of fairness.

The Durban Conference concluded with a compromise between developed and developing countries to operationalize the Green Climate Fund, but stalemate continued over other issues. These other issues include the capitalisation of the Fund (with developing states demanding that developed states provide money for it), how the developed countries will meet their target of 100 billion USD in climate change finance by 2020, and which actors should be in control of climate change finance.

Yet, the perhaps most important issue regarding climate change finance is to do with getting actors outside the

negotiations on board and getting them to accept the way the climate change finance is used. Will actors (especially finance ministries) in developed states think the finance is going to be used correctly? If they do not, they may not provide the money. It is also important to get the actors in the developing countries which will use the finance on various projects on board.

This paper will sketch the major issues regarding international climate change finance after Durban and before Doha, looking at how different country groupings treat the issue and their reasons for doing so, and will provide suggestions on how to address the possible problems. Although the major fault line lies between developing and developed countries, significant differences also exist within the two groups. Whereas the Least Developed Countries (LDC's) Small Island States (in UN represented in the group AOSIS) have a strong interest in adaptation finance, other (generally more powerful) developing countries, as well as the developed countries, prioritise mitigation finance.

As mitigation financing has been the most contested and is arguably more important than adaptation financing, it will be prioritised in this paper although we will not overlook adaptation financing.

The paper will start by discussing the different sources of climate change finance, including the question of how climate change finance should be governed, and finally will look at some of the factors outside the negotiations which influence the flow of climate change finance: the economic crisis and the political actors who are not involved in the negotiations.

2. Sources of Climate Change Finance

At COP15 in Copenhagen and COP16 in Cancún, agreement was reached on the need for climate change finance. Importantly, the developed countries agreed to provide 100 billion USD in climate change finance by 2020. According to the agreement, the 100 billion USD will come from both public and private sources. The division between the two kinds of source was not agreed upon, and nor did the parties agree upon how the commitment should be distributed between the developed countries. The Green Climate Fund is supposed to channel a significant share of the finance, but how great a share is subject to debate. Besides the 100 billion USD, the developed countries also promised to provide 30 billion USD in total in the period 2010-2012 (10 billion USD p.a.) in so-called fast-start finance. The fast-start finance comes from public budgets, but is not subject to the same degree of independent monitoring as the longer-term finance will require. Much of the fast-start finance that has been provided has been taken from budgets already committed to climate finance, and consequently does not represent additional finance.

Following COP15 in Copenhagen, UN Secretary General Ban Ki-Moon established a High-Level Advisory Group on Climate Change Finance (AGF) chaired by the Norwegian Prime Minister Jens Stoltenberg and the late Ethiopian Prime Minister Meles Zenawi. The purpose was to identify how the 100 billion USD target can be met from a combination of different sources. In their final report, the AGF identified a range of different sources, from direct

budget contributions (from developed country budgets), through taxes on air passengers, to private investment, but did not recommend one specific combination of sources. Drawing on the report, but using a somewhat different way of grouping the different sources of financing, this paper will centre on three kinds of climate change finance: financing through the carbon market, private investment and public financing. Each one will be discussed in turn.

Carbon Market Financing

Financing through the carbon market means the delivery of financing in return for credits that can be used to meet reduction targets in a developed country. The Clean Development Mechanism (CDM) is the only existing mechanism for such an exchange of reductions for money. The CDM was originally established with several aims in mind:

- Ensuring cost-efficiency by allowing Annex 1 countries to utilise the low-cost emission potential of developing countries in order to meet their own reduction targets (since reducing emissions is generally cheaper in developing countries than in developed ones).
- Facilitating technology transfer to the developing countries.
- Increasing the flow of capital from developed to developing countries.
- Providing sustainable development in the developing countries.

The first aim has been predominant, and a common criticism of CDM has been that the projects have almost exclusively taken place in the major emerging economies

(hence the nickname ‘China Development Mechanism’). More generally, reductions via off-sets in developing countries may help the transition to low-carbon societies in the developing countries, but it may also slow down the transition in developed countries.

The main difference between the carbon market and the other two kinds of climate change finance is that the reductions financed through the carbon market may count towards the reduction target of the developed country. This means that there is a risk of double counting: a developed country promises to deliver a certain reduction, as well as an amount of climate change finance for reductions in the developed world, but uses off-sets to meet both targets, rather than just the first one.

It is important to keep in mind that off-sets are a way of moving reductions from one place to another, but are not a way of generating additional reductions: if a given country has a reduction target, it can reduce domestically and/or through off-sets². Using off-sets means that the reductions take place in a developing country rather than domestically, and this does not increase global emission reductions.

Consequently, the idea of including carbon market financing in the 100 billion USD commitment has faced severe criticism from developing countries (who would prefer the 100 billion USD to come from public sources in the developed countries) but also from several actors (NGOs and politicians) in developed countries who fear that it would water down the overall commitment of the developed countries and hence the global fight against climate change.

² Current UNFCCC rules state that at least half of a reduction commitment has to be met domestically.

It should, however, be noted that a CDM credit does not per se need to be used for off-setting. If the credits from a CDM project are not used for off-setting, but are retired, they could instead be used as evidence that a reduction in emissions has taken place, and the risk of double counting could be avoided.³

It has also been suggested that only the so-called infra-marginal rent should count towards the 100 billion dollar target. The infra-marginal rent is the difference between the price at which the credit is sold (usually the market price) and the incremental cost of reducing the emissions. The incremental cost of reducing a ton of CO₂ – for instance, the difference between the production costs for producing power using solar energy and the same costs using coal – is generally much lower in developing countries than in developed countries, but credits are sold at prices close to the marginal costs in developed countries. The infra-marginal rent is often split between the company owning the installation where the project takes place and the developed country companies providing financing, responsible for selling the credit, etc. In China the state taxes CDM projects, thus getting a part of the infra-marginal rent. Altogether it is quite difficult to calculate the infra-marginal rent and how much of it remains in the developing country. Furthermore, infra-marginal rent which is captured by a company in a developing country does not necessarily benefit the country's transition towards sustainable development, but may be treated as normal profit.

Another difference between carbon market finance and public finance is that the burden of carbon market finance

³ For more on this, see Raab (2012).

falls on the emitting companies, whereas the burden of public finance falls on the state budget. The difference is less clear-cut than it seems: placing the burden on companies will generally mean that consumers will bear a large part of the burden, through higher electricity and product prices, which means less economic activity and less revenue for the state; placing the burden on the public budget means that the state will have to find the money through increasing taxes or cutting expenditure (or through borrowing and so postponing cuts or tax rises). Tax rises and budget cuts both cause less economic activity, and thus less company turnover.

This does not mean that carbon taxes cannot be a very cost-effective way of reducing domestic emissions with only limited, if any, effect on growth. Here, the focus is on the international flows of climate finance, and in this case the difference between CDM and public finance is less significant than is often believed, as the money will have to come from somewhere and there are few magic ways of creating such money except by cutting subsidies (discussed below). Yet, such costs are often overstated, and raising the 100 billion dollars will not have a significant impact on the overall level of growth of the developed countries.

The current CDM system is project-based, which means that credits are generated from reducing emissions at an individual installation (for instance a power plant or a steel mill) below a defined business-as-usual baseline. This means that defining what the level of emissions from the installation would be in a scenario without the CDM project is extremely important, and is often subject to criticism.

Although the business-as-usual baseline has to be certified by external reviewers, both the purchaser and the seller of

the credits from the project (usually a developed country company financing the credits and a developing country company owning the installation) have an interest in setting the baseline as high as possible, as this means more credits for both of them.

One significant problem in this respect is the problem of additionality: would some of the reductions have happened without the CDM project? For instance, in the case of energy efficiency measures it is possible that the owner of the installation would have adopted at least some of them without external financing, simply because they would save money. Another problem is that it is hard to determine the exact consequences of a CDM project beyond the individual installation: a project to reduce emissions from power production may lead to lower power prices and subsequently to diminished incentives to reduce power consumption, as well as to lower fossil fuel prices which create fewer incentives for other power plants to move away from fossil fuels.

Some of the problems in determining the effects of a CDM project (although not the impact on fossil fuel prices) may be solved by adopting sector-based CDM, in which a baseline is set for an entire sector (e.g. steel). Such a baseline may be output-based: the more being produced, the higher the baseline. Reductions below the baseline generate credits.

Meeting the baseline may require some effort on the part of the industry: one could imagine, for instance, the purely hypothetical example of the production of 100,000 tons of steel under the current conditions in the Chinese steel industry causing the emission of 100,000 tons of CO₂; the Chinese steel industry would only receive credits for reductions below 90,000 tons.

Proposals for sectoral CDM typically operate with a gradually declining baseline. Such sectoral approaches are popular among developed countries, particularly regarding industries such as steel, which are exposed to competition from countries which are not included in Annex 1. They are, on the other hand, unpopular among the countries which host most of the CDM projects, especially China, probably due to the fear that they will reduce profits from the CDM.

However, from 2013 onwards the European emissions trading system EU ETS, which has been the main driver of demand of CDM credits, will not allow its operators to use CDM credits from projects established after 2013 in China or other emerging economies, so other market mechanisms will have to be established if the aim to be part of the international carbon trading.⁴

Private Investments⁵

Another source of financing which may or may not count towards the 100 billion USD target is private investment (Stadelmann et al. 2011a). Curbing global emissions requires investment in the developing world at a level which exceeds the 100 billion dollars (Mathews et al. 2010). Many of these investments will be profitable (especially in the longer run), and thus should in principle be covered by private financing. Such investments include energy efficiency measures as well as some renewable energy projects – e.g. hydropower – with relatively high initial costs but low operating costs, which are

⁴ See further discussions in Raab 2012.

⁵ During 2013 FORES will publish at least one report on how to stimulate private climate investment.

hence profitable in the longer run. Yet, these profitable investments are often not utilised due to barriers which include:

- **High risks:** Often low-carbon investments in developing countries are seen as being rather risky and as not offering sufficient returns to cover the risks (private investors are generally not averse to risky projects, but expect the potential profit to reflect the higher risk). As the calculation of the estimated risk of any investment is based on assumptions, the tendency to perceive investments in developing countries as more risky than they turn out to be leads private actors to require unnecessarily high returns from (low-carbon) investments in developing countries.
- **Difficult investment environment:** Besides risks, a range of other factors (cultural differences and bureaucracy) may make investing in developing countries more difficult and costly.
- **Inadequate access to finance:** Profitable investments are often not utilised because of a lack of domestic capital (domestic capital is not available in sufficient amounts) and a lack of international capital (investors are deterred by perceived high risks and difficulties). Such barriers can be overcome by public financing (or carbon market financing) which offers loans or guarantees (in order to cover parts of the risk), or by co-financiers bearing the brunt of the risk and in this way leveraging the private investment. If, for instance, we imagine a renewable energy power plant that has higher initial costs than a coal fired one but lower operating costs, but where the lower operating

costs still do not outweigh the high initial costs, it is possible for a donor agency to contribute a relatively small public grant which covers the difference. The investment then becomes attractive for private investors.

This raises the question of whether private finance should be included in the 100 billion dollar target, and, if so, how?

There is widespread agreement that private investment is something to strive for and is necessary. However, many actors, especially those from developing countries, do not want to define it as one of the kinds of finance to be used for meeting the climate finance target, as it will mean that less finance comes from public sources.

On the other hand, many developed countries want to include private finance, mainly because it means less pressure on them to provide public finance, but also because they consider private finance crucial. In the context of the AGF, it has been suggested that, rather than focusing on gross private finance, it is more important to focus on calculating the net benefit of private financing. The net benefit refers to the difference between how much private investors would demand in return in a scenario without any risk-reducing measures (e.g. public financing) and how much they would demand in a scenario where risk reduction was provided. The net benefit is obviously difficult to calculate, but it could provide a rough idea of how much additional finance is leveraged by public finance (and to some degree by carbon market finance).

Public Finance

The third leg of climate change finance is public climate change finance. Besides direct contributions from the budgets of developed countries, the category includes so-called innovative sources (referred to as ‘alternative sources’ in the Cancún Agreement) which are raised directly at the international or national level. In the negotiations, different developing countries have, as mentioned above, argued that only public financing should count as climate change finance. The argument has been that only public finance can provide the necessary guarantee that the money will be provided. Yet there are significant differences, not only between innovative and non-innovative public sources, but also between different kinds of innovative sources.

Innovative sources: The Norwegian Proposal

The so-called Norwegian Proposal (put forward by the Norwegian government) is to set aside a given percentage of the total number of Assigned Amount Units (AAUs) that is distributed to the Annex 1 countries⁶. An independent body will then auction the AAUs which have been set aside to the highest bidders. As a consequence, public finance would become much less dependent on decisions by the governments of the developed countries than is the case with direct budget contributions, but also the amount of money available may vary radically from year to year depending on the demand for AAUs. These reasons contribute to making the proposal not very popular both

⁶ Each Annex 1 country has, under the Kyoto Protocol, a number of AAUs which determines how many tons of CO₂-equivalent it can emit; this is determined by its reduction target. The Norwegian proposal is thus dependent on a Kyoto-style ‘targets-and -timetables’ approach rather than a ‘pledge-and-review’ approach.

among developed countries and among developing countries.

Innovative sources: A Tobin Tax

A tax on financial transactions, or a Tobin tax (named after the Nobel Laureate in Economics James Tobin), has been discussed for more than fifteen years, and has also been proposed as a source of climate change finance. Such a tax could generate significant amounts of revenue, but faces significant, but decreasing, opposition, particularly from developed countries, who fear the consequences for the international financial markets and are opposed to hypothecation. Regardless of this, the chance that a Tobin tax will be introduced depends on developments outside climate change politics. Furthermore, the revenue from a Tobin tax would probably be quite volatile (Bowen 2011: 1030).

Innovative Sources: Earmarking Domestic Revenues

Most carbon emissions in developed countries are taxed in one way or another, through direct levies and taxes on petrol, oil or electricity; through royalties on the extraction of fossil fuels; or through the auctioning of emission permits. All of these create revenue for the state. One of the proposals in the AGF Report is that (a part of) this revenue should be earmarked for climate change finance. Such earmarking of revenue is met with fierce resistance in many developed countries, especially in their finance ministries, mainly for three reasons:

First, the proposal is seen as an international interference in the allocation of state revenue and, as such, as a breach of the principle of fiscal sovereignty.

Secondly, it is argued that earmarking generally leads to a suboptimal allocation of resources: how much money a given policy area receives should be dependent on an assessment of how much it needs compared to other policy areas, rather than being a guaranteed amount of money which may be too high or too low.

Thirdly, the revenue from one particular levy is not identical with its impact on state finances: a petrol levy may generate 800 million USD in revenue, but may simultaneously reduce the income from other taxes and levies, because, among other reasons, consumers will have less money to spend on other goods so that there is less income from levies and VAT on those goods. The co-benefits from such taxation (e.g. improved health due to less air pollution) generally pull in the opposite direction by lowering public expenditure. The impact on the state budget, of the negative effect on revenue from other taxes and the positive effect of less expenditure, is both difficult to estimate and varies from case to case. Here, it suffices to say that finance ministries (especially in less 'green' countries) tend to focus on the former rather than the latter, and consequently argue that the net effect of a levy or tax is often much lower than the direct revenue from it.

Due to this opposition, binding commitments on earmarking a given part of the revenue from, for instance, the auctioning of emissions allowances, are somewhat unlikely, although 'softer', less binding commitments are not impossible.

Innovative Sources: Levies on International Aviation and Shipping

Another proposed way of raising revenue is to impose levies on the emissions from international aviation and/or shipping. These emissions have increased by, respectively, 76 per cent (aviation) and 63 per cent (shipping) in the period 1990–2008 (International Energy Agency 2010), and are estimated to rise rapidly, in the worst case scenarios even quintupling (aviation) and tripling (shipping) by 2050 (International Centre for Trade and Sustainable Development 2010).

According to the International Energy Agency (2010), international aviation emitted approximately 455 megatons of CO₂ in 2008 – more than the total Mexican CO₂ emissions that year; in the same year international shipping emitted approximately 578 megatons of CO₂ – slightly more than the total British CO₂ emissions for that year.

Furthermore, neither international aviation nor international shipping are yet subject to carbon taxes or any other kind of policy aimed at reducing emissions, although from 2013 aviation within as well as to and from the EU will be part of the EU ETS. Placing a levy on international aviation and shipping will both limit emissions from these two sectors and provide revenue which – according to the AGF report – would be in the range of 2-19 billion USD from shipping and 1-6 billion USD from aviation (the wide range depending on the carbon price⁷).

⁷ The AGF operates with three scenarios for carbon prices: low (carbon price of 10-15 USD per ton CO₂e), medium (20-25 USD per ton) and high (50 USD per ton).

Yet, the proposal also faces obstacles: developing countries fear that it will constitute a break with the principle of ‘common but differentiated responsibility’, and place an unfair burden on them. This is especially the case for countries whose economies depend on export or tourism, or countries (particularly small island states) which have to import most goods by sea. Whereas they are not opposed to levies on transportation between developed countries, they oppose any kind of levy that is placed on transport to or from developing countries.

However, there is a range of practical difficulties – at least when it comes to shipping – in charging the levies so that the incidence falls solely on developed countries.

First there is a risk that a lot of the transport may move to developing countries in order to avoid the levy (for instance by off-loading cargo in Morocco rather than in Spain), which will increase costs as well as emissions.

Secondly, when it comes to shipping, it is difficult to ascertain exactly which part of the fuel consumption is due to the transport of a particular load of cargo, as most ships contain several loads which are loaded and off-loaded at different ports.

Thirdly, excluding transport to and from developing countries from the levy will diminish the impact of the levy on global emissions. For this reason, it has been proposed in different circles that the levies should be global, but that the developing countries should be compensated in various ways, for instance by being allowed to keep the revenue collected on their territory.

A more fundamental criticism, which has been raised by developed countries such as the US as well as by some developing countries, is that collecting a levy earmarked for an international fund on the territory of a state constitutes a break with the principle of fiscal sovereignty. In other words, it should only be the state which collects taxes and levies and which exclusively decides how the revenue should be used.

Innovative Sources: Off-set Levies

Another internationally collected source of revenue is a levy on off-set credits such as the CDM. There is already a 2 per cent levy on CDM credits which goes to the Adaptation Fund under the UNFCCC, and it would be possible to scale this up. According to the AGF Report, such a levy could provide up to 15 billion USD in 2020 in a high revenue scenario with a high carbon price and a 10 per cent levy.

The higher the levy, the more it will deter the use of the carbon market, which many see as a significant problem (Bowen 2011: 1028). The burden will fall on those developed countries which buy the most credits, which, all other things being equal, will mean those with the deepest reduction targets. Although the resulting difference in burden will not have a great impact on the state budgets and economies of the countries that will contribute the most, those countries are still likely to perceive it as unfair.

Budget Contributions

A final way of raising climate change finance is by contributions from state budgets. This is the traditional way, and cannot be said to be particularly innovative. But it is the source from which most climate change finance is currently flowing, and it will play a crucial role in climate change finance in the coming ten years. However, in spite of being

the most established source of climate change finance, budget contributions also raise a range of controversial issues.

The first controversial issue concerns who should pay, and how much they should pay. A global distribution key (based on either GDP or emissions) is often conceived as the fairest solution to the question of how the burden of financing should be shared. Such a key has been discussed repeatedly, including in Durban, and will continue to be discussed in the coming year.

The alternative is that countries pledge how much they are willing to contribute on a voluntary basis, without a benchmark for assessing whether this contribution is fair or not. Both the size of the possible funding pledge and its subsequent delivery would then have to rely only on genuine 'naming and shaming' of countries pledging or delivering too little. The actual delivery of finance would be subject to international Measurement, Reporting and Verification (MRV), which would provide the basis for the naming and shaming.

Such a mechanism would in most cases probably not provide the same amount of funding and the same degree of predictability as a global distribution key. Yet burden-sharing based upon pledging is, at least in the short term, the only conceivable solution, and is even rather optimistic because a group of countries led by the US are opposed to any burden-sharing which will assign a specific target for how much finance they should provide; such a target is seen as infringing the state's sovereign right to decide its public expenditure.

The US probably also fears that it will be held to account for a target that it will have problems meeting. Nonetheless, the idea of a global distribution key will probably still be important, even if it is not formalised, as actors favouring such a key, including the EU, will assess whether developed countries provide their fair share (based on income and/or emissions) of the total public finance, and will try to get those who do not do so to increase their level of finance (provided that this does not include themselves). Yet, even a burden-sharing based on voluntary pledges may be difficult to achieve, as few countries are currently willing to pledge climate financing more than one or two years ahead.

Furthermore, most developed countries have argued in the negotiations that whether or not a country should contribute to climate change finance (i.e. whether or not it should finance initiatives in other countries) should depend on its level of income and emissions, rather than on whether it is classified as a developed country by Annex I to the United Nations Framework Convention on Climate Change.

The current distinction between Annex-I and non-Annex-I countries means that a country such as South Korea (which has high income and emissions levels) is exempt from contributing, whereas a country such as Portugal (which has lower income and emissions levels than South Korea) is not, unless it voluntarily decides to apply for a transfer to Annex-I. Although the developed countries, in the Copenhagen Accord and the Cancún Agreements, accepted that Annex-I countries should not contribute to the 100 billion USD target for 2020, the question of what will happen afterwards still remains, especially as the strict division into Annex -I and non-Annex-I countries appears to have been challenged following COP17 in Durban.

How the distribution of public finance is governed is a critical issue (and this problem is also relevant for potential financing from innovative sources). Whereas today it is acknowledged that the public finance will be both bi- and multi-lateral, there are still discussions about who should govern the flow of public finances.

Roughly speaking, the developed countries would prefer countries to deliver the finance on a voluntary basis, whereas the developing countries would prefer the UNFCCC or an institution under the UNFCCC to decide how the finance should be distributed between countries, between mitigation and adaptation, and between types of support (grants, loans, etc.). Underlying these discussions is a question of which principles should guide the allocation of climate change finance: should it primarily be cost-efficiency, as desired by the developed countries and institutions such as the World Bank, or should it primarily be justice (often operationalized as compensation for the developed countries' historical responsibility), as argued by developing countries and many NGOs?

Focusing on cost-efficiency (which means obtaining as many reductions and as much adaptation as possible for the money) increases the legitimacy of climate change finance in the eyes of those providing it, which will make them more likely to pay. There is a widespread fear in developed countries that if money is provided without any strings attached, much of it may be misused or at least used in an inefficient manner.

Since the actors from the developed countries demand as much value for their money as they can get, they also tend to demand more effort on behalf of the developing countries. Such efforts do not necessarily have to mean co-financing,

but may just mean that the developing country must commit to a more overarching low-carbon development plan, including using mitigation options with negative costs, such as phasing out fossil fuel subsidies.

Many observers are worried by the lack of a global carbon price (most estimates put the global carbon price at zero or a negative figure). Phasing out fossil fuel subsidies in the developing countries (where most but not all of the subsidies can be found⁸) is a crucial step towards establishing a global carbon price and avoiding the problem that emission cuts in one part of the world simply lead to lower global fossil fuel prices and consequently higher consumption in other parts of the world (Victor 2009). In developing countries, most subsidies benefit the middle class rather than the poor (because, for example, subsidised petrol benefits car owners), and it is possible to compensate the poor for their losses through direct cash transfers.

Yet, even attempts to reduce such subsidies have often caused protests and even riots, most recently in India, underscoring why such phase-outs are politically difficult in spite of their environmental and economic merits.

Underlying the position of many developed countries on the governance of climate change finance is also the belief that the money fundamentally belongs to them, and that they should therefore be able to decide how it is spent and to withhold it if it is not going to be spent in the right way (or in what they see as the right way).

Focusing on historical responsibility means that the money does not belong to developed countries, but rather to

⁸ In developed countries fossil fuel subsidies tend to take the shape of tax breaks or cheap loans for fossil fuel extraction.

developing countries as compensation for the damage caused by climate change. Yet there are significant differences within the group of developing countries. For some actors (most notably from countries with high emissions such as China and Saudi Arabia), emphasising historical responsibility is to a large degree a way of avoiding reducing emissions. For other actors (most notably from vulnerable and poor countries such as small island states), effective mitigation and adaptation is the primary objective, and historical responsibility mainly concerns getting the funding necessary for adapting to climate change from those mainly responsible for causing that climate change.

On a related note, India supported a group of other developing countries that have called for the use of equity as a guiding principle: each individual should have the right to emit an equal amount of emissions or an equal share of the atmosphere's capacity to absorb emissions. As developed countries emit more per capita/have used a greater part of the atmosphere's absorptive capacity than their equal share, they should compensate the developing countries through climate change finance.

The question of climate change finance control has played out in various concrete ways in the negotiations. In Cancún it was agreed that a Standing Committee under the UNFCCC would be established which will be involved in – among other things – improving coherence and coordination in the delivery of climate change finance, mobilizing financial resources and measuring, reporting on and verifying the support provided.

How exactly the role of the Standing Committee will be operationalized was a disputed issue in Durban. Many of the G77 countries, especially those who perceive climate change

through a North–South lens, argue that it should have considerable influence over finance streams, especially those that run through the Green Climate Fund.

Exactly how much money the Green Climate Fund will distribute depends on how much the developed countries contribute, which again will depend on a range of factors, including the degree to which the developed countries perceive the Fund as acting in accordance with their individual preferences and interests. When it comes to both the Green Fund and the Standing Mechanism, there has been widespread discussion of who should be represented on the different boards and committees: not only have developed and developing countries argued for and against a majority of developing countries, but there have also been arguments over the distribution between different groupings (regional groupings, as well as the small island states in AOSIS) and the decision-making procedures.

A third point is the crucial issue of climate change finance additionality (Stadelmann et al. 2011b). There is a widespread fear among developing countries and NGOs that the finance provided by developed countries will consist solely of development aid which already exists or Overseas Development Assistance (ODA) which is directed to meet climate change needs. Developed countries have already promised to deliver ODA equivalent to 0.7 per cent of their gross national income (GNI) by 2015, but this is a promise which few of them appear likely to meet. The question is to what degree the industrialised countries will use climate finance which they count towards the 100 billion USD target also to count against the 0.7 per cent goal. The experience so far is that most industrialised countries count their fast-start finance towards their 0.7 per cent target.

The exact interpretation of the term ‘new and additional’⁹ is still disputed: on the one hand most developing countries insist that only innovative sources and public finance over and above the 0.7 per cent ODA target – or, if the 0.7 target has already been met, over and above current levels – counts as additional. Otherwise industrialised countries will simply be feeding the dog its own tail, which is a problem for three reasons:

First, developing countries see it as unfair: developed countries should pay for their historical responsibility and their overuse of the atmosphere.

Secondly, it undermines the value of climate change finance as a bargaining chip: why should the developing countries deliver on mitigation actions if the finance they get in return is largely taken from money they would have received anyway? (Obviously this would not apply to any developing countries which are more likely to receive climate change finance than ODA).

Thirdly, given developed countries’ poor track record when it comes to delivering on their promises, they need to be held accountable to a clearly defined set of standards.

On the other hand many actors in the developed countries, especially finance ministries, find the term ‘additional’ meaningless and unrealistic for two reasons.

First, they argue that distinguishing between climate change finance and ODA is counterproductive, as the two kinds of finance are often practically inseparable: finance may be

⁹ For the sake of simplicity, only the term ‘additional’ will be used here.

given to a wind power project in order both to reduce emissions and to provide cheap electricity to assist development. Or a new sewage system may have an important development objective (improving sanitation) as well as an adaptation component (ensuring the system can withstand increasing flood levels).

Secondly, they argue that it is simply not realistic to establish separate monitoring systems for climate change finance and ODA, and then to claim that a country does not contribute to climate change because it does not meet its ODA target. This would mean that the money spent was wasted, and creates an unfortunate incentive structure for most states. It unrealistic that a state such as the US will, within the foreseeable future, increase its ODA from its current level to 0.7 per cent of GNI and, on top of that, provide climate change finance.

3. Challenges beyond the Negotiations

So far, the most important issues in the negotiations on climate change finance have been outlined. Yet there are also challenges that need to be addressed which concern the world outside the negotiations. Here I will focus on two: the economic crisis and the actors who are outside the negotiations.

The economic crisis

The economic crisis will have significant repercussions for a number of years. From the perspective of climate change finance, the most important consequence is that the budgets of developed countries are under pressure: the current level of public debt means that most developed countries will, all other things being equal, have to keep state expenditure low for the next decade or so.

This means that increased budget contributions to climate change finance will have to be found within shrinking or at least constant budgets, or, in other words, that the money will have to be taken from somewhere else. This will most likely not be politically popular in countries hit hard by austerity measures. Yet the case of the UK demonstrates that it is not impossible: in the period 2010-2014 the UK government will increase spending on climate change finance by almost 50 per cent (UK Department of Energy and Climate Change and UKAid, 2011), while overall government spending will be cut by 19 per cent over the same period of time (UK Treasury, 2010). As the UK ODA will increase during this period, the increased climate

finance will not be taken from other kinds of development finance.

The difficulty of finding the money in public budgets in times of austerity makes other sources more attractive. Yet these are not without problems of their own. Not only are many of them, as described above, rather unpopular among both developed and developing countries, but many of them involve shifting the burden onto private companies in developed countries (this is especially the case with the carbon market), something which is difficult in times of crisis and which will also often have a negative effect on tax revenues.

Altogether this strengthens the case for using innovative sources such as bunker and air fuel levies, which have the dual advantage that they tax untaxed emissions (thus limiting global emissions) and they raise money. Yet, levies on international shipping and aviation are unpopular in many corners in both developed and developing countries, as described above. The crisis also strengthens the case for utilising private investment, but this runs counter to the historical responsibility arguments brought forward by developing countries (and NGOs).

Actors outside the negotiations

The crisis also means that one group of actors outside the negotiations, namely the finance ministries of developed countries, becomes more important. Having already increasingly involved themselves in the issue of climate change finance in the course of the last five years, the finance ministries of the developed countries are increasing their

influence on budget contributions to climate change finance due to the crisis.

Finance ministries are responsible for the prioritisation of different budget items, and they must thus find the money to be used for climate change finance. Hence, they have considerable power to decide not to deliver the climate change finance promised: they decide whether there is enough money to provide the promised climate change finance; and they may choose not to deliver the climate change finance if it will not be spent in what the finance ministry perceives to be the correct way.

The right way, according to the finance ministry of a developed country, usually means that the money has to be spent in a cost-efficient manner, and that the finance ministry can make sure that the money has been spent in this way. This goes against the idea of climate change finance as compensation for historical responsibility, which the developing countries decide how to spend.

Finance ministries may also play an important role in rejecting certain kinds of sources, such as the earmarking of domestic revenues, as described above. Thus, the finance ministries not only influence their country's negotiators to take a more hard line position, but may also undermine an agreement reached by the negotiators by not providing the promised amount of money.

Yet, the finance ministries in developed countries are not the only influential actors operating outside the negotiations. In the case of the developing countries, domestic actors are also involved in the implementation of the projects that are financed by climate change finance. In many cases, they provide a significant share of the financing.

This means that their perceptions of the purposes of mitigation and adaptation are important, especially when an individual project contributes significantly to the transformation to a low carbon society, rather than standing on its own. This is because the transformation to low carbon societies requires that such actors (among others, ministries and agencies dealing with energy, planning, industry and the economy as well as private actors) agree that the transition is necessary and roughly agree on what is required to make it.

4. Conclusions

The climate change finance negotiations will continue in Doha. As mentioned, many of the previous problems remain unresolved. Where will the promised 100 billion USD in climate change finance come from? Will the developed countries increase the financing from their public budgets? What degree of influence will developed and developing countries have over climate change finance? Meanwhile, new questions emerged after Durban: to what degree will the Green Climate Fund be capitalised? Will it be able to fund climate change measures in the developing countries to the desired extent? Solving such issues is not made easier by the economic and financial crisis.

Yet it would be a mistake to say that these obstacles cannot be overcome. After all, a significant amount of climate change finance is already flowing, which means that there is something to build upon. However, in order to create a working system for climate change finance which can handle larger amounts of money and deliver, in terms of mitigation and adaptation, in a fair and effective fashion acceptable to most parties, it is necessary to take a range of circumstances seriously.

First, the crisis. Although the crisis does not make climate change finance impossible, it puts the public budgets of most developed countries under serious strain. For this reason it is crucial to realise unused sources of finance, including taxing emissions from international aviation and shipping and removing fossil fuel subsidies. Utilising these sources is a good idea even when there is no crisis, but may

be crucial during times of crisis. Both cases require domestic and international opposition (especially from interest groups) to be overcome.

Regarding international aviation and shipping, countries should not block early attempts to reduce and tax such emissions. This means that the US and China should abandon their opposition to the EU's inclusion of flights to and from Europe in the EU ETS, and developing countries should accept that they will be part of such global efforts (but perhaps will be compensated for serious consequences for their economies).

Regarding the removal of fossil fuel subsidies, developed countries should lead the way and remove their subsidies (which are mainly for fuel extraction and production), rather than just demand that developing countries remove their subsidies (which are mainly on consumption). The money saved does not necessarily have to be earmarked for climate change finance; it is sufficient that it creates more space in the public budgets so that public climate change finance can be increased. The crisis also means that it is even more important to leverage private investment and to remove the barriers to such investment.

Secondly, developed countries must send a credible signal that they are willing to provide the public finance required, by capitalising the Green Climate Fund and stating how much they will provide in climate change finance each year until 2020, stepping up from the current levels. Ideally the commitments should hinge on a burden-sharing key based on emissions and GDP, but this is hardly realistic. In return, developed countries may demand overarching commitments to low-carbon development from the

developing countries, but such demands can only be based on credible commitments.

Thirdly, it is necessary to bring actors outside the negotiations on board and get them to understand the purpose and necessity of climate change finance. In the end, what matters most is not what is agreed in the negotiations, but how much climate change finance is provided and how the money is spent. Both the provision of sufficient funds and the effective use of those funds require shared understandings between those who are supposed to provide the finance and those who will implement the measures being financed and who may help to mobilise the private capital which is also necessary. Such understandings have to include some kind of shared idea of how to prioritise cost-efficiency and fairness. Although the negotiations are probably important for establishing common ground, it is most important that the understandings are shared among the actors outside the negotiations, within the public sphere as well as private actors.

5. Bibliography:

AGF (2010). Report of the Secretary-General's High-level Advisory Group on Climate Change Financing.

Bowen, A. (2011). Raising climate finance to support developing country action: Some economic considerations. *Climate Policy* 11 (3): 1020-1036.

Haites, E., ed., 2011. International financial support to address climate change. *Climate Policy*, special issue

International Centre for Trade and Sustainable Development (2010). International Transport, Climate Change and Trade - What are the options for regulating emissions from aviation and shipping and what will be their impact on trade? Geneva.

International Energy Agency (2010). CO₂ emissions from fuel combustion. Paris, OECD Publishing.

Mathews, J. A., et al. (2010). Mobilizing private finance to drive an energy industrial revolution. *Energy Policy*, 38 (7), 3263-3265.

Michaelowa, A., ed. (2012). Carbon markets or climate finance? Low carbon and adaptation investment choices for the developing world. Cambridge: Routledge.

Raab, Ulrika (2012). Market Mechanisms – from CDM towards global market. FORES.

Stadelmann, M., Castro, P. and Michaelowa, A. (2011a). Mobilising private finance for low-carbon development. Cambridge, Climate Strategies.

Stadelmann, M., Roberts, J. T. and Michaelowa, A. (2011b). New and additional to what? Assessing options for baselines to assess climate finance pledges. *Climate and Development*, 3(3), 175-192.

UK Department of Energy and Climate Change and UKAid (2011). UK Fast Start Climate Change Finance.

UK Treasury (2010). Spending Review.

Victor, D. (2009). The politics of fossil-fuel subsidies. Geneva, International Institute for Sustainable Development.

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