Dialogue on Globalization

BRIEFING PAPERS

FES BERLIN

It’s Sink or Adapt: Financing for Climate Change Adaptation

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1 Background

Urgent action needs to be taken to cut green house gas emissions and mitigate the impact of climate change. However, even if efficient steps to reduce emissions would be taken today, a minimum rise in average global temperatures of 2°C seems inevitable, leading to effects such as rising sea levels, an increase of natural disasters, desertification, and, as a likely consequence, increased conflict over scarce natural resources, such as food and water in many parts of the world. Most developing countries lack financial means and livelihood alternatives to effectively adapt to these changes. Being least responsible for climate change, the countries of the global South are most vulnerable to its impact. Developing countries thus urge the industrialized world to face its historic responsibility and meet the promises made. Adaptation was identified as one of the five key building blocks for a strengthened future response to climate change within the Bali Action Plan in 2007. Discussing adaptation policies to a large extend means talking about who pays for what and which financing mechanisms are feasible to cover the expected costs, but also about how funding is being disseminated. In his speech at the Conference of the Parties in Poznan, Sigmar Gabriel, the German Federal Environment Minister, pointed out the question of financing as the main obstacle on the road to a new climate protection agreement in Copenhagen. The UNFCCC established an Adaptation Fund Board at the Bali conference to monitor financial support for adaptative measures in developing countries. The Fund is however still on its way to become fully operational. This paper discusses the prospects of the Adaptation Fund and other funding initiatives and looks into innovative policy options to raise money for adaptation, such as carbon taxing, auctioning of emission rights, the taxation of international air traffic and climate insurance initiatives.

2 Progress at a crawl

Climate change adaptation took a long time to make it onto the international agenda. At the 7th conference of the Parties in Marrakech in 2001 the special vulnerability of developing countries was recognized and three new funds were established: the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF), and the Adaptation Fund (AF). The LDCF and the SCCF are financed by voluntary donor contributions. The total amount of funding appropriated for these two funds until 2007 was with about 26 million US-Dollars however less than what the United Kingdom spends on its flood defence programme within a week.[1] The UN in contrast estimates that about 86 billion US-Dollars per year will be needed by 2015 to support poor countries in their adaptation efforts. The Adaptation Fund was also established at the Marrakech conference but only started its work in early 2008. Apart from the fact that the delivery of all these funds had been limited, the main criticism addressed their governance structure. Until 2007 all three funds were administered by the Global Environmental Facility (GEF) which is perceived by many civil society organizations as a donor driven institution and can only be influenced by developing countries via their participation at the UNFCCC.

3 Not a global commons problem?

Why is cooperation in the field of climate change adaptation going so slow? Structural conditions and incentives for cooperation in the field of adaptation differ fundamentally from those related to mitigating the impact of climate change. Mitigating the impact of climate change and reducing CO2-Emissions underlies the structure of a global commons problem, where co-operation takes place only under the condition of mutual trust, but once established creates long-term benefits for all actors involved. Adaptation on the other hand deals with the impact of climate change and the loss or transformation of livelihood conditions on the local level. It is thus often not seen as a global commons problem. This perception overlooks the fact that long-term implications of insufficient adaptation such as migration flows of climate refugees and increased conflict over resources might very well be of transnational nature. Incentives for global co-operation, however, remain lower than in the area of emissions reduction. Although in the last years the challenge of adaptation has received increased attention in international climate negotiations, it still remains an issue that first of all concerns the developing world as the recent UNFCCC climate conference in Poznan showed clearly. Representatives of developing world therefore already uttered concerns about a future of "climate"- or "adaptation-Apartheid" in which developing countries are left alone with problems caused foremostly by the industrialized world.

[1] Human Development Report 2007/2008, Fighting climate change: Human solidarity in a divided world, p. 14.

4 Aid, Loans or Compensation?

At the Bali conference in 2007 the international community finally acknowledge the urgent need for action in the field of adaptation and agreed upon putting in place an Adaptation Fund Board to monitor financing for adaptation. The Fund is being financed by a 2 percent levy on Certified Emissions Reductions (CER) traded under the Clean Development Mechanism (CDM) as well as voluntary contributions. Different to previous operating entities in financing for adaptation the Board's membership is equally distributed among developed and developing countries and also includes representatives from Least Developed Countries (LDCs) and Small Island Developing States (SIDS). To underline this new approach and dissociate it from donor dominated initiatives of the past the Board was set up with the UNFCCC in Bonn, not with the Global Environmental Facility in Washington. The establishing of the Board and the perspective to get the Adaptation Fund finally operating was celebrated as a break through by developing and industrialized countries alike. The German Federal Development Minister Heidemarie Wieczorek-Zeul welcomed it as an "important step in reaction to climate change". Nonetheless, fundamental differences in donor interests and demands of developing countries remain. From a Southern perspective financing for adaptation should not be seen as development aid but as a compensation for damage caused by the industrialized world. It should thus not be counted as Official Development Aid (ODA) but paid additionally to the 0.7 percent ODA rate that was agreed upon in 1970. Similar to the board monitoring the Clean Development Mechanism the Adaptation Fund Board should ensure this additionality. This claim is also being reflected in the criteria for adaptation in the Bali Work Plan under the UNFCCC. On the other hand there is a broad consensus on the necessity of mainstreaming adaptation into developing policies. This and the fact that effective reaction to climate change needs to be built on national and local ownership makes it difficult to sharply separate the different fields of financing.

While the operational structure of the Adaptation Fund was still under construction, the World Bank started a climate initiative in early 2008 that became subject of harsh critique. Stimulated by the G8 Plan of action on climate change the Bank established two so called Climate Investment Funds (CIFs), the Clean Technology Fund and the Strategic Climate Fund. Although potentially promising the majority of developing countries perceived this initiative as torpedoing the work of the newly established Adaptation Fund Board and to be undermining the leading role of the UNFCCC. A number of civil society organizations pointed out the World Bank's lack of credibility as an actor in climate policies as the Bank also funds polluting industries. The main criticisms however focused on the inappropriateness to provide loans for adaptation instead of additional funding.

Debates about the newly set up Adaptation Fund were one of the corner stones of the Poznan conference. Developing countries in Poznan unsuccessfully called for negotiations on expanding the two percent levy on the CDM to other financial mechanisms such as Joint Implementation (JI). In the run up to the meeting news paper headlines announced that the Fund was already running out of money and that without appreciable financial contributions the Board would not even be able to hold meetings in the coming year. Hence one of the few concrete outcomes of the Poznan meeting was a new pledge to provide financial support to the Fund of some 60 million US-Dollars within months. Sigmar Gabriel, the German Federal Environment Minister, furthermore underlined the insufficiency of current funding through the two percent levy on Clean Development Mechanism projects. Gabriel made an explicit plea for making additional money available for adaptation to climate change.

5 Financing for adaptation in times of financial crisis

But where should this additional money come from? In 2007 the EU and especially Germany were celebrated as the vanguards of climate policy. Now, in face of the financial crisis they seemed to be backpedaling when they made clear that climate protection had to stand back in favor of securing jobs and investment. The difficulties of the current global situation make advocates of climate change adaptation policy face a triple challenge:

1. *A comprehensive legal and operational structure of the Adaptation Fund* has to be put in place. Such an institutional setting is an indispensable condition for the implementation of any financing measures.

2. *There is no time to lose:* The matter is urgent, sea levels are rising, desertification is advancing and hence preventive measures have to be taken as soon as possible to avoid further damage and a future cost explosion.

3. *Mobilization of funding in times of financial crisis:* if the ODA rate has not been met before the breakdown of the international financial system, calls for future additionality of climate change adaptation funding in the current situation are even more likely to remain pipe dreams. New and innovative financing paths have to be explored.

To provide urgent support and maintain the course for tackling climate change adaptation in times of international crisis clear concepts and priorities need to be determined.

Operational Structure

To facilitate the effective and just dissemination and monitoring of funding for adaptation the operational structure of any financing mechanisms needs to be established under the umbrella of the Adaptation Fund and reflect the criteria for adaptation set out in the Bali Action Plan. Financing should thus be[2]

- *Appropriate* – in the sense that it should follow the "polluter pays principle" and not be based on loans or voluntary contributions.
- *Equitable* – referring to the principle of common, but differentiated responsibilities stated in the Kyoto protocol and respective capacities.
- *New and additional* – meaning that it will not count as Official Development Assistance.
- *Adequate* – referring to needs of developing countries and the amount of funding needed.
- *Predictable* – with regard to guaranteeing long-term flows of financing.

In addition the operational structure needs to reflect the complexity of adaptation and its interlinkedness with other development policy areas. Adaptation strategies need to be mainstreamed into development policies. National and local ownership for adaptation activities are of fundamental importance and local best practices need to be documented to allow for evidence based policies. The Adaptation Fund urgently needs to become fully operational, otherwise climate change adaptation efforts will remain in the sphere of pure rhetoric. The agreement reached in Poznan on allocating new funding for the Adaptation Fund is a further step in the right direction. Nevertheless, the outcome is far from the amount of funding needed and does not yet include any long-term funding perspectives.

No time to lose

The increasing number of extreme weather events and shortfalls of crop in the last decade illustrated the future consequences of climate change and underlined the need for immediate action. Especially vulnerable are small island states that are threatened by the rising sea level. While the government of the Maldives is already developing plans for resettlement of parts of the islands' population the Prime Minister of Tuvalu, Apisai Ielemia, at the recent climate conference in Poznan called for direct access to funding to guarantee the island's "right to exist". It is still another three years to go until a possible Post-Kyoto agreement will be implemented in 2012. Climate change adaptation is pressing while the international community is caught up in lengthy discussions about legal structures and organizational issues. Apart from developing long-term adaptative plans for the Kyoto-Plus process, an effective adaptation strategy therefore also needs to

- Define *Short-term measures* that have to be taken on the road to Copenhagen
- Make adaptation work for the *most vulnerable* countries and populations

A three-year work programme for a Quick-Start for Adaptation was presented by Germanwatch and the World Wide Fund for Nature (WWF) in the run-up to the Poznan conference,[3] which suggests a number of short-term measures: The implementation of the most urgent adaptation needs as identified in the National Adaptation Programmes of Action (NAPAs) is being recommended. Regional climate adaptation emergency programmes and regional networks of excellence should be established. Furthermore the proposal includes a programme for first regional climate insurance facilities to provide the bases for an international climate insurance mechanism that could be part of a Post-Kyoto agreement as well as the implementation of a process similar to the National Adaptation Programmes that helps to identify urgent adaptation needs in Small Island Developing States and developing countries that are not part of the group of Least

[2] Brot für die Welt/EED, 2008, International Instruments for Financing Adaptation to Climate Change, p. 7.

[3] Germanwatch/WWF, 2008, Climate Change Adaptation in Poznan: Moving forward on short and long-term action, p. 4-5.

Developed Countries. To target the most vulnerable it is of special importance to include the community level in the assessment of vulnerability as well as the development of projects and programmes.

Mobilization of funding and innovative financing mechanisms

In 2007, Sir Nicolas Stern labeled the cost of “doing nothing” with an breath taking price tag which made calls for urgent climate action indefeasible. But within only one year the shock about the world climate crisis was followed by discussions about a global energy crisis and now the turmoil over the most far reaching financial crisis since 1929. In the light of these three crises and due to the fact that adaptation is often not being perceived as a global commons problem, financing for adaptation is likely to be neglected. It is therefore important to raise awareness for the fact that tackling the climate, the energy, and the financial crisis is not a question of either/or. Global repercussions of insufficient adaptation scenarios need to be pointed out to make clear that financing for adaptation is not an issue of charity but a political imperative. A cross-sectoral and integrated approach is being needed that links innovation in the field of green technologies and renewable energies with the creation of new jobs to show that the different policy areas can not be played off against each other. A pioneering work in this field has been presented by the study "Investments for a climate-friendly Germany" published by the German Federal Environment Ministry in June 2008 that looks into ecological conversion of capital stocks and green investment and elaborates an integrated strategy for growth, employment and climate protection. Beyond that, in times where voluntary contributions to adaptation financing become more improbable innovative financing paths have to be explored and binding financing mechanisms need to be established.

6 Innovative Financing Instruments

At the climate talks in Bonn in June 2008 a number of suggestions for innovative adaptation financing were discussed. Mexico and the Alliance of Small Island States presented a financing model in which each country has to contribute according to its scale of emissions and its economic capacity. Such an approach would be inline with the principle of common but differentiated responsibilities. In absence of efficient sanctioning mechanisms in the case of non-compliance and in the light of the global economic situation the success of such initiatives is however more than unlikely. Switzerland suggested a system of global carbon taxing with an exemption of 1,5 tons per capita which would leave out most developing countries. Norway took into consideration the auctioning of parts of emission rights to private actors instead of giving them out for free.[4] This could generate additional funding for adaptation. Another possibility could be the taxing of international air traffic or a climate insurance system. In the following sections the feasibility of these different financing instruments is being analyzed.

Carbon taxing

Carbon taxing is not a new nor an untested instrument. Denmark, Finland, Norway and Sweden introduced such taxes already in the 1990ies. Whereas an agreement on carbon taxing could not be reached in the European Union, which in 2005 established a so called cap-and-trade system instead. While the problem of disadvantaging developing countries could be solved by a per capita exemption, further aspects have to be taken into consideration. Carbon taxing follows the “polluter-pays”-principle. It such aims at changing consumers’ behavior by increasing incentives for energy saving or using climate friendly alternatives. Lessons Learnt from the Scandinavian experience show that this outcome is only reached if certain circumstances are given. In Norway for example per capita emissions have risen by around 43 percent since the introduction of carbon taxing. Only Denmark succeeded in reducing its emissions in time from 1990 to the year 2005 by approximately 15 percent. The Danish experience suggests that a reduction in green house gas emissions through carbon taxing was only possible because the money was used for significant investment in renewable energy research and green technologies in the Danish industry. Thus the effect of emissions reduction seems to be linked to decision makers refraining from seeing the tax as a “Cash Cow” to cover financing gaps in other policy areas.[5] This makes carbon taxing as a source for additional funding of adaptation problematic.

Auctioning of emissions permits

Auctioning of Assigned Amount Units (AAUs) to private companies instead of giving them out for

4 See Treber, Manfred / Bals , Christoph / Harmeling, Sven, 2008, Klimaverhandlungen in Bonn, in: Forum Umwelt und Entwicklung, Rundbrief 2, p. 18.

5 Prasad, Monica, 2008, On Carbon Tax and Don’t Spend, in: The New York Times, March 25.

free could make a substantial contribution to financing for adaptation. Experts even believe that not only parts but 100 percent of the emission permits should be put up for auction modeled after the US treasure bill auctioning.[6] In Europe, where a emission trading system was established at the beginning of 2005, prices of CO2 certificates went almost down to zero. Giving away the rights for free, created big supply under comparably low demand. Full auctioning in contrast would be a more effective instrument of distribution and would also allow for more transparency. Partly auctioning additionally creates a risks of unintended price distortion due to imperfect competition.

Tax on international air traffic

A holiday trip from Europe to the Caribbean already exceeds the climate sparing threshold value of four tons of CO2 emissions per year and capita. Emissions generated by a round trip from Germany to Tenerife equal the pollution of a whole year of driving a car. And CO2 emissions encompass only a part of the greenhouse gas emissions of aviation. Condensation trails and methane and ozone formations caused by planes add to the problem of global warming. The German Federal Environment Agency estimates that radiative forcing of aircraft emissions in the year 2000 were twice as high as CO2 emissions alone.[7] Even if the industrialized countries would be successful in meeting the Kyoto reduction targets, the preventive effect on global warming would be more than rescinded by the drastic increase in aviation since the year 1990.[8] Proponents of charging international air traffic also argue that the introduction of such charges would not be tantamount to a new taxation. They claim that the non-taxation of kerosene and moreover the disclaiming on value-added-tax constitutes hidden subsidies that benefit air traffic in comparison to competing alternatives such as rail and road traffic.[9] There are convincing arguments to introduce charges on air traffic and generated financial resources could fund adaptation efforts. Nonetheless, so far, an international agreement on such charges could not be reached and is also not likely to be successful in the near future.

Climate Insurance

Another financing option that was discussed at the Poznan climate summit is the possibility of risk sharing through climate insurances. Overlooking the long-term preventive impact of insurances they had been seen in the past mainly as an alternative, not as a substantial part of adaptation. In Poznan the Munich Climate Insurance Initiative (MCII) presented a risk management model based on two pillars: prevention and insurance. Evidence from Malawi suggests that insurance systems can work in developing countries but need to be financially backed by the international community. The necessary funding that would be needed for the MCII approach tots up to a yearly amount of about 10 billion US-Dollar. Up to half of this money would need to be covered by contributions of industrialized countries and resources from the Adaptation Fund. The model includes Public-Private-Partnership in the area of low damage insurance. Germanwatch climate expert Christoph Bals advocated the incorporation of a climate insurance mechanism into a Post-Kyoto-Agreement and emphasized the necessity to focus on the most vulnerable populations.[10]

7 Conclusion

Effective financing for adaptation will have to be based on a combination of different funding mechanisms. Only an integrated approach that takes into account the implications of the triple crisis of climate, energy and finance can be successful. To ensure an adequate response to climate change the Adaptation Fund needs to become operational as soon as possible and short-term adaptation measures will have to be taken with in the next three years. Sustainable long-term adaptative policies and binding financial mechanisms that follow the criteria of the Bali Action Plan will have to be integrated into the Kyoto-Plus regime. It remains to be seen whether the European Union will keep up with the high expectations towards its leadership in international climate negotiations. The future of the international climate regime also depends to a large extent from the position that the new Obama administration will take. The decision to

6 See: Kemfert, Claudia / Müller, Sigrid, 2007, Versteigern statt verschenken, in: Handelsblatt, October 2nd, p. 11.

7 Umweltbundesamt, 2008, Klimawirksamkeit des Flugverkehrs.

8 Germanwatch, Fakten, die Sie nicht überfliegen sollten (available at: www.germanwatch.org)

9 Treber, Manfed / Kirchmair, Andrea / Kier, Gerold, 2003, Die Subventionen des Flugverkehrs – eine Bestandaufnahme, Germanwatch Briefing Paper.

10 See Germanwatch press release „Klimaversicherung auf den Weg nach Kopenhagen gebracht“, December 8, 2008 (available at www.germanwatch.org).

bring noble price laureate Stephen Chu into the team as the new energy secretary gives hope for change as Chu is known for being a vocal proponent of vigorous steps to control greenhouse gas emissions.

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