Strategic options for mainstreaming climate change into German development cooperation

Draft

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1 Strategic context

Global warming will profoundly change the conditions for human development in many areas of the world. Particularly developing countries will be strongly affected by climate change, through rises in temperature, changes in precipitation patterns, and an increased frequency and intensity of extreme weather events, such as droughts, floods, and storms. If no preventative adaptation measures are taken, the reduced availability of freshwater could have strong economic and social impacts, due to greater constraints for agriculture, the energy sector, tourism, new health threats and reduced food security. The more developed countries (and large emitters from the South) fail to implement measures which allow to limit global average warming to 2°C, the more likely it is that strong demands for an international compensation and liability regime will emerge (IPCC 2007a).

Climate change has thus to be seen as a new factor which has to be integrated into development planning in general. In the coming years and decades, adaptation to climate change will turn into an essential part of strategies for poverty eradication, and of international cooperation in general. The agenda of the development community will be profoundly changed (UNDP 2008).

Germany has signed the UNFCCC which defines adaptation as part of its overall objective (Article 2), stating that greenhouse gas concentrations should be stabilized in the atmosphere at a level which allows "ecosystems to adapt naturally to climate change, (ensures) that food production is not threatened and (enables) economic development to proceed in a sustainable manner." Developed countries committed to assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects (Article 4.4). All parties to the Convention agreed to include adaptation to climate change into domestic strategic planning, and to cooperate in preparing for adaptation to the impacts of climate change, particularly in Africa (Article 4.1e).

At the 2006 Conference of the Parties to the UNFCCC, the Nairobi Work Programme (NWP) specified that developing countries need assistance in order to improve their understanding and assessment of impacts, vulnerability and adaptation and to make informed decisions on practical adaptation actions and measures to respond both to climate change and climate variability. At the 2007 Conference of the Parties to the UNFCCC in Bali, enhanced action on adaptation was re-iterated as a major building block of the post-2012 climate regime.

In April 2006, the OECD organised a ministerial-level meeting of its Development Assistance Committee and its Environment Policy Committee. The meeting served to launch a process to work in partnership with developing countries to integrate environmental factors efficiently into national development policies and poverty reduction strategies. The outcomes of the meeting were an agreed *Framework for Common Action Around Shared Goals*, as well as a *Declaration on Integrating Climate Change Adaptation into Development Co-operation*. The OECD framework and declaration are expected to provide an impetus to all development agencies to consider climate change in their operations and thus facilitate mainstreaming.

In April 2007, the BMZ published its Action Programme on Climate and Development (*Aktionsprogramm "Klima und Entwicklung"*). The Action Programme frames both mitigation of climate change and adaptation as global public challenges, which are directly linked to combating poverty and securing international peace. Regarding adaptation, developed countries are stated to have the moral duty to support developing countries in adapting and in improving their capacities for preventing natural disasters. In this regard,

BMZ pledges to transfer 25 Million € to the LDCF under the GEF. Among other concrete measures, BMZ commits additional funds for "climate-friendly" development of cities and industry as well as for adaptation measures, especially in the areas of infrastructure, water, agriculture and health. The BMZ also commits to introduce tools for climate-proofing of projects More specific steps for tackling adaptation in bilateral cooperation are not mentioned. The EU, the World Bank and other multilateral financing institutions are mentioned as important partners for the implementation of this action programme, mainly regarding mitigation measures.

In the current EU development policy, climate change forms part of the needs for capacity building on environment and the sustainable management of natural resources. An action plan on climate change and development was established in 2004, which lists activities such as supporting developing countries to "integrate climate risk management into planning processes" and to "benefit from the diffusion of environmentally sound technologies". In June 2007, the EU released its *Green Paper "Adapting to climate change in Europe – options for EU action"*. The second pillar of these options refers to the necessity of integrating adaptation into EU external actions and explicitly mentions a Global Climate Change Alliance (GCCA) which will work with least developed countries to integrate climate change into poverty reduction strategies.

In the following text we will present a strategy proposal for integrating adaptation to climate change into the BMZ agenda. BMZ is in a unique position because it can offer experience, pilot initiatives and competence for this emerging field of international cooperation. No other ministry has a comparable background for enabling Germany to implement its commitments under the UNFCCC in this area.

Box 1: Definitions of key terms

Adaptation: The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC 2007b).

Climate change: The IPCC defines this term referring to any change in climate over time, whether due to natural variability or as a result of human activity. The UNFCCC refers to changes that are attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods (IPCC 2007b).

Mainstreaming: The integration of policies and measures that address climate change into development planning and sectoral decision-making. The benefit would be to ensure the long-term sustainability of investments as well as to reduce the sensitivity of development activities to both today's and tomorrow's climate (IPCC 2007b:768). Mainstreaming approaches include administrative and procedural changes as well as normative work and conceptual reframing of policy objectives and contents, in order to achieve policy coordination and integration between sectors and administrative levels (Persson / Klein 2007).

Vulnerability: The degree, extend or magnitude to which individuals, a community or a social system is susceptible to harm/adverse effects of climate change. Vulnerability results from interactions between socio-economic conditions and institutional arrangements. In poor countries, vulnerability is often linked to poverty, as the poor are as a rule more dependent from the direct use of natural resources for their reproduction and have a weaker safety net for dealing with the economic damages associated with natural hazards (Levina / Tirpak 2006; O'Brien et al. 2007).

2 Climate Change and Development

Climate change and development are linked in a number of ways. Emissions of greenhouse gases, such as carbon dioxide, methane and nitrous oxide, are the result of socio-economic

development characterised by industrialisation, population growth, intensive agriculture and increased reliance on modern technology. At the same time, advances in socio-economic development potentially improve the ability of governments and people to prepare for or cope with the impacts of climate change. While mitigation policies aim at channelling development policies into the direction of a low-carbon economy, adaptation policies are concerned with reducing the adverse socio-economic impacts of climate change, as well as with avoiding detrimental effects of development on adaptive capacities.

2.1 Rationale for Policy Linkages

The links between greenhouse gas emissions, mitigation of climate change and development have been well studied. The links between adaptation to climate change and development were highlighted in a 2003 report prepared by BMZ and nine other bilateral and multilateral donor organisations (Sperling 2003), and in the 2008 Human Development Report (UNDP 2008). Both reports conclude that climate change presents a challenge to meeting important development objectives, including the Millennium Development Goals. Both reports coincide in that development adaptation should be designed so as to be consistent with development priorities, but they differ with regard to financing issues (see section 5 below).

Current efforts aimed at mitigating climate change will not lead to a stabilisation of atmospheric greenhouse gas concentrations. In fact, owing to the inertia of the global climate system, no mitigation effort today, no matter how rigorous and relentless, will prevent climate change from happening in the next few decades. The first impacts of climate change are already visible: adaptation has become inevitable. However, reliance on adaptation alone will in the long run lead to a magnitude of climate change to which effective adaptation is no longer possible, or only at very high social, economic and environmental costs. It is therefore no longer a question of whether to mitigate climate change or to adapt to it. Both adaptation and mitigation are essential in reducing the expected impacts of climate change to humans and their environment.

Box 2: What if adaptation fails?

For most of the developing world, adaptation is at least as important as mitigation. Much has been written about what could happen if mitigation failed: a change in climate that can trigger a number of non-linear responses and feedbacks, resulting in widespread impacts that will be unmanageable. The Stern Review on the Economics of Climate Change estimates that if no action is taken to mitigate climate change, overall damage costs will be equivalent to losing 5-20% of global GDP each year. Less has been said about what could happen if adaptation failed.

Initially, a failure in adaptation will highlight the ineffective use of money invested in, for example, ODA projects and programmes that do not take into account their exposure to climate risks. In addition, people's lives and livelihoods will be increasingly threatened by extreme events such as floods, droughts and cyclones, and by increasing risks from climate-related diseases. A failure to prepare for such events will greatly increase the need for costly disaster-relief operations, and set back development efforts by many years if and when disaster strikes.

Exposure to more frequent and more intense extreme events can lead to increasing insecurity and instability within and between countries, creating increased potential for violent conflict. This will then increase the need for humanitarian and peace-keeping interventions. Eventually, if adaptation continued to fail, areas will become uninhabitable due to the impacts of climate change, violent conflict or both, which would create large streams of environmental refugees.

The IPCC confirms that effective climate policy would involve a portfolio of adaptation and mitigation actions. These actions include (i) technological, institutional and behavioural options, (ii) the introduction of economic and policy instruments to encourage the use of these

options, and (iii) research and development to reduce uncertainty and to enhance the options' effectiveness and efficiency. There are important differences between adaptation and mitigation. For example, most adaptation is motivated by the self-interest of affected individuals, households and firms, and by public arrangements of impacted communities and sectors, whilst mitigation is primarily justified by international agreements reflecting collective concern, and ensuing national public policies.

Yet there is one important way in which adaptation and mitigation are connected, namely in their reliance on social and economic development to provide people with the capacity to adapt and mitigate. Such capacity is often limited by a lack of resources, poor institutions and inadequate infrastructure, amongst other factors that are typically the focus of ODA. People's vulnerability to climate change can therefore be reduced not only by mitigating greenhouse gas emissions or by adapting to the impacts of climate change. Vulnerability is also reduced by development aimed at improving the living conditions and access to resources of those experiencing the impacts, as this will enhance their capacity to adapt and mitigate.

2.2 Mainstreaming adaptation to climate change into development efforts

The links between climate change and development demonstrate that climate policy involves more than decision-making on adaptation and mitigation in isolation. Three roles of climate policy can be identified under the UNFCCC:

- To control the atmospheric concentrations of greenhouse gases,
- To prepare for and reduce the adverse impacts of climate change and take advantage of opportunities,
- To address development and equity issues.

Although climate change is not the primary reason for poverty and inequality in the world, addressing development and equity issues is a prerequisite for successful adaptation and mitigation in many developing countries. This presents a strong case for incorporating development concerns into climate policy and for incorporating climate concerns into development policy. Development concerns can be incorporated into climate policy through the participation of developing countries in international climate policy negotiations. The incorporation of climate concerns into development policy can be set about by mainstreaming them into ODA.

"Mainstreaming" here describes the integration of policies and measures that address climate change into development planning and sectoral decision-making. The benefits of mainstreaming would be (i) to ensure the long-term sustainability of investments, (ii) to reduce the sensitivity of development outcomes to both today's and tomorrow's climate and (iii) to reduce the vulnerability of the population, especially the poor, to the impacts of climate change. With regard to this last point, it is important to note that vulnerability is not only a consequence of poverty and direct exposure to changes in natural conditions, such as droughts and floods, but may also be a consequence of economic development strategies which inadvertently increase vulnerability instead of strengthening adaptation capacities.

Mainstreaming is seen as a way of making more efficient and effective use of financial and human resources than designing, implementing and managing climate policy separately from ongoing development efforts. The institutional means by which mainstreaming is attempted or achieved will vary from location to location, from sector to sector, as well as across spatial

scales. By its very nature, energy-based mitigation (e.g., fuel switching and energy conservation) can be effective only when mainstreamed into energy policy. For adaptation, however, the motivation for mainstreaming has not appeared as self-evident until recently.

Box 3: Concerns about mainstreaming

There is no broad consensus yet that mainstreaming adaptation into ODA is the most desirable way of reducing the vulnerability of people in developing countries to climate change. There is indeed an emerging consensus among developing agencies, as reflected in the OECD *Declaration on Integrating Climate Change Adaptation into Development Co-operation* from April 2006. However, concerns about mainstreaming have been voiced within developing countries and amongst academics. On the one hand there is concern that scarce funds for adaptation on developing countries could be diverted into more general development activities, which offers little opportunity to evaluate, at least quantitatively, their benefits with respect to climate change. On the other hand there is concern that funding for climate policy would divert money from ODA that is meant to address challenges seen as being more urgent than climate change, including water and food supply, sanitation, education and health care (see also Box 4 in section 5).

As is often the case with new and poorly defined concepts, different interpretations of the meaning of "mainstreaming" have emerged. Put simply, there are two ways in which mainstreaming is understood. The first one takes a rather narrow, technological view of mainstreaming, whilst the second one is more inclusive of non-technological and non-climatic factors relevant to adaptation. In this document we refer to these interpretations as *Mainstreaming Minimum* and *Mainstreaming Plus*, respectively.

3 Mainstreaming Minimum

Mainstreaming minimum is adaptation seen through a development lens. It is a defensive view of adaptation, whereby the main question is "*What would need to be changed in sectoral and project-based planning so that the risks of climate change are anticipated and the additional costs of adaptation are internalised?*" In other words: *mainstreaming minimum* is concerned with climate-proofing future investments. This problem requires the attention of sectoral ministries, planning agencies and banks in industrialised and developing countries alike, of the public administration as well as to the private sector, and it will require the introduction of new operational procedures for financing agencies.

In its 2008 Human Development Report, UNDP estimates the cost of climate-proofing development investment at USD 44 billion by 2015 in OECD countries; this equals 0.1 % of OECD GDP (UNDP 2008: 27).

Climate-proofing is based on the notion that a national government or central agency assumes responsibility for developing and implementing technological options (e.g., dams, early warning systems, seeds, irrigation schemes) based on specific knowledge of future climate conditions. Mainstreaming minimum would ensure that projections of climate change are considered in the decision-making of relevant government departments and agencies, so that technologies are chosen that are suitable to the future climate. For example, in an area projected to experience more rainfall events water managers would fit a drainage system with bigger pipes when replacing old ones. Likewise, agricultural extension services concerned about the possibility of increased drought would advise farmers to select crop varieties that are better suited to grow under dry conditions.

At present, several organisations including the World Bank, UNDP, Danida and DfID are preparing and/or testing tools for climate-proofing development investment projects. In Germany, GTZ is compiling these tools in order to develop proposals – in close cooperation

with KfW – for introducing climate-proofing into the planning procedures of German development cooperation. As this work is forthcoming, we do not review these instruments here.

Mainstreaming minimum tools are likely to have a strong focus on climate-proofing technological and infrastructural investments. Their paramount objective is to ensure that climate risks (based on data regarding both current climate variability and projections of the likely impacts of climate change) are incorporated into sectoral planning and decision-making. This means that there are ambitious information requirements for these tools to work effectively: First of all, it is necessary to know the ranges which define the impacts of global warming (e.g. temperature rise, changes in water volumes, precipitation patterns and in frequency and intensity of extreme weather events) during the next 20 or 30 years. For many developing countries, such information is hardly available, which means that second-best tools for defining security margins need to be elaborated. Secondly, there needs to be information on technological alternatives, e.g. for adapting the project to changed natural conditions and maintaining its original purposes. Thirdly, financial resources for covering the additional costs incurred by both the procedures for climate-proofing and for adapting the project need to be in place. Fourthly, there need to be procedures for changing the scope of the project when the evaluation comes to the result that the likely impacts of climate change might not allow to pursue all objectives intended with the project (e.g. using water volumes for both irrigation and energy generation). Fifth, it will be necessary to define economically, socially and environmentally adequate thresholds for acceptable risks of a project.

The complexity of the tasks ahead of *mainstreaming minimum* in both developed and developing countries is large. Investing in capacity development in developing countries in areas related to the knowledge base of climate-proofing should therefore become a priority in order to reduce their dependency from external expertise. This includes programmes for the promotion of scientific research capacities. Special attention should be given to the exploration of ways for integrating indigenous knowledge and experience with climate variability into formal systems for measuring risk.

4 Mainstreaming Plus

Mainstreaming plus is development seen through an adaptation lens, and its objectives go beyond those of mainstreaming minimum. Climate-proofing development investment is necessary, but it is not enough, for three main reasons: persisting uncertainty about the impacts of climate change at the local level, the limitations of technology, and the failure to develop synergies between adaptation and development:

- The uncertainties surrounding the manifestation of climate change often make it difficult to justify investment in technological adaptation measures, in particular on a local scale. An important uncertainty relates to the effect of a changing climate on the frequency, magnitude and spatial occurrence of extreme weather events, such as floods, cyclones and droughts. Planning specific measures based on projections of future climate conditions therefore presents a great challenge to developing countries.
- Technological options can be important on reducing vulnerability to climate change, but they do have their limitations. First, they may be only partially effective if they do not address non-climate factors that contribute to vulnerability to climate change.

Second, they may be ineffective if they are not suited to local conditions. And third, they may turn out to be maladaptive if they are implemented without taking account of relevant social and environmental processes.

- Synergies with development are needed in order to address both uncertainty and the limitations of a technological approach. Investment in education, health, social protection and other areas can increase adaptive capacities of poor people, and strengthen their own resources for reacting to increased climate variability, coping with extreme weather events and adapting their production systems or livelihood strategies more fundamentally to changed climate conditions. At the same time, strengthening governance structures in developing countries in order to enhance cooperation across the various administrative levels, to improve access to remote areas and to provide channels for meaningful participation and self-organisation of local communities will be fundamental for enhancing collective adaptive capacities.

Mainstreaming plus thus asks a different main question: *"What needs to be done in order to reduce socio-economic and political vulnerability to climate change and increase individual as well as collective adaptive capacities in partner countries?"* It thus views adaptation to climate change as involving more than the implementation of technological measures, and explicitly includes consideration of non-technical and non-climate issues that influence vulnerability.

German development cooperation possesses a rich treasure of experiences and knowledge in a number of areas which will become increasingly relevant for enhancing adaptive capacity in developing countries. These include areas such as integrated water resource management, improving primary health care, reducing deforestation, combating desertification, and promoting effective governance arrangements, e.g. through decentralization.

The focus on vulnerability reduction involves technological, institutional, economic and capacity-building measures in a multitude of areas. What is required here is a change of analytical perspective: While in *mainstreaming minimum* the dynamic force is located in the changing natural environment, mainstreaming plus looks at socio-economic and political dynamics as affecting the capacity to cope with the impacts of climate change. What interests here then are all the ways by which ODA may either increase or reduce adaptive capacities. This requires a holistic understanding of development-climate interactions.

Besides the potential direct negative impacts of climate change on development investment already mentioned, two types of interactions need to be mentioned here:

- the already existing vulnerability of specific social groups to climate change may limit the sustainability of the intended measures. Usually, investment in the productivity of smallholder agriculture in one region leads to increased food security and monetary incomes. These in turn may increase the potential for sustained growth, if additional monetary income is re-invested. But, climate change may lead to migration flows into this region with ensuing increased competition on land and water and reduced food security. Successful poverty reduction may be undermined again. Climate-induced migration into urban areas can also lead to falling living conditions as better-off urban families may see themselves forced to pay for the survival of their extended rural families instead of investing in the education of their children.

- investment into pro-poor growth may increase the vulnerability of social groups to the impacts of climate change. If economic growth in agriculture and industry is to the detriment of environmental protection and resource conservation, e.g. through the overuse and pollution of freshwater resources, the ability to adapt to more frequent droughts will be reduced. Another example is the modernisation of agricultural production systems, which usually go hand in hand with specialisation and thus the reduction of diversity of income sources. Household adaptation to climate change, however, is facilitated when livelihoods are based on diversity (Eriksen et al. 2006).

For German development cooperation, *mainstreaming plus* requires that BMZ strategy papers actively include adaptation to climate change. When going through their periodical review, sectoral strategies, country assistance strategies as well as strategy papers for the various priority areas can be rewritten in order to include adaptation to climate change.

5 Mainstreaming policy

Adapting to climate change will require manifold investments by developing countries. In order to cope with these, developing countries, especially LDCs, will demand additional support from the governments of the countries which caused climate change. Adequate policy strategies to respond to these demands need to be conceived early on.

BMZ is present on several policy arenas within Germany, the EU and on international level, where it can use its leverage for increasing support to developing countries in adapting to climate change. There are three fundamental issues at stake which BMZ can bring forward on these policy arenas: (i) how to manage the knowledge gap on local impacts of climate change, (ii) how to secure funding for adaptation, and (iii) how to best integrate adaptation into development cooperation.

Mainstreaming policy on adaptation has to be based on a political decision by BMZ on the relative importance it wants to give adaptation in the near future. Already today, climate variability is increasing and extreme weather events are of a higher frequency and intensity. Climate change should thus be seen as an important factor for long-term development. Activities related to adaptation would then not be primarily tied to sectors such as environment, rural development or water, but could be conceived in any sector. It would not always be necessary to change sectoral priorities, but to integrate additional activities aimed at strengthening adaptive capacity.

Once this political decision is made, BMZ will be able to better use its own instruments and build new partnerships for improving the support to adaptation efforts in developing countries: (i) within Germany, with regard to implementing agencies of development cooperation, other ministries and non-governmental actors; (ii) in bilateral relations with partner countries; and (iii) in the international context, with regard to negotiations in the UNFCCC and other Rio Conventions, to the EU and the OECD/DAC, multilateral agencies, and specifically with regard to negotiations on the multilateral funding regime for adaptation.

The scope and speed of global warming may well require more flexible procedures for bilateral development cooperation. As it is difficult to predict the precise impacts of climate change on local level, flexibility becomes an important characteristic of planning and decision-making procedures in order to adapt to changing conditions. This is also true for bilateral development cooperation which needs to be more flexible in its decisions on concrete

activities in the short term, while at the same time make reliable commitments over the long term.

Mainstreaming policy within Germany

BMZ has important (potential) partners within Germany with regard to all three issues mentioned above – knowledge gap, funding and integration of adaptation. Implementing agencies of German development cooperation are the main partners for integrating adaptation into development cooperation. Their main contribution here will be (i) to reduce climate risks for their activities and investments (climate-proofing), (ii) to implement pilot activities for capacity development in partner countries with regard to the integration of adaptation into sectoral and regional development planning, (iii) to develop proposals for the reduction of vulnerability to climate change. In a first phase, all German implementing agencies should maximise their learning on approaches for integrating adaptation to climate change on all possible learning grounds, that is in a broad variety of partner countries. In a second phase, when learning has been consolidated it may be more effective when cooperation is focussed on countries which are most affected and/or which have especially weak endogenous structures.

KfW has created one additional position for the coordination of climate change issues in the department of water and of rural development / management of natural resources respectively, as well as one climate change coordinator for issues concerning both departments as well as the departments on energy and on transport. The KfW board has commissioned these departments to develop tools for climate-proofing and make an operational proposal until the end of 2007. GTZ is making progress in mainstreaming climate change into its activities. It has created a new department of environment and natural resources which will be responsible for coordinating all activities related with climate change. InWEnt and DED will be required to integrate adaptation into their portfolio, by designing training activities and identifying interested partners.

Other ministries in Germany could develop into important partners for BMZ with regard to strengthening adaptive capacities in developing countries, especially in relation to knowledge and funding. Basic elements of these partnerships should be mentioned in the international chapter of the German adaptation strategy. They would refer mainly to BMBF and BMU, possibly also BMF.

BMBF and BMZ could develop a joint strategy for capacity development in the South with regard to reducing the knowledge gap on the local impacts of climate change. This joint strategy could aim at strengthening local climate modelling, research on and interpretation of data on changing climate variability and its links to climate change, as well as research on adaptive technologies, the costs and benefits of adaptive options, and the necessary changes in the institutional environment and policy coordination. The strategy would encourage research partnerships among German and partner country institutions, and facilitate coordinated action between research and development cooperation.

Since the preparations for the UN Conference on Environment and Development 1992 in Rio de Janeiro, the partnership between BMZ and BMU is well established. BMU has the lead in climate negotiations, and it is increasingly relying on BMZ expertise for the negotiation of a growing list of agenda items. Financial commitments of Germany in the climate context are usually fulfilled with funds from the BMZ budget. BMZ has integrated activities for

strengthening mitigative capacities in large emitters from the South (e.g. China and India), and is thus an important partner for BMU. The situation changes in 2008, when BMU will receive 120 million € generated by the auction of a specific share of emission allowances in Germany for international activities classified as ODA. This gives BMU autonomy from BMZ. BMU is planning its activities with China, India and other developing countries independently from BMZ. According to the EU plan, the share of auctioned emission allowances will grow after 2012. When auctioning turns into the main distribution mechanism, it is estimated that a public income of up to two billion € could be generated. BMZ should ensure that a sizable share of this growing income is made available for funding adaptation in developing countries.

Non-governmental actors, e.g. the foundations of the political parties, play an important role in German relations with developing countries. The foundations are increasingly engaged in dialogue activities on how large emitters from the South should be integrated in the post-2012 regime, and how global equity and fairness could be secured in a future regime, e.g. with regard to gender issues. These activities have a high potential for supporting German negotiating positions.

Box 4: Aid and climate change – diversion of funds or complementary relationship?
The commitment of ODA funds to activities related to climate change has always been criticized as diverting funds from their original purpose. Today, about 90 percent of ODA funds dedicated to climate change focus on the reduction of greenhouse gas emissions which have no direct positive impact on reducing poverty. Particularly support for the creation of institutional conditions for CDM projects is criticised as furthering mainly donor interests, because CDM allows developed countries to achieve emission reduction targets partially through investment abroad. So far, CDM projects have failed to generate broader positive effects for sustainable development in the South.
Regarding adaptation, the aid diversion argument does not hold: reducing vulnerability to climate change will have positive effects on living standards, while not all activities and strategies for reducing poverty will automatically reduce vulnerability. As it can be argued that the additional costs of adaptation to climate change are largely the historical responsibility of industrialized countries, they are seen to have a moral responsibility to support adaptation over and above ODA. While it is generally clear that there are huge overlapping areas between the reduction of poverty and vulnerability, there is still a need for more conceptual work in order to identify more precisely (i) how development activities can increase vulnerability, and what should be changed in order to avoid this, and (ii) which specific approaches there are for explicitly reducing vulnerability, without compromising development potentials.
In its recent Human Development Report, UNDP argues strongly in favour of new and additional resources for adaptation in order to avoid the problem of aid diversion and to reach both aims: the MDGs and anticipatory investment in adaptation measures, including climate-proofing (UNDP 2008).

Mainstreaming policy in bilateral cooperation

Integrating adaptation issues into programmes of bilateral cooperation should become a high priority. This would help to achieve advances with regard to all of the three issues mentioned above: practical progress with regard to decreasing the knowledge gap and with learning on how to integrate adaptation into development planning and implementation, as well as channelling financial support into adaptation.

In order to achieve progress, it will be necessary to invest in dialogue activities with partner countries, with the aim of discovering areas where common activities make sense. This will require efforts for the identification of adequate partners for these dialogues, as adaptation to climate change may be rather low on the main policy agenda.

At the same time, BMZ will have to train its own staff with regard to impacts of climate change, adaptation strategies, options and activities. These training efforts are necessary for all staff, independently of whether they have a primarily regional, sectoral or organisational perspective on development cooperation.

Cooperation programmes and strategies with partner countries may have to be adjusted to the needs of a partnership which acknowledges the high relevance of preventive adaptation to climate change. A re-formulation of objectives within priority areas of cooperation already agreed upon may facilitate this process.

An effective strategy for bilateral cooperation in this area will require a clear definition of the division of labour with the European Commission and multilateral organisations.

Mainstreaming policy at the international level

Mainstreaming policy at the international level is linked closely with the negotiations for a post-2012 climate policy regime under the UNFCCC, and with strategic decisions made by multilateral agencies (e.g., World Bank, regional development banks, UN specialised agencies) and supranational bodies (e.g., EU, OECD/DAC).

The Bali Action Plan, which sets out guidelines for negotiation on long-term cooperative action, includes adaptation as one of its four building blocks (along with mitigation, technology development and transfer, and financing). Funding for adaptation will be a central issue, and linked with it the question of additionality. An agreement on an international funding regime will need to clarify how adaptation is defined, whether it refers to climate change only or whether increased climate variability will be included as well, and if and how adaptation should be distinguished from both ODA and disaster-risk reduction. It may also become necessary to define “environmental refugees” and consider climate-induced migration as part of a future climate policy regime.

The UNFCCC (2007a) estimates that USD 28-67 billion in additional investment and financial flows will be needed in 2030 for adaptation in developing countries. The World Bank (2006) concludes that the incremental costs of adapting to projected impacts of climate change in developing countries are likely to be approximately USD 10-40 billion per year, while Oxfam International (2007) estimates this number to be over USD 50 billion per year. The UNDP (2008) suggests that aid financing for adaptation could amount to USD 86 billion per year by 2015.

Existing resources under the Global Environment Facility (GEF), which currently operates the financial mechanism of the UNFCCC, are not sufficient to cover the estimated needs. Financial resources available so far in the various funds managed by the GEF for the period 2007-2010 amount to USD 1.3 billion to support mitigation, adaptation and technology transfer. Likewise, bilateral and multilateral ODA provides only a small fraction of what is required to address climate change.

Hence considerably more financial resources are needed. The Adaptation Fund is the first financial instrument under the UNFCCC and its Kyoto Protocol that is not based solely on voluntary contributions. It receives a 2% share of proceeds from project activities under the CDM and can also receive funds from other sources to fund concrete adaptation projects. The actual amount of money that will be available from the fund depends on how much the CDM is used and on the price of carbon. According to a World Bank estimate it is likely to total USD 100-500 million by 2012.

The Adaptation Fund is the first example of the use of market-based options to generate substantial financial resources to address climate change. The carbon market, created by the Kyoto Protocol, has the potential to move huge financial flows to developing countries for mitigation and adaptation, especially when the European Emission Trading Scheme will operate by auctioning.

If emission targets were ambitious, the carbon market could make a future climate agreement self-financing. However, there is the risk that two parallel flows will develop: one that supports adaptation (and mitigation) activities in developing countries, and one that is made up of traditional ODA. Both *mainstreaming minimum* and *mainstreaming plus* require the integration of adaptation and development, which could be hindered by the existence of separate financial flows. Second, there is the risk of "projectisation" of adaptation if the money intended to support these activities is managed separately from traditional ODA, which is increasingly used for programme and budget support. Third, there is the risk that new funds for adaptation are largely donor-driven, which could result in trust issues between developed and developing countries that can affect the success of both climate and development policies.

These three risks are not unique to BMZ. Guidance on how to address these risks can be developed by the OECD/DAC and/or by the European Commission. The upcoming G8 meeting in Japan in July 2008 could also provide an opportunity to agree on the development of a global partnership for adaptation that enables adaptation and development to be integrated in a way that respects the priorities of developing countries.

A consistent policy on the institutional and legal dimensions of adaptation funding requires a clear conceptual understanding of the linkages between adaptation and development. With such understanding it will be possible to develop criteria for determining whether the existing institutional framework for adaptation (i.e., the existing funds under the UNFCCC and the new bilateral and multilateral funds that are being set up) is adequate, whether they should be maintained as parallel structure for adaptation funding and how funding for adaptation and development should be linked in the future. In addition, the role of non-state actors in adaptation needs to be explored and encouraged. The private sector is already strongly involved in mitigation in developing countries, but its potential contribution to adaptation is unclear. Civil society plays a major role in many development initiatives, but the current institutional framework for adaptation makes it difficult for them to become more engaged in adaptation.

6 Recommendations

Summarizing, we recommend the BMZ to make the following strategic decisions in order to turn adaptation into a priority:

1) Enhance effort: gradually increase the weight and volume of activities in bilateral cooperation for improving adaptive capacity in developing countries, with the aim of matching the volume given to the support of mitigative capacity

- select three partner countries for a pilot process on how adaptation to climate change can be mainstreamed into bilateral cooperation (one workshop in 2008 and 2009 respectively, results to be presented at COP 15 in Copenhagen)

2) Build partnerships: explore cooperation with German ministries in order to close the knowledge gap in developing countries on the impacts of climate change and to secure funding for adaptation

- engage in a cooperation agreement with BMBF on joint measures to increase the knowledge base on the local impacts of climate change in selected developing countries
- engage in negotiations in order to secure that a substantial share of public income generated by the auctioning of emission allowances goes into adaptation funding

3) Increase visibility: identify and enhance activities conducive to promote adaptive capacity in development countries

- carry out a portfolio screening in German financial and technical cooperation in order to identify projects/programmes, approaches and instruments which already promote adaptive capacity or offer a good basis for it
- support a specific World Bank investment framework for adaptation, based on the evaluation of the pilot activities of the Bank (and relevant bilateral experiences) in African agriculture and water sectors, as well as on its experiences with climate-proofing
- encourage efforts for programmatic work on adaptation in other regional development banks

4) Generate knowledge: broaden the knowledge base on adaptation to climate change in developing countries through shared learning between development agencies and with research organisations

- envisage technical and financial cooperation with India on adaptation to climate change as a systematic learning ground for German bilateral cooperation from which future cooperation with LDCs will benefit
- encourage shared learning among multilateral and bilateral development agencies, e.g. by reactivating the Vulnerability and Adaptation Resource Group (VARG) or by using other appropriate arenas

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