



Overseas Development Institute

# Poverty Reduction, Equity and Climate Change: Global Governance Synergies or Contradictions?

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Globalisation and Poverty Programme

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## Acknowledgements

I am grateful to the Department for International Development, UK, for financing this study. This paper forms part of the Effective Participation by Developing Countries in International Governance, Institutions and Negotiations study which is in turn part of the Globalisation and Poverty programme, which now includes fourteen projects on the relationship between the global economy, and global institutions, and poverty, and on how the developing countries can influence this. The comments of Benito Müller (Oxford Institute for Development Studies), Aubrey Meyer (Global Commons Institute) and Sheila Page (ODI) are gratefully acknowledged. Thanks are also due to the hard preparatory work of three London School of Economics Masters students: Claire McGuigan, Rebecca Reynolds and Daniel Wiedmer.

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## Introduction

Poverty and equity issues are inextricably linked in the analysis of climate change and the global governance response. While equity issues have always been significant in the negotiations of the United Nations Framework Convention on Climate Change (UNFCCC), poverty and sustainable development (SD) issues have risen to prominence more recently. The steep rise of poverty on the climate change agenda stems from the 2001 report of the Inter Governmental Panel on Climate Change (IPCC) which identified the vulnerability of the poor to climate change impacts, as well as from the greater priority to poverty goals accorded by multi- and bilateral overseas development assistance (ODA), as indicated in the Millennium Development Goal (MDG) targets.

Policy makers and donors increasingly realise that tackling equity and poverty issues is now key for environmentally effective global governance cooperation to 'mitigate' climate change, as evidenced by the recent approval of three new 'adaptation' funds (see Box 1 for key jargon and definitions) from the UNFCCC process. A recent donor consortium report on climate change and poverty (AfDB et al, 2002) emphasises the synergies between the climate change and poverty reduction agendas, and observes that without urgent action climate change is likely to undermine the MDG poverty targets.

This paper first looks at the broader equity issues surrounding the climate change negotiations, and then focuses on the poverty and SD issues, considering the potential and limitations of win-win poverty and environmental options. It concludes by assessing strategies for linking poverty, equity and environmental outcomes.

### **Box 1: Key jargon in the climate change, poverty and equity debate**

'Mitigation' refers to efforts to stabilise greenhouse gas (GHG) concentrations or prevent climate change, mainly by cutting emissions at source or offsetting them via the 'flexible mechanisms' open to Annex 1 industrialised countries in the Kyoto Protocol (KP): emissions trading, joint implementation (both of these between Annex 1 countries) and the Clean Development Mechanism (CDM). Through the CDM, Annex 1 countries can obtain Certified Emission Reduction (CER) credits from carbon investments or projects in non-Annex 1 countries. The CERs count towards the Annex 1 country KP emission reduction targets. 'Meaningful participation' refers to the participation of developing countries in climate change mitigation by accepting emission targets like Annex 1 countries

'Adaptive capacity' refers to the ability or capacity of countries, communities or households to adjust in order to reduce vulnerability to climate variation, moderate potential damage, cope with, and recover from the consequences. 'Adaptation' refers to the process of adjustment, and can be anticipatory or planned (disaster preparedness), or spontaneous and reactive (disaster recovery). 'Vulnerability' is the susceptibility of people to the harmful consequences of climate variability and extremes; this largely depends on their adaptive capacity and the sensitivity of their livelihood systems to climate change. It should be noted that definitions of these terms are vigorously discussed in the literature, and those provided here, although they try to follow IPCC definitions, are by no means definitive.

## Equity and Climate Change

The UNFCCC Principles state that climate change protection must have an equitable basis 'in accordance with their [the Parties] common but differentiated responsibilities and respective capacities', and that developed country Parties should take the lead in combating climate change. In practice, there are major differences in the interpretation of 'equity'. At the risk of generalising, since there are major differences of position by the various UNFCCC sub-groups on a range of issues, these differences can be summarised as those of the 'North' and 'South' perspectives.

The dominant North perspective sees equity in terms of developing country 'participation' in mitigation efforts, and as an essentially environmental and economic issue (Müller, 2002). Thus some industrialised countries (most vocally the US) argue that the Kyoto Protocol (KP) is 'unfair' because developing countries with significant and growing emission levels do not have emission targets, and will not therefore share the costs of mitigation (at least in the first KP commitment period to 2012). The 'meaningful participation' of developing countries was treated by the US as a *sine qua non* for their participation in the KP. This 'North view' of equity justifies the predominant developed country interest in managing the global carbon trade in order to minimise the costs of compliance to their emission targets.

By contrast the dominant South perspective is that equity is a 'redistributive social justice' issue; the human impacts and adaptation costs are disproportionate to causal responsibilities. Developing country delegates at the Eighth Session of the UNFCCC Conference of the Parties (CoP8) in Delhi (November, 2002) repeatedly pointed out that Annex 1 country emissions continue to increase, and that the gap with developing country emissions is widening rather than narrowing. As one developing country representative put it, 'those least responsible for creating the crisis are most at risk from its ravages'. This perspective raises issues like over-consumption, historical patterns of development, and the 'right to emit' to reach a level of economic development which satisfies basic human rights. Therefore the South favours a per capita emissions rights based solution which stems from the assumption that the atmosphere is a global commons public good to which all are equally entitled. This re-frames the whole issue of climate change mitigation as a resource sharing problem rather than one of cost or how to divide up the emission reduction burden (the North perspective).

But treating climate change as a redistributive social justice issue has resulted in developing countries adopting a weak negotiating position in the UNFCCC, for example, a trenchant opposition to 'meaningful participation' (Box 2) and led to outcomes contrary to the interests of the poorest and most vulnerable countries, but that rather favour the larger developing country emitters. A reactive rather than proactive negotiating strategy has also prevented the formation of strong coalitions, allowing industrialised countries to use 'divide and rule' bargaining tactics (Gupta, 2000). A more pro-active negotiation strategy would be to accept targets and put pressure on industrialised countries for meaningful emission reductions. But this would require a major strengthening of developing country negotiating capacity; at present they lack the negotiating resources (team size, range of skills, institutional support, information and research basis, etc.) to compete with the large, skilled and experienced developed country negotiating teams (Richards, 2001). Several studies have pointed out the urgent need to increase developing country negotiating capacities and resources.

### **Box 2: The irony of opposing ‘meaningful participation’**

‘Meaningful participation’ in emission reduction targets by developing countries has always been resisted by the G-77 and China Group in the UNFCCC negotiations due to:

- the concern that emission targets will constrain economic development (this would be historically unjust); and
- insistence that industrialised countries ‘take the lead’ on mitigation as stated in the UNFCCC principles – as well as cutting emissions at source, this includes clean technology development and providing new and additional sources of finance.

While this position has a strong equity basis, the irony of opposing ‘participation’ is that it would not be difficult for the vast majority of G-77 countries to meet their emission targets. Studies by UNDP even show that bigger developing country emitters like India, China, Mexico and Brazil have successfully delinked economic growth and emissions. Opposing ‘participation’ has provided an excuse for Annex 1 countries to settle for weaker targets, prejudicing the interests of the poorest countries for whom delays in emission reductions will have dire consequences according to the IPCC predictions.

(based on Gupta, 2000; Richards, 2001)

## **Poverty and climate change**

### *The poverty impacts of climate change: the Third IPCC Assessment Report*

Climate change is predicted to deepen poverty both directly and indirectly. The direct impacts include the loss of life, livelihoods, assets, infrastructure, etc., from climatic extreme events. For example, following Hurricane Mitch in 1998, 165,000 people in Honduras fell below the poverty line; the ‘poorest’ lost 18% of their assets; there was a 29% loss of crops; and 20% of hospitals and education centres were affected (World Bank, 2002). The indirect effect is due to the effect on economic growth; continuing climate change variation is predicted to alter the sectoral origins of growth, including the ability of the poor to engage in the non-farm sector, as well as increase inequality, and therefore to reduce the poverty elasticity of growth (ERM, 2002). This could nullify the pro-poor potential of macroeconomic policies, trade and private sector investment.

A key milestone in defining the poverty impacts of climate change was the Third Assessment Report of the IPCC in 2001. This confirmed that the poorest (countries and people) are most at risk,<sup>1</sup> and identified a range of poverty-related climate change impacts, including:

- Reductions in crop yields in most tropical and sub-tropical regions due to decreased water availability, and new or changed insect pest incidence. In Africa and Latin America many rainfed crops are near their maximum temperature tolerance, so that yields are likely to fall sharply for even small climate changes; falls in agricultural productivity of up to 30% over the 21<sup>st</sup> century are projected;<sup>2</sup> marine life and the fishing industry will also be severely affected in some places;

<sup>1</sup> Between 1990 and 1998, 94% of 568 major natural disasters, and 97% of all disaster-related deaths have taken place in developing countries. Another study has found that 35–40% of the worst catastrophes have been climate change related (ERM, 2002).

<sup>2</sup> Another recent study of agricultural vulnerability to climate change predicts that the 40 poorest countries may lose 10–20% of their basic grain growing capacity by 2080 due to water scarcity, while yields in temperate areas increase due to warmer temperature and higher carbon dioxide levels. China, the world’s largest cereal producer, could experience a 25% rise in production (Fischer et al, 2002).

- Such changes would have a major impact on food security, employment, incomes, and economic growth; for example, one study has predicted a 9–25% fall in net farm revenue in India from a temperature rise of 2–3.5° C; reductions in crop yields can be expected to lead to localised food price rises;
- Huge displacement of people from coastal and densely populated low-lying areas like the Bangla, Mekong and Yangtze Deltas (inundation would also result in salinisation of these fertile areas); while islands like Tuvalu, Kiribati, Anguilla and the Maldives could disappear;
- Exposure of millions of people to new health risks, especially from vector-based diseases like malaria and schistosomiasis, as well as water-borne diseases like cholera and dysentery. Malnutrition from the reduction in crop yields would increase the severity of these diseases. Also health impacts are likely to have an effect on growth, e.g. there is a reported correlation between higher malaria incidence and per capita growth (ERM, 2002);
- Climate change will increase the frequency and severity of extreme climatic events like the El Niño related hurricanes and droughts; Pacific cyclones are predicted to increase by 10–20%.

Poorer developing countries are most at risk since they are more reliant on agriculture, more vulnerable to coastal and water resource changes, and have less financial, technical and institutional capacity for ‘adaptation’. Africa is particularly susceptible due to the desertification process, declining run-off from water catchment areas, declining soil fertility, dependence on subsistence agriculture, the prevalence of AIDS and vector-borne diseases, inadequate governance mechanisms, and rapid population growth. South Asia shares many of these problems.

### *Adaptation and vulnerability*

The IPCC report also stated that climate change impacts are now inevitable. Most mitigation scenarios show that even with deep emission cuts the lead-time for this to lead to GHG stabilisation is at least half a century. Given this irreversibility, it is realised that adaptation is almost as important as mitigation. For many observers, ‘adaptation’ is the key poverty issue surrounding climate change. Social groups are ‘vulnerable’ when their livelihood systems are sensitive to modest climate changes, and they lack supportive institutions or social networks. Successful adaptation depends on such factors as local institutional arrangements, the availability of finance, information exchange and technological change.

Within the adaptation and vulnerability debate, there are some important North-South differences in priorities. The North tends to place more emphasis on disaster prevention and preparedness (DPP), e.g. early warning systems and contingency planning for droughts and floods. The South argues that given the irreversibility of climate change impacts, DPP is inadequate for short-term threats, and places more emphasis on disaster relief. The latter view is reinforced by emerging evidence of imminent threats, e.g. 44 glacial lakes in Bhutan and Nepal could burst their banks within five to ten years (Müller, 2002).

### *The Bonn-Marrakech agreements on adaptation funding*

Following the groundbreaking IPCC report, three new funds (Box 3) were agreed at CoP6 (Bonn), and legislated at CoP7 (Marrakech). Two of them come under the UNFCCC, so Parties like the US can support them, while the third is under the KP. But it is not yet clear how much new money is being put on the table as opposed to ‘re-labeled’ old money. The KP Adaptation

Fund is to be financed from a 2% levy on the proceeds of CDM projects. This has been criticised by the South as it puts the CDM at a competitive disadvantage against the other KP 'flexible mechanisms' (Box 1), and places the financial burden on developing countries. However, if the \$1 billion target for the KP Adaptation Fund is not reached by 2005, a levy will also be placed on emissions trading and joint implementation. A few Annex 1 countries have earmarked \$410 million per annum for the two UNFCCC funds from 2005, but much more is needed.

**Box 3: The three new funds for adaptation activities**

- The UNFCCC Special Climate Change Fund is to support adaptation activities; technology transfer; energy, transport, industry, forestry, and waste management; and assist developing country Parties diversify their economies.
- The UNFCCC Least Developed Countries (LDC) Fund is mainly to support the preparation of National Adaptation Plans of Action (NAPAs). This involves identifying and prioritising adaptation activities, including building institutional capacity; DPP activities; and public awareness and education activities to encourage local participation in climate change activities.
- The Kyoto Protocol Adaptation Fund is also to support adaptation activities, including vulnerability assessments, capacity-building, insurance, and the avoidance of deforestation, land degradation and desertification.

These Funds are to be administered through the Global Environment Fund (GEF). This has raised concerns about developing country access to the Funds. There is also still considerable uncertainty over the details of the UNFCCC Special Climate Change Fund, although specific guidance on use of the LDC Fund was achieved at CoP8.

The CoP7 (Marrakech) decision that developing countries will carry out NAPAs implies they can define their own adaptation priorities, ideally with a strong participation of local stakeholders. Important related on-going initiatives include a UNDP project 'Adaptation Policy Frameworks', and a UNEP-IPCC project to support scientific research for adaptation in developing countries. Some regions and countries, like the Caribbean, Pacific and Bangladesh, are well-advanced with their NAPAs, and could start pilot adaptation projects in 2003. But a constraint is that the UNFCCC Special Climate Change Fund will only start in 2005, and the KP Adaptation Fund possibly not until 2008.

*Sustainable development in the Clean Development Mechanism*

Although SD is mentioned in only a rather diluted way in the UNFCCC Principles, it is an explicit objective of the CDM of the Kyoto Protocol, which is due to become operational in 2003. There are vigorous attempts to identify win-win (environmental and poverty) project types are being considered, for example in the areas of renewable energy and community forestry (Box 4).

But win-win projects in the CDM will not be easy. Firstly it is not clear how much demand there will be for CDM projects; with the US opting out of the KP and the threat of Russian hot air sales, the price of carbon could prove too low for many pro-poor options. Secondly, the CDM is essentially a market-based mechanism and left to market forces CDM investment would focus on large 'carbon-rich' developing countries and transition economies – most economic models predict China, India and Brazil gaining the lion's share of CDM projects (McGuigan et al, 2002). A third problem is the higher transaction costs of pro-poor projects due to organisational and administrative factors. Even if transaction costs can be lowered, CER purchasers still face large up-front costs, long payback periods, and relatively high risks.

#### **Box 4: Potential win-win CDM projects**

Small-scale rural renewable energy projects appear to offer the best prospect for poverty benefits in the CDM. According to a recent DFID research study (Troni et al, 2002), poverty benefits will be highest where rural households are connected with new energy sources, for example, via grid-connected biomass electricity production. The poverty benefits from this type of project can include increased income from enterprise development, access to clean water, improved health services and sanitation, security, education and gender benefits (as women and children spend less time collecting firewood and water). Improved wood stoves and micro-hydro power generation are other energy options with high poverty benefits. But the study observes the need for 'dedicated purchasing programmes' to ensure such benefits are obtained.

Another high potential area, according to a recent study by the Center for International Forestry Research (Smith and Scherr, 2002), is community-level forestry, in spite of the fact that forestry 'sink' activities in the first phase of the CDM have been limited to afforestation and reforestation. There is scope for community-based restoration of degraded and deforested areas through multiple-species reforestation and agroforestry. But such projects will have higher transaction costs and lower biomass productivity compared to industrial plantations. There are also outstanding uncertainties over forest definitions and sink project modalities.

It is becoming clear that developing countries, which are responsible for ensuring CDM projects meet national SD criteria, will require considerable ODA support<sup>3</sup> as well as domestic political will to prioritise and secure win-win projects – competition for scarce CDM funds means there is an obvious temptation to trade-off SD objectives (McGuigan et al, 2002). Developing countries therefore need support to:

- Develop a legal and policy framework for the CDM;
- Develop institutional capacity for identifying, designing and vetting pro-poor CDM projects; this includes an effective set of SD criteria, social and environmental impact assessments, and economic carbon analysis;
- Lower the transaction costs of SD-oriented CDM projects, for example by 'bundling' projects, supporting new or existing institutional arrangements for rural communities, and introducing simplified and standardised procedures for project appraisal, monitoring and reporting carbon performance, while at the same time ensuring local participation in project design and transparent decision-making;
- Introduce risk mitigation mechanisms which increase the attractiveness for CER purchasers;
- Secure property rights for land or forest use projects;
- Develop supportive learning networks.

### **Potential solutions and priorities**

The priorities for equitable and poverty-reducing climate change actions can arguably be divided into three main areas: mitigation (including the CDM); adaptive capacity building, including the mainstreaming of climate change actions in development policies; and disaster relief.

#### *Equitable mitigation and the CDM*

From the perspectives of both equity and environmental effectiveness, and therefore global security, the best solution would be one based on per capita emission rights. One of the best-known per capita emission rights proposals is Contraction and Convergence (C & C) (Box 5).

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<sup>3</sup> It should be pointed out that while donors and environmental organisations can be brokers, intermediaries and service providers, it is generally agreed they should not directly purchase CERs.

However the obvious problem is political acceptability by Annex 1 countries; for example, estimates show the US currently emits at least ten times the likely convergence level.

#### **Box 5: Contraction and convergence: the equitable mitigation option**

The central idea of C & C is that all countries arrive at the same per capita emission level by a given date, say 2100, which gives high emitters time to bring their rates down, and lower emitters time to reach an emission level corresponding to an acceptable level of economic development. Various sensitive calculations are needed to arrive at a firm C & C proposal:

- The maximum tolerable level of GHGs in the atmosphere (a common estimate is 450 parts per million volume – a roughly 60% contraction from current GHG emissions)
- The necessary rate annual of emission reduction to achieve convergence by a target year
- The contribution of cleaner (more energy efficient) technology
- The financial value of a unit reduction in GHGs

During the ‘convergence period’, an emissions trading system would allow countries exceeding the target per capita level to buy credits from lower emitting countries so that they can continue higher emission levels while they bring their emissions down. The net financial flow to developing countries would enable them to finance adaptation and invest in clean technology, although there are objections to the idea that developing countries should ‘profit’ from this type of emissions trading.

Another proposal is to share the mitigation burden on the basis of each country’s contribution to cumulative global emissions since 1990, but again political acceptability is doubtful. A more politically acceptable but much weaker option environmentally would be to link the CDM with ‘meaningful participation’. It could be mandated that a certain quantity of ‘CER Obligations’ take place under the CDM, and a system developed whereby these be distributed equitably among developing countries. The equity advantage of this is that developing countries would be ‘participating’, but the North would effectively pay for this ‘participation’.

A more immediate challenge on the mitigation agenda is how to maximise pro-poor benefits in the CDM. From the global perspective this will require a broad geographic spread of CDM projects, as well as substantial ODA support, since green market forces do not favour poverty objectives. The main hope may be to create a niche market for ethically motivated CDM investment in which carbon benefits are secondary to SD benefits (Huq, 2002). This is the objective behind the \$100 million Community Development Carbon Fund launched by the World Bank at the recent World Summit for Sustainable Development (WSSD). A mix of Northern companies, governments and an Australian Bank are among those who have agreed to fund the resulting CDM projects. Ethical-based CDM investment could be promoted among Northern social and environmental portfolio funds. Finally, there is a huge potential role for North-South clean technology transfer, both within and outside the CDM.

#### *Adaptive capacity building*

There is much common ground between the climate change adaptation and poverty reduction agendas. Adaptive capacity building actions (e.g. strengthening local institutional networks) are mainly the same as those needed for poverty reduction. Similarly, SD policies aimed at improved governance and natural resource management are key for climate change adaptation. There is an urgent need is to understand the additional vulnerability caused by climate change over other poverty-inducing factors, and thence re-orient current development policies and practice to account for this (AfDB et al, 2002).

But these synergies are not being identified or built on, partly since climate change policies tend to come under environmental or natural resource protection ministries, and due to the lack of climate change expertise in more development oriented departments. Institutional divisions are reinforced by the fear that climate change policies will prejudice economic development.<sup>4</sup> Therefore, for AfDB et al (2002), the ‘Adaptation Funds’ and ODA should be used to mainstream or integrate climate change adaptation in development policies by:

- Mainstreaming climate change issues in land use planning, natural resource management, energy, transport, and coastal management agendas;<sup>5</sup>
- Integrating climate change management in the economic planning and budget process (climate change adaptation should ideally be managed by a Ministry with a broad mandate, like Planning or Finance);
- Promoting SD capacity in climate change institutions;
- Strengthening the links and coordination between government departments and other stakeholders working on SD and climate change policies;
- Improving the management of climate change knowledge, especially the dissemination of good practice tools and methodologies to policy makers, civil society and others involved in adaptation efforts (much can be learned from the disaster management community on methodological and institutional issues);
- Education and training for DPP, and by encouraging local participation in climate change activities;
- Incorporating climate change adaptation in Poverty Reduction Strategy Plans.

Adaptive capacity building should focus on enhancing the resilience of the poor by building on existing human and social capital (institutional coping mechanisms), supporting the financial resilience of poor, possibly with some kind of asset-based insurance, and encouraging sustainable natural resource management. A high potential area is environmental service payments to small farmers for watershed protection. The main immediate task is to support the development of NAPAs so that developing countries are ready to make optimum use of the new adaptation Funds.

### *Disaster recovery and relief*

As already discussed, disaster recovery, relief and rehabilitation (the three Rs) are viewed as a priority more by the South than the North. One area of urgent reform is disaster relief funding, which is characterised by piece-meal voluntary funding mechanisms and poor coordination between governments and aid agencies. One proposal is for a UNFCCC ‘Climate Impact Relief’ fund (Müller, 2002). This could be based on the proven Trust Fund for Disaster Relief managed by the UN Office for the Coordination of Humanitarian Affairs (OCHA). This fund would need to be regularly replenished in anticipation of disasters, and use existing institutional structures – it could be managed by OCHA under the guidance of the UNFCCC CoP.

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<sup>4</sup> These concerns are valid for some countries, for example, South Africa’s economy is highly dependent on coal, including as a major source of export earnings and employment.

<sup>5</sup> When development and land use policies ignore climate change, there can be serious consequences for the poor, e.g. when the poor are encouraged to live and work on flood plains or steep hillsides.

Climate change disaster insurance, which can be regarded as both a preparedness and a response measure, is another idea gaining prominence. A proposal for an International Insurance Pool to provide insurance against sea-level rises was originally made by Vanuatu in 1991. The case for insurance against climate change impacts was shelved until recently, but ‘insurance-based actions’ are now back on the UNFCCC agenda.

## Conclusions

This paper argues that there are major untapped synergies between the poverty reduction and climate change agendas, especially in the area of ‘adaptation’. This is because of the commonalities between a range of SD and climate change related actions, like improved energy efficiency, a cleaner transport system, clean air, sustainable forestry, appropriate agricultural technology, clean technology transfer, etc. The AfDB et al (2002) report argues that mainstreaming climate change policies, as opposed to treating them as an ‘add-on’ to development policies, will improve the quality of economic growth – while failure to mitigate climate change impacts will slow growth, and therefore the potential to tackle poverty. At the UNFCCC level, there is a parallel need to promote a policy and institutional architecture in which climate change actions make sense from the SD perspective.

Secondly, while a mitigation strategy based on per capita emission rights is urgently needed from the environmental and equity perspectives, the problem is political acceptability. Also for any far-reaching mitigation reform (and even a substantial increase in Annex 1 emission reduction targets), the South must be much more pro-active and constructive in its negotiating strategy. There is an important role for donors to help the South develop a clear strategy to demand and negotiate more equitable and effective climate change outcomes in the run-up to the second commitment period of the Kyoto Protocol – negotiations for this are due to commence in 2005.

While the CDM does provide a funding source for potential pro-poor projects, it is clear that strong ODA support will be necessary to secure them, and there is a danger of falling between two stools. The contradictions between a market-based instrument (with the objective of providing credits on the global carbon trade market), and small-scale local development and sustainable livelihoods at the heart of poverty reduction, could prove too great, or at least substantially reduce the poverty benefits of scarce ODA expenditure. Since it appears that there is a considerable momentum building for ODA support for CDM win-win projects, and given the poverty-reduction opportunity costs, the effectiveness of ODA support for CDM projects needs to be carefully monitored.

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