



Overcoming the barriers

Mainstreaming climate change adaptation in developing countries



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Executive summary

Climate change is a huge threat to all aspects of human development and achievement of the Millennium Development Goals for poverty reduction. Until recently, donor agencies, national and local layers of government, and non-governmental organisations have paid little attention to the risks and uncertainties associated with climate change.

Now, however, players at all levels are increasingly engaging with the question of how to tackle the impacts of climate change on development in poorer nations. There are growing efforts to reduce negative impacts and seize opportunities by integrating climate change adaptation into development planning, programmes and budgeting, a process known as mainstreaming. Such a co-ordinated, integrated approach to adaptation is imperative in order to deal with the scale and urgency of dealing with climate change impacts.

In developed countries progress on mainstreaming climate adaptation has been limited. Many countries have carried out climate change projections and impact assessments, but few have started consultation processes to look at adaptation options and identify policy responses.

In developing countries, the mainstreaming process is also in its early stages. Small island developing states have made good progress, with Caribbean countries among the first to start work on adaptation. The Pacific islands have received considerable support and through the World Bank a number of initiatives have begun.

Crucially, there has been little progress in mainstreaming adaptation within existing poverty alleviation policy frameworks. There is a lack of research on the extent to which climate change, and environmental issues more broadly, have been integrated within PRSPs. This is critical. Examples of efforts from Sri Lanka, Bangladesh, Tanzania, Uganda, Sudan, Mexico and Kenya are presented, highlighting a number of key issues relating to current experiences of integrating climate change into poverty reduction efforts.

Experiences so far highlight a number of barriers and opportunities to mainstreaming climate change adaptation in developing countries. These are focused around information, institutions, inclusion, incentives and international finance, and result in a number of **recommendations** for national governments and donors:

Information

- Governments should engage more actively with the scientific community, who in turn must be supported to provide easily accessible climate risk information
- Climate risk information should put current and future climate in the perspective of national development priorities
- Information needs of different actors should be considered and communications tailored more specifically to users, including the development community

Institutions

- A multi-stakeholder coordination committee should be established to manage national adaptation strategies, chaired by a senior ministry
- Regulatory issues should be considered from the start of the mainstreaming process
- The capacity of existing poverty reduction and risk reduction mechanisms should be expanded to incorporate climate adaptation where possible
- Governments should ensure that any national adaptation strategy is consistent with existing policy criteria, development objectives and management structures
- Policy-makers should look for policies that address current vulnerabilities and development needs, as well as potential climate risks
- Actions to address vulnerability to climate change should be pursued through social development, service provision and improved natural resource management practices

Inclusion

- A broad range of stakeholders should be involved in climate change policy-making, including civil society, sectoral departments and senior policy-makers
- Climate change adaptation should be informed by successful ground-level experiences in vulnerability reduction
- NGOs should play a dominant role in building awareness and capacity at the local level

Incentives

- Donors should provide incentives for developing country governments to take particular adaptation actions, appropriate to local contexts
- The economic case for different adaptation options should be communicated widely
- A risk-based approach to adaptation should be adopted, informed by bottom-up experiences of vulnerability and existing responses
- Approaches to disaster risk reduction and climate change adaptation should be merged in a single framework, using shared tools

International Development Finance

- Funding for adaptation should be increased well beyond that currently available via the GEF and other adaptation-specific bilateral aid
- Current international adaptation resources should be used to leverage maximum adaptation results within existing development activities and investments
- Donors should support research and monitoring and evaluation of the mainstreaming process, to develop understanding of what contributes to effective enabling environments

1 Background and rationale

Until recently, developing country governments, donors, and non-governmental organisations (NGOs) seldom considered the risks and uncertainties associated with climate change in their development planning. Research findings and policy recommendations on the effects of climate change were only considered relevant to the environment sector. There is now greater acknowledgement among the development community that climate change will affect social and economic systems and is therefore a serious risk to development. According to the recent UK Government White Paper on International Development, *'Climate change poses the most serious long-term threat to development and the Millennium Development Goals.'*¹ Donor agencies, national and local layers of government, and non-governmental organisations are now beginning to engage with the question of how to tackle the impacts of climate change on development. In particular, there are growing efforts to reduce negative impacts and seize opportunities by integrating climate change adaptation into development planning and programmes, a process known as **mainstreaming**.

This report:

- reviews what progress has been made by developing country governments and donor agencies in mainstreaming climate adaptation into development planning
- examines barriers to further progress
- provides recommendations on how these barriers can be overcome.

The report intends to promote discussion on opportunities for further action research and on strategies for increasing awareness and information related to climate adaptation in development sectors.

2 Definitions of adaptation

The major scientific body associated with climate change, the Intergovernmental Panel on Climate Change (IPCC), defines climate change adaptation as:

*'Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.'*²

An alternative definition is offered in the inter-agency report, *Poverty and Climate Change*.³ Climate change adaptation is:

'The ability to respond and adjust to actual or potential impacts of changing climate conditions in ways that moderate harm or take advantage of any positive opportunities that the climate may afford.'

In language more familiar to those involved in risk management and development:

*'Adaptation is about reducing the risks posed by climate change to people's lives and livelihoods.'*⁴

Adaptation can be planned or it can occur spontaneously through self-directed efforts. Understanding these individual responses to changes in climate is particularly important in

1 DFID, 2006.

2 IPCC, 2001.

3 African Development Bank (AfDB) et al, 2003.

4 DFID, 2006.

exploring approaches to adaptation, because stimulating or improving existing strategies is likely to be more effective, less expensive and less demanding on institutional capabilities than large, pre-planned adaptation programmes.

3 Climate change and development

Climate change impacts and development processes are linked in a number of ways. Developing countries, despite having contributed least to greenhouse gas emissions, are likely to be the most affected by climate change because they lack the institutional, economic and financial capacity to cope with the multiple impacts. Poorer developing countries are at risk as they are more reliant on agriculture, more vulnerable to coastal and water resource change, and have less financial, technical and institutional capacity to adapt. Africa is a particularly vulnerable continent, due to existing land degradation and desertification, declining run-off from water catchments, high dependence on subsistence agriculture, the prevalence of HIV and AIDS and other diseases, inadequate governance mechanisms and rapid population growth.⁵

Within developing countries, not all groups are affected equally. Development is rarely even or equitable and the poorest members of society are usually the most vulnerable to climate change. The projected impact of climate change on access to natural resources, heat-related mortality and the spread of diseases such as malaria, for example, has direct implications for the achievement of the Millennium Development Goals.

Different development paths can have positive and negative impacts on the vulnerability of communities to climate change. ‘Mal-adaptation’ occurs where, for example, development triggers settlement in climate-sensitive areas such as on low-lying coastlines. On the other hand, participatory development processes have the potential to increase adaptive capacity by improving vulnerable people’s access to decision-making processes and information.

Development investments may be adversely affected by climate change, either by being directly threatened (e.g. effect of extreme weather events on infrastructure) or under-performing (e.g. irrigation investments that fail to pay off when rainfall decreases).⁶ Equally, investments play a role in decreasing (or increasing) vulnerability indirectly (e.g. education programmes that improve the capacity of farmers to harness new technology or practices). An OECD analysis of Official Development Assistance (ODA) flows to six developing countries indicates that a significant portion of this aid is directed at activities affected by climate risks. Estimates range from 50–65% of official bilateral aid flows in Nepal, to 12–26% in Tanzania.⁷ These figures are based on an assessment of how much aid has been spent on activities in sectors broadly sensitive to climate-related risks over a 3-year period (1998–2000). It does not assess the risks to particular projects and should be considered only as an approximate indicator, which is related to historic and not of potential future expenditure.

Until recently, the different institutional histories, terminology and timescales used have frustrated efforts to bridge the gap between the communities associated with climate adaptation, disaster risk reduction and development. Now, however, the concept of

⁵ Richards, 2003.

⁶ van Aalst, 2006.

⁷ Agrawala, 2005.

'mainstreaming' is becoming increasingly prominent in climate policy and international climate change negotiations, as it has in discourses on disaster risk reduction, gender and sustainable development. Given the linkages between climate change and development identified above, many believe that adaptive policies can only be effective if they are integrated into the wider development agenda. The assimilation of adaptation activities within development budgets ensures that these interventions continue to be properly funded over the long term, integrated into relevant sector priorities and balanced against other competing priorities.⁸ With potential increases in the magnitude and frequency of natural hazards because of climate change, creating closer links between the governance of climate adaptation and the governance of disasters is crucial. The climate adaptation community can also learn from the recent experiences of mainstreaming disaster risk reduction, and may be able to take advantage of existing initiatives in this field.

There are of course possible drawbacks to a mainstreaming approach. Mainstreaming adaptation into development policy and planning may not give it the attention it deserves, and may just result in another series of tick-boxes in project design guidelines. Mainstreaming gender in development planning has faced this problem in recent years,⁹ and highlights the importance of campaigns to raise awareness when any issue is to be incorporated into development and sectoral plans. There is also concern that integrating money already available for adaptation into more general development activities may discourage donors from providing the necessary level of funding in the future because adaptation-related benefits are more difficult to trace.¹⁰ Finally, 'mainstreaming fatigue' is a major concern and efforts to integrate climate change adaptation may have a negative impact on the motivation of overworked staff.

4 The international climate change regime

4.1 United Nations Framework Convention on Climate Change

Institutionally, the interest in climate change adaptation started with the first meeting of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) (COP-1, Berlin, 1995), where the decision was taken to approach adaptation in three stages:

STAGE 1 Planning, which includes studies of possible impacts of climate change, to identify specific vulnerable countries or regions and policy options for adaptation and appropriate capacity building.

STAGE 2 Measures, including further capacity building, which may be taken to prepare for adaptation.

STAGE 3 Measures to facilitate adequate adaptation, including insurance.

International negotiations associated with the UNFCCC and Kyoto Protocol have led to the creation of a number of financial mechanisms to support climate adaptation activities. The Global Environment Facility (GEF) administers these funds, which include:

⁸ AfDB et al, 2003.

⁹ Huq et al, 2006.

¹⁰ Yamin, 2005.

- The Special Climate Change Fund (SCC Fund) which finances activities relating to climate change in the areas of adaptation, technology transfer, energy, transport, industry, agriculture, forestry and waste management.
- The Least Developed Countries Fund (LDC Fund) which was set up to support preparation of National Adaptation Programmes of Action (NAPAs) by the 48 least developed countries. NAPAs are used to communicate the urgent and immediate adaptation priorities – those for which further delay could increase vulnerability or lead to increased costs at a later stage.
- The Kyoto Protocol Adaptation Fund will be used to finance concrete adaptation projects and programmes in developing countries. Although the management of this fund is still under consideration, initial finance will be through a 2% levy on credits generated by Clean Development Mechanism projects (projects in developing countries that reduce greenhouse gas emissions).

Under the UNFCCC, countries also have to report on steps they are taking to address climate change (mitigation) and its adverse impacts (adaptation). Submitted reports are called National Communications and the chapter on adaptation contains information on baseline conditions and their linkages, which might include:

- climate-related disaster effects and response capabilities
- population, food security and agriculture
- climate and health
- environmental problems (e.g. coastal erosion, reef exploitation (and conservation), deforestation, waste management etc) and their link to climate and socio-economic conditions
- financial services, insurance and associated economic services (financial products) available for the management of climate risks.

A vulnerability and adaptation assessment is conducted to identify general strengths and weaknesses of baseline conditions and specific needs and concerns, such as potential barriers to adaptation in critical areas or sectors, and opportunities and priorities for adaptation. Finally, approaches, methods and tools for adaptation are developed.

National Communications can therefore act as an important catalyst. National governments are encouraged to research and compile these reports in a participatory manner, involving different groups of stakeholders, many of which are completely unaware of the potential impacts of climate change. These communications therefore have the potential to initiate the mainstreaming of climate change adaptation into development planning.

As of June 2006, 132 developing or 'Non-Annex I' countries had submitted their initial National Communication, which included a baseline assessment, vulnerability analysis and the identification of adaptation options and constraints.

There are now a wide range of frameworks or instruments available to assess climate change impacts and options for adaptation (see for example UNFCCC compendium on methods and tools to evaluate impacts of, vulnerability and adaptation to, climate change: http://unfccc.int/adaptation/methodologies_for/vulnerability_and_adaptation/items/2674.php). These include specific tools for assessment in specific sectors or regional context, as well as

broader policy instruments that consider mainstreaming of adaptation responses. These include the Guidelines for the Preparation of National Adaptation Programmes of Action (NAPA), prepared through the UNFCCC process,¹¹ and the Adaptation Policy Framework (APF).¹² The Adaptation Policy Framework provides guidance on designing and implementing projects that reduce vulnerability to climate change. It explicitly seeks to mainstream adaptation into development policy and planning, and focuses on the involvement of all stakeholders at all stages.

4.2 Development frameworks

In addition to the instruments identified above, there have been strong calls for integration of climate change concerns into existing development frameworks, particularly those which promote participation of stakeholders, such as the Poverty Reduction Strategy Papers (PRSPs), sectoral planning and programmes, and country action plans to support progress towards the Millennium Development Goals. The Commission for Africa Report (2005) recommends that *'from 2008 donors should make climate variability and climate change risk factors an integral part of their project planning and assessment. They should meet their commitments on funding to help African countries adapt to the risks and impacts of climate change'*.¹³ This influenced development of the G8 Gleneagles Plan of Action¹⁴ in which G8 countries invited the World Bank to:

'develop and implement best practice guidelines for screening their investments in climate-sensitive sectors to determine how their performance could be affected by climate risks as well as how those risks can be best managed in consultation with host governments and local communities'.

The Plan also urges other bilateral donors to either adopt the World Bank's screening guidelines or develop their own.

More recently, this political impetus has been further redoubled by a declaration by OECD Development and Environment Ministers that *'they will work to better integrate climate change adaptation in development planning and assistance, both within their own governments and in activities undertaken with partner countries'*.¹⁵ They also declared that they will *'develop and apply appropriate tools to address climate risks in development activities and to prioritise responses'* and need to *'develop methodologies to monitor progress on integration of climate change risks and adaptation in development activities and on strengthening the adaptive capacities of developing country partners'*.

11 LEG, 2002.

12 Lim et al, 2005.

13 Commission for Africa, 2005, page 51.

14 Gleneagles Plan of Action, 2005, para. 35.

15 OECD, 2006.

5 Progress on mainstreaming

In the context of climate change, mainstreaming implies that awareness of climate impacts and associated measures to address these impacts, are integrated into the existing and future policies and plans of developing countries, as well as multilateral institutions, donor agencies and NGOs. At the national level, mainstreaming shifts responsibility for climate change adaptation from single ministries or agencies to all sectors of government, civil society and the private sector.¹⁶ However, to ensure mainstreaming does not lead to adaptation efforts becoming fragmented and the priority given to it being reduced, a coordinating mechanism such as a multi-stakeholder committee is required, which is afforded political power by being attached to a senior political office or powerful ministry of government.

In developed countries, progress has been limited on mainstreaming climate adaptation. Programs to reduce climate risk have been identified and there is a consensus that actions need to be taken to reduce these risks. While not always collected into large climate risk management programmes, many different sectors of government are beginning to place more resources into fragmented climate risk reduction initiatives, associated with sustainable development, water resource management, disaster management and coastal protection for example. An OECD report finds that many countries have carried out climate change projections and impact assessments but very few have started consultation processes to look at adaptation options and identify policy responses.¹⁷

In developing countries, the mainstreaming process is also in its early stages. It has almost exclusively been driven by UNFCCC, for example through preparation of NAPAs and the associated prioritisation of adaptation projects. Small island developing states have made some progress on implementing adaptation projects, but for the majority of developing countries, activities are just beginning to be identified and the level of awareness about the issue is slowly on the increase.

In the past, many governments responded to the threat of climate variability with a range of isolated structural and non-structural responses. Often these ignored the most vulnerable – for example, engineered flood control measures, drought early-warning systems and flood wall construction. More generally, government actions and plans which have the potential to reduce climate vulnerability are either restricted to a single ministry with few resources or fragmented across sectors with no co-ordinating mechanism, and as a result have not been fully implemented.

Small island developing states have made greater progress in mainstreaming adaptation. In the Caribbean and Pacific, communities and policy-makers have been more sensitised to the climate change problem. These small states are highly vulnerable to climate change:

- environmentally, because of their exposure to weather extremes and increasing depletion of natural resources
- economically, because of their relative isolation and smallness
- socially, because of migration and urbanisation.

¹⁶ Schipper and Pelling, 2006.

¹⁷ Gagnon-Lebrun and Agrawala, 2006.

5.1 Caribbean countries

Caribbean countries were among the first to start work on adaptation and collectively now have a large portfolio of completed, ongoing and planned adaptation projects.¹⁸ Work began under the Caribbean Planning for Adaptation to Climate Change (CPACC) project in 1997, which identified climate change scenarios and calculated potential losses. These efforts have now grown into a comprehensive adaptation programme, the Mainstreaming Adaptation to Climate Change (MACC), and projects under the Special Program on Adaptation to Climate Change (SPACC) are now under way. Although adaptation has not yet been fully mainstreamed into sectoral activities and it remains to be seen how effective plans are once implemented, it nevertheless represents a coherent approach to mainstreaming.

The MACC is likely to be effective because it brings together the climate change and disaster management constituencies. Adaptation strategies identified under the CPACC are similar to those being called for by national disaster coordinators, given that the islands suffer regularly from climate-related disasters due to coastal storms and hurricanes. Some projects identified under the MACC explore synergies between disaster risk management and adaptation to climate change, but further cooperation and institutional linkages are required to ensure sustainability and maximum effectiveness of joint interventions.

5.2 Pacific islands

The Pacific islands have received considerable support for adaptation from the Asian Development Bank (ADB) for the Climate Change Adaptation Program for the Pacific (CLIMP), which has produced a set of guidelines on mainstreaming adaptation, focusing on its integration into disaster risk reduction strategies. The World Bank produced a regional economic report, *Cities, Seas and Storms*,¹⁹ which assessed the potential impact of climate change and led to a regional dialogue attended by ministers and senior officials from finance and planning ministries. One of the activities that emerged from the regional dialogue was the Kiribati Adaptation Program, funded by the World Bank-GEF. This program provides a good example of the international community's efforts to help island countries adapt.

It is a useful example more generally, though, because the island of Kiribati, like many post-colonial countries, has a government with strong sectoral segmentation.²⁰ The programme has successfully integrated climate risk management into national development strategies and ministry operational plans for all relevant sectors, and it is about to enter its investment phase. The lessons are two-fold. Firstly, horizontal coordination across sectors is more effective if it is situated within an important ministry: in Kiribati, the program was situated within the Ministry of Finance and Economic Planning and then, when it had built up enough broad support, was moved to the Office of the President as part of a new National Strategic Risk Management Unit. Secondly, such horizontal coordination is not as effective as vertical coordination when attempts are made to institute regulatory changes or consult with communities on development plans.

18 van Aalst, 2006.

19 World Bank, 2000.

20 van Aalst, 2006.

5.3 Poverty reduction frameworks

In terms of mainstreaming adaptation within existing poverty alleviation policy frameworks, there has been little progress so far. A World Bank Environment Department report in November 2004 revealed that the average level of mainstreaming of environmental issues in Poverty Reduction Strategies (PRSs) is low.²¹ A study carried out by the International Institute for Environment and Development on adaptation to climate change in East Africa found that the PRSPs in Tanzania, Uganda, and Sudan do not explicitly mention climate change but only refer to the impact of floods and drought on economic development.²² Overall, little research has been conducted on the extent to which climate adaptation, and environmental issues more broadly, have been integrated within PRSPs. Future analytical work should focus on opportunities and activities designed to increase the level of recognition of climate adaptation within such strategies.

Sri Lanka was the first country in Asia to prepare a National Environmental Action Plan (NEAP) in 1992, with further updates published in 1998 and 2003. Priority environmental issues, from a poverty perspective, were identified as:

- deforestation and degradation of biodiversity
- soil erosion
- water pollution due to a poor regulatory framework, weak enforcement, inadequate sanitation and lack of proper waste management systems
- livelihood impacts on coastal communities due to widespread erosion of the country's coastline
- adverse environmental impacts due to the armed conflict, such as destruction of rainwater harvesting and lagoon barrages, as well as poor solid waste management causing aquifer pollution in the Jaffna peninsula
- deterioration of urban air quality due to poor-quality fuels, which affects the poor disproportionately.

Sri Lanka's PRSP in March 2003 was considered to be 'reasonably successful' by the World Bank Environment Department in mainstreaming these key environmental issues.²³

One important factor influencing the relative success of mainstreaming environmental concerns in Sri Lanka's PRSP, including those related to climate change, is that community-driven development has a major role in the implementation of the PRS. Community participation is stressed in coastal zone management, reef stabilisation, fisheries and social infrastructure development. One of the constraints to better mainstreaming and effective environmental management is the regulatory framework, which is still largely enforcement-based with virtually no economic incentives to encourage compliance.

In **Kenya**, the government has completed its First National Communication to the UNFCCC and is now working on the second. The Ministry for Environment is responsible for coordinating national adaptation and climate change issues through a specially established Climate Change Secretariat. Its primary focus is on raising awareness of climate change vulnerability and adaptation issues within government. In addition, there is an inter-ministerial committee on environment, which includes NGOs and the private sector. Climate change issues have been incorporated into a number of policy documents

21 Bojo et al, 2004.

22 Orindi and Murray, 2005.

23 Bojo et al, 2004.

which guide and promote development activities, including the National Development Plan (to 2010); however, it is only referred to using sustainable development terminology. Climate change information is hard to integrate into planning processes because officials at the Ministry of Planning lack the capacity and sometimes the tools to interpret the information. This makes it difficult to demonstrate that climate change considerations are important to development processes, and therefore they do not attract a budgetary allocation. In other ministries, such as health, officials are focused on poverty and do not recognise the impact of climate variability and change on health.

5.4 Sectors

Some LDCs have moved further ahead on integrating adaptation within particular sectors. In **Bangladesh** over the last decade, a number of studies have been carried out into impacts, adaptation and vulnerability, culminating in a National Adaptation Programme of Action. A recent study found that key sectoral planners and managers are well versed on the likely sectoral impacts of climate change, and have identified and prioritised suitable adaptations.²⁴ However, in only a couple of sectors have firm commitments been made to incorporate climate change adaptation into existing plans. These were coastal resource management, fresh water resource management and ecosystem biodiversity. In agriculture, stakeholders were quick to see the importance of incorporating climate change considerations into their research programmes, but those involved in agricultural extension work did not recognise the importance of adaptation measures for their projects. Climate change adaptation has, however, been well integrated into disaster preparedness.

One general problem in Bangladesh and elsewhere is that even where climate change pilot projects have been initiated, subsequent action to incorporate findings and lessons learned into national and local-level developments is often limited. Overall, a major constraint to mainstreaming adaptation in Bangladesh remains the lack of interest of high-level policy-makers (for example, those representing the Prime Minister's office, Finance and Planning ministries, as well as legislators).²⁵

In East Africa some progress has been made on integrating adaptation into the most vulnerable sectors. In their National Communications to the UNFCCC, **Tanzania, Uganda** and **Sudan** identified a number of adaptation measures, including:²⁶

- increase irrigation to boost crop production
- introduce low-water-use crops and adopt sustainable water resource management policies (seasonal rainfall harvest; water quality control)
- increase capital investment in reservoirs and infrastructure
- reduce water loss through water conserving technologies
- make water resource management an attractive career and field of investment
- institute policy mechanisms to control unsustainable forest clearing and forest consumption
- promote techniques for tackling emergency food shortage
- adjust farming areas and reduce animal population

²⁴ Huq et al, 2003.

²⁵ Huq et al, 2003.

²⁶ Orindi and Murray, 2005.

- promote use of LPG for cooking and solar cookers, instead of inefficient woodstoves and charcoal stoves
- conduct a comprehensive study of malaria.

The isolated nature of these measures suggests that they cannot be considered a coherent approach to mainstreaming. These three East African countries are now preparing their NAPAs. The biggest constraint to implementation is likely to be that many of the activities identified are technology-driven and involve high capital investments, for example the construction of sea walls.

In **Mexico**, the Inter-Secretarial Commission on Climate Change (CICC) was established in 2005 to coordinate the development of national policies on climate change, and is responsible for incorporating adaptation actions across different sectors, developing legal frameworks to achieve this and updating commitments to the UNFCCC. The environment ministry is responsible for coordinating climate change policy through the CICC. Mexico's National Development Plan 2001–2006 includes strategies to reduce vulnerability to climate change, strategies which resulted in small farm sector intensification; improved employment opportunities in commercial agriculture; growth of rural non-farm sector; migration of the young; and provision of safety nets for those trapped in poverty. In addition, a shift towards prevention in disaster management has led to the setting up of scientific advisory committees, improved engineering standards and the retrofitting of schools to withstand high winds, and hospital readiness standards.

Overall, although some progress has been made, institutional fragmentation remains a barrier to mainstreaming climate change adaptation in Mexico. One of the main problems is that responsibility for climate change and disaster management are separated between environmental and civil defence arms of government, and their associated research institutions. Climate change adaptation is isolated from the development agenda by its institutional location within the environmental ministry, which has little influence over other government departments. A further problem is that of political discontinuity, which hinders a long-term approach to reducing climate risk. High turnover of governments and loss of key 'champions' mean the loss of skills and capacity as well as the political will to continue with policies introduced by previous administrations. This is compounded by a general unwillingness to involve stakeholders in policy-making processes.

The barriers to mainstreaming climate change adaptation in Mexico are therefore mainly institutional. There is an awareness of actual climate risks within government departments and at the community level, but poor coordination between sectors and very short political and funding horizons make full integration of adaptation measures particularly difficult.

Overall, progress on mainstreaming in developing countries has been constrained because of limited awareness of the impacts of climate change. Issues of climate change adaptation are communicated within environmental policy, isolating the issue from the development and disaster risk reduction agendas. In Kenya, as in the case of Mexico, the high turnover of government staff is a barrier to institutional learning. Bureaucratic inefficiencies like excessive 'red tape' and limited district capacity also get in the way of implementing policies.

5.5 International donors

The international funding community is beginning to act on climate change risk. In 2002, donor agencies released the first draft of a paper *Poverty and Climate Change* at the eighth Conference of Parties (COP8) of the UNFCCC, revealing their interest in addressing climate change.²⁷ Since then donors have started to address the issue in ODA, and a few have already begun to develop strategies to mainstream climate change adaptation into their development operations. A range of bilateral donors are moving towards portfolio screening to promote climate change adaptation, commonly based on a risk management approach, with the World Bank and Asian Development Bank leading the way among multi-lateral donors in making current and future investments more resilient to climate change.²⁸ The Department for International Development (DFID) and the Canadian International Development Research Center are supporting the Climate Change Adaptation in Africa programme, which aims to improve adaptation research. At the local level, DFID is also supporting climate change adaptation through disaster risk reduction programmes, such as the Chars Livelihoods Programme in Bangladesh, which is raising house levels above the 100-year flood line in a low-lying region in the north of Bangladesh.

5.6 NGOs

NGOs are increasingly specifically considering climate adaptation in the context of their policies and operations, building on existing experience and practice.²⁹ Working groups have been set up to bridge the gap between climate change and development communities, such as the Working Group on Climate Change and Development, a coalition of environment and development NGOs in the UK. A number of non-governmental organisations have already begun to examine how to mainstream adaptation into their own activities: some have launched projects to address the problem at the global level through advocacy and at the local level by working with local partners on capacity building projects to improve resilience.

5.7 Research institutions

Research institutions in developing and developed countries also play an important role in assisting the mainstreaming process. Examples include:

- The Institute of Development Studies (IDS) Linking Climate Adaptation project brings together over 800 academics, policy-makers and practitioners worldwide, with a focus on encouraging participants from developing countries.³⁰
- The International Institute for Environment and Development (IIED) is running a capacity-building programme in 11 LDCs, which provides assistance on implementing NAPAs. The aim of the project is to improve governance of climate change adaptation, by ensuring that the policies produced through the NAPAs take into account the views and needs of the most vulnerable members of society.

27 AfDB et al, 2003.

28 Klein et al, forthcoming.

29 Mitchell and Tanner, 2006.

30 The project's website, www.linkingclimateadaptation.org provides a regularly updated resource for developing country actors to draw upon, and works to ensure that the most vulnerable members of society are not missing from international and national climate governance.

6 Conclusions and recommendations

Most developing countries are still in the very early stages of identifying appropriate responses to climate change risks, limiting practical experience of mainstreaming climate change adaptation into national development planning. However, the experiences described in available literature and outlined above give some indication of a number of barriers and opportunities for mainstreaming climate change adaptation. These are briefly summarised below and divided into five categories: **Information**, **Institutions**, **Inclusion**, **Incentives** and **International Development Finance**.

6.1 Information

Much work reviewed here notes a lack of awareness among policy-makers and development practitioners about the risks posed by climate change, and how these relate to development priorities. This is seen as a constraint on the necessary foundations for mainstreaming. There is no doubt that general low capacity is a major issue for many developing country government departments, and this cannot be ignored as a contributing factor in this context. However, where capacity is limited, targeting the right people with the right information in an accessible way becomes even more important.

In a world where climate change is increasingly raised as an issue in the mainstream media, low levels of awareness relate most crucially to the way that information is presented. The issue may be circulating but because it is presented as a global environmental issue, stakeholders may fail to make the connection with their own interests and activities. A major challenge for mainstreaming climate adaptation therefore is not in simply raising awareness per se, but in presenting issues in the context of the audience, paying attention to both content and manner of delivery. This could mean the data presented is made more relevant to a particular sector (e.g. total yearly rainfall for reservoir planning or number of days with no rainfall for agricultural extension work); or it could require that communication is tailored to the specific way information is consumed by different stakeholders. Understanding the different ways that climate information is already used is vital in framing the issue of future climate change. Without such framing, multiple actors, whether planner or planter, are likely to see little relevance in future predictions.

Many governments, agencies and NGOs deal with sectors and areas where climate is a major driver, including agriculture, water resource management and disaster preparedness. While progress has been made on improving the relevance of scientific outputs, communications between scientist and policymakers working in these sectors need urgent attention. Tailoring information in these contexts will require a more in-depth understanding of how targeted audiences consume information in different cultural and organisational contexts.

It will also require greater connectivity on the sort of climate information currently generated and used in developing countries in making decisions in climate-sensitive sectors. These are likely to include short-term and seasonal weather forecasting, as well as disaster early-warning mechanisms.

Generating 'intelligent information' for awareness-raising and promoting action

Raising awareness of the likely impacts of climate change remains a key first priority, particularly among senior politicians and high-level policymakers. Governments will need to engage more actively with the scientific community (natural and social scientists), who must provide easily accessible and up-to-date climate risk information relevant to the demands of different sectors. Improving the capacity for developing countries to generate such information within the country is a crucial building block for enhancing the effectiveness of information flow. Education and training on climate change issues, set within a development rather than environmental context, will bolster people's ability to demand, generate and interpret information. Importantly, this information must put current and future climate in the perspective of national development priorities to improve assessment of its relative importance to these priorities. In addition, the information needs of different actors must be understood more thoroughly and communications tailored to suit end-users.

RECOMMENDATIONS

- Governments should engage more actively with the scientific community, who in turn must be supported to provide easily accessible climate risk information
- Climate risk information should put current and future climate in the perspective of national development priorities
- Information needs of different actors should be considered and communications tailored more specifically to users, including the development community

6.2 Institutions

Linked with this provision of 'intelligent information' to raise awareness and interest in climate change is the need to address institutional context. Experience shows that successful mainstreaming is heavily dependent on addressing key aspects of organisational and institutional learning. One common barrier cited is that housing climate change in environment or meteorology departments of government leads to limited leverage on the issue. Where national adaptation programmes exist, they tend to be more effective when they are situated within a ministry with a high level of leverage over others, as is the case in Kiribati where the programme was situated first within the Ministry of Finance and Economic Planning and then moved to the Office of the President.

Similarly, institutional barriers have contributed in most countries to weak coordination between those working on climate change, development and disaster risk reduction. Government departments responsible for poverty reduction and disaster risk reduction are in some cases aware of vulnerability to extreme climate events, but have no means of coordination, which leads to the development of parallel efforts in all three areas. Bangladesh provides an important example of a country where efforts are being made to coordinate and integrate climate change and disasters activities.³¹ This example illustrates how a framework for combining tools, funding, organisations and institutions is facilitating joint mainstreaming of these two areas to address the common goal of poverty reduction.

31 Mallick et al, 2004.

Assessing institutional frameworks

Experience suggests that a representative multi-stakeholder coordination committee, which is chaired by a ministry with leverage over other government departments, should manage national adaptation strategies (whether a NAPA or articulated in National Communications). High-level officials from different government departments and from the legislature, along with senior civil society representatives should be involved in a consultation process from the start and be invited to serve on the adaptation strategy committee. Sufficient attention should also be paid to regulatory issues from the start, to avoid unnecessary bureaucratic inefficiencies when implementing policies. It should also not be assumed that lower levels of government have the capacity to adjust current programmes or create new ones to address the risks associated with climate change. The cost of changing approaches at all levels requires consideration, awareness-raising and resources, particularly at local government level where adaptation plans will be implemented. Care should be taken not to duplicate the activities of existing overarching governance mechanisms for poverty reduction and disaster risk reduction. Where possible, the capacity of existing mechanisms should be expanded to incorporate climate adaptation; helping with the mainstreaming process and allowing tools and approaches to be shared.

Enabling policy coherence and consistency

National governments must ensure that the national adaptation strategy is consistent with existing policy criteria, development objectives and management structures. This means that the initial period of assessment of climate change risks should be accompanied by an assessment of the policy and management structures through which adaptation will be integrated. Policy-makers should look for 'no regrets' or 'win-win' policies. These address current vulnerabilities and development needs, as well as potential climate change risks, and therefore produce benefits even if climate change does not occur. These options are much more likely to gain political support given that some climate change impacts will only be felt over the medium term.

Reducing reliance on structural and technological approaches to adaptation

Top-down climate impact models tend to favour prescriptions for adaptation based on structural measures and technology. While this approach allows a simple delineation of adaptation, it may also be inflexible, insensitive to local needs and technologically and financially demanding. Effective mainstreaming will rely on a broader approach where adaptation is not reliant solely on such approaches. Actions to address vulnerability to climate change can also be pursued through social development, service provision and improved natural resource management techniques. These can better seek 'win-win' opportunities, incorporate local knowledge, are cheaper and can more easily be implemented at lower levels of government and with greater participation from communities.

RECOMMENDATIONS

- A multi-stakeholder coordination committee should be established to manage national adaptation strategies, chaired by a senior ministry
- Regulatory issues should be considered from the start of the mainstreaming process
- The capacity of existing poverty reduction and risk reduction mechanisms should be expanded to incorporate climate adaptation where possible
- Governments should ensure that any national adaptation strategy is consistent with existing policy criteria, development objectives and management structures
- Policy-makers should look for policies that address current vulnerabilities and development needs, as well as potential climate risks
- Actions to address vulnerability to climate change should be pursued through social development, service provision and improved natural resource management practices

6.3 Inclusion

It is rare to find participation of a broad range of stakeholders in policy-making related to climate change. Civil society in particular has commonly had little or no involvement in national policy-making. In some LDCs, the NAPA process appears to have encouraged greater participation across different sectors of government and civil society in the identification of climate change impacts and adaptation policies. However, it remains to be seen whether this leads to a shift in responsibility for implementation away from single ministries currently promoting the issue, to other key sectors of government, civil society, academia and the private sector.

A number of frameworks and initiatives are available to developing countries through which they can identify climate change risks and put together policies and plans to reduce these risks and reduce poverty. Coherence in mainstreaming climate change adaptation does not imply selecting only one approach. In fact, given the scale of the problem and the limited awareness of how to deal with it, it makes more sense for developing countries to use all the instruments at their disposal to address adaptation. What is crucial is that the process of identifying risks and interventions is inclusive, so that experiences are shared among different actors, including donors, across government departments and between different countries.

Engaging stakeholders

It is fundamentally important to get a broad range of stakeholders involved, including civil society, sectoral departments and senior policy-makers. National Communications to date have tended to treat the issue of adaptation in a sectoral manner. A broader group of stakeholders needs to be regularly engaged to ensure a more coherent approach to mainstreaming, and therefore more effective implementation and sustainability. Climate change adaptation must be informed by successful ground-level experiences in vulnerability reduction. Embedded in these experiences are valuable lessons for a range of potential users. A first step may be to examine ongoing projects in the fields of natural resource management, disaster risk reduction and poverty reduction to identify those with adaptation potential. Steps should be taken to build on their strengths, ensure sustainability and monitor their impacts on adaptive capacity.³²

³² Burton, 2003.

At the local level, non-government actors in developed countries, along with their local partners in developing countries, will have to play a stronger role in encouraging and supporting participatory decision-making processes and greater stakeholder involvement in implementation. Specifically, NGOs can play a more dominant role in building awareness and capacity at the local level so that civil society and local government have the interest and knowledge to participate more actively in the mainstreaming process. Civil society can also play an important role in monitoring the progress of mainstreaming within government and advocate for particular strategies or policies at critical junctures.

Including environmental considerations in Poverty Reduction Strategies

As a high proportion of people living in developing countries rely on ecosystems for their livelihoods, measures to protect their environments must form a core element of poverty reduction strategies. At the current time there is limited evidence of the inclusion of environmental considerations in such strategies and this must change. This may be achieved by raising awareness of climate change and of the importance of protecting environments from insensitive development projects among representatives of different sectors and tiers of government. Raising the profile of the environment in international meetings dedicated to poverty reduction will also contribute to addressing the current omission of many environmental issues.

RECOMMENDATIONS

- A broad range of stakeholders should be involved in climate change policy-making, including civil society, sectoral departments and senior policy-makers
- Climate change adaptation should be informed by successful ground-level experiences in vulnerability reduction
- NGOs should play a dominant role in building awareness and capacity at the local level

6.4 Incentives

Climate change mainstreaming may have much to learn from political science in focusing attention on incentive structures for individuals, organisations and institutions. These include early attention to regulatory and bureaucratic issues when considering policy implementation, as well as transaction costs of changing to a different set of practices associated with adaptation. The mainstreaming fatigue experienced by many engaged in international development and elsewhere must also be tackled by creating positive and recognisable goals, and avoiding replication with other parallel processes (for example, by combining tools for disaster risk reduction and climate change adaptation where possible).

Providing financial and career development incentives

Donors can attach specific demands to development finances that provide incentives for developing country governments to take particular climate adaptation actions. These should be appropriate to local contexts. Climate adaptation training programmes for representatives of different development sectors can come with monetary or career

development incentives. More effort is being given to making the economic case for different adaptation options, and these should be communicated widely to demonstrate the value of investing scarce resources at an early stage.

Improving risk management approaches

A holistic strategy for adaptation should improve the ability to cope with present variability, as well as enhance the adaptive capacity to respond to future climate change. This will necessarily involve both disaster risk reduction and climate change adaptation. One way of combining these is through a risk-based approach to adaptation. Using risk calculations as the basis for mainstreaming fits well with existing risk assessment and management techniques used by planners in many sectors (e.g. health, finance, transport, agriculture, energy and water resources). Although risk management approaches are commonly top-down in nature, if they are informed by bottom-up experiences of how households and communities experience vulnerability and their adaptation strategies, they may provide an important avenue for mainstreaming in the future. An initial move to facilitate mainstreaming would involve merging approaches to disaster risk reduction and climate change adaptation in a single framework, under a single administrative unit, using shared tools. While climate adaptation and disaster risk reduction have exclusive elements, such as the long-term view of some adaptation measures and of geo-tectonic natural hazards, these should not detract from the benefits of developing shared projects and tools, and raising finances collectively.

RECOMMENDATIONS

- Donors should provide incentives for developing country governments to take particular adaptation actions, appropriate to local contexts
- The economic case for different adaptation options should be communicated widely
- A risk-based approach to adaptation should be adopted, informed by bottom-up experiences of vulnerability and existing responses
- Approaches to disaster risk reduction and climate change adaptation should be merged in a single framework, using shared tools

6.5 International Development Finance

Developed countries must shoulder part of the burden for mainstreaming, both in the context of development cooperation ('aid') frameworks, and assistance to developing countries on the process and implementation of mainstreaming climate change adaptation. Development cooperation and financing agencies are increasingly facing up to their responsibilities (both fiduciary and justice-based) to integrate risk reduction and adaptation within their work.³³ Most agencies now recognise that the way to ensure these investments are not at risk and do not contribute to rising vulnerability, is not to deal with climate change as a separate issue; rather climate change issues should be integrated into their development planning, programmes and projects. This includes integration within national and sectoral dialogues and strategic donor frameworks, as well as in programmes and projects. Mainstreaming is progressing slowly in a learning-by-doing manner in a range of development agencies, and political declarations are reinforcing commitments to screen

³³ Mitchell and Tanner, 2006; Klein et al, forthcoming.

development assistance and finance accordingly.³⁴ While some progress is being made, it is too early to assess the effectiveness of these actions.

Providing financial and technical assistance for mainstreaming

Adaptation will require considerable funding, certainly beyond that currently available via the GEF and adaptation-specific bilateral aid. While adaptation funding at the level of the Convention is hotly contested, it is generally accepted that much adaptation in developing countries will need to be carried out and financed as part of regular development activities (although this may be through development cooperation). Current international resources for adaptation should therefore be used to leverage maximum adaptation results within existing development activities and investments. This means identifying, in particular, disaster risk reduction, poverty reduction and natural resource management programmes which could most easily, and economically, be adapted to address climate change vulnerability. It is therefore also vital that in addition to using adaptation funds and frameworks, climate change adaptation also be mainstreamed into poverty reduction strategies and other development programmes to leverage greater finance.

Given the low baseline, developed countries must continue to play a role in assisting developing countries through provision of financial and technical assistance to improve the enabling environments that best facilitate mainstreaming and successful adaptation. Improving understanding of what contributes to such enabling environments, mainstreaming processes and effective adaptation measures will be central to this process. This will require research and tools to monitor the mainstreaming process, building on those available in other areas such as disaster risk reduction. It will also require greater attention to monitoring and evaluation of adaptation, including analysis of the costs and benefits of risk reduction and adaptation measures, to place them within the context of development priorities.

RECOMMENDATIONS

- Funding for adaptation should be increased well beyond that currently available via the GEF and other adaptation-specific bilateral aid
- Current international adaptation resources should be used to leverage maximum adaptation results within existing development activities and investments
- Donors should support research and monitoring and evaluation of the mainstreaming process, to develop understanding of what contributes to effective enabling environments

³⁴ Klein et al, forthcoming.

References

- AfDB et al (2003) *Poverty and Climate Change: Reducing the vulnerability of the poor through adaptation*. Inter-agency report by the African Development Bank (AfDB), Asian Development Bank (ADB), Department for International Development (DFID, UK), Federal Ministry for Economic Cooperation and Development (BMZ, Germany), Ministry of Foreign Affairs - Development Cooperation (DGIS, The Netherlands), Organisation for Economic Cooperation and Development (OECD), United Nations Development Programme (UNDP), United Nations Environment Program (UNEP) and the World Bank.
- Agrawala S (ed) (2005) *Bridge over Troubled Waters, Linking Climate Change and Development*. OECD, Paris.
- Bojö J, Green K, Kishore S, Pilapitiya S, and Reddy C (2004) *Environment in Poverty Reduction Strategies and Poverty Reduction Support Credits*. The World Bank Environment Department, Paper No. 102. World Bank, Washington.
- Burton I, Soussan J and Hammill A (2003) *Livelihoods and Climate Change. Combining disaster risk reduction, natural resource management and climate change adaptation in a new approach to the reduction of vulnerability and poverty*. The International Institute for Sustainable Development, Winnipeg.
- Commission for Africa (2005) *Our Common Interest*. Penguin Books, London.
- DFID (2006) *Eliminating World Poverty: making governance work for the poor*. White Paper on International Development. Department for International Development, London.
- Gagnon-Lebrun F and Agrawala S (2006) *Progress on Adaptation to Climate Change In Developed Countries: an analysis of broad trends*. OECD, Paris.
- Gleneagles Plan of Action (2005) *Gleneagles Plan of Action: climate change, clean energy and sustainable development*. www.g8.gov.uk
- Huq S, Sokana Y and Najam A (2002) *Climate Change and Sustainable Development Beyond Kyoto*. International Institute for Environment and Development Opinion Paper. IIED, London.
- Huq S, Rahman A, Konate M, Sokana Y and Reid H (2003) *Mainstreaming Adaptation to Climate Change in Least Developed Countries (LDCs)*. IIED, London.
- Huq S, Reid H and Murray L (2006) *Climate Change and Development Links*. IIED Gatekeeper Series 123. IIED, London.
- IFRC (2003) *Report of the Second Work Conference on Climate Change and Disaster Risk Reduction*. IFRC, The Hague.
- Klein RJT, Eriksen SEH, Næss LO, Hammill A, Robledo C, O'Brien KL and Tanner TM (forthcoming) *Portfolio Screening to Support the Mainstreaming of Adaptation to Climate Change into Development Assistance*. *Climatic Change*.
- LEG (2002) *Annotated Guidelines for the Preparation of National Adaptation Programmes of Action*. Least Developed Countries Expert Group, UNFCCC, Bonn.

- Lim B, Spanger-Siegfried E, Burton I, Malone E, Huq S (eds) (2005) *Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies and Measures*. Cambridge University Press, Cambridge.
- Mallick DL, Rahman AA, Alam M, Juel ASM, Ahmad AN and Alam SS (2004) 'Floods in Bangladesh: a shift from disaster management towards disaster preparedness' in Yamin F and Huq S (eds) (2005) *Vulnerability, Adaptation and Climate Disasters*. *IDS Bulletin* 36 (4) October, Institute for Development Studies, Brighton.
- Mitchell T and Tanner TM (2006) *Adapting to Climate Change: challenges and opportunities for the development community*. Tearfund, Teddington.
- OECD (2006) *Declaration on Integrating Climate Change Adaptation into Development Co-operation Adopted by Development and Environment Ministers of OECD Member Countries*. 4 April 2006, OECD, Paris.
- Orindi V and Murray L (2005) *Adapting to Climate Change in East Africa: a strategic approach*. Gatekeeper Series 117. IIED, London.
- Parry M and Carter T (1998) *Climate Impact and Adaptation Assessment. A guide to the IPCC approach*. Earthscan, London.
- Richards M (2003) *Poverty Reduction, Equity and Climate Change: Global Governance Synergies or Contradictions*. ODI, London.
- Schipper L and Pelling M (2006) 'Disaster Risk, Climate Change and International Development: scope for, and challenges to, integration'. *Disasters* 2006 30 (1) 19–38. Blackwell Publishing, Oxford.
- Van Aalst M (2006) *Managing Climate Risk. Integrating adaptation into World Bank Group operations*. World Bank, Washington, DC.
- World Bank (2000) *Cities, Seas and Storms: managing change in Pacific Island economies*. Vol 4: 'Adapting to Climate Change'. Papua New Guinea and Pacific Island Country Unit, World Bank, Washington, DC.
- Yamin F (2005) 'The European Union and Future Climate Policy: is mainstreaming adaptation a distraction or part of the solution?' *Climate Policy* 5 (3) 349–361.

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