ADAPTATION AND THE POST-2012 FRAMEWORK





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Tearfund is an evangelical Christian relief and development agency working with local partners to bring help and hope to communities in need around the world.

Executive summary

'Nearly 15 years after the Convention's negotiation ... the international adaptation effort is more an irregularly funded patchwork of multilateral and bilateral initiatives than a fully conceived and functioning regime.' ¹

To date, the focus of the international climate effort under the UN Framework Convention on Climate Change (UNFCCC) has been on addressing the cause of climate change. Adaptation to its inevitable effects has been treated largely as a separate, and secondary, issue. With no legally binding obligation on developed countries to fund adaptation, desperately needed finance for adaptation programmes in vulnerable communities has not materialised.

Negotiations on the second commitment period of the Kyoto Protocol must begin at COP 13 in Bali and be concluded by COP 15 in 2009. Adaptation should be a fundamental, top-level priority in these negotiations – not an add-on. However, a simple review of existing adaptation mechanisms is not enough. Tearfund proposes that Parties to the Convention adopt a radically improved approach to adaptation in the post-2012 framework, comprising two key elements:

- Firmly linking adaptation and mitigation negotiation tracks, so that key negotiations and decisions on these issues are no longer made in isolation from each other. This could inspire faster, more effective action in both areas.
- Awarding adaptation equal status with mitigation. This would include creating a legally binding commitment to fund adaptation, and ensuring that funding levels are adequate to address the scale of need.

In order to elevate the status of adaptation in the post-2012 framework, adaptation must be:

1 clearly and accurately defined

■ A clear definition of adaptation under the Convention should be agreed as a matter of urgency. This definition should not include implementing 'response measures'.

2 adequately funded

■ Funding for adaptation in the post-2012 framework needs to match the scale of need. Based on current estimates and assessments, Tearfund believes at least US\$50 billion per year is needed for adaptation in developing countries.

3 reliably funded

- A more consistent, predictable and reliable source of finance is needed. Funding should be legally binding, linked to emissions pathways in the post-2012 framework.
- The possibility of creating an emissions levy should be explored.
- A levy should be placed on all the flexible mechanisms of the Kyoto Protocol.
- Additional sources of revenue may need to be found and channelled through the Adaptation Fund.

1 Pew Center (2006), Adaptation to Climate Change: International Policy Options

4 targeted on the poorest

- Adaptation efforts should be focused on the most vulnerable countries and the most vulnerable communities within those countries.
- The primary objective of adaptation activities must be to build resilience and adaptive capacity in local communities. These communities should participate in planning, decision-making and implementation.

5 focused on natural resource management

- Actions to address vulnerability to climate change should be pursued through social development, service provision and improved natural resource management techniques.
- Measures for managing water resources should receive priority in allocation of adaptation funds.

6 integrated with development

- Adaptation measures should be incorporated into national development plans, poverty reduction strategies, and sectoral policies and strategies.
- Climate change, disaster management and development communities need to communicate effectively to make maximum use of tools and methodologies, avoid duplication of activities, and reduce the risk of mal-adaptation.
- Governments need to engage more actively with the scientific community, who should provide easily accessible and up-to-date climate risk information relevant to the demands of different sectors.
- While adaptation measures must be embedded within development planning and programming, adaptation funding under the Convention should be additional to ODA.

2

Introduction

'Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which makes adaptation essential...' INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE ²

The effects of global warming are becoming increasingly and rapidly obvious. Many long-term changes in climate have been observed, including changes in arctic temperatures and ice, precipitation, ocean salinity, wind patterns and extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones.³

Throughout history, people have adapted to natural climate variability. However, human-induced climate change is exceeding many societies' ability to cope. It is having a devastating effect on the lives and development of the world's poorest people, especially those living in places where the climate is already at its most extreme. Adaptation in vulnerable communities and countries is therefore essential, and failure to invest sufficiently in it is a major threat to development goals. According to World Bank estimates, climate change is placing 40% of international poverty reduction investment at risk.

Adaptation under the UNFCCC should no longer be treated as a separate, and secondary, issue. There are strong economic, moral and political imperatives for adopting a radical new approach in the post-2012 framework. In this paper, in Section 1, we discuss the rationale for linking adaptation and mitigation negotiating tracks. In Section 2 we discuss the need for adaptation to be awarded equal status with mitigation. Following on from this, in Section 3, we propose six ways to ensure that adaptation is comprehensively and effectively addressed in the post-2012 framework.

1 Adaptation: a separate issue?

To date, negotiations on adaptation and mitigation under the UNFCCC have continued along largely separate tracks. However, the two areas of concern are inextricably linked and this approach has failed to recognise obvious synergies between them. Specifically, there has been failure to acknowledge the implication of different emissions pathways in terms of the impact they will have on vulnerable countries, as well as failure to recognise that the level of adaptation support required will be dependent upon the level of ambition set in future mitigation commitments.

1.1 The impact of emissions pathways

The level of adaptation required will be utterly dependent on the level of global temperature increase, and mitigation commitments, agreed by countries within the post-2012 framework. As the IPCC states: 'delayed emission reductions lead to investments that lock in more emission-intensive infrastructure and development pathways' which 'increases the risk of more severe climate change impacts.' ⁴

- 2 IPCC (2007), Working Group II Fourth Assessment Report, Summary for Policymakers
- 3 Ibid.
- 4 IPCC (2007), Working Group II Fourth Assessment Report, Summary for Policymakers

Projections for greenhouse gas emissions make it clear that even with drastic action taken now, temperature increase greater than 1°C is inevitable. If a 1–2°C rise is experienced, serious impacts could result, including: ⁵

- hundreds of millions of people exposed to increased water stress
- lower maize yields for much of South America and Africa
- sea-level rise of 1–3 metres this century, with millions more people at risk from coastal flooding
- the loss of some Small Island States
- 20–30% of plant and animal species at increased risk of extinction.

If temperature increases beyond 1–2°C, ie +2°C, the impacts intensify:

- 1–4 billion people experiencing growing water shortages (with a 2–3°C rise)
- 30% of land area experiencing extreme droughts by the end of the century
- 250–550 million additional people at risk of hunger, over half of them in Africa and western Asia (with a +3°C rise)
- 40–60 million more people exposed to malaria in Africa (with a 2°C rise)
- 80% of Arctic sea ice lost (with a 3°C rise).

For many people and some ecosystems, current warming is already far too much. But it is clear that 2° C marks a significant boundary. The impact of a $+2^{\circ}$ C rise would be devastating, not only in terms of loss of life and livelihoods but also economically. Therefore, to an extent, the level of emissions permitted dictates the level of adaptation action and funding that will be required. Without drastic cuts in emissions, adaptation becomes increasingly difficult. These correlations have not been sufficiently acknowledged in UNFCCC negotiations to date.

1.2 The need for a coherent approach

This correlation between emissions pathways and the impacts of proposed pathways on vulnerable countries needs to be fully recognised. Key negotiations and decisions on adaptation and mitigation should no longer be made in isolation from each other. In the post-2012 framework, mitigation and adaptation negotiation tracks should be firmly linked in order to achieve a more coherent and effective approach to the problem of climate change. This would be a more effective way forward for two reasons. First, it could inspire increased commitment to providing funding for adaptation, because there would be an improved understanding of the inevitable impact that likely emissions levels will have on the poorest countries. Secondly, it could inspire more commitment to reducing **emissions** as governments recognise the cost of mitigation (in global GDP terms) is relatively small when considered against the global impact of climate change – that will be felt in both developed and developing countries.

"...the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and for ever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more. In contrast, the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1% of global GDP each year". UK GOVERNMENT'S 'STERN REVIEW' 7

In summary, a joined-up, coherent approach to the two issues could facilitate **and** enable agreement on a more ambitious package of adaptation measures and emissions reductions.

- 5 See Tearfund (2007), Two Degrees, One Chance
- 6 Some impacts of climate change are potentially beyond adaptation responses such as sea level rise leading to forced migration.
- 7 Stern (2006), The Economics of Climate Change

2 Adaptation: a secondary issue?

Climate change mitigation has traditionally been the pivotal issue amongst climate experts. In recent years adaptation has gained more profile among scientific and policy-making communities, and is now a major area of discussion within the UNFCCC process. However, adaptation in UNFCCC negotiations is still viewed as a secondary issue, and has not received the level of attention it deserves. This is evidenced by the fact that there are as yet no legally binding obligations to finance it, and current adaptation funds are pitifully small. Moreover, negotiations on adaptation have been characterised by confusion and contention over what it is, how much funding is needed, where funds should come from, and who/what is eligible.

Adaptation should not continue to be an add-on to mitigation. There are important moral and political imperatives for awarding adaptation equal status with mitigation in the post-2012 framework.

2.1 The moral imperative

The scale of human and material loss that will be experienced with a temperature rise beyond 2°C is massive. Yet the greatest loss will be experienced by those who have contributed the least to such a temperature rise. There is then, a fundamental injustice issue at the heart of climate change. To redress this injustice, the world's largest emitters need to assist the smallest (which are very often the poorest), to cope with the impact of rising temperatures.

The Convention itself requires two justice-related principles to be applied in addressing climate change: 'polluter pays' and 'common but differentiated responsibilities'. The 'polluter pays' principle requires developed country Parties to:

- provide new and additional financial resources for adaptation, and to take into account the need for adequacy and predictability in the flow of funds (Article 4.3)
- assist developing country Parties particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation (Article 4.4).

The 'common but differentiated responsibilities' principle requires developed countries to:

- take the lead in combating climate change and the adverse effects thereof' (Article 3.1)
- support technologies and capacities originating from developing country Parties, via financing and technological support (Article 4.5).

Clearly, then, developed countries have a moral duty and responsibility to finance adaptation. The extent to which this moral responsibility is acted upon will dictate the level of human and material losses suffered by the poorest countries.

2.2 The political imperative

Developed country Parties are increasingly acknowledging the moral issues involved in climate change and the need to help vulnerable countries adapt. However, in recent COPs many of these Parties have been quick to block moves by poor countries to achieve some changes in the way that the adaptation funds are managed. As the Tyndall Centre observes, 'It would seem reasonable to suggest that many developed countries truly want to see action but lack the political will needed to bring this about.' 8

⁸ Tyndall Centre (2007), Assessment of key negotiating issues at Nairobi climate COP/MOP and what it means for the future of the climate regime

There is, however, a strong **political** imperative for developed countries to prioritise adaptation in the post-2012 framework. This relates to the increasing demand from developed countries for developing countries to participate in the global effort to reduce emissions within an equitable framework. The chances of achieving this are significantly improved if developed countries are seen to take the lead in combating climate change and its adverse effects. Currently, however, many are failing to act on their existing commitments, both in relation to mitigation and adaptation. This failure is being observed by developing country negotiators, who are growing increasingly distrustful of Annex 1 Party motives and tactics. At COP 12 in Nairobi, Party delegates pointed out that 'trust is the key to stepping up action within the existing international climate regime, but the actions of some of the developed countries are eroding the foundation of trust within the diplomatic climate circles. A key issue is the perception that some developed countries will not meet their targets under the Protocol's First Commitment Period.' 10

A truly effective adaptation response in the post-2012 regime could help to restore developing country Party faith in the UNFCCC process, in turn building support for their participation in the global effort to stabilise emissions/climate change. As the Pew Center observes '...substantial new mitigation commitments post-2012 may be politically feasible only if accompanied by stronger support for adaptation.' ¹¹

3 A comprehensive and effective approach

There is strong justification for bringing adaptation and mitigation tracks together and elevating the status of adaptation in the post-2012 framework. But in what ways can adaptation be awarded more significance? In other words, how can adaptation be comprehensively and effectively addressed in the second commitment period?

Tearfund believes that adaptation in the post-2012 framework must be:

- clearly and accurately defined
- adequately funded
- reliably funded
- targeted on the poorest
- focused on natural resource management
- integrated with development.

3.1 Clearly and accurately defined

If adaptation is to be addressed effectively within the post-2012 regime, there must be universal understanding of, and agreement on, the definition of adaptation. This is not explicit in the Convention or the Kyoto Protocol, and there have been important differences in the perception of adaptation in several developed countries, including the EU and the US. These differences have resulted in unnecessarily protracted negotiations.

One key contention relates to Convention Article 4.8. In this Article, reference is made to assisting developing countries with the 'adverse effects of climate change and/or the impact of the implementation of

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⁹ Annex 1 Parties include the industrialised countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties).

¹⁰ Tyndall Centre (2007), Assessment of key negotiating issues at Nairobi climate COP/MOP and what it means for the future of the climate regime

¹¹ Pew Center (2006), Adaptation to Climate Change: International Policy Options

response ¹² measures'. This coupling of two separate issues – addressing the effects of climate change and the impact of reducing emissions – has confused the adaptation debate. It has prompted some middle-income countries to bring their concerns about implementing 'response measures' into adaptation negotiations, much to the concern of Least Developed Countries in desperate need of adaptation assistance.

Tearfund recommends that a clear definition of adaptation is agreed as a matter of urgency in order to clear up confusion over what type of activities adaptation funding can legitimately support. This definition should not include response measures.

Tearfund defines adaptation as...

'Re-shaping and redesigning development, social and economic practices in response to the impact of actual or anticipated climate change. Focusing on environmental sustainability, it builds community resilience in order to maintain development gains.'

This is similar to the IPCC's scientific definition of adaptation as 'an adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits benefit opportunities.'

3.2 Adequately funded

In 2001, at COP 7 in Marrakech, countries agreed that the key issue related to adaptation in the foreseeable future would be the fair provision of adequate and reliable funding. Yet since the Convention entered into force, funding for adaptation has not been forthcoming in a predictable or adequate manner. But how much funding would be regarded as 'adequate'? This question has been increasingly debated within and outside of the UNFCCC process.

3.2.1 The cost of adaptation

The challenge of estimating the cost of adaptation is enormous. One of the reasons for this is that it is difficult to ascertain where development stops and adaptation starts, as 'good' development (ie sustainable resource management) by its nature contributes to increasing vulnerable people's resilience to climate change. Moreover, it is extremely difficult to separate out what is adaptation to natural climate variability and what is adaptation to human-induced climate change.

Nevertheless, various partial attempts have been made:

- The World Bank has estimated that the cost of 'climate-proofing' new investment in developing countries equates to US\$10 to US\$40 billion a year.¹³
- Christian Aid estimates that US\$100 billion annually is required to meet the costs of adaptation in developing countries.¹⁴
- Oxfam estimates US\$50 billion per year is needed in developing countries, and far more if emissions are not cut rapidly.¹⁵
- 12 In other words, assisting countries adversely affected by reducing emissions
- 13 World Bank (April 5, 2006), Clean Energy and Development: Towards an Investment Framework
- 14 Christian Aid (2007), Global War Chest needed to fight impact of climate change on the poor
- 15 Oxfam (2007), Adapting to climate change: What's needed in poor countries, and who should pay

■ The UNFCCC estimates that the cost of adaptation for one year (2030) will be: US\$50–170 billion in total, and US\$28–67 billion for developing countries. ¹⁶

Calculating the cost of adaptation is complex and all of these estimates have limitations, as the agencies that produced them freely recognise. For example, the World Bank's calculations do not account for the cost of climate-proofing existing natural and physical capital, the cost of financing new investments needed because of climate change, or the costs faced by households, communities and NGOs for the majority of their adaptation needs.¹⁷ Oxfam includes in its estimation the cost of scaling up the most urgent and immediate priorities of LDCs, including community projects, but asserts that more robust estimates are needed. The UNFCCC's figures are based on estimates of the additional investment and financial flows that will be needed in key sectors ¹⁸ as a result of climate change, but the estimates are described as 'indicative' as many assumptions have been made. Moreover, there are notable exclusions from the calculations: for example, water resource management, the costs of damage caused by climate-related disasters, impacts on ecosystems and the need for new institutions and policy-enabling frameworks are not considered.

While estimates of the cost of adaptation are imprecise, concrete figures need to be brought into the UNFCCC negotiations in order to make meaningful progress towards ensuring funding for adaptation matches the scale of need. Taking the above estimates and their limitations into account, Tearfund believes at least US\$50 billion per year is needed for adaptation in developing countries, and, as Oxfam asserts, this figure will rise if emissions are not cut rapidly.

3.2.2 Current funds available

In 2001 a 'Least Developed Country Fund' (LDCF) and a 'Special Climate Change Fund' (SCCF), connected to the UNFCCC, and an 'Adaptation Fund', connected to the Kyoto Protocol, were established. Subsequently, at COP 12 in 2006, a five-year Programme of Work on adaptation was agreed, aimed at providing poor countries with adaptation tools and research. Funding for adaptation under the LDCF, the SCCF and five-year work programme consists of voluntary donor contributions. The Adaptation Fund is financed through a 2% tax on the carbon credits generated by Clean Development Mechanism (CDM) projects.

The LDC Fund and the SCC Fund Finance provided through these two funds is extremely limited. US\$115.8 million has been pledged to the LDCF ¹⁹ but by May 2007 only US\$52 million had been received. US\$62 million has been pledged to the SCCF, but by the same date only US\$46 million had been received. Moreover, although the SCCF has been established to finance **both** mitigation and adaptation initiatives, its priority areas are all related to mitigation. The amount of funding available to LDCs for adaptation is therefore likely to be minimal.

Nairobi Programme of Work on Impacts, Vulnerability and Adaptation In 2006, COP 12 finalised the detail of the five-year programme of work (up to 2008). However, the core budget for this programme is very limited and the Programme is dependent upon voluntary contributions from donors.

The Adaptation Fund (AF) The Adaptation Fund under the Kyoto Protocol has significantly more potential to deliver adaptation financing than the Convention funds. This is because revenue for it is generated through a 2% levy on Clean Development Mechanism (CDM) projects (so is not dependent on voluntary contributions), and

- 16 UNFCCC Dialogue Working Paper 8 (2007), Reports on the analysis of existing and potential investment and financial flows relevant to the development of an effective and appropriate international response to climate change
- 17 See Oxfam (2007), Adapting to climate change: What's needed in poor countries and who should pay
- 18 Agriculture, forestry and fisheries, water supply, diarrhoeal disease, malnutrition and malaria, beach nourishment and dykes, and infrastructure.
- 19 This fund was established to assist least developed countries in producing and implementing National Adaptation Programmes of Action (NAPAs).
- 20 From GEF (2007), Status Report on the Climate Change Funds as of April 30th, 2007 (GEF/LDCF.SCCF.2/Inf.2)

the AF is exclusively dedicated to funding 'concrete' adaptation activities in developing countries. Nevertheless, financing is likely to total a **maximum** of US\$500 million by 2012.²¹ Future CDM flows are highly uncertain.

In summary, adaptation funds are woefully inadequate:

- In 2001, at COP 7, developed countries originally pledged US\$450 million a year for adaptation, a tiny fraction of what is needed
- Of this small amount only US\$180 million in total has been formally pledged a fraction of a fraction
- The World Bank estimates that the main instruments for financing adaptation are projected to deliver only US\$150 million to US\$300 million per year.²²

There is, then, a huge gap between what is or will be available and what is needed: an estimated US\$150 to US\$300 million per year, when at least US\$50 billion is required. This gap needs to be filled so that funding for adaptation in the post-2012 framework matches the scale of need.²³

3.2.3 Access to funds

Southern countries often report significant difficulties in accessing funds from the Global Environment Facility (GEF),²⁴ along with complex and lengthy applications processes. This problem needs to be addressed. Procedures for application for, and distribution of, funds, need to be simplified, and the needs of poor countries should be met in the management and disbursement of current and future adaptation funds.

3.3 Reliably funded

The donor-dependent Convention adaptation funds have demonstrated that it is politically unlikely that developed countries will ever provide the tens of billions of dollars needed for adaptation in the world's poorest countries through voluntary contributions and pledges. Clearly, adaptation funding can no longer depend on developed countries honouring their obligations voluntarily, based on duty or responsibility. The present system of pledging needs to be replaced by a more consistent, predictable and reliable source of finance, ie one that is legally binding.

To make funding for adaptation legally binding, funding should be linked to emissions pathways in the post-2012 framework. The most obvious way to achieve this is to place a levy on emissions. An emissions levy is one of several options on the table for new sources of adaptation funding linked to a 'polluter-pays' paradigm: ²⁵

3.3.1 Emissions levy

The Alliance of Small Island States (AOSIS) asserts that in order to guarantee a regular and adequate source of funding, 'a link must be made between Convention obligations on adaptation funding and greenhouse gas emissions.' ²⁶ They propose a levy could be imposed on greenhouse gas emissions, based on the level of a country's emissions (reflecting responsibility) and a GDP index (reflecting ability to pay). Tearfund

- 21 World Bank (2006), An Investment Framework for Clean Energy and Development: a Progress Report
- 22 Ibio
- 23 Funding must mean more than simply transferring finance. Significant scientific, technical and capacity building support for adaptation planning and implementation is required.
- 24 Both the LDCF and the SCCF are implemented by the Global Environmental Facility (GEF), an independent organisation headquartered in Washington DC.
- 25 These options are not mutually exclusive.
- AOSIS submission to the fourth workshop under the Dialogue.

supports this proposal. An emissions levy would be legally binding, and would implement the 'polluter-pays' principle as well as the principle of common but differentiated responsibilities and respective capacities. **The possibility of creating such a levy should be explored further.**

3.3.2 Flexible mechanisms

For the second commitment period, a levy should be placed on proceeds from all the flexible mechanisms of the Kyoto Protocol: emissions trading, Joint Implementation and the CDM.²⁷ While for the short-term a 2% levy seems appropriate, the level set for the second commitment period needs to be coupled to an assessment of adaptation needs.

3.3.3 Additional revenue streams

In addition to legally binding, emissions-based revenue streams under the UNFCCC, further sources of revenue may need to be found. These additional sources of finance should always be generated through 'taxing' polluting activities, and channelled through the Adaptation Fund.

Examples of 'polluter pays' funding 28

An international air travel adaptation levy (IATAL) International air travel is a fast-growing source of carbon pollution. In 2006, there were two billion air travellers, with 800 million of them on international flights: a levy of US\$10 on each ticket could raise US\$8 billion for adaptation each year.

Redirecting fossil fuel subsidies In the late 1990s, the OECD countries collectively subsidised domestic fossil fuel production and consumption in the range of US\$10–57 billion each year. If these tax breaks and subsidies were ended, the revenue raised could be channelled to the Adaptation Fund.

Carbon taxes ²⁹ A percentage of revenue raised from current and future national carbon taxes could be directed to adaptation funding. Carbon taxes of some kind are already in use in countries including France, Sweden, the Netherlands, the UK, and Germany and are being debated in a number of other developed countries.

In summary, the current piecemeal, ad hoc approach to funding adaptation should not continue: a legally binding obligation needs to be established. Interestingly, at recent COPs there has been some discussion about the need for an 'Adaptation Protocol' to provide a legally binding basis for adaptation funding. While Tearfund agrees a legal basis is urgently required, we would be concerned about a separate Protocol, as this could create an even greater divide between mitigation and adaptation. It could also take several years to negotiate – at a time when adaptation is urgently needed.

3.4 Targeted on the poorest

There has been much debate within the UNFCCC processes over how adaptation funding should be allocated. **Tearfund believes that adaptation efforts must be focused on the most vulnerable**

- The CDM (a sustainable development mechanism) is the least appropriate flexible mechanism on which to impose an adaptation levy. The Adaptation Fund will be financed initially through a 2% levy on carbon credits generated under the CDM, financed by the purchase of Certified Emission Reductions (CERs) by Annex B countries from projects in developing countries. This effectively means that developing countries forego 2% of their income from CERs to contribute to the adaptation costs of the poorest countries. This runs counter to the polluter pays principle.
- These three examples and related statistics are taken from Oxfam (2007), Adapting to climate change: What's needed in poor countries, and who should pay.
- 29 Taxes placed on the consumption of carbon, with the primary objective of lowering CO₂ emissions.

countries and the most vulnerable communities within those countries, which lack the infrastructure and resources needed to protect themselves. Article 4.8 of the Convention identifies communities and ecosystems particularly vulnerable to the adverse affects of climate change. These include countries with low-lying coastal areas; arid and semi-arid areas, forested areas and areas liable to forest decay; areas of high urban atmospheric pollution; areas prone to natural disasters, drought, desertification and highly fragile ecosystems, landlocked countries and Small Island States.

The primary objective of adaptation activities must be to build resilience and adaptive capacity in vulnerable local communities. Evidence shows that activities centred on people (in contrast to major infrastructural or technical measures) addressing aspects of human vulnerability provide simple, proven cost-effective ways to reduce losses within relatively short timeframes. Scientific assessments of impacts of climate change and adaptation requirements, therefore, should focus on responding to the needs of the most vulnerable, building on and complementing local knowledge and coping practices. This will require vulnerable communities to participate in planning, decision-making and implementation, to ensure long-term viability of adaptation activities and reduced the likelihood of mal-adaptation.

3.5 Focused on natural resource management

There has also been much debate over what activities adaptation can legitimately support. **Tearfund** believes that actions to address vulnerability to climate change should be pursued through social development, service provision and improved natural resource management techniques. These can provide '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.

Prioritise the water sector

The water sector is a priority for adaptation – water resources are increasingly threatened as a result of climate change, directly undermining all other development sectors. The IPCC's 4th Assessment Report highlighted that many millions more people will face water shortages in the coming decades as a result of climate change already under way. Measures for managing water resources should receive priority in allocation of adaptation funds. In many countries there is an absence of effectively functioning water sectors. At the World Summit on Sustainable Development (2002), governments agreed to set up Integrated Water Resource Management (IWRM) strategies by 2005, but by the end of 2005 only 20 out of 95 countries surveyed had such a plan or had plans well under way. ³⁰

3.6 Integrated with development

Adaptation measures must be systematically incorporated into the design and implementation of national development plans, poverty reduction strategies, and sectoral policies and strategies, if these are to be sustainable in the face of climate change.³¹ 'Adaptation' should not be viewed as a separate 'sector' with separate frameworks, tools and approaches, but an integral component of sustainable development.³² A critical test for development programmes and projects is: are they increasing or decreasing human vulnerability in the face of climate change?

- 30 IWRM planning must be linked with NAPAs, where these exist, to ensure that the changing environment that IWRM deal with is forecast and accounted for.
- 31 This is stated in Convention Article 3.4.
- 32 Some specific impacts of climate change, eg sea-level rise, may require separate adaptation strategies.

The importance of 'mainstreaming' adaptation into development has been increasingly acknowledged in political circles, as the responsibility of national and donor governments. In 2005, the Commission for Africa made a recommendation that donors, 'make climate variability and climate change risk factors an integral part of their project planning and assessment by 2008'. That same year, G8 leaders at the Summit in Scotland recognised the need to build the capacity of developing countries to '…integrate adaptation goals into sustainable development strategies.'

Mainstreaming adaptation requires collaboration with many stakeholders, in order to maximise synergies and take into account previous relevant agreements and commitments on sustainable development, poverty reduction and disaster management – including the priorities and activities agreed at the World Conference on Disaster Reduction in 2005 presented in the Hyogo Framework for Action. It is imperative that the climate change, disaster management and development communities communicate effectively to learn from each other and coordinate, to make maximum use of appropriate tools and methodologies, avoid duplication of activities, and reduce the risk of mal-adaptation.

Access to information

Policy makers and practitioners need access to a consistent and regular flow of information about climate-related risks, and how these relate to development priorities in their region, in order to build adaptation into development planning and programming. Governments need to engage more actively with the scientific community, which should provide easily accessible and up-to-date climate risk information relevant to the demands of different sectors. This information must put current and future climate in the perspective of national development priorities. Communication between scientists and policy makers working in sectors where climate change is a major driver (including agriculture, water resource management and disaster preparedness) is especially important.³⁴

3.6.1 Mainstreaming vs additionality?

While adaptation measures must be embedded within development planning and programming, **funding for adaptation under the Convention must be 'additional' to Official Development Assistance (ODA)** in order to apply the 'polluter pays' principle (see Section 2.1). Confusion has arisen within the climate change community over a perceived contradiction between these two requirements: namely that if adaptation is mainstreamed, funding for it cannot be tracked and therefore cannot be additional to ODA.³⁵

Certainly, it is extremely difficult to separate out the cost of 'adaptation' from 'normal development' in order to ensure that financing for adaptation is additional to ODA (see Section 3.2.1). A similar difficulty is experienced by developing countries as they seek to calculate the additional costs imposed by climate change in order to satisfy LDCF and SCCF criteria. To some extent the GEF has acknowledged this difficulty and has developed a sliding scale for LDCF and SCCF funding. Under this sliding scale, smaller projects receive relatively more funding from the GEF than bigger projects, as it is assumed they have a greater adaptation component. This demonstrates that while additionality requirements are important, they should not be excessively rigid or prescriptive.

³³ See Commission for Africa report (2006), Our Common Interest

³⁴ For more information, see Tearfund (2006), Overcoming the Barriers: mainstreaming climate change adaptation in developing countries.

³⁵ An exception is if funding is used to assist developing countries establish the systems and structures required to mainstream adaptation, in which case it can be more easily tracked.

4 Conclusion

Adaptation under the UNFCCC should no longer be treated as a separate, and secondary, issue. If progress with poverty alleviation is to be made, a radically improved approach to adaptation is needed in the post-2012 framework. Tearfund recommends firmly linking adaptation and mitigation negotiating tracks, and awarding adaptation equal status with mitigation. This could result in a more ambitious package of both emissions reductions and adaptation measures.

In order to ensure that adaptation is comprehensively and effectively addressed in the post-2012 framework, adaptation must be:

1 clearly and accurately defined

■ A clear definition of adaptation under the Convention should be agreed as a matter of urgency. This definition should not include implementing 'response measures'.

2 adequately funded

■ Funding for adaptation in the post-2012 framework needs to match the scale of need. Based on current estimates and assessments, Tearfund believes at least US\$50 billion per year is needed for adaptation in developing countries.

3 reliably funded

- A more consistent, predictable and reliable source of finance is needed. Funding should be legally binding, linked to emissions pathways in the post-2012 framework.
- The possibility of creating an emissions levy should be explored.
- A levy should be placed on all the flexible mechanisms of the Kyoto Protocol.
- Additional sources of revenue may need to be found and channelled through the Adaptation Fund.

4 targeted on the poorest

- Adaptation efforts should be focused on the most vulnerable countries and the most vulnerable communities within those countries.
- The primary objective of adaptation activities must be to build resilience and adaptive capacity in local communities. These communities should participate in planning, decision-making and implementation.

5 focused on natural resource management

- Actions to address vulnerability to climate change should be pursued through social development, service provision and improved natural resource management techniques.
- Measures for managing water resources should receive priority in allocation of adaptation funds.

6 integrated with development

- Adaptation measures should be incorporated into national development plans, poverty reduction strategies, and sectoral policies and strategies.
- Climate change, disaster management and development communities need to communicate effectively, to make maximum use of tools and methodologies, avoid duplication of activities, and reduce the risk of maladaptation.
- Governments need to engage more actively with the scientific community, who should provide easily accessible and up-to-date climate risk information relevant to the demands of different sectors.
- While adaptation measures must be embedded within development planning and programming, adaptation funding under the Convention should be additional to ODA.



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