HEINRICH BÖLL STIFTUNG

CLIMATE GOVERNANCE IN AFRICA

ADAPTATION STRATEGIES AND INSTITUTIONS

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CLIMATE GOVERNANCE IN AFRICA:

ADAPTATION STRATEGIES AND INSTITUTIONS

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October 2010

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FOREWORD

Africa has contributed very little to global warming, but it will be disproportionately impacted by the negative impacts of climate change. Reports by the Intergovernmental Panel on Climate Change (IPCC) have highlighted the unavoidable impacts of climate change, and particularly the negative economic consequences in Africa. Although discussions on the continent's contribution to the mitigation of greenhouse gas emissions continue to play a critical role in climate negotiations, Africa's major focus towards any resulting global climate change governance architecture is on issues of adaptation.

In addition to a legally binding adaptation framework, the African negotiating bloc has outlined several other demands, including adequate, sustainable, new and additional, and predictable financial resources, investment to support action on mitigation and adaptation as well as technology cooperation. Details on how much funding will be made available for adaptation finance, as well as the arrangements by which these funds will be administered, are still emerging. Nonetheless, it is clear that in order to make a strong case in negotiating for adaptation finance, African countries will have to prove that they are able to utilise adaptation funding efficiently, transparently and for the purpose it was intended.

African countries have been required to provide national communications on climate change impacts and vulnerabilities, and in the Least Developed Countries, to produce National Adaptation Programmes of Action (NAPAs). These plans may soon provide the basis or even condition on which African countries can apply for funds in the area of adaptation. While most African countries have undertaken steps to fulfill such commitments, in many cases, their capacity to do so appears to be limited. Moreover, in many African countries, adaptation planning remains a stand-alone activity that is not integrated into development planning processes. This weakens the ability of African states to efficiently implement adaptation plans and programmes.

Through its "Climate Governance in Africa" (CGA) Project , the Heinrich Böll Stiftung (HBS) is supporting demands by state and non-state African actors for new and additional support for adaptation. The CGA is being implemented jointly by the HBS Africa Team in Berlin and its four offices in Africa: East and Horn of Africa; Ethiopia; Nigeria and Southern Africa. It provides a single framework for HBS's work on adaptation, gender and climate change, monitoring of financing for adaptation and collaboration on capacity building activities for African climate change negotiators.

Working under the CGA Project, the four HBS Africa offices commissioned studies to evaluate the state of preparedness for climate change adaptation in seven African countries namely Botswana, Kenya, Nigeria (with references to Ghana), South Africa, Tanzania, Uganda, and Zimbabwe. This report, commissioned by HBS Southern Africa, draws heavily from the findings of these country specific studies and focuses on emerging issues and key lessons with regards to climate change adaptation governance in Africa. Among the key questions to which this paper responds are: What are the impacts of and vulnerabilities to climate change in Africa? To what extent do existing adaptation policies, strategies and plans respond to the vulnerabilities identified?, and What is the institutional and legal landscape for climate change adaptation, focusing on the role of various actors, existing institutional capacities and governance issues relating to institutions?

We hope that the critical discussions, key recommendations and strategic directions presented in this report will go a long way in enabling the emergence of a robust climate change adaptation governance architecture in Africa.

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Regional director, HBS Southern Africa

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EXECUTIVE SUMMARY

Developing countries are the most vulnerable to climate change due to their low adaptive capacity and growing dependence on resources sensitive to changes in climate. Climate change will undermine development efforts in Africa and the rest of the developing world, and will hit the poorest and most vulnerable sections of society hard. Its potential impacts threaten to reverse the gains of sustainable development and put additional pressure on already overstretched human and financial resources in developing countries. Key economic sectors such as agriculture, water, energy, health, wildlife and tourism and efforts towards poverty reduction are identified as the most vulnerable. The majority - 96% - of Sub-Saharan Africa's population is dependent on rain-fed agriculture and in some countries crop yields are predicted to fall by 50% by 2050 while arable land will decline by 6%. Food security and access to food will therefore be severely compromised by climate change, and poor rural communities and poor countries with the least financial, institutional and technological capacity to adapt will face the worst impacts.

Policy makers have... recognised the need to integrate climate change adaptation into all spheres of public policy-making. This integration requires a focus on key climate change governance issues, some of which are highlighted in this summary report.

Though Africa generally contributes less to the total global greenhouse emissions, the scale of the impacts on Africa and its poor is devastating and will be even more significant in the future. The implications of climate change on development make both mitigation and, in particular adaptation, essential to responding to the impacts of climate change. Policy makers have therefore recognised the need to integrate climate change adaptation into all spheres of public policy-making. This integration requires a focus on key climate change governance issues, some of which are highlighted in this summary report. Regarding the governance of climate change, important questions to raise are among others: the state of adaptation preparedness; institutional arrangements and capacities; the scale of funding required for adaptation; the best ways to administer development cooperation support; effective mechanisms for delivery; and mechanisms to ensure that adaptation efforts target and benefit the most vulnerable sectors of society.

Numerous studies have been carried out on different aspects of climate change, including its impacts and adaptation needs in Africa, but few have looked into the capacities for adaptation governance.

Priorities for the agenda for adaptation governance need to be driven and informed by the realities of the countries and regions that are directly affected by climate change. In order to understand these realities, and the state of adaptation preparedness in Africa, Heinrich Böll Stiftung (HBS) regional offices for East, West and Southern Africa commissioned case studies in Botswana, South Africa, Zimbabwe, Kenya, Uganda, Tanzania, and Nigeria (with references to Ghana). For each country, the studies assessed the following; impacts of and vulnerabilities to climate change; climate change adaptation policies, plans and strategies in the country, their genesis and appropriateness in relation to the current state of knowledge on vulnerability at a national level; main institutional actors involved in climate change policy and responses, including their capacity to effectively play their role; the level of public awareness on climate change; and the role played by state and non-state actors in international climate change negotiations. This report provides a synthesis of climate change governance issues emerging from the case studies.

KEY FINDINGS

Climate change is a global problem that requires global solutions, but the nature of the problem and its impacts require the active involvement of multiple national and local-level stakeholders in shaping and implementing the solutions. Adaptive capacity is dependent on policies and strategies that are put in place to respond to the needs as well as enhance the resilience of the most vulnerable systems and groups in society. A lack of appropriate policies and legislative frameworks may present barriers to the implementation of adaptation responses, and possibly increase the vulnerabilities of certain groups such as women and the poor. Inadequate institutional support and inappropriate policies can act as a constraint to adaptation and limit access to much needed natural resources by communities dependent on such resources for both survival and adaptation to environmental change and climate variability. The crosscutting impacts of climate change and the imperative need for an integrated response requires resilient and adaptive institutions and exemplary actors to lead the process towards creating an enabling environment for adaptation to climate change. The country studies highlight a number of policy and institutional issues and the extent to which these facilitate or undermine the capacity of some groups and sectors to adapt to climate change. The key findings are summarised below;

The country studies highlight a number of policy and institutional issues and the extent to which these facilitate or undermine the capacity of some groups and sectors to adapt to climate change.

Policy frameworks for adaptation governance:

- ***The policy framework for climate change adaptation governance is inadequate*** – Most countries lack a coherent policy framework for climate change adaptation. This is particularly the case in

countries which have not embarked on a comprehensive planning process for adapting to climate change, often articulated in National Adaptation Plans of Action (NAPA) and/or National Climate Change Response Strategies (NCCRS). Countries such as Zimbabwe and Nigeria lack such plans and strategies. Where such plans do not exist, adaptation tends to be addressed by a plethora of fragmented environment and development policies. Where NAPAs/NCCRS exist, these tend to be narrowly focused on biophysical vulnerabilities, follow sectoral and project approaches to adaptation and fail to facilitate integrated responses as well as account for micro-level adaptation requirements. As a result of these shortcomings the needs of the most vulnerable sectors in society (women, the poor and small-scale farmers) are not adequately catered for.

A review of the environment and development policy frameworks reveals a tendency to place climate change adaptation solely with the environment sector with no reference to other sectoral plans.

- *Positioning of climate change adaptation within the environment sector limits effective integration* – A review of the environment and development policy frameworks reveals a tendency to place climate change adaptation solely with the environment sector with no reference to other sectoral plans. This has been found to limit public and decision makers' understanding of climate change impacts and the implications for national economies, and thus undermines political buy-in for prioritisation and resource mobilisation for climate change adaptation. Often guidelines for mainstreaming climate change adaptation into national level planning are not availed to economic planners. Addressing the impacts of climate change and planning for adaptation is therefore done *ex post facto* and in an *ad hoc* manner.
- *Macro-economic development frameworks undermine adaptive capacity* – The drive towards attracting foreign direct investment (FDI) and towards securing industrial competitiveness, fiscal policy, and moderation of wage increases so as to attract foreign investment and facilitate economic growth, marginalises the poor and undermines their adaptive capacity. A review of agricultural policy revealed a bias towards macro-economic interests in terms of commercial agriculture and technological transfer while the needs of subsistence farmers were under-represented. The focus of most vulnerability and adaptation (V&A) assessments in the agricultural sector point to this bias. Furthermore, capital interests have led to displacements of local land owners and resource users in rural communities to make way for tourism, commercial forestry and agriculture for export – leaving a significant number of rural dwellers landless, without access to biodiversity and natural resources and highly vulnerable to the impacts of climate change.

- *Gender is not mainstreamed into key adaptation response frameworks* – National adaptation strategies do not adequately address aspects of inequality and gender. Adaptation strategies for most of the vulnerable sectors such as agriculture, biodiversity and water have major gaps in terms of making provisions for gender-related differential impacts of climate change. Enabling provisions which include, among others, security of tenure, provision of technical information such as meteorological and weather forecasts and access to micro-finance, as well as opportunities for productive employment are often not adequately and appropriately extended to women. Packaging solutions to suit the needs of the recipients is as important as providing the solutions.

The state of institutional adaptive capacity:

- *The development of adaptation policies and strategies is highly dominated by state actors* – Civil society organisations and local communities have so far played a limited role in the formulation of national climate change adaptation policies and strategies. This situation undermines key governance principles such as equity, stakeholder participation, accountability and transparency. Stakeholder needs and interests are therefore not adequately reflected in adaptation responses. Of the eight countries covered in this review only three (Uganda, Ghana and Tanzania) followed a participatory approach to V&A assessments and the development of adaptation responses.

Of the eight countries covered in this review only three (Uganda, Ghana and Tanzania) followed a participatory approach to V&A assessments and the development of adaptation responses.

- *Government institutions are faced with major challenges that undermine adaptive capacity* – These include weak coordination as a result of conflicting and overlapping mandates, dysfunctional arrangements for inter-agency integration, overburden of external (UNFCCC and donor) reporting requirements and inadequate financing for adaptation. Low income countries such as Uganda, Tanzania and Zimbabwe have challenges with attracting and retaining skilled people and the decentralisation of adaption responses needs to be strengthened by empowering local governments and building their capacity for adaptation.
- *There is inadequate investment in strategic areas for climate change adaptation* – Most actors are involved in climate change awareness-raising, capacity building and research with fewer investments in legislative aspects, coordination, advocacy and financial cooperation.
- *There is limited space for civic engagement (particularly for Non-Governmental Organisation and Community-Based Organisation participation) due to financial, human resources and political constraints* – International NGOs tend to dominate

climate change adaptation agendas at the national level and implementation is externally driven and reflects disparate interests. The activities led by NGOs in such cases have resulted in intangible outcomes and a lack of oversight at the national level. Very few concrete adaptation activities have been observed at the local level. Where networks of local NGOs are actively involved in climate adaptation, very little exchange of experiences and lessons learned takes place.

- ***Research does not respond to national knowledge gaps on climate change*** – African research capacities are forced to collaborate on disparate, foreign-led research which responds to external research interests and agendas.
- ***Coordination mechanisms within the donor community are weak and project approaches continue to dominate development assistance*** – Donor coordination on climate change related matters is confined to environment working groups. As a result coordination and communication is restricted and fails to integrate other important sectors such as agriculture, energy and poverty reduction where the bulk of development assistance is channeled. In some cases donors merely rebrand existing initiatives as climate change activities, making it difficult for government and other actors to access the funding they require to develop adaptation strategies.

KEY RECOMMENDATIONS

Faced with these challenges a multi-tier approach is required to build the capacities of governments and communities in Africa to effectively respond to and adapt to climate change.

On policies:

- Mainstreaming climate change into economic frameworks and sectoral policies is of paramount importance in order to ensure integrated adaptation responses. The current state of national adaptation strategies and the confinement of the climate change agenda to the environment sector makes it difficult for development planners to have a holistic perspective of adaptation priorities at both macro (national) and micro (local) levels.
- The assessment of social and economic vulnerabilities needs to be strengthened so as to inform processes for identifying adaptation priorities.
- There is a need for national adaptation policies that provide clear guidelines for integration and implementation of strategies, programmes and activities.

- Macro-economic policies need to be reviewed to ensure that they build the resilience of the poor and enhance their capacity to adapt to the impacts of climate change.

On institutional frameworks:

- Coordination capacity needs to be strengthened and placed within a state agency (ministry or department) with political clout and convening power to facilitate integration across other agencies and sectors. Responding to the national agenda must be a core function.
- Adaptation should be integrated into the planning frameworks of decentralised governance structures and adaptive capacity built at that level. The success of climate change adaptation will depend on the extent to which responses are felt at the local level.
- There is a need for increased adaptation funding at local and national levels. However, priority must be given to the adaptation needs of the most vulnerable in society (ie women, small-scale farmers, subsistence fishers, the poor). Systemic capacities to improve accountability must be built at all levels of governance.
- Individual capacities located within donor partners and other non-state actors (NGOs, CBOs, private sector and research institutions) ought to be harnessed to support national adaptation needs.

Overall, adaptation governance in Africa calls for a review of the quality of growth and development processes, an emphasis on equity as well as improvement of the level of public engagement in the formulation of national responses.

Coordination capacity needs to be strengthened and placed within a state agency (ministry or department) with political clout and convening power to facilitate integration across other agencies and sectors.

LIST OF ACRONYMS

CBOs	Community Based Organisations
CCU	Climate Change Unit
CDM	Clean Development Mechanism
COPs	Conference of Parties
DEAT	Department of Environmental Affairs & Tourism
DMES	Department of Meteorology Services
FDI	Foreign Direct Investment
GDP	Gross Development Product
GEAR	Growth Equity and Redistribution
GEF	Global Environmental Facility
GHG	Greenhouse gas
GRD	Green Rights Development Framework
GTZ	Deutsche Gesellschaft fur Techniische Zusammernarbeit/ German Technical Cooperation
HBS	Heinrich Böll Stiftung
IMCCC	Inter-Ministerial Committee on Climate Change
IPCC	Inter-governmental Panel on Climate Change
IRDP	Integrated Rural Development Programme
LDC	Least Developed Countries
MDGs	Millennium Development Goals
NAPA	National Adaptation Programme of Action
NBSAP	National Biodiversity Strategy and Action Plan
NCCC	National Committee on Climate Change
NCCRS	National Climate Change Response Strategy
NDP	National Development Plan
NEFCP	National Erosion and Flood Control Policy
NGOs	Non Governmental Organisations
ODA	Official Development Assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
REDD	Reducing Emissions from Deforestation and Forest Degradation
SACAN	South African Climate Action Network
SCCU	Special Climate Change Unit
SNC	Second National Communication
UNECA	United Nations Economic Commission for Africa
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
V&A	Vulnerability and Adaptation

Image on next page:

1

INTRODUCTION

Climate change has emerged as a critical development issue since the early 1990s due to its predicted impacts on biodiversity, rural livelihoods and national and global economies. Poor countries and poor people will disproportionately bear the brunt of climate change impacts due to their lack of institutional, financial and technological capacity to adapt[1]. Water stress and scarcity are predicted to increase for many countries in Africa, Asia and Latin America, which will in turn pose a threat to national and household food security. Increased temperatures will result in heat-related mortalities, an increase and spread of vector borne diseases like malaria, a reduction in agricultural yields and reduced access to natural resources. Key economic sectors and the most vulnerable sectors of society will be most affected. Climate change threatens to reverse the gains of development and put pressure on already limited human and financial resources in developing countries. Adaptation is thus critical at all levels of society and of the economy. Alongside mitigation, adaptation has become an essential response to the impacts of climate change.

Climate change threatens to reverse the gains of development and put pressure on already limited human and financial resources in developing countries.

1 OECD. 2009.

The third and fourth Inter-governmental Panel on Climate Change (IPCC) reports highlighted the unavoidable impacts of climate change (especially economic consequences) in the imminent future and the importance of coping through adaptation. Specifically, the reports highlighted the increased vulnerability of poor countries and the need for assistance from developed countries in order to build poor countries' capacity to adapt[2]. Policy makers have acknowledged the need to integrate climate change adaptation into all areas of public policy-making. Additional focus has been brought by development partners through key reports such as the Poverty and Climate Change by the Multi Agency Report in 2003 and the Declaration on Integrating Climate Change Adaptation into Development Cooperation, which called for 'meaningful coordination and sharing of good practices on integrating climate change adaptation into development cooperation'. The commitment to adaptation has been further demonstrated by the recent establishment of three new adaptation funds[3].

While these developments are commendable, a major limitation to adaptation lies in the inadequate development of instruments for governing climate change adaptation. Questions have been raised on a host of adaptation governance issues, including: the state of adaptation preparedness; institutional capacities and arrangements; the scale of funding required for adaptation; the best ways to administer development cooperation support and effective mechanisms for delivery; and mechanisms to ensure that adaptation efforts target and benefit the most vulnerable sectors of society.

Numerous studies have focused on different aspects of climate change impacts and adaptation needs in Africa. But few have looked into adaptive capacity as well as climate governance issues at national and regional levels.

Numerous studies have focused on different aspects of climate change impacts and adaptation needs in Africa. But few have looked into adaptive capacity as well as climate governance issues at national and regional levels. Adaptation takes place at national and local levels, thereby necessitating a better understanding from both perspectives in order to inform priorities at both levels. As one of the regions hardest hit by climate change, priorities for the adaptation governance agenda ought to be driven and informed by the realities of the countries and regions that are directly affected. In order to understand these realities, and the state of adaptation preparedness, the Heinrich Böll Stiftung (HBS) regional offices for East, West

2 Nepad and APF Support Unit. 2007.
3 Richards, M. 2003 and Madzwamuse, M. 2009.

and Southern Africa commissioned case studies in Botswana, South Africa, Zimbabwe, Kenya, Uganda, Tanzania, Nigeria and Ghana. For each country, the studies assessed the following:

- Impacts of and vulnerabilities to climate change
- Climate change adaptation policies, plans and strategies in the country, and their genesis and appropriateness in relation to the current state of knowledge on vulnerability at a national level
- Main institutional actors involved in climate change policy and responses including their capacity to effectively play their role
- The level of public awareness on climate change
- The role played by state and non-state actors in international climate change negotiations

The adaptation preparedness studies were based on desktop studies and a review of available literature. In some countries, face to face interviews were conducted. Sources of information included national and regional policy documents, development strategies, IPCC reports, national climate change communication reports, peer-reviewed research findings and interviews with key individuals within government, NGOs and development partners. This report provides a synthesis of climate change governance issues emerging from the case studies. The case studies highlight different aspects of climate change governance. The Southern African cases give insights into the policy and institutional frameworks, East Africa provides useful insights on the governance of climate change finance, while West Africa and the rest of the reports touch on issues of participation and engagement of multiple actors.

To provide a context for the emerging issues from these studies, chapters 1 and 2 give brief overviews of climate change governance and key issues within the context of the UNFCCC and its climate change negotiation processes. Chapter 3 provides a summary of key vulnerabilities per region. Chapter 4 highlights climate change governance issues emerging from the case studies. Chapter 5 provides insights into the institutional landscape and adaptive capacities of the different regions. Finally, chapter 6 focuses on the state of public awareness of, and access to, information about climate change and its effects.

2

CLIMATE CHANGE GOVERNANCE

2.1 THE INTERNATIONAL LEGAL FRAMEWORK

Climate change is a global problem that requires global solutions. But since it is also a local phenomenon, interventions to cope with climate change impacts require the engagement of stakeholders at national and local levels. To prevent a global average temperature rise of two degrees Celsius and ensure rights to sustainable development, new and stringent regulatory frameworks, laws, policies and reforms are needed to reduce global greenhouse gas emissions, introduce low carbon development pathways and support social, economic and legal transitions to address climate change[4]. Thus climate change poses complex governance challenges to global and national communities as international commitments and agreements are being negotiated to coordinate national mitigation and adaptation efforts.

The basis for a climate change governance framework lies in the articles of the climate change convention. The UNFCCC and the Kyoto protocol put the onus for early action on industrialised countries citing common but differentiated responsibilities[5]. Article 3.1 of the UNFCCC states that 'climate change protection must have an equitable basis in accordance with the parties' common but differentiated responsibilities and respective capacities'[6]. In Article 3.4 the convention further states that 'parties have a right to, and should, promote sustainable development'[7]. In terms of adaptation, Articles 4.8 and 4.9 of the UNFCCC and Article 3.14 of its Kyoto Protocol require parties to take measures to minimise the adverse effects of climate change on developing and least developed countries (LDCs). The two instruments make clear that measures to combat climate change should not limit the ability of developing countries to develop and pay special attention to the needs of the poorest countries and the most vulnerable sectors of society. The instruments make provisions for the transfer of technical and financial resources and other assistance necessary to deal with the impacts of climate change from developed to developing countries. These articles have been the subject of much debate and interpretation in the various UNFCCC Conferences of Parties. The UNFCCC stipulates that the specific development needs and vulnerabilities of developing countries

In terms of adaptation, Articles 4.8 and 4.9 of the UNFCCC and Article 3.14 of its Kyoto Protocol require parties to take measures to minimise the adverse effects of climate change on developing and least developed countries (LDCs).

4 InWent and Transparency International. 2010.
5 Ashton, J and Wang, X. 2003. 6 Richards, M. 2003.
6 Richards, M. 2003.
7 Article 3.4 of the UNFCCC.

ought to be protected as economic development in such countries is essential to addressing poverty reduction. It is on the basis of these principles that adaptation policy responses are being negotiated at the global level. Although governance structures for adaptation are not well developed, the UNFCCC adopted a Nairobi Programme of Work on adaptation (2005-2010) aimed at helping all countries improve their understanding and assessment of the impacts of climate change and to implement practical adaptation measures.

2.2 DEFINING GOVERNANCE IN CLIMATE ADAPTATION

Adaptation requires the active involvement of different actors and responses at multiple levels. The impacts of climate change will be felt at a local level and therefore renders the active participation of stakeholders at local, national and regional levels critical for the advancement of adaptation decisions reached through UNFCCC negotiations. This reality raises the question of governance within the climate change adaptation agenda.

Climate change governance is consequently also about the extent to which developing countries can bring developed states and global companies and corporations to account.

Governance is defined as the *"interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens or other stakeholders have their say*[8]*"*

Governance is thus about power relationships and accountability. It is ultimately about who has influence, who has a voice, who decides how decisions are made and how decision-makers are held accountable. Given that climate change is a global challenge, and that those faced with an adaptation deficit are among the least responsible for greenhouse gas emissions, climate change governance is also about relationships between states. Climate change governance is consequently also about the extent to which developing countries can bring developed states and global companies and corporations to account. These are all critical questions for climate change governance and decisions about climate change adaptation. So far, states and government agencies have played a dominant role in shaping adaptation policy responses and decision-making, with inadequate space for non-state actors and local communities. This has resulted in significant shortcomings in the formulation of adaptation policies and strategies. Climate change adaptation governance falls short of reflecting internationally agreed principles for good governance explained in table 1 below[9].

Image on next page: Mphunga village members watch a participatory video developed by a group of villagers that shows how they have been adapting to frequent flood events. The video was then shown to adjacent villages in an effort to share Mphunga's learning more broadly. By Gina Ziervogel.

8 Graham, J., Amos, B., Plumptree, P. 2003.
9 Dudley, 2008 and Graham et.al 2003.

TABLE 1; **PRINCIPLES OF GOOD GOVERNANCE**	
LEGITIMACY & VOICE	**Participation** – All men and women should have a voice in decision making, either directly or through legitimate institutions that represent their intention. Such broad participation is built on freedom of association and speech as well as capacities to participate constructively. **Consensus orientation** – Good governance mediates differing interests to reach a broad consensus on what is the best interest of the group and, where possible, on policies and procedures.
DIRECTION	**Strategic vision** – Leaders and the public have a broad long-term perspective on good governance and human development, along with a sense of what is needed for such development. There is also an understanding of the historical, social and cultural complexities in which that perspective is grounded.
PERFORMANCE	**Responsiveness** – Institutions and processes try to serve the interests and needs of all stakeholders. **Effectiveness and efficiency** – Processes and institutions produce results that meet needs while making the most of resources.
ACCOUNTABILITY	**Accountability** – Decision makers in government, the private sector and civil society organisations are accountable to the public as well as to institutional stakeholders. This accountability differs depending on the organisation/setting and whether the decision is internal or external. **Transparency** – Transparency is built on the free flow of information. Ensuring that all relevant information is available to all stakeholders in an understandable format allowing them to monitor and make informed decisions.
FAIRNESS	**Equity** – All men and women have opportunities to improve or maintain their wellbeing. **Rule of law** – Legal frameworks should be fair and enforced impartially, particularly the laws on human rights.

Adapted from Dudley (2008); and Graham et.al. 2003.

Commentators on governance agree that the dispersion of governance across multiple jurisdictions is both more efficient than, and normatively superior to, central state monopoly[10]. Governance must operate at multiple levels in order to capture variations in the territorial reach of policy externalities[11]. This observation is particularly critical for climate change adaptation. Adaptation to climate change will entail adjustments and changes at every level of society – international, national and community. Climate change poses serious challenges for constructing equitable global responses to shared problems. Emissions of greenhouse gases come disproportionately from industrialised countries, yet the most harmful impacts are likely to befall the poorest countries least responsible and least equipped to cope[12]. In most negotiations the most vulnerable countries tend to be least able to make their voices heard, or assess the implications of any outcome in light of their own interest[13]. In cases where there have been attempts at collective voices representing the South, as in the case of Copenhagen and the previous Conferences of Parties (COPs), there have been divisions and differences, particularly between Africa and Asia, which fragment the power base of this group in negotiations[14]. These differences are further found within the negotiations blocs. For instance, in Africa there would be differences between the needs of least developed countries and rapidly industrialising middle-income countries[15]. Climate change governance is thus also about geo-politics and international power relations.

In cases where there have been attempts at collective voices representing the South, as in the case of Copenhagen and the previous Conferences of Parties (COPs), there have been divisions and differences, particularly between Africa and Asia, which fragment the power base of this group in negotiations[14].

At the national level, governments need to implement strategies that enhance the resilience of national economies to help them cope with the impacts of climate change. Local communities on the other hand must build their resilience by adopting appropriate technologies while making the most of traditional knowledge and diversifying their livelihoods to cope with current and future climate stress. Success in adaptation must be measured in terms of impacts on the ground at the local level as much as in regional and international responses. Yet even at this level, adaptation responses are not devoid of political considerations and the role that spheres of power play in determining policy outcomes. Equitable climate change responses are required at both national and local levels. Therefore, appropriate governance structures and processes that respond to the questions of power and equity are required to support adaptation responses.

10 Marks, G. and Hooghe, L. 2004.
11 Ibid.
12 Ashton, J and Wang, X. 2003.
13 Ibid.
14 Madzwamuse, M. 2009.
15 Hoste, J. 2010.

2.3 EMERGING CLIMATE CHANGE ADAPTATION GOVERNANCE ISSUES

Matters of equity, provision of finance for adaptation, transparency, accountability, public participation and access to information have been identified as critical for climate change governance. These issues are discussed in the next section.

2.3.1 Equity, poverty and right to development

The question of equity is highly contested in the climate change discourse and was one of the main reasons behind the failure of states to reach a binding legal agreement in Copenhagen[16]. There is a pressing need for the international community to devise new strategies to reduce greenhouse emissions and promote low carbon pathways to economic growth and development while ensuring developing countries' rights to sustainable development.

Equity has been open to interpretation. The dominant Southern perspective regards equity as a redistributive social justice issue, considering the disproportionate human impacts and adaptation costs associated with climate change[17]. Developing countries argue that developed countries must pay for the costs of climate change adaptation as they are responsible for the bulk of greenhouse gases causing global warming and climate change. They also argue that any effective climate change regime must preserve the right to sustainable human development, particularly in developing countries where climate change undermines the achievements of the Millennium Development Goals (MDGs). The vulnerability of developing countries highlights their urgency to adapt to climate change and realise their right to development. Inequity has been interpreted by parties of the UNFCCC to refer to inequity between states and regions (South vs the North, developed and least developed countries).

Equity has been open to interpretation. The dominant Southern perspective regards equity as a redistributive social justice issue, considering the disproportionate human impacts and adaptation costs associated with climate change[17].

The Greenhouse Development Rights framework (GDR) has been proposed to take account of equitable costs and benefit sharing for climate change adaptation and mitigation. This framework argues that while people remain poor it is unacceptable and unrealistic to expect them to focus their valuable resources on climate change crises[18]. The GDR draws the conclusion that wealthier countries that have enjoyed higher levels of development must take on their fair share of the effort to deal with the effects of climate change. The GDR calls for an expansion of the climate protection agenda to include protection of developmental equity, which can and should be specified in terms of the UNFCCC's notion of common but differentiated

16 Koketso, S. 2010. Busby, J. 2010.
17 Richards, M. 2003.
18 Baer, P., Kartha, S., Athanasiou, T., Kemp-Benedict, E. 2008.

responsibilities and respective capabilities. Capacity is based on ability to pay, while responsibility is based on an assessment of the contribution to greenhouse gas emissions. The GDR takes intra-national income disparities into account, stepping beyond the usual national per capita averages which fail to capture the true depth of a country's developmental needs or the actual extent of its wealth. The framework points to inequalities within and between countries and focuses attention on class-based approaches to economic justice rather than nation-based approaches[19]. The GDR framework specifically implies dissolving the lines between Annex 1 and non-Annex 1 countries[20]. It implies that developing countries such as South Africa, with large emissions, should take on some emission reduction targets in effort-sharing regimes. The emission targets of developing countries must however be enabled by the North in the form of financial and technological support. Not surprisingly, this framework has received very little support from developing countries[21].

Attention must be given to the 'architecture of entitlements' being the social, economic and institutional factors that influence levels of vulnerability within a community or nation and promote or constrain adaptation[23].

Climate change will disproportionately affect the poor due to their current socio-economic conditions and the massive increases in poverty and inequality that climate change has the potential to generate[22]. Adaptation governance thus also calls for a consideration of equity at a national level, local level and between social groupings within a given community. Attention must be given to the 'architecture of entitlements' being the social, economic and institutional factors that influence levels of vulnerability within a community or nation and promote or constrain adaptation[23]. Such entitlements extend beyond income and other material measures to encompass rights, ownership and access to resources through formal and informal institutional arrangements. In attending to these issues climate change governance requires a closer examination of various dimensions of inequality (gender, poverty, access to key resources, policy formulation processes, representation, participation and institutional frameworks) at national and local levels.

2.3.2 Finance for Adaptation

The financing of climate change mitigation and adaptation is a complex field. There are a host of bilateral and multilateral sources of funding[24]. Under the UNFCCC, three new funds for adaptation activities have been established, administered by the Global Environment Facility (GEF) (see Box 1 below).

19 Baer, P, Karthas, T, Athanasiou, T., Kemp-Benedict, E. 2008.
20 Ibid.
21 Ibid.
22 Oxfam, 2007. Richards, M. 2003.
23 Kelly, P.M., Adger, W.N. 2000.
24 For a clear representation of the complex situation regarding international climate finance, please see www.climatefundsupdate.org.

THE UNFCCC SPECIAL CLIMATE CHANGE FUND

is to support adaptation activities; technology transfer; energy, transport, industry, forestry, and waste management; and to assist developing country parties diversify their economies.

THE UNFCCC LEAST DEVELOPED COUNTRIES (LDC) FUND

is mainly to support the preparation of National Adaptation Plans of Action (NAPAs) in LDCs. This involves identifying and prioritising adaptation activities including building institutional capacity, DPP activities and public awareness and education activities to encourage local participation in climate change activities.

THE KYOTO PROTOCOL ADAPTATION FUND

is also to support adaptation activities including vulnerability assessments, capacity-building, insurance and the avoidance of deforestation, land degradation and desertification.

Box 1: UNFCCC Adaptation Funds

In addition to above funds, during COP15 in Copenhagen, donor countries created a Copenhagen Green Climate Fund and pledged almost US$30 billion between 2010 and 2012 in short term financing for mitigation and adaptation in developing countries[25]. The donors further pledged to increase the funding to US$100 billion from public and private sources[26]. It remains unclear where these funds will come from, how they will be distributed between the countries and how they will be managed. Heinrich Böll Stiftung North America, in partnership with the Overseas Development Institute (ODI), have examined the three phases of climate funding cycle relating to mobilisation, administration and governance and the disbursement of climate change funds. They developed a normative framework for climate finance, based on UNFCCC and other global human rights and environmental obligations and principles to which countries have agreed[27]. The framework and guiding criteria place a strong emphasis on the application of principles of transparency, accountability and equity in the mobilisation, administration, governance and disbursement of climate change funds by both developed and developing countries. While these principles remain a matter of interpretation and discussion, they serve as normative guidance for a coherent framework for which climate change funds can be accessed, utilised and managed.

25 Busby, J. 2010.
26 Ibid.
27 Schalatek, L., Bird, N. 2010. Climate Fundamentals- A Normative Framework for Climate Finance. Brief 1.

Prior to Copenhagen 2010, developing countries, including those from Africa, demanded an increase in the level of funding for climate change adaptation, as available funds did not reflect the scale of the problem. Only 1% of Official Development Assistance (ODA) and concessional lending was specifically directed to adaptation. US$67 billion had been raised through the adaptation fund (which has been set up with proceeds from a levy on the Clean Development Mechanism (CDM) units sold under the Kyoto Protocol)[28]. African governments argued that US$67 billion will be required per year to compensate Africa alone for climate change impacts. Africa requested that polluting countries pay for climate change technology transfer, give support for increasing African countries' capability to address adaptation to climate change through NAPAs and other national adaptation programmes, and offer support for the establishment of Climate Centres within Africa to support cooperative mechanisms (South-North and South-South) in order to address regional specific climate change impacts and adaptation needs.

The demand for an increase in funding has been accompanied by calls for improving the transparency, accountability and oversight regarding decisions and actions to allocate, distribute, spend and account for 'new and additional' public financing for adaptation and mitigation activities[29]. Questions have been raised as to how limited global resources are allocated to particular countries, and to specific locations within those countries. These questions include what criteria to use to determine allocations, the basis on which such decisions will be made and what linkages NAPAs and NCCRS should make with national poverty reduction strategies and plans for achieving MDGs. Current funding mechanisms are difficult for developing countries to access and there has been a call for funding to be made more accessible and more equitable. For instance, two observations have been made by developing countries with reference to the Global Environmental Facility (GEF) criteria for the UNFCCC financial mechanisms. Firstly, the requirement for projects to have incremental costs is said to put an additional resource mobilisation burden on vulnerable states. Secondly, the need for global benefits does not match the nature of adaptation which is largely a local response. Other concerns with respect to climate change adaptation finance relate to the fact that funds support sector-specific responses and not societal adaptation, and therefore overlook key governance aspects such as equity, access and participation. A key concern is that carbon finance which could be used for adaptation is difficult to access, particularly for local communities and small-scale farmers and other vulnerable sectors of society. Civil society organisations have also complained about the overall lack of information on sources of funding and criteria for accessing them.

Questions have been raised as to how limited global resources are allocated to particular countries, and to specific locations within those countries.

28 Although not discussed in this paper, the CDM itself is also beset by underlying governance issues.
29 InWent and Transparency International. 2010.

Concerns emerging mainly from the donor community are centred on the capacities of the recipient countries' national administrations to absorb climate finance. Much attention has been placed on the need for mechanisms to ensure that adaptation finance contributes to poverty reduction strategies and other sustainable development frameworks, and more specifically that it reaches the most vulnerable. This issue raises the importance of identifying and highlighting capacity needs for strengthening governance structures and processes at national and local levels where adaptation interventions take place.

2.3.3 Access to knowledge and information

Adequate knowledge and access to information regarding climate change issues are necessary for effective public participation and decision-making processes surrounding important climate change issues[30]. Enhancing stakeholder capacities to participate in decision-making processes is key to shaping responsive and relevant adaptation interventions. This includes access to information on assessments on the impacts of climate change, highlighting biophysical and socio-economic impacts, adaptation policy-making processes, climate change negotiations, climate change financing schemes including subsidies and investments, global, regional and national carbon markets and technology development. All these are critical for building adaptive capacity. Access to information brings to the fore questions of the legitimacy and integrity of the information tabled as well as the importance of presenting it in a way that makes sense to both technical and non-technical users.

2.3.4 Public participation and engagement

There is a growing appreciation among policy makers and societal actors that the policy context within which adaptive decisions need to take place must also be considered as it may in fact undermine adaptation[31]. In examining the extent to which policies enable adaptation, climate change governance requires a closer analysis of the extent to which various actors, particularly local communities and the most vulnerable, shape policy outcomes. Issues of poverty, public participation and the extent to which policies represent the adaptation needs of the most vulnerable members of society become very important for integration of climate change into development frameworks. Feedback from those most affected is therefore critical.

30 Inwent and Transparency International. 2010.
31 Urwin, K., Jordan, A. 2008.

3

CLIMATE CHANGE IMPACTS & VULNERABILITY

Africa faces severe climate change impacts. Mean rainfall is predicted to decline in most parts of Sub-Saharan Africa, especially in Southern Africa. Meanwhile, it may increase in parts of Eastern and Central Africa. Western Africa presents more variable scenarios. High temperatures in Eastern and Central Africa will shorten the growing periods of crops due to high temperatures. The worst impacts of climate change will be felt in Sub-Saharan Africa. Here, 96% of the sub-continent's population is directly dependent on rain-fed agriculture. Agricultural production is projected to fall 50% by 2050 due to a reduction in rainfall and increase in temperatures, while the majority of African states will be faced with water scarcity and water stress by 2050. The land suitable for agriculture will be reduced by 6% and the subcontinent's total agricultural GDP will go down by 9%. Due to their direct dependence on natural resources sensitive to changes in climate, rural livelihoods will be the hardest hit by the impacts of climate change. Declining economic growth in the wake of global warming, will result in reduced income for the rural poor, worsen poverty and directly undermine the achievement of the Millennium Development Goals.

Africa is highly vulnerable to the impacts of climate change and climate variability due to its limited financial, institutional and technological capacity to adapt. Several factors such as poverty, low levels of literacy, lack of skills, weak economies, limited infrastructure, weak institutions, lack of technology and information, poor access to resources, low management capacities and armed conflicts combine to limit the continent's adaptive capacity. While adaptation to evolving climate patterns does occur, certain sections of society already vulnerable to present climate variability could find this vulnerability exacerbated by the extreme climate events in the form of droughts and floods. Climate change will therefore increase vulnerability and possibly reverse and undermine the development process.

A regional assessment of vulnerability provides insights into differentiated impacts as a result of differences in socio-political, economic and geographic profiles of the continent. Much has been written about the impacts of climate change in Africa, and though more information is needed, it is not the intention of this paper to discuss climate change impacts and vulnerabilities in detail, but rather to highlight key socio-economic impacts identified in the vulnerability and adaptation preparedness country studies. The regional impacts of climate change are discussed in the sections below.


SIATTYAKIN

3.1 EASTERN AFRICA

Climate variability already significantly impacts on a number of East African countries including Kenya, Uganda and Tanzania, which are covered in this synthesis. Key socio-economic impacts are a result of floods, droughts and changes in seasonal rainfall. Changes in rainfall reliability, frequent floods and droughts cause crop failure and famine, exacerbated by other stresses such as land degradation and insecurity of tenure. Rainfall variability has implications for a number of economic sectors. For instance in Lake Victoria reduced rainfall compounded by excess releases at the outflow of the lake made in order to meet power generation demands has led to a drop in water levels which in turn has affected various economic sectors[32]. This drop in lake levels has led to power shortages, disruption of water supply, transportation and infrastructure as well as reduced productivity of fisheries in Uganda and other surrounding countries since 2005. An indirect consequence of these climate impacts is increased pressure on wetlands and forests, which are already facing encroachment and deforestation as people turn to charcoal production, gathering wood and agricultural expansion as coping strategies.

The Uganda and Tanzania case studies highlight potential beneficial outcomes such as increased grazing area for livestock in the cattle corridor in Uganda with increased rainfall, or opportunities to grow more profitable crops. However, the benefits of increased rainfall are likely to be negligible as high temperature and greater evaporative losses will offset recharge or run-off. Changes in rainfall will also have the potential to bring heightened risks of floods, landslides, disease,

32 Hepworth and Goulden. 2008.

Image opposite:
Fishermen in Kenya.
By Greg Lomas.

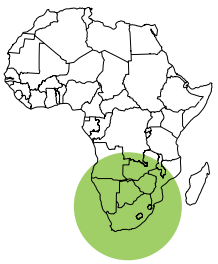
According to UNEP, climatic conditions may become unsuitable across most of Uganda's coffee growing areas. Coffee is a leading export commodity and the loss of coffee within 30-70 years could lead to a loss of approximately US$266 million in exports, corresponding to 40% of Uganda's export revenue and 3% of its GDP. This is in excess of the entire national health budget.

increased soil erosion and crop damage. According to UNEP, climatic conditions may become unsuitable across most of Uganda's coffee growing areas. Coffee is a leading export commodity and the loss of coffee within 30-70 years could lead to a loss of approximately US$266 million in exports, corresponding to 40% of Uganda's export revenue and 3% of its GDP. This is in excess of the entire national health budget. While these developments are likely to be significant for Uganda's economy and development, sufficiently detailed exercises to quantify the implications or to assess the impact of the past variability on the country's economy are lacking.

The Uganda study highlights the need for a thorough evaluation of the fiscal and social development implications of impacts of climate change in order to assist in identifying strategic priorities and focus decision-makers' attention on the need for appropriate modalities for adaptation and an in-depth understanding of differentiated vulnerabilities. There is also a growing disparity in poverty levels in Uganda. The country's Gini Index, which measures inequality, is increasing, with large regional differences partly due to prolonged conflict in the northern part of the country. Among many challenges, high population growth, underemployment, poor health, HIV/AIDS, low investment, shortage of skills and persistent governance issues continue to undermine development efforts in the country. It will be the poor and the vulnerable who will feel the impacts of climate change the most. Climate change will exacerbate poverty triggering migration as well as heighten competition for strategic water resources, which could lead to regional insecurity.

Image opposite: Coffee factory worker, Bbowa, Uganda. By Paul Evans.


DIAMOND
WAVE



3.2 SOUTHERN AFRICA

South Africa's vulnerability to the impacts of climate change depends on several factors, the most critical being a high dependence on climate sensitive economic sectors, high poverty levels and the inter-relations with the impacts of HIV/ AIDS. More than 50% of Southern African people live below the poverty datum line and in 2007, one in seven people faced starvation[33]. Southern Africa is already facing crises of endemic and pervasive underdevelopment that are likely to worsen the region's vulnerability to climate change[34].

Since poor people have a limited number of alternative strategies to draw upon, they will be disproportionately affected by the expected increase in frequency and intensity of extreme weather events as well as the gradual changes in average temperatures associated with climate change. Climate change will have negative impacts on the sectors upon which the livelihoods of the poor are directly dependent, thereby worsening their vulnerability. These sectors include agriculture, biodiversity, ecosystems and water.

The agricultural sector in Southern Africa is one of the most vulnerable to climate change. The impacts of climate change on agricultural production systems range from negative impacts on a variety of crops, impacts on livestock, reduction in the amount of land suitable for both arable and pastoral agriculture, reduction in the length of the growing season and decreases in yields, particularly along the margins of semi-arid lands. In South Africa, climate change is likely to further reduce the contribution of agriculture to the GDP, which has been declining over the years. For instance, in 1998 agriculture and forestry contributed 4% to GDP. This is significantly lower than the 9.1% recorded in 1965. In Botswana, 45% of households rely on livestock for their livelihoods and over 70% are involved in arable rain-fed agriculture. A hotter, drier climate is expected to reduce crop yields for the major crops – sorghum and maize – by 30%. Climate change will negatively

33 IUCN. 2007.
34 Murombedzi, J. 2007.

Climate change will have negative impacts on the sectors upon which the livelihoods of the poor are directly dependent, thereby worsening their vulnerability. These sectors include agriculture, biodiversity, ecosystems and water.

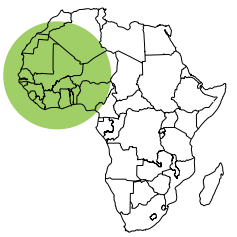
impact large-scale agriculture that relies on irrigation, small-scale farmers and the rural poor who practise rain-fed agriculture. These projected impacts have far reaching consequences for national food security and the national economy.

The water sector is also highly sensitive to climate change. It is projected that by 2025 Southern Africa will have reached high levels of both water stress and scarcity. Climate change is expected to alter the present hydrological resources in Southern Africa and add pressure on the adaptability of future water resources. Predicted water shortages will have devastating effects on the agricultural sector (which in South Africa is the largest water user by far, accounting for 62% of national water allocations).

The health sector has also been found to be highly vulnerable to climate change. Health consequences stem from extreme climatic events, changes in the patterns of infectious diseases, increased food insecurity, displacement of populations and water scarcity, among several factors. Both malaria and schistosomiasis will extend to areas where the diseases currently do not occur. HIV/AIDS further increases the health-related impacts of climate change on affected communities and households, thus reducing their ability to cope with and adapt to the impacts of climate change. Climate change will thus be one of the most important and urgent health issues in Southern Africa over the next few decades.

Finally, climate change is a real threat to biodiversity resources. These are not only important for national economies but also have significant global value. Loss of ecosystems will have significant consequences for local communities as well as national economies that utilise biodiversity resources for economic development such as ecotourism. For instance, subsistence resource use in South Africa is an essential livelihood strategy for many poor rural communities, particularly in the forests and savannah biomes. Communities harvest natural resources for medicinal use, food, shelter, fuel and craft production. This is a common trend for most of rural Southern Africa.

Image on next page:
Worker on a rooibos farm in Clanwilliam, South Africa.
By Michael van Rooyen.



3.3 WEST AFRICA

The 2010 UNECA report identifies climate change as an added factor on the list of challenges confronting the West African region. This is one of the most adversely affected regions of the world. Nigeria and Ghana are particularly vulnerable to the impacts of climate change on many fronts due to their geography, climate, vegetation, soils, economic structure, population and settlement patterns, energy demands and climate dependent agricultural activities.

The bulk of West Africa's population resides in rural areas and their livelihoods are still largely dependent on agriculture. Agriculture accounts for about 30% of regional GDP and as has been previously mentioned, it is one of the most sensitive and vulnerable sectors to climate change in Africa. With nearly 70% of Nigeria's population dependent on agriculture, and the sector contributing nearly 40% of the country's GDP, the country is vulnerable to climatic variability and long-term climate change. It is predicted that under a business-as-usual scenario, Nigeria's agricultural productivity could decline by between 10-25% by 2080. In certain parts , a decline in rain-fed agriculture could be as high as 50%. Exposure to extreme events makes subsistence and small-scale farmers most vulnerable to climate change because of their limited capacity to adapt. Impacts of climate change on agriculture could therefore have tremendous consequences on the food security, income, employment and food production of many rural households and communities.

It is predicted that under a business-as-usual scenario, Nigeria's agricultural productivity could decline by between 10-25% by 2080.

With a population of almost 56 million in urban areas and 87 million in rural areas[35], Nigeria's ecosystems are under tremendous pressure, making them vulnerable to environmental change. Logging, mining, hunting and human population growth are placing extreme stress on ecosystems. Coupled with the impacts of climate change, the loss of biodiversity in these ecosystems will increase.

Image opposite:
The Sekona local food market in Osun state, Nigeria.
By Akintunde Akinleye,
© The Gates Foundation.

35 Nigeria National Population Commission, 2006.

Another distinctive feature of West Africa is its long coastline of approximately 15,000km. Only four out of the 17 countries in West Africa are landlocked, leaving the remaining 13 countries with coastal territories. Coastal towns are by far the most developed of Africa's urban areas and by implication they have a high concentration of residential, industrial, commercial, tourist, educational and military facilities[36]. Sea-level rises will have a significant impact on these coastal areas because of the concentration of poor populations in areas that are vulnerable to such changes.

According to HBS[38] climate change could result in increased variability in rainfall in Nigeria, resulting in floods in some humid areas in the south of the country, while a decrease in precipitation would result in droughts in the northern parts.

West Africa has experienced a significant decline in rainfall. The decline in rainfall ranges from 15% to over 30% depending on the area[37]. According to HBS[38] climate change could result in increased variability in rainfall in Nigeria, resulting in floods in some humid areas in the south of the country, while a decrease in precipitation would result in droughts in the northern parts. The IPCC predicts that Nigeria will be warmer, experience increased precipitation and increased droughts. The frequency and intensity of extreme events such as floods and droughts has increased over the years. Higher temperatures and low rainfall will affect groundwater recharge and therefore water supply in the parts of the country that are dependent on groundwater. Rainfall variability will also affect river flow patterns, negatively affecting hydropower production and other water-related activities. Reduced rainfall coupled with increased temperatures could reduce the moisture in the soil, ultimately impacting on agriculture. It is safe to say that climate change will magnify the intensity and frequency of natural disasters in Nigeria. However, the nature and severity of the changes predicted need to be studied further.

These findings present a troubling scenario for a continent that is already struggling to cope with food security, diseases and high levels of poverty, illiteracy and mortality. Climate change threatens to reverse gains made towards achieving sustainable development goals. The links between climate change and socio-economic impacts as highlighted in the country studies render adaptation critical at all levels of society.

Image on next page:
Brother and sister, Banda, Uganda. By Paul Evans.

36 UNHabitat, 2008.
37 IUCN 2004.
38 HBS. 2010. Country report on Nigeria's preparedness to climate change adaptation.

3.4 GENDER ASPECTS OF VULNERABILITY TO CLIMATE CHANGE

There is a gender dimension to poverty and vulnerability to climate change. Women form the majority of the rural population in Southern Africa where livelihoods are intimately linked with the climate-sensitive natural resource base. Female-headed households (FHHs) are particularly vulnerable to poverty and the impacts of climate change. Countries with high percentages of FHHs, such as Botswana, ought to pay attention to mainstreaming gender in national adaptation strategies. Studies conducted by the Consortium for Southern Africa's Food Emergency in 2003 have shown that the percentage of FHHs in the neighbouring countries are still much lower than in Botswana, with Zimbabwe at 34.5% and Zambia at 23.4%. Due to differences in property rights and other social inequalities facing women, and the absence of male heads of households, women are not in a position to make timely decisions to re-organise their livelihood activities and adapt farming systems in response to climate change and increases in climate variability[39]. In Zimbabwe, rural to urban and cross border migration compounds vulnerability by leaving agricultural activities to the elderly and the very young that may not be able to maximise the use of land and generally lack farming experience.

Women form the majority of the rural population in Southern Africa where livelihoods are intimately linked with the climate-sensitive natural resource base. Female-headed households (FHHs) are particularly vulnerable to poverty and the impacts of climate change.

Gender inequalities will exacerbate the negative impacts of disasters such as floods. Usually the household workload increases substantially in the aftermath, forcing many girls to drop out of school to assist with household chores and food production. Women are also vulnerable to other social problems such as poverty, unemployment and HIV/AIDS. It is widely recognised that climate change worsens existing inequalities in key dimensions that are not only the building blocks of livelihoods, but are also crucial for coping with change including wealth, access to and an understanding of technologies, education, access to information, and access to resources[40]. Household capacities to adapt will therefore be undermined if social inequalities facing women are not considered in vulnerability assessments and adaptation interventions.

39 Ibid.
40 Brody, A., Demetriades, J., Esple, E. (2008).

4

CLIMATE CHANGE GOVERNANCE ISSUES EMERGING FROM THE CASE STUDIES

Adaptive capacity is dependent on policies and strategies that respond to the needs of the most vulnerable systems and enhances their resilience to the impacts of climate change. A lack of appropriate policies and legislative frameworks may present barriers to the implementation of adaptation responses and pose a constraint on the adaptive capacity of certain groups in society. The section below provides a synopsis of the extent to which key sectoral policies facilitate adaptation to climate change and address the vulnerabilities.

4.1 A SYNOPSIS OF KEY SECTORAL POLICIES AND STRATEGIES

Water Resources Management

Water scarcity and stress are major problems facing Africa due to climate variability and change, and will worsen due to climate change. Significant policy attention is therefore required to build the resilience and adaptive capacity of the water sector. The country studies point to a number of challenges in the water policy frameworks of many countries and the challenges for climate change adaptation facing the sector as discussed below. The South African National Water Conservation Strategy provides strategies that are sufficiently flexible to accommodate the anticipated effects of climate change. It allows for flexibility in water use allocations, water demand management, water conservation measures and contingency planning for extreme events such as droughts and floods – all of which are widely recognised adaptation strategies. Despite these provisions the current water and policy frameworks have not yet fully and explicitly considered the implications of climate change. For instance, the need to balance water demand with water availability has not been adequately reflected in the strategy. Robust long-term strategies are still required to ensure future water supply meets demand in the face of scarcity. South Africa has invested a great deal in the development of water resources, mainly through inter-basin transfer projects. But

[F]uture shortages are likely to contribute to high levels of social unrest, particularly in townships and poor municipalities, as evidenced by the recent increase in service delivery protests in the country.

the sustainability of this approach is questionable considering that the entire region is likely to face water stress, which will reduce the availability of water despite the level of infrastructural development. The projected water shortages in the future are likely to reverse the strides that South Africa made in the post independence decade and undermine poverty reduction efforts. The Water Policy emphasises equitable and sustainable social and economic development that benefits all South Africans in line with the post-apartheid government policy. These future shortages are likely to contribute to high levels of social unrest, particularly in townships and poor municipalities, as evidenced by the recent increase in service delivery protests in the country.

The Zimbabwe water policy framework was reformed following the 1991-1992 droughts subsequently leading to the National Water Act No.31 of 1998 and the Zimbabwe National Water Authority Act No.1 of 1998. These two acts provide administrative structures as well as a legal foundation for the sector, which incorporates provisions for time bound water permits. The framework also allows for the application of the polluter pays principle, allocation of water for environmental flows and for drought mitigation. Time limited water abstraction permits increase flexibility and allow abstraction to be stopped when water levels are too low. The implementation of the new system of water permits is still very weak due to lack of institutional, technical and monitoring capacity[41]. The new acts have also brought into effect the removal of private ownership of water and preferential rights for water owners. These reforms should allow more equitable access to water in the future, which will be crucial as rainfall patterns are expected to shift due to climate change. However, water subsidies are still in place despite the introduction of water reforms aimed at providing water at full cost. These subsidies encourage over-use of water and discourage conservation measures critical for adaptation strategies.

Lack of capacity and funds are the main constraining factors to the implementation of the legislative provisions governing integrated land and water resource management. Other constraints include the inability of most water users to pay for the full cost of water, particularly small-scale farmers and recent beneficiaries of the accelerated land reform programme. An examination of the existing water rights system in Zimbabwe shows that existing legal instruments are not sufficiently developed or implemented to be able to react to changing climatic conditions and climatic variability. Conflicts over water remain present and strong provisions to handle conflicts on a consistent basis are absent. Lastly, similar to South Africa, demand management interventions are in place. However, water demand continues to outstrip supply, a problem that is likely to worsen due to the impacts of climate change on water resources in Southern Africa's major river basins.

41 Levina, E. 2006.

Similarly, Kenya is not adequately equipped to handle water scarcity related conflicts that characterise Northern Kenya, as observed in the Turkana and West Pokot Districts[42]. While cattle rustling is partly the cause of the conflicts, the most important source of conflict is said to arise from the competition for scarce resources, mainly water wells and the pastures surrounding these. Due to the increasingly unpredictable weather conditions caused by climate change, water is becoming an even scarcer resource and violent conflict is expected to occur as competing groups obtain access to modern weapons. However, the Kenyan policy framework for climate change is silent on the issue of conflict arising from climate-related changes. Nevertheless, provisions have been made for more dominant economic sectors such as the horticulture and cash crop industries.

Tanzania, on the other hand, has a progressive National Water Policy and legislation. The successful implementation of the Water Sector Development Programme is expected to improve the country's resilience to climate change, although the policy does not give explicit attention to climate change impacts. The Water Sector Development Strategy confines discussions of climate change and extremes to: 1) development of alternative resources (rainwater harvesting, waste water re-use, desalination and inter-basin transfers) to supplement water during times of scarcity; 2) disaster management. The strategy recognises that disaster mitigation has been based on remedial and not preventative measures, and targets future efforts on provision of early warning systems and contingency planning. The strategy however does not provide for a robust prioritisation of drought and flood management in the water sector. The use of fixed level abstraction permits rather than abstractions proportional to flow and barriers in the implementation of the water resource management reforms mean that the country's vulnerability to climate change and variability through water related impacts will persist and inequitable resource access will continue, particularly within poor communities.

Tanzania... has a progressive National Water Policy and legislation. The successful implementation of the Water Sector Development Programme is expected to improve the country's resilience to climate change, although the policy does not give explicit attention to climate change impacts.

Nigeria has a draft National Water Policy that seeks to improve the nation's water resources management, including the management of hydrological risks and vulnerabilities. The main focus of the policy is on improving forecasting of extreme hydrological events. Measures and strategies for preventing hydrological disasters from occurring are however inadequately addressed. The policy also lacks clearly defined channels through which hydrological information will be communicated to end users such as farmers. Water is central for sustainable social and economic development and one of the most vulnerable sectors to climate change. From the Nigeria case study[43], it is not clear how the draft water policy will address these vulnerabilities. Adding to

42 Wambugu, L.K. 2009.
43 Olodipo E. 2010.

the climate challenge, Nigeria is in the process of privatising the water sector without a clear indication on how privatisation programmes will account for pro-poor concerns.

Agricultural production & food security

Agricultural production and food security will be severely compromised by climate change. Subsistence agriculture is the most vulnerable as the bulk of it is rain fed. The agricultural reform policy framework is critical for addressing the vulnerabilities that subsistence or small-scale farmers are faced with as a result of high existing poverty and food insecurity levels in Africa. It is in this sector where complex governance issues arise, as highlighted by the Southern Africa country studies. While the East Africa (Kenya, Uganda and Tanzania) country studies point to policies that aim to increase access to irrigation, early warning systems for farmers and drought mitigation measures, these interventions on their own are not sufficient for enhancing adaptive capacity in the agricultural sector without paying attention to, and addressing, structural inequalities which underlie socio-economic vulnerabilities in the agricultural sector. For instance, pastoralists in East Africa (includes most of Kenya, northern Uganda, Northern Tanzania and southern Ethiopia) have lost large tracts of land through externally promoted agricultural investment schemes, which took away many of the communities' most important dry season pastures[44].

A key feature of the agricultural policy in Nigeria is the focus on reduction of risks and uncertainties in agriculture. The policy framework covers many issues that may be impacted by climate change. These include: 1) crops, livestock, fisheries and agro-forestry production, 2) pest control, and 3) water resources and irrigation.

A major initiative for the implementation of the agricultural policy is the National Fadama Project, which started in 1991, currently in its third phase of implementation[45]. Its main objectives are to improve the quality of life of small-scale farmers, food security and rural infrastructure. Some of the activities that are indicative of possible anticipatory adaptation measures include: 1) promotion of simple and low-cost improved irrigation technology, and 2) enhancing the capacity of Fadama users to adopt environmentally sustainable land management practices. Theoretically, the Nigerian agricultural framework's focus on the needs of small-scale farmers could enhance local

44 Nelson, F. 2009.

45 The objective of Fadama III is to increase food security, reduce poverty, and create employment and improved opportunities in rural areas by: (i) financing investments in productive community infrastructure to increase agricultural productivity and diversify sources of livelihood; (ii) building the capacity of community organisations to increase the stock of social capital; (iii) strengthening the capabilities of participating states and local governments to deliver services to the rural poor; and (iv) promoting socially-inclusive and environmentally sustainable management of natural resources.

Image opposite:
Small scale farmer in Mpumalanga, South Africa.
By Katinka Wågsæther.

adaptive capacity. However, the extent to which the policy addresses key issues such as tenure security and other structural socio-economic vulnerabilities remains unclear.

A number of African countries have implemented land and agrarian reform programmes which provide a critical entry point for climate change adaptation strategies. The South African Land Reform programme has three main components: restitution, tenure reform and a land redistribution programme. The overall aim of the land reform policy is to ensure the transfer of 30% of all agricultural land to previously disadvantaged groups over a 15-year period after 1994. These policy provisions have a potential to address challenges that undermine the adaptive capacity of the agricultural sector and vulnerable groups in South Africa. Key policies include the Integrated Rural Development Programme (IRDP), the Agricultural Policy, Land Redistribution for Agricultural Development (LRAD), the Policy on Agriculture and Sustainable Development and the National Agriculture Research and Development Strategy, among others.

While South Africa has a comprehensive set of policies geared towards addressing the structural issues relating to poverty, and efforts towards redistributing national economic benefits to previously disadvantaged groups, major challenges lie in policy implementation.

While South Africa has a comprehensive set of policies geared towards addressing the structural issues relating to poverty, and efforts towards redistributing national economic benefits to previously disadvantaged groups, major challenges lie in policy implementation. The South African land reform process is considered to have stalled. Some argue that it has failed completely due to the tensions between appropriate development paths at the macro-economic level and the needs at a micro-economic level. Suggestions are that the land and agrarian reform programme has failed to escape the trappings of neo-liberalism[46]. As a result, even though progressive policies are in place which could enhance adaptive capacities at various levels, landlessness continues to compound poverty as it impedes communities, especially in the rural areas, from having recourse to a source of livelihood through farming and other land based activities. It thus curtails poor people's ability to use land as a reproductive asset[47].

A gender dimension to the problem is that while a small number of women gained access to land through LRAD and other programmes for land reform between 1994 and 2000, land reform did not take place at a sufficiently large scale to benefit the majority of poor women living in rural areas[48]. Poor women could not benefit from agricultural programmes as the policy drive post-1999 prioritised the promotion of a black commercial farming class above other commitments[49].

46 See Noyoo, N. nd. Bond, P. 2005; Mngxitama, A. 2005.
47 Noyoo, N. nd.
48 Walker (2000).
49 Ibid.

To adequately reduce vulnerability to climate change, particularly for the poor and small scale farmers, and enhance food security at a local level, efforts towards removing the barriers to the implementation of land reform policies need to be enhanced. Of critical importance is to mainstream the adaptation agenda at a national level and renew political will for agrarian reform. Thus far, the ANC government has not regarded agrarian land reform as an important component of economic policy due to a focus on urban industrial strategies, and a focus on investor-friendly macro-economic policy. Some commentators are of the view that the main challenge has been institutional and structural resistance to land reform, the political sensitivity of global and national investors, as well as the constitutional limitations on the redistribution of land rights which have forced the state to prioritise urban based strategies[50].

The policy environment in South Africa is constantly shifting and adaptation strategies need to take these changes into account, while at the same time investing in a political drive to renew commitments towards sustainable development and equity.

In 2000, the government of Zimbabwe implemented a controversial Fast Track Land Reform Programme which was aimed at redistributing land acquired primarily from white large-scale commercial farmers to predominantly landless impoverished black Zimbabweans. The land and agricultural reform process has been stalled by a number of constraints that face resettled farmers, such as limited support services to ensure full utilisation of acquired land and food security. Nevertheless, the programme has the potential to build adaptive capacity in the agricultural sector as up to 80% of the population are farmers, including some in urban areas who depend on agriculture for their livelihoods and staple foods. Women play an important role in agriculture and are estimated to comprise 70% of small-scale farmers.

The issue of land and agrarian reform is not restricted to Zimbabwe and South Africa, but is shared by other African countries. African governments are at various stages of addressing land issues, through policy and administrative reforms and innovative approaches to land management and governance. In spite of these efforts, African countries are far from fully addressing land related challenges in a way that facilitates goals of poverty reduction, peace and security, sustainable management of natural resources and supports agricultural productivity[51] .

In many countries a significant number of the rural poor's livelihood is based on farming and farming related activities. Lack of control over land, water, forestry and other natural resources is strongly related

50 Murombedzi, J. 2010.
51 AU, ADB, ADF and ECA. 2008.

to poverty and inequality. Women are usually the most vulnerable as they have fewer and weaker rights to land due to biases in formal law, in customs and in the division of labour in society. The land issue is a highly political and complex matter but also one that has to be dealt with in order to build resilience in African communities to cope with climate change[52]. African governments are reluctant to deal with the land issue and at the same time the developed world is apprehensive about land reform policies in Africa. The focus on the land reform policy in Zimbabwe and the international outcry is a case in point.

Biodiversity and natural resources

4.1 A SYNOPSIS OF KEY SECTORIAL POLICIES & STRATEGIES

Water Resources Management

Agricultural Production & Food Security

› Biodiversity & Natural Resources

Biodiversity and ecosystem goods and services are critical for both local and national economies. Wildlife-based tourism is a significant income earner for countries such as Botswana, South Africa, Kenya and Tanzania. At the same time, natural resources (in the form of forests, riverine resources, marine and rangelands) provide a source of livelihood for the majority of the rural poor.

Climate change adds stress to a resource base that is already facing pressure from land use, population increase, endemic droughts, unsustainable land use practices and poverty. The importance of natural resources and biodiversity to national economies and climate change vulnerability warrants a focus on this sector in order to enhance the adaptive capacities of local communities and natural resource-dependent economies.

The South Africa, Botswana, Kenya and Nigeria case studies identify a number of biodiversity-related policies and policy constraints to climate change adaptation. For South Africa, the National Biodiversity Strategy and Action Plan produced in 2005 supports national adaptation strategies. The goal of the NBSAP is 'to conserve and manage terrestrial and aquatic biodiversity to ensure sustainable and equitable benefits to the people of South Africa, now and in the future'. Climate change adaptation is explicitly mentioned under Strategic Objective 3 and while recognising the importance of mitigation, the NBSAP deals mainly with climate change adaptation.

Outcome 3.4 of the NBSAP is 'an integrated national programme [that] facilitates adaptation to the predicted impacts of climate change on biodiversity across the landscape and seascape'. This component of NBSAP builds on the findings of the South Africa Country Studies Programme as well as proposed adaptation interventions contained in the National Climate Change Response Strategy. The strategy seeks to 'Implement an integrated programme for climate change adaptation, with an emphasis on vulnerable ecosystems and sustainable livelihoods'. Through this activity the

Image opposite:
Grabouw, South Africa.
By Michael van Rooyen.

52 Madzwamuse, M. 2009.

NBSAP recognises that climate change adaptation is an issue that cuts across several of the strategic objectives necessary to conserve and sustainably use biodiversity even in the absence of climate change.

Other national biodiversity policies such as the Nigeria National Biodiversity Strategy and Action Plan make provisions for developing frameworks and instruments for the conservation of biological diversity. It also mainstreams biodiversity into Nigeria's poverty reduction programmes and the National Economic Empowerment and Development Strategy (NEEDS). They however fall short of mainstreaming climate change adaptation.

Kenya, on the other hand, highlights the importance of the Forest Policy, particularly in the context of emerging opportunities on REDD. The Forest Act of 2005 is expected to guide the implementation of the Forest Policy. The Act provides for the involvement of communities living adjacent to forests and other stakeholders in the management and conservation of forests. It also provides appropriate incentives to promote sustainable use and management of forests, recognising local and global forestry issues and challenges to ensure fair contribution of the forestry sector to economic development. Even though the policy covers a wide scope of issues concerning forests, it is geared towards environmental conservation and not climate change. There are a myriad of climate change opportunities in forestry, both on the mitigation and adaptation side, such as REDD, which the policy has not captured.

Under the guidance of the African Union Commission, Nigeria is implementing a "Green Wall Initiative" through which trees will be planted across the dry-land area of Nigeria to push back deforestation and secure agriculture and livelihoods across the Sudano-Sahelian zone of the country.

Nigeria is also in the process of finalising the National Forest Policy, which builds on an existing National Forestry Action Programme (NFAP). The policy is geared towards ensuring sustainable forest management, promoting participatory processes of development, facilitating private sector forestry development and adopting an integrated approach to such development. It comprises three sub-programmes: forest management, social forestry and forest industries. Government is currently embarking on a number of afforestation programmes.

Under the guidance of the African Union Commission, Nigeria is implementing a "Green Wall Initiative" through which trees will be planted across the dry-land area of Nigeria to push back deforestation and secure agriculture and livelihoods across the Sudano-Sahelian zone of the country. This initiative will not only mitigate the impacts of climate change but also facilitate the achievement of the UN Millennium Development Goals. There is also the Presidential Initiative on Afforestation Programme for Environmental Sustainability that plans to plant 40 million trees annually.

While forests and biodiversity play a critical role in national economies, perhaps the most crucial in the context of climate change adaptation is the importance that these resources have for local adaptation. Community-based forestry and wildlife conservation programmes have the potential to contribute to the diversification of local livelihoods and thereby build resilience. However, climate induced changes to resource flows will affect the viability of livelihoods unless effective measures are taken to protect them and diversify them through adaptation and other strategies[53]. A trend that could significantly affect the use of natural resources as a basis for adaptation strategies is the increasing centralisation of natural resource management[54]. The resource rights of local communities in most parts of Africa remain highly insecure.

4.2 CONTINENTAL POLICY ISSUES & CHALLENGES

Integrating climate change into key spheres of policy-making, as well as social and economic development frameworks is important for adaptation. The adaptation preparedness studies looked into the extent to which non-climate policies support or constrain adaptive responses. The section below highlights some of the main policy issues and challenges facing Africa, with a particular focus on governance issues, including levels of responsiveness, effectiveness, and strategic visions. The processes and effects of climate change are long-term and will affect all countries for decades to come. It will therefore be an ever-present issue for national development planners and ideally should become a regular consideration in planning cycles and policy development processes[55]. Mainstreaming climate change responses into policy and development frameworks is an obligation of parties under the UNFCCC. Article 4.1(f) stipulates that:

> all parties shall take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimising adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.

To enable workable and effective adaptation measures, governments, ministries, institutions and NGOs need to integrate climate change in planning and budgeting processes and all levels of decision-making. At the national level, government strategies must focus on enhancing the resilience of national and local economies and building their capacity to adapt to the impacts of climate change.

53 Murombedzi, J. 2007.
54 Ibid.
55 UNFCCC, 2002.

As climate change has the potential to undermine sustainable development, increase poverty and delay or prevent the realisation of MDGs, it is imperative that adaptation measures are integrated into sustainable development strategies so as to reduce pressure on natural resources, improve environmental risk management and increase the social wellbeing of the poor. Thus this section provides a synthesis of issues emanating from the country studies with regard to the extent to which climate change adaptation is provided for in national development and economic frameworks, including strategies for poverty reduction. Below is a summary of the key issues.

Inadequate overall policy framework for climate change adaptation & governance

Most countries lack a comprehensive policy framework for guiding the integration of climate change adaptation into broader development programmes and activities. For example, although Zimbabwe has ratified the UNFCCC, there is currently no clear national strategy for the implementation of its provisions. A comprehensive and specific national policy and legislative framework for climate change and climate change adaptation is lacking[56]. Instead, legislative and programmatic adaptation responses are found in a plethora of development policies, strategies and action plans spread across various government sectors such as environment and natural resources management, water resources management, agriculture and disaster management.

In 2009, Zimbabwe was preparing its Second National Communication report which included V&A assessments focused on natural ecosystems, water resources, public health, human settlements, agriculture and wildlife. These assessments will form the basis for the development of a national climate change response strategy. However the V&A follows a sectoral approach to generate V&As which tends to be top-down. As a critical process for developing a national response strategy, wider consultation is of paramount importance. Thus far, stakeholder consultations have involved experts through a workshop which included civil society organisations, but no record of public engagement exists.

The South Africa study reveals a comprehensive set of policies that provide an enabling environment for climate change adaptation. These are provided through the NCCRS as an overall framework for adaptation at a national level. Other policies that provide an enabling policy framework include sectoral policies on agriculture, water and energy. However, while the NCCRS notes the potential impacts of climate change in various sectors, it falls short of providing a compelling

56 Mtisi, S. 2010.

analysis of the socio-economic implications of climate change. The proposed adaptation interventions do not provide strategic interventions that can adequately build the resilience of the different sectors of the economy and the most vulnerable sections of society. To a large extent, the NCCRS only responds to the biophysical vulnerabilities which characterise the nature of debates within the IPCC at the time South Africa produced its strategy.

Similarly, Kenya developed a National Climate Change Response Strategy in 2010 which seeks to strengthen nationwide action towards adapting to, and mitigating against a changing climate by ensuring commitment and engagement of all stakeholders, while taking into account the vulnerable nature of the country's natural resources and society as a whole. The strategy provides a conducive and enabling policy, legal and institutional framework to combat climate change. It also provides a concerted action plan and resource mobilisation plan to reduce and mitigate the impacts of climate change. The strategy points out that the existing policy and legal framework does not directly and explicitly address climate change. The only policy document that comes close to addressing climate change is the draft National Environmental Policy of 2008 which is yet to be approved by parliament. The said policy however lacks explicit provisions for climate change adaptation and merely calls for the development of a climate change strategy.

Climate change adaptation provisions are currently spread out through various sectoral laws and policies in Kenya. These include the new Forest Act, the Agricultural Act, the Energy Policy, the Forest Policy and the Arid and Semi Arid Lands Policy.

Climate change adaptation provisions are currently spread out through various sectoral laws and policies in Kenya. These include the new Forest Act, the Agricultural Act, the Energy Policy, the Forest Policy and the Arid and Semi Arid Lands Policy. However, these policy and legal instruments are weak. Not only is climate change not their focus, but they focus on environmental management and do not consider the cross-cutting aspects of climate change. The Kenyan National Climate Change Response Strategy is a positive step towards addressing climate change, but there is a need for comprehensive policies that address mitigation and adaptation and that provide guidelines for their integration and mainstreaming into key sectors and institutions.

Botswana has no dedicated policy or strategy towards climate change mitigation and adaptation. Environment and climate change concerns are, however, acknowledged and articulated in a number of different policy documents. Underpinning all policy formulation and development planning in Botswana is the recognition that long-term growth must be sustainable. While this is commendable, the issue of climate change should be placed more centrally within the evolving socio-economic and development context. This context is critical to understanding the vulnerability of all sectors to climate change and to the development of integrated adaptation strategies to address the impact of climate change on developmental sectors in Botswana, and

to balance trade-offs among the multiple objectives of sustainable development. For Botswana the issue of equitable growth is particularly important.

Uganda and Tanzania developed National Adaptation Programmes of Action in 2003 and 2007 respectively. The formal objectives of the NAPAs are to provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to the urgent and immediate needs of adapting to climate change. The focus is on urgent adaption interventions, further delays to which could increase vulnerability and costs. The Tanzania NAPA does not address the integration of climate change adaptation into national and sector policies, plans and activities. It proposes a list of projects, but these have not been included in sector plans and budgets of the institutions responsible. The NAPA is yet to be developed into a more comprehensive national plan. Studies are currently ongoing to prepare the Second National Communication report through the Office of the Vice President to enable Tanzania to fulfil its UNFCCC obligations. The studies include vulnerability assessments and identifying adaptation priorities in the areas of energy and agriculture, land use, forestry, tourism, inland and coastal water resources, livestock and industry. The findings of the studies were not available at the time of writing this report.

Nigeria signed and ratified the UNFCCC in 1994 and in 2003 respectively and the First National Communication report was produced to meet the convention's obligations. The Second National Communication (SNC) exercise was initiated in 2006, however it is still in the drafting stage. Despite this progress, Nigeria has no specific climate change policy and strategy that outlines the country's current and future efforts to address vulnerability to climate change. The closest Nigeria comes to having a comprehensive adaptation response framework is a working document on Adaptation Strategies of Action prepared by Heinrich Böll Stiftung. There is no indication that this document is being used to inform the development of a national adaptation plan. The needs of the most vulnerable sectors within Nigeria are therefore not adequately catered for.

The challenges of managing social impacts in coastal areas of West Africa are well documented. Nigeria's National Erosion and Flood Control Policy (NEFCP) addresses the vulnerability of coastal zones, but does not adequately integrate the potentially significant challenges and complexity that climate change will bring to the management of coastal zones. The policy does however provide for the creation of efficient institutional arrangements and a legal framework for erosion and flood management, and promotes a participatory approach to their prevention and control country-wide. It however fails to holistically address the management of sensitive ecosystems such as coastal zones.

An integrated approach to coastal zone management, which promotes sustainable management of coastal areas in West Africa, and balances the impacts and goals of development in these areas, is critical. This should facilitate informed participation and cooperation among all stakeholders in the management of these areas, particularly poor and vulnerable coastal communities. Integrated Coastal Zones Management plans and policies should not only guide appropriate planning and development along these areas to reduce the impacts of sea level rise on communities, but should also facilitate poverty reduction.

In dealing with climate change adaptation, as with most environmental issues, it is expected that governments should rely on scientific information to aid decision-making. Evidence-based approaches in devising climate change solutions are slowly gaining recognition. In the case of West Africa however, only Ghana has undertaken detailed vulnerability assessments of all its climate sensitive sectors to effectively determine its adaptation responses. Conversely, Nigeria has not conducted vulnerability assessments to understand how climate change and sea level rise will affect and impact its ecosystems, population, human health, welfare and the economy. These assessments are needed to provide the means within which critical and appropriate adaptation options for the country can be identified.

Evidence-based approaches in devising climate change solutions are slowly gaining recognition. In the case of West Africa however, only Ghana has undertaken detailed vulnerability assessments of all its climate sensitive sectors to effectively determine its adaptation responses.

Ghana undertook a structured response to enhancing its climate change adaptive capacity. The critical starting point was for the mainstreaming of climate change into its poverty reduction strategy. With this approach Ghana was able to identify key vulnerabilities and proposed adaptation strategies in response to the identified vulnerabilities and to build resilience. The process was both consultative and collaborative, involving various stakeholders in developing a national approach to mainstreaming climate change into the country's developmental plans. The outcome of this process was the National Climate Change Adaptation Strategy, designed to create an enabling environment for Ghana to effectively manage and respond to the impacts of climate change and reduce vulnerabilities.

The Ugandan NAPA was also developed through a robust methodology which focused on analysis of climate related disaster impacts and coping strategies at a community level. The process adopted the use of participatory rural appraisal (PRA) methods across three sample districts in highland, lowland, semi-arid, aquatic and shoreline regions. This approach is markedly different from those outlined in other countries covered in this study, which tended to be top-down and based on vulnerability analyses carried out by teams of experts. Community, regional, national and policy level workshops were organised to validate the findings of the PRA exercises and further prioritise adaptation projects. While this approach is commendable, the NAPA has been criticised for lacking detailed vulnerability

Image on next page:
Man carrying groceries in Acornhoek, Mpumalanga, South Africa.
By Gillian Benjamin.


City to City

analysis at the local level. The NAPA looks at community level issues but fails to provide a strategic overview of national adaptation needs. Adaptation decisions need to be taken at different levels of governance. Bottom up and top down approaches to policy formulation between local and national levels are required so as to respond to strategic needs and local vulnerabilities. Currently the policy environment for climate change in Africa does not reflect the need for balance between top down and bottom up approaches. Experience shows that local participation and accounting for household coping strategies remain real challenges in the development of adaptation policies due to a tendency for the interventions to focus at sectoral level. There is therefore, a danger that adaptation solutions prescribed nationally, without the participation of those intended to adopt the practices, will actually limit, rather than create, spaces for local adaptation[57].

Most of the national climate change response strategies and national adaptation programmes of action do not respond to, nor address the role of non-climatic factors. However, they are not consistent with broader policies and measures for sustainable development. Adaptation measures are likely to be implemented only if they are consistent with or integrated into decisions or programmes that address non-climatic stresses. Hence the need to integrate climate change adaptation into sustainable development and mainstream economic frameworks.

In the absence of a comprehensive policy framework for climate change this synthesis looks into key sectoral policies as well as key development and economic policies to assess the extent to which they facilitate climate change governance. These include national development plans, poverty reduction and economic development strategies, rural development strategies and others.

Macro-economic development frameworks undermine adaptive capacity

The South Africa case study provides a good example of how macro-economic policies tend to undermine adaptive capacity. South Africa is currently undergoing policy reforms following the recent (2009) elections. However, its Integrated and Sustainable Rural Development Strategy (ISRDS), although not designed to respond to climate change specifically, provides an enabling framework as it forms a critical part of a set of policies designed to address the challenges facing the poor in South Africa, especially in rural areas.

A strategic objective of the ISRDS is 'to ensure that by the year 2010 the rural areas would attain the internal capacity for integrated and sustainable development'. According to the ISRDS, the intent of this strategy is to transform rural South Africa into an economically

57 McDevitt. 2009.

viable, socially stable and harmonious sector that makes a significant contribution to the nation's GDP. The strategy is designed to benefit the rural poor generally, but specific efforts target women, youth and the disabled. This strategy is relevant for climate change adaptation responses as it attempts to secure the poor's access to, and benefits from natural resources to support livelihood strategies. It also sets out to reform the agricultural sector, diversify rural economies and other key interventions that are likely to reduce poverty and thereby strengthen resilience to climate change. The strategy targets rural areas in which agriculture, forestry, tourism and other activities are growing and the natural resource base has the potential to support such interventions. These very sectors have been identified as being highly vulnerable to climate change impacts.

Furthermore, the ISRDS makes provisions for extending social assistance to rural areas through social grants and the Expanded Public Works Programme which focuses on creating employment opportunities for the poor. The role of social safety programmes in cushioning the poor against the impacts of climate change and variability is widely recognised, although efforts need to go into long-term measures that build the resilience of the broader social, human, institutional, physical and political capital base of the poor.

South Africa's rural development strategies have been criticised for failing to address structural causes of poverty. These shortcomings have implications for the extent to which climate change adaptation will be possible in the current state of policy. Macroeconomic policies such as the Growth Equity and Redistribution (GEAR) have been said to effectively deny the poor development opportunities, marginalise them from the economy and undermine their adaptive capacity[58]. This is mainly because government, in its effort to attract foreign direct investment, higher domestic savings and industrial competitiveness, has further marginalised the poor and failed to reduce poverty. This situation is not peculiar to South Africa, but a common development path pursued by many African States. It is widely recognised that one of the fundamental pro-poor responses to climate change is to ensure that macro-economic policies reduce poor people's vulnerability[59].

Macroeconomic policies such as Growth Equity and Redistribution (GEAR) have been said to effectively deny the poor development opportunities, marginalise them from the economy and undermine their adaptive capacity[62].

Positioning climate change adaptation within the environment sector limits effective integration

Uganda, on the other hand, has developed a new five year National Development Plan 2010–2015 which will be a vehicle through which official development aid (ODA) will be channelled over the medium term. Prior to this plan, and until 2008, the Poverty Eradication Action Plan was the main national development framework. The development of the

58 Noyoo, nd; and Frye, I. nd.
59 DFID. 2004.

new National Development Plan is seen by many actors as an opportunity to review the gains, and act on the challenges, constraints and emerging issues facing Uganda's development. Stakeholders consider that the way in which climate change is addressed in the new NDP will be a critical factor in the country's ability to adapt to climate change.

Thus far, climate change adaptation is not well integrated into the NDP, mainly due to the process through which the issues were introduced during NDP formulation. The incorporation of climate change adaptation issues was guided by sector working papers, one of which was 'Environment, Natural Resources and Climate Change' developed by Uganda's National Environment Authority. Climate change was thus presented as a purely environmental issue and as one of the ten themes analysing the sectoral contribution to national development goals. Integration is critical for effectively mainstreaming climate change adaptation into development planning. Currently climate change is packaged as an environmental issue with no linkages to other key sectors of the economy.

As in Uganda, Kenya's climate change adaptation is not well integrated into its national development framework. Although Vision 2030 makes reference to climate change adaptation, it only does so in the context of building capacity as a part of the environment sector. The National Development Plan on the other hand highlights adaptation issues in light of the 'El Nino-La Nina' episodes and outlines the UNFCCC commitments including 'carrying out programmes for mitigating climate change and adaptation to climate change'. There is an appreciation of the impact of climate variability on, for instance, the water resources and a need to promote policies for sustainable environmental management.

Integration is critical for effectively mainstreaming climate change adaptation into development planning. Currently climate change is packaged as an environmental issue with no linkages to other key sectors of the economy.

Climate change concerns are however not considered within other sections of Kenya's NDP, even though this is an explicit aim of the NDP itself, which acknowledges that full integration of environmental concerns in development planning at all levels of decision-making remains a challenge for the country. The Kenyan Economic Recovery Strategy is silent on the issue of climate change adaptation, which could be attributed to the Ministry of National Planning and Developments' limited ability to integrate climate change into the national planning framework. Climate change considerations have not been seen as crucial to developmental progress due to limited public understanding and inadequate assessments of climate change impacts on key socio-economic sectors. The reference to climate change adaptation in the context of building capacity under Kenya's Vision 2030 is promising. There is however a need to shift climate change away from solely highlighting environmental aspects to underscore national development concerns.

The Nigeria case study indicates that the effectiveness of policies relating to climate change adaptation is low. Their potential to support adaptation measures is therefore not fully utilised. The policies are very broad and do not adequately focus Nigeria's responses to adaptation concerns. The policy framework for aligning human development and climate change management efforts through adaptation is largely undeveloped in the country. Nigeria needs to find a way through which existing national policies, strategies and plans in different development sectors for sustainable development can integrate adaptation to climate change impacts. The national Vision 2020 could provide a good entry point.

Climate change considerations have not been seen as crucial to developmental progress due to limited public understanding and inadequate assessments of climate change impacts on key socio-economic sectors.

Lack of coherent policy framework

A review of the development policy framework in Zimbabwe reveals a lack of coherence and coordination in the incorporation of climate change adaptation responses. Some of the policies constrain climate change adaptation rather than build adaptive capacity. There is a need to harmonise uncoordinated and fragmented legislation and strategies in order to enable and enhance adaptive responses to climate change. A conscious and deliberate effort to mainstream climate change adaptation in Zimbabwe has not been defined. Currently the understanding of climate change among policy makers remains limited, which makes it difficult for them to push for clear adaptation policies and integrate these into the national economic development framework.

Furthermore, this analysis has revealed a lack of policies to support adaptation at the micro level. This issue is not unique to Zimbabwe, but common to all the countries covered in this synthesis, with the exception of Uganda. If adaptation should reflect the dynamics of people's livelihoods (especially the most vulnerable groups) then adaptation needs to be seen as a process that is in itself adaptive and flexible to address locally-specific and changing circumstances[60]. The ultimate goal of the adaptation process should be to provide security to people who face greater threats because of changes to the climatic conditions in which they live[61] .

Similarly, Nigeria has no specific policy that addresses climate change. However, environmental policies, strategies and plans may to some extent serve to address climate change. The National Environmental Policy of 1989 provides an overarching national framework for environmental policies, strategies and action plans. It was reviewed in 1999 to accommodate new and emerging environmental concerns that were gaining global attention. The National Policy on Drought and Desertification of 2007 also recognises that climate change could intensify

60 Murombedzi, J., 2007.
61 Ibid.

drought and desertification in areas that are already experiencing environmental degradation. Some initiatives such as the Green Wall Initiative and the Presidential Initiative on Afforestation will serve as measures that combat desertification, land degradation and address climate change. These initiatives help in mitigating environmental risks, and at the same time enhance economic and social development. A major challenge for Nigeria, however, is the lack of an implementation strategy that will translate these policies into meaningful inter-sectoral activities for sustainable environmental management.

Promising developments towards integration

Tanzania's National Strategy for Economic Growth, commonly known as MKUKUTA, the implementation of which ends in 2010, made no mention of climate change, even though environmental issues were said to be mainstreamed into the plan. The indicators used were poor and little was achieved to support more sustainable natural resources' management in the country. The opportunities are considered to be more promising for MKUKUTA II. Some sectoral studies are under way to examine how climate change adaptation can be integrated in this next five year plan. There is also a designated consultation process devised by the Informal Discussion Group on the Environment (IDGE) to champion a focus on environment in MKUKUTA II.

Gender & climate change

To be successful, adaptation policies and measures within both developed and developing countries need to be gender sensitive. Most of the economically active females in rural areas are engaged in agriculture and, owing to the rapid decline of the male population in rural areas through increasing urbanisation and HIV/AIDS, agriculture is being increasingly feminised[62]. For example, studies carried out by FAO in Mozambique in 1998 showed that for every 100 men working in agriculture, there were 153 women[63]. Similarly, the country studies

62 Wamukonya, N. 2001.
63 FAO, 2001.

> To be successful, adaptation policies and measures within both developed and developing countries need to be gender sensitive. Most of the economically active females in rural areas are engaged in agriculture and, owing to the rapid decline of the male population in rural areas through increasing urbanisation and HIV/AIDS, agriculture is being increasingly feminised[62].

and an earlier study commissioned by HBS on Climate Change and Gender in Southern Africa found that although most of the rural households are female headed, women are not typically empowered in policy making processes[64].

The Zimbabwe, Botswana, Kenya, South Africa, Uganda and Tanzania case studies make the following observations;

- Gender is not mainstreamed into key adaptation response frameworks
- Sectoral policies, especially for the most vulnerable sectors such as agriculture, biodiversity and water, have major gaps in terms of making provisions for gender-related differentiated impacts of climate change
- Enabling provisions, such as security of tenure, weather information, micro-finance and productive employment are not extended to women
- Property rights tend to marginalise women
- Lower literacy levels among women limit their access to information and their household responsibilities often do not allow them to participate in broader public fora

Gender-related barriers to climate change adaptation need to be better understood in order to develop gender–sensitive responses. This requires an understanding of existing inequalities between men and women and of the ways in which existing inequalities might exacerbate the impacts of climate change for individuals and communities.

64 Petrie, B. 2010.

5

INSTITUTIONAL LANDSCAPE & ADAPTATION CAPACITIES

A number of institutions are actively involved in climate change adaptation in various capacities. Institutions are involved in guiding the development of national policies and implementation, undertaking research, building the capacity of stakeholders or facilitating the implementation of climate change initiatives. The cross-cutting impacts of climate change and the imperative for an integrated response means that a formidable set of institutions and actors should be engaged. It also implies a need for coordination and accountable leadership. The roles of various actors are therefore evaluated in the next chapter so as to assess whether effective action is taking place, and to identify the key challenges facing institutions in Africa with regards to climate change adaptation. Adaptation to climate change can reduce impacts and in some cases yield benefits. Heightened attention on, and commitment to, providing new international finance and political attention on climate change has the potential to strengthen weak institutions as well as reduce social vulnerability and inequity, which has been the long-term goal for most development assistance[65].

Institutions are critical for climate change adaptation and yet inadequate institutional support is frequently cited as a barrier to adaptation. At another level, institutional constraints can also limit access to natural resources and therefore hamper adaptation responses for communities who depend on natural resources for their livelihoods. While the importance of both formal and informal institutions for climate change adaptation is recognised, this section focuses purely on 'formal' institutions due to the nature of the country studies. This chapter highlights the role as well as capacities for climate change adaptation of government actors and institutions (central, local government, politicians) as well as non-state actors (NGOs, research institutions, influential people etc.)

Institutions are critical for climate change adaptation and yet inadequate institutional support is frequently cited as a barrier to adaptation.

65 Hepworth, Goulden, 2008.

5.1 GOVERNMENT ACTORS

Management of climate change and climate change policy in Africa is seen primarily as the domain of governments. However, the active participation of various actors in climate change debates at national and international levels provides an opportunity to ensure that interventions are responsive to the needs of the populations they are intended to benefit. It also promotes equity and accountability and allows for transparency in government to aid the management of climate change impacts. A number of governments have established institutional structures for coordinating climate change responses, ranging from specialised units to coordination committees.

South Africa has a complex environmental governance institutional framework. Government institutions within the three spheres of government, which include national, provincial and local, are expected to coordinate and cooperate in the implementation of climate change adaptation interventions, as well as facilitate implementation and policy reform where necessary. Capacities for climate change adaptation seem to be strong at the level of national government but weaker at the provincial and local levels. The main body responsible for climate change policy development is the National Climate Change Committee hosted by the Department of Water and Environmental Affairs. The department plays a critical coordination role in the implementation of climate change responses at the national level driven by other key departments such as Agriculture and Fisheries, Minerals and Energy and Science and Technology.

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In Botswana, government holds the biggest responsibility for climate change adaptation and policy formulation. This responsibility is not explicitly located within one government department but scattered across several ministries and departments. The Department of Meteorological Services (DMES) under the Ministry of Environment, Wildlife and Tourism is responsible for local climate information and predicting local climate change. DMES is also the national focal point for climate change consideration and for meeting Botswana's obligations under the UNFCCC. The National Committee on Climate Change (NCCC) was established as an advisory body to the UNFCCC at the national level and is chaired by the Director of DMES. The NCCC has representatives from government, NGOs and the private sector. The role of the NCCC includes the planning and coordination of the elements and activities of all climate change projects, communication with stakeholders, public awareness raising and management of all climate change projects.

Zimbabwe established a National Climate Change Committee under the auspices of the then Ministry of Mines, Environment and Tourism in 1996. The committee is a cross-sectoral group charged with

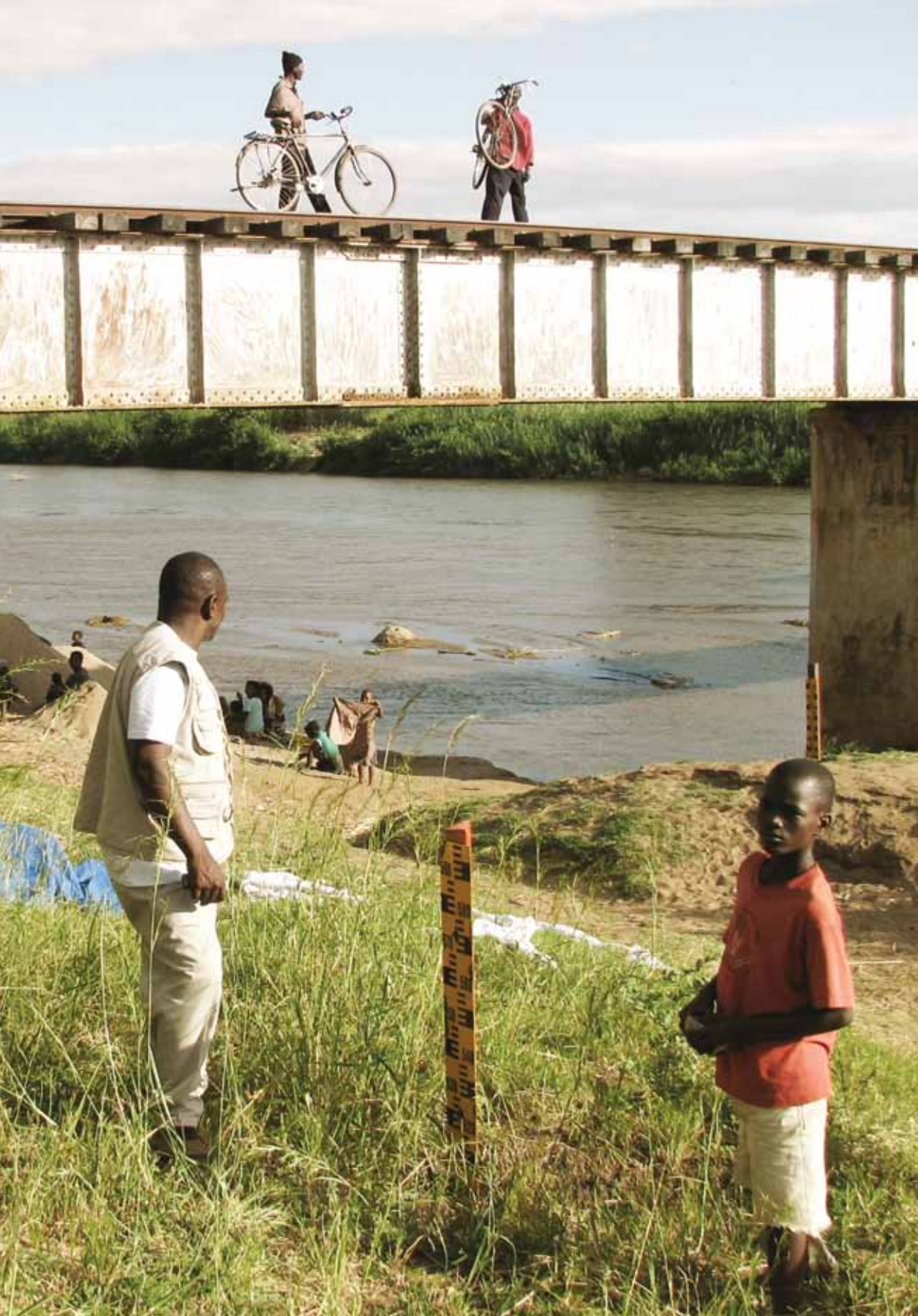
coordinating and reviewing all national climate change positions that the country may take. It also acts as a deliberating body on emerging issues on climate change. The Ministry also established a Climate Change Office with a full-time coordinator. This office and the committee form the institutional core of climate change activities in the country. Other key government agencies include the National Early Warning Unit, various water and agricultural sector institutions and disaster management institutions. Apart from serving in the National Climate Change Committee these institutions are custodians of several policies and programmes that contribute to the national climate change adaptation agenda.

Nigeria has established a climate change desk in all ministries. The institution that is responsible for the coordination of all climate related activities in Nigeria is the Special Climate Change Unit (SCCU), which falls under the Federal Ministry of Environment. Its mandate is to drive the national responses to climate change at the national and international levels. The unit coordinates the implementation of the activities of the UNFCCC, Kyoto Protocol and the Inter Ministerial Committee on Climate Change (IMCCC). The IMCCC is a multi-sectoral committee with representation from several government departments, non-governmental organisations, and private sector and research/ academic institutions. The SCCU works with a number of ministries through the IMCCC.

Nigeria has established a climate change desk in all ministries. The institution that is responsible for the coordination of all climate related activities in Nigeria is the Special Climate Change Unit (SCCU), which falls under the Federal Ministry of Environment.

In Ghana, the designated climate change national authority is the Ghana Environment Protection Agency under the newly established Ministry of Environment, Science and Technology. Supporting the agency is a National Climate Change Committee made up of representatives of various ministries, the private sector and NGOs. This committee has also been given the task of formulating a national climate change policy by the Minister of Environment, Science and Technology.

Uganda has a Climate Change Coordination Unit (CCU) which was established in 2009 under the direct responsibility of the Permanent Secretary of the Ministry of Water and the Environment. It was set up to support the work of the Department of Meteorology, which at that time had been coordinating the national response on climate change and responding to the needs of the UNFCCC. The CCU was established out of the recognition that the Department of Meteorology did not have political clout, resources and capacity to coordinate climate change response across multiple actors. Uganda also established a Parliamentary Forum on Climate Change in 2008. The work of the forum includes streamlining climate change into the national budget, creating a communications strategy, implementing a training programme and taking issues to the constituencies that each member serves.



Other agencies include the Directorate of Water Resource Management, Department of Disaster Management and Refugees within the Office of the Prime Minister and the National Environmental Management Authority. Generally, there is poor coordination between these institutions and the CCU. There appears to be confusion and overlapping mandates between the CCU and the National Environmental Authority, which considers itself directly responsible for the overall coordination of environment matters relating to climate change. The National Environmental Authority considers itself better placed to facilitate the integration of climate change issues into national development processes.

KEY ISSUES AND CHALLENGES

There appears to be significant political attention paid to the impacts of climate change as well as a need for national level responses in Africa. However, the ability to coordinate as well as the capacity to implement is very low due to a number of systemic challenges discussed below. The challenges that these institutions face with regards to enhancing adaptive capacity include lack of coordination, weak institutions at local government level, inadequate finance for adaptation, lack of transparency and accountability and inadequate investment in strategic areas for climate change adaptation. These issues are discussed in more detail below.

Lack of coordination and limited capacities

The cross-cutting impacts of climate change require coordinated adaptation responses at all levels. Yet most of the countries highlighted lack of coordination amongst key sectors as a major problem

In Uganda, effective action is hampered by dysfunctional arrangements for inter-agency coordination, conflicting mandates and weak incentives for taking action. These less obvious constraints operate alongside explicit capacity constraints in terms of resources and personnel. As well as adding to the challenges of developing an effective response, this undermines existing institutional efforts and in turn heightens the country's vulnerability to climate change impacts. Strong leadership with power to influence across sectors and commitment towards tackling these constraints will be required to respond effectively to climate change. Strong leadership is also required from development partners. Uncoordinated action threatens to stifle existing capacity and produces parallel and overlapping initiatives. Furthermore, the institution that is tasked with the coordination role, the CCU, is overstretched, and staff members spend a significant amount of time and resources responding to increasing demands for communication, consultation and engagement with the requirements of international actors. Donor requirements and

Image opposite: The Malawi Red Cross supported the Mphunga village (in Salima District) in developing an early warning system. The Red Cross representative can be seen here next to the gauge they installed. When the river reaches a certain level, community members use the bicycles they were given to cycle to the village and blow whistles to alert village members to leave their houses and take their possessions to higher ground. By Gina Ziervogel.

procedures for procurement, and the needs of international conferences (e.g. COPs) and negotiations take away considerable resources and time from local responses to climate change.

Capacity constraints are also reported for Zimbabwe. Skills migration coupled with limited financial resources to retain qualified staff undermines the adaptive capacity of institutions across the health, environment, water, agriculture and other sectors.

Another problem faced by several agencies tasked with coordination is the lack of authority to coordinate a government-wide response. For instance in Tanzania, the lack of a clear mandate for coordination hampers effective adaptation responses which require integrated planning and implementation of adaptation strategies. The Office of the Vice President, where the coordination mandate sits, does not have the convening power it requires to work with other, more powerful Ministries such as Agriculture and Energy. It has been suggested that coordination responsibility be shifted to the Office of the Prime Minister or Ministry of Finance, which possesses the political muscle to coordinate integrated planning and policy formulation. In some cases, lack of coordination is further worsened by the monopolisation of information related to the UNFCCC and climate change. The coordination function in Kenya sits with the Office of the Prime Minister, which has made a positive difference in getting the commitment and active participation of other ministries, including the Ministry of Environment which previously accorded little attention to climate change issues.

The lack of coordination is exacerbated by ongoing jostling for climate change funding in an environment where most of the government agencies are faced with budget constraints.

The lack of coordination is exacerbated by ongoing jostling for climate change funding in an environment where most of the government agencies are faced with budget constraints. Low income countries such as Uganda and Tanzania consider funding constraints to be a major barrier to inter-agency collaboration on climate change responses. In Kenya, the Ministry of Environment opposed the idea of establishing a Climate Change Commission charged with coordination of climate change response activities for fear of losing funding opportunities. The establishments of a Climate Change Committee would divert climate change funds that would otherwise be channelled towards the Ministry of Environment.

It must be noted that lack of coordination does not only affect government agencies, but appears to be a problem that affects other actors. In Uganda for instance over 20 organisations are reported to be involved in developing strategies for climate change adaptation. These institutions range from donors, government agencies, NGOs and research institutions. Out of these, 11 actors are involved in coordination and four are development partners with a lead role in coordinating sectoral working groups where climate change is considered a cross-

cutting issue. This raises questions on how the strategies are interrelated, whether they are complementary and how they inform national priorities. The uncoordinated efforts of the different actors may cause confusion for policy-making processes and provide conflicting advice.

The role of local government and other decentralised institutions is weak

The role of government structures at various levels is critical for climate change adaptation. While climate change adaption requires strategic interventions at a local level the country studies covered in this synthesis point to a weak role played by local government structures.

In South Africa governance structures have undergone significant changes in the recent past which have affected local government in the short term, creating both new opportunities and challenges. This reform has placed local government in a central role in integrating programmes to achieve synergistic rural development. Many need assistance and guidance to develop capacity, but their role and responsibilities are clearly established in various policies and legislation. The policy and legal provision for decentralisation and integrated economic development planning do not necessarily translate to the level of cooperation required for effective environmental planning. Some of the challenges include the need to rationalise the requirements of the different legislative instruments for environmental management. The current legislative framework in South Africa adds a layer of complexity that makes environmental management, and by extension climate change adaptation, an overly cumbersome and daunting exercise. This presents a challenge for the under-capacitated organs of state at local level to develop adaptation plans. In addition, financial and human resources have been noted as key capacity constraints for adaptation at a local level. There are also power struggles and a lack of cooperation between democratically elected structures and traditional leadership structures. Such conflicts may prove detrimental in times of stress when swift action needs to be taken by local level leadership to guide communities towards 'new' adaptation strategies.

There are also power struggles and a lack of cooperation between democratically elected structures and traditional leadership structures. Such conflicts may prove detrimental in times of stress when swift action needs to be taken by local level leadership to guide communities towards 'new' adaptation strategies.

Although Botswana has a decentralised governance system that works closely with traditional governance structures, this partnership has not been evident in its institutional framework for climate change response. Most of the climate change activities are led by the Department of Meteorological Services in Gaborone with little involvement of its district offices in awareness raising and adaptation projects. Furthermore, due to the cross-sectoral nature of climate change and its broader development implications, the department is not well placed to coordinate and lead a national

response. Such leadership could best be provided by the Ministry of Finance and Development Planning, which has a coordination mandate. Alternatively the Department of Environmental Affairs ought to be playing a more strategic role than it currently does.

In Tanzania and Uganda, effective preparedness was also found to be hampered by weaknesses in linkages between regional, district and lower levels of governance. Provisions for decentralisation and coordination with central government exist, i.e. through Disaster Management and Environmental Protection and to a lesser extent water resources management. However, there is little evidence that this architecture is operational or adequately resourced. The Ministry of Livestock in Kenya is taking measures to ease the impact of droughts on the livestock sector by monitoring market trends and supporting subsidised sales to encourage continued market activity during droughts. However, these activities take place at a district level and are often uncoordinated, short-lived and geared towards disaster management rather than long-term adaptation programmes to enable communities to withstand on-going changes in the climate.

Capacities of local government structures are critical for adaptation responses, particularly in vulnerable districts and regions. Governments, with the support of development partners, and in partnership with NGOs, need to strengthen the linkages between policy and strategy formulation process through decentralised structures so as to respond to local level adaptation needs and priorities.

Inadequate capacity and finance

Tanzania is faced with considerable systemic challenges between government and development assistance which hampers the efficacy of the country's response to climate change. Capacity and finance are thinly spread, and incentives for focusing resources on the needs of the most vulnerable are largely absent. Although key sectors in climate change response such as agriculture, water resource management and disaster management are receiving donor support, a lack of explicit focus on climate change undermines adaptive capacity. This problem is coupled with a continuation of systemic problems such as difficulties in recruitment and motivation and linked to low public sector salaries, weak leadership and low accountability. The problem of low public sector salaries and difficulties in recruitment and motivation are also shared by Uganda and Zimbabwe.

A lack of funding, particularly the low investment of internal resources, combines the with lack of coordination and other factors to undermine adaptive capacities. For instance, the Ugandan Ministry of Water and Environment is allocated as little as 2% of the annual government budget. In the water sector 9% of the total funds are allocated to the

management of water resources. This is a disturbing trend in the sense that if national governments do not prioritise climate change integration and environmental issues in general, it will have negative implications for resource mobilisation, particularly if most donors are questioning the efficacy of providing climate change funding outside the ODA frameworks. Therefore, if climate change is not adequately reflected in the national development frameworks, and African governments do not demonstrate their commitment to tackle the issue through allocation of resources, it may prove difficult to attract external funding.

Kenya and Nigeria also highlight the issues of limited financing for sustained policy, institutional and technical capacities as a real barrier to adaptation preparedness and scaling-up adaptation initiatives.

Lack of transparency and accountability

Corruption and a lack of accountability and transparency were cited as major problems in Uganda and Kenya and this problem permeates all levels of governance, including central and local government and civil society organisations. In these cases, poor governance increases vulnerability. There is a need to build the capacity of institutions to enable transparency and accountability through the strengthening of financial management systems at both central and local governments. The approach of social accountability monitoring has also been proposed as a possible way of keeping corruption in check. Financial flows and climate change spending by governments, NGOs and development partners could be tracked through monitoring and the regular publication of both narrative and financial reports.

In the case of West Africa, the challenges of transparency and accountability are a legacy of prolonged conflict in the region.

In the case of West Africa, the challenges of transparency and accountability are a legacy of prolonged conflict in the region. The West African region has been characterised by armed conflict and undemocratic changes in the political regime. While countries like Chad and Liberia experienced civil wars and coup d'états in the 1980s, the 1990s saw a shift to democratic regimes. For instance, Nigeria, which is currently under a democratic political leadership, was under military dictatorship for 18 years. The years of military rule have undermined Nigerian governance structures, resulting in flawed democratic processes with questionable accountability and government capacity[66].

Inadequate investment in strategic areas for climate change adaptation

In Uganda, the majority of actors are involved in awareness raising and research around climate change, potentially because of the 'newness' of the subject. Far fewer actors are involved in legislative

66 http://www.unodc.org/nigeria/en/social_context.html

aspects, coordination, advocacy and financial cooperation, issues that are critical to the development of a robust adaptation response. Once again, this is a common scenario throughout most African countries. Climate change adaptation policies are underdeveloped and local level interventions are few and far between.

The Nigerian case study underscores the need for additional assessments of adaptation options in order to enable mobilisation and prioritisation of resources, and to address gaps in basic information and research so that the strategic approaches to adaptation are based on evidence.

5.2 NON-STATE ACTORS

In this category, the country studies looked into the roles of NGOs, research institutions and the private sector in climate change adaptation response. Among both international and local NGOs climate change has boomed as an issue of focus in response to both the needs and interests of their constituencies and the availability of funding opportunities around the issue. Participation is skewed towards national and international organisations with very little involvement of community-based organisations (CBOs).

NGOs are calling for broader inclusiveness in the formulation of climate change policy and in crafting the country's official position on climate change.

The involvement of NGOs in climate change programmes is very limited in Botswana. However, there are NGOs that work in related sectors such as forest and veld products management and conservation, water resources management and waste management, all of which present opportunities as climate change adaptation entry points. For example, the Nigeria Climate Action Network (Nigeria-CAN) is a coalition of NGOs that identify innovative entry points and resources to assist in mainstreaming climate policies and programmes into the broader development agenda. Similarly, the Pan African Climate Justice Alliance hosted by Kenya, which is a coalition of African civil societies, engages in work on climate change and sustainable development.

In most instances, NGOs are seen as relatively weak actors whose political space is usually constrained by limited financial and human resources and by a lack of political power, as is the case in Zimbabwe. NGO-Government relations in Zimbabwe have been tense in recent years, with government imposing a ban on NGO field activities from June to August 2008 following the presidential elections. NGOs are calling for broader inclusiveness in the formulation of climate change policy and in crafting the country's official position on climate change. This is a call that is universally shared by civil society organisations. As indicated earlier, the climate change policy discourse has been dominated by states and government agencies at all levels of governance.

Image opposite:
A small scale farmer stands in part of her field destroyed by a flood. She could not recall a similar flood event occurring in the area. Mpumalanga, South Africa. By Gillian Benjamin.

Other challenges include limited donor funding due to donor withdrawal from middle income countries such as Botswana and Namibia, limited capacity and difficulties in staff retention, limited expertise in climate change and adaptation issues and a lack of coordination of environmental and climate change activities. Some are discussed below.

Lack of coordination and local level adaptation activities led by non-state actors

Stakeholders in Uganda have raised concerns about coordination of climate change activities. Particular reference has been made with regards to the activities of international NGOs which are considered to be externally driven by disparate interests leading to intangible outcomes and a general lack of oversight. Despite the presence of NGOs and an interest in climate change initiatives, Uganda noted a lack of concrete adaptation initiatives on the ground.

Some of the countries have coordination initiatives spearheaded by NGOs such as NigeriaCAN, South African Climate Action Network (SACAN), Uganda Climate Action Network, and the Tanzania Civil Society Forum on Climate Change. But most of the activities are organised around the UNFCCC negotiations and COP meetings. Very little is done in terms of sharing lessons and experiences in a coordinated manner and up-scaling local level issues so as to progressively influence policy decisions at national and international levels. However, it must be noted that the space for civic engagement is almost non-existent in these policy fora while funding is limited for adaptation activities led by civil society organisations. Legitimacy and voice in adaptation responses is undermined by the limited role of civil society organisations.

Untapped potential for private sector involvement

In all eight countries covered in this study, very few private sector entities seem to be engaged in climate change adaptation initiatives. Climate change will however affect industries such as commercial agriculture, fisheries and tourism. Even though participation of private businesses is lacking in the adaptation debate, these industries can provide valuable insights and provide resources towards solutions. A number of untapped opportunities exist, such as agricultural micro-finance schemes and weather index insurance.

Other private entities such as the East African Breweries Ltd. and Capital FM in Kenya are said to be supporting climate change adaptation activities. Public-private partnerships have been more active in climate change mitigation, particularly in relation to the CDM. So far, Nigeria has been able to get three CDM projects approved.

Research does not respond to national knowledge gaps on climate change adaptation

A significant number of research institutions and researchers are involved in various aspects of climate change adaptation research. Most of the universities and research institutions in Africa have in-house technical expertise in climate change and solid research programmes, but they lack financial resources and technologies to undertake policy-oriented research. For instance, universities in Zimbabwe, South Africa, Uganda and Tanzania have been at the forefront of climate change research with researchers contributing to a number of IPCCC studies and reports. The challenges they face include:

- A lack of coordination or umbrella entity guiding and prioritising research work
- Disjuncture between research areas and priorities in terms of knowledge gaps in adaptation policy and other responses
- Research capacities are being forced to collaborate on disparate, foreign-led research which answers to external research agendas

In some cases, government institutions and decision-makers also fail to actively engage local research findings and expertise, and opt for foreign technical advice and scientific expertise.

5.3 DEVELOPMENT PARTNERS

The lack of donor coordination, duplication efforts and draining of government resources through project-orientated approaches have long been identified as barriers to effective aid delivery. Major development partners have signed up to the Paris Declaration on harmonisation of development aid. The success of operationalising the Paris Declaration varies from country to country.

In Uganda, key international development partners working on climate change adaptation include the World Bank, GTZ, USAID, and the Norwegian and Belgian governments. These have established an Environment and Natural Resources Donor Partner Working Group (ENR-DPG), co-chaired by the World Bank and various working groups. A coordination mechanism among the donors on climate change has not been established which leads to multiple efforts and sometimes to duplication[67]. In addition to a lack of effective coordination among donors there is a need to reconcile the different expectations within the donor community and non-government actors, particularly on funding modalities.

67 Hepworth, Goulden. 2008.

A stocktaking exercise undertaken in Tanzania in 2009 revealed donors and NGOs to be involved in over 100 different projects, programmes and initiatives associated with climate change. There is no joint programming taking place at donor-level, providing a breeding ground for duplication.

Tanzania is arguably at the forefront of piloting new approaches for better coordination and more effective delivery of aid which sees most bilateral donors pooling their ODA into general budget support or into basket funds attached to sector-wide approaches. Despite commitments to coordinate development assistance, the project approach is still dominant. A stocktaking exercise undertaken in Tanzania in 2009 revealed donors and NGOs to be involved in over 100 different projects, programmes and initiatives associated with climate change. There is no joint programming taking place at donor-level, providing a breeding ground for duplication.

The coordination challenges that donors in Tanzania are faced with mirror those of government institutions. Coordination and communication is restricted to the Development Partner Group on the Environment and the ability and reach of this group is limited given that adaptation needs to be coordinated across sectors such as water, health, energy, finance, development and local government.

Furthermore, the donors in Tanzania are alleged to be re-branding existing development projects as climate change adaptation projects. It is therefore difficult to ascertain the level of 'new' funding that is coming into the country to support adaptation programmes and initiatives associated with climate change. There is no joint programming that is taking place at the level of donors once again providing a breeding ground for duplication.

Image opposite:
Women walking along the road, Mpumalanga, South Africa.
By Gillian Benjamin.

6

PUBLIC AWARENESS & ACCESS TO INFORMATION

The importance of climate change awareness is enshrined in Article 6 of the UNFCCC, which calls upon its parties to, among others things, develop and implement educational and public awareness programmes on climate change and its effects. Apart from being a critical principle of adaptation governance, access to information regarding climate change is also important for fair and equitable public participation in shaping and implementing local and national adaptation initiatives. And yet beyond reiterating the importance of public awareness, most African countries do not have coherent strategies for communicating and raising awareness on climate change issues or national response strategies.

According to the first comprehensive study of global opinions on climate change conducted in 2007–2008 through a Gallup Poll, industrialised countries are more aware of climate change than developing countries, with Africa being the least aware. However, most of the countries covered in the studies reported an increase in communication and awareness in the lead up to COP15. With the exception of a few countries, communication tends to be one-way and falls short of an effective strategy to reach low-end users (rural dwellers, farmers and the poor) who are most vulnerable to the impacts of climate change. Below is a summary of issues raised in the country reports with regards to climate change adaptation:

With the exception of a few countries, communication tends to be one-way and falls short of an effective strategy to reach low-end users (rural dwellers, farmers and the poor) who are most vulnerable to the impacts of climate change.

Local coverage of major events enhances public awareness

Prior to 2005 the level of public awareness in Kenya was very low. However, this situation changed in 2006 when the country hosted COP12 in Nairobi. The major international event received substantial media attention locally. This helped to raise the level of public awareness.

Botswana currently does not have an awareness strategy or programme for climate change. Awareness activities so far have been sporadic, uncoordinated and on an ad-hoc basis. For example, before the country delegation left for the UNFCCC COP15 in Copenhagen, the Minister of Environment, Tourism and Wildlife gave the Botswana position on climate change on Botswana Television. This type of one-way communication did not allow the general public to contribute to Botswana's position or interrogate it. There were no public consultations in the process of preparing the Botswana position.

COP15 enjoyed wide coverage in all the countries covered in this study. The level of attention given to climate change in Africa is unprecedented, possibly due to lengthy negotiations which led to African countries agreeing upon a common position, and the fact that the COP was meant to come up with a new climate change regime post-Kyoto Protocol as the first commitment period ends in 2012. However due to high media attention on COP15 most of the information remained largely accessible to urban populations with TVs and literate members of society with access to print media. It is widely known that the rural poor are numerous while they have low literacy rates. Very few countries field climate change information in local media using local languages.

In Nigeria the importance of public awareness about climate change prompted the Special Climate Change Unit (SCCU) to organise a roundtable discussion, engaging all stakeholders nationwide to get

In the run-up to COP15, Tanzania implemented an innovative awareness-raising and public engagement strategy by holding National Climate Hearings in Dar es Salaam, which brought together Tanzanians from around the country testifying to the effects of climate change on their daily lives.

involved in the debates about climate change and its consequences and implications for policy. The unit also organised a post-Copenhagen climate change roundtable to deliberate on the implications of the Copenhagen Accord for Nigeria. While information sharing and public awareness on climate change in Nigeria is gaining momentum, it is not clear what outcome this awareness has had on influencing policy and decision making.

In the run-up to COP15, Tanzania implemented an innovative awareness-raising and public engagement strategy by holding National Climate Hearings in Dar es Salaam, which brought together Tanzanians from around the country testifying to the effects of climate change on their daily lives. These contributions informed the negotiations of the team from Tanzania in Copenhagen. These events received wide radio and TV coverage due to the involvement of high-profile individuals.

The role played by national crises & media coverage

A series of droughts that hit Kenya between 2006 and 2009 contributed to raising awareness about climate change and climate variability. The droughts occurred at the same time as national discussions on the need to protect vital natural ecosystems such as the Mau forest complex. The local media reporting on these issues linked climate change and environmental degradation to the drought and hunger that the country faced at the time.

The media has however also engaged with the issue of climate change as a primarily global problem and insufficient attention has been given to the local manifestations of climate change.

Image on next page: Man with bicycle walks through a flooded road in Quelimane, Northern Mozambique. By Tremayne Dudley Ward-Smith.

The Kenya report points out that many people at the grassroots level do not differentiate between climate change impacts and problems caused by local and environmental degradation. The media tends to link all natural disasters to climate change and ignore the role that governance inefficiencies play in making impacts worse.

Participatory national response formulation

Most of the country reports show that engagement of stakeholders during the formulation of NCCRS and NAPAs contributed to raising public awareness. Kenya, for instance, undertook national and regional workshops to gather inputs from affected citizens and key stakeholders. However, most of these workshops were dominated by members of parliament, the private sector, NGOs, government ministries and agencies. There is little evidence that these processes led to information reaching the grassroots levels. In addition, the lack of comprehensive communication strategies with key messages targeting different stakeholder groups, as well as mechanisms for receiving input and feedback on a continuous basis, means that awareness-raising tends to be ad hoc and thus ineffective. Botswana, South Africa and Zimbabwe noted this as a glaring gap in raising awareness and public participation.

Public participation and access to information is reported to work better in countries like Tanzania and Uganda, both of which have civil society led awareness raising projects as well as parliamentary fora for climate change. However, communication is not fed by the information and knowledge needs of the general population and awareness is largely restricted to professional cliques in urban centres.

Inadequate understanding leads to false awareness

The Kenya report points out that many people at the grassroots level do not differentiate between climate change impacts and problems

caused by local and environmental degradation. The media tends to link all natural disasters to climate change and ignores the role that governance inefficiencies play in making impacts worse. For instance, while it is clear that climate change has had a profound impact on the hydrological cycle in Kenya, it is also clear that the problems are made worse by land degradation and unsustainable land management practices. Similarly, the devastating effects of floods are a result of poor infrastructure as well as poor land use planning, such as construction on unstable mountain slopes, the building of housing on floodplains and failures to observe urban housing codes. In Uganda, mudslides are increasingly attributed to climate change, absolving governments from the responsibility for effective planning and action on key areas such as environment, infrastructure, food security and health.

On the other hand, media reporting does not have a good handle on uncertainty, with journalists in Tanzania expressing frustration about the struggles they face in covering climate change issues due to the complex nature of the issue. Climate forecast awareness plays a crucial role in planning for agricultural production activities. To this end, the Department of Meteorology has established periodic workshops with the Department of Crop Production, extension workers as well as farmers through which information and technologies are disseminated to assist farmers to prepare for climate and rainfall variability. Information is however sometimes late and only availed to established farmers, leaving small-scale farmers uninformed and more vulnerable to climate variability.

7

CONCLUSION & SUMMARY OF KEY POLICY MESSAGES

Climate change impacts have significant implications for sustainable development and economic growth in Africa. They threaten to reverse the gains of sustainable development and undermine the achievement of MDGs. Agricultural production and food security are at risk, water scarcity is looming and poverty levels are likely to increase if the impacts of climate change are not mitigated and adaptation measures initiated. Adaptation is an urgent issue for Africa and this study argues that adaptation preparedness is dependent on a number of inter-related governance factors. These range from enabling policy frameworks which reduce levels of poverty and inequity at national and local levels, to institutional frameworks that enable participation of all stakeholders to facilitate local level adaptation, to availability of institutional capacity and funding, as well as access to information on the impacts of climate change.

The country studies from East, Southern and West Africa point to glaring gaps in integrating climate change adaptation in national development planning processes and frameworks and addressing key vulnerabilities. An assessment of adaptive capacity preparedness based on a review of policy and institutional frameworks, and the roles played by various actors, as well as levels of public awareness brought to the fore a number of barriers to adaptation governance in Africa. The main points on key sectoral policies are:

Adaptive water resources management – The water sector is one of the most vulnerable in Africa. Although most countries have water demand management policy frameworks these have not yet fully and explicitly considered the implications of climate change. The main challenges are as follows;

- Demand continues to outstrip supply and there is a need to balance this demand with water availability in the future
- Legislation and policies governing water rights are not sufficiently developed to respond to changing climatic conditions and conflicts are likely to develop as a result of increased scarcity. Conflict mitigation needs to be an integral part of water resource management policies
- There is a need to monitor water abstraction and respond to the fluctuation in the availability of water as a result of climate variability
- Equitable access to water for both domestic and agricultural production is a key priority moving forward, particularly considering the challenges facing small-scale and subsistence farmers and the poor.

Agricultural production and food security – Agricultural production systems are exposed to the impacts of climate change leading to negative impacts on national economies and an increase in levels of food insecurity. Building the resilience of this sector is therefore a priority for the climate change adaptation agenda in Africa. A key message coming out of the climate change preparedness studies discussed here is that agrarian reform remains a priority and must form a part of macro-economic policy frameworks while putting an emphasis on addressing structural inequalities which persist with regards to access to land for the poor, women and small-scale and subsistence farmers. Barriers to land reform need to be identified and addressed. Equally important are efforts to promote sustainable land and water management, technology transfer, improve crop varieties, access to finance and other adaptation enablers.

A key message coming out of the climate change preparedness studies discussed here is that agrarian reform remains a priority and must form a part of macro-economic policy frameworks...

Biodiversity and natural resources – As biodiversity and natural resources contribute significantly to local and national economies in Africa, policies in this area are important for climate change adaptation. This sector is highly vulnerable to the impacts of climate change and warrants close monitoring in order to mitigate the impact and enhance adaptive capacity. Countries need to take advantage of emerging opportunities in the forestry sector like REDD, but not at the expense of local livelihoods that benefit from the use of such resources. Community-based forestry and wildlife conservation

programmes have a potential role in diversifying local livelihoods and building the resilience of local communities. However, in order for these opportunities to materialise, governments need to support the decentralisation of natural resources management, support the development of local level institutions and move towards securing the resource rights of local communities.

Mainstreaming climate change into economic planning frameworks is of paramount importance. The following conclusions are drawn;

- NAPA and NCCRS fall short of providing an overall policy framework for integrating climate change adaptation into development planning. Most of the vulnerability assessments focus on biophysical impacts of climate change and pursue a sectoral approach to analysing impacts on national economies. It is therefore difficult for development planners to have a holistic perspective of adaptation priorities at both national and micro levels. Social and economic vulnerabilities need to be assessed so as to inform the process of identifying adaptation priorities and mainstreaming climate change into key development policy instruments. There is a need for policies that explicitly address adaptation to climate change, providing guidelines on its integration and mainstreaming into key economic sectors.
- Some macro-economic policies undermine adaptive capacity, particularly at the local level. Development policies are not pro-poor and tend to be focused on attracting FDI without addressing the structural causes of poverty and vulnerability. Macro-economic policies must be reviewed to ensure that they build resilience of the poor to adapt to the impacts of climate change.
- Positioning the climate change agenda within the environment sectors tends to limit effective integration. In most of the country assessments where climate change is mentioned in the national development plans or poverty reduction strategies it tends to be confined to the environment chapters of the plans and not mainstreamed into the plans of key sectors such as agriculture, water resources management or energy. Climate change adaptation must be addressed as a cross-cutting policy and development issue to ensure integration.

Macro-economic policies must be reviewed to ensure that they build resilience of the poor to adapt to the impacts of climate change.

Institutional frameworks;

- Coordination capacity needs to be strengthened and placed within a ministry or agency that has political clout and convening power to enable it to facilitate integration across other ministries and agencies. A number of countries have set up units or agencies to coordinate climate change responses at the national level. However, coordination tends to be undermined by a lack of

Climate change adaptation must be integrated into the planning frameworks of decentralised governance structures and adaptive capacities built at that level. Coordination needs to be ensured between various stakeholders at this level.

political clout or convening power. In cases where the coordination function sits within the Ministries of Environments these agencies are not in a position to facilitate integration by other more 'economically and politically' powerful ministries such as those of Agriculture, Energy and Economic Development Planning. In some cases the coordination agencies are overstretched due to demanding reporting and meeting requirements of the UNFCCC and therefore inadequately engage with national level stakeholders. Responding to the national agenda should be one of the core functions of climate change coordination activities at the national level.

- The success of climate change impacts will depend on the extent to which impacts are felt on the ground and resilience is enhanced at the local level. This renders the role of local institutions critical. Climate change adaptation must be integrated into the planning frameworks of decentralised governance structures and adaptive capacities built at that level. Coordination needs to be ensured between various stakeholders at this level.
- Adaptation funding at both local and national levels needs to increase. However, priority must be given to addressing the adaptation needs of the most vulnerable (women, small scale and subsistence farmers and the poor). Systemic capacities to improve accountability and transparency must be built at all levels of governance.

Donors, researchers and civil society organisations similarly share the same problems of coordination. In order to harness and enhance the institutional capacities of these players, better coordination is required. The interventions spearheaded by these actors need to respond and contribute to national adaptation priorities. The role of these actors, especially that of civil society, needs to be acknowledged and form a core part of partnerships with state actors and other players for climate change adaptation. Government agencies cannot tackle the problems of climate change on their own.

Access to information and public awareness is critical for climate change adaptation capacity. Communication strategies need to be developed so as to respond to the information needs of stakeholders at various levels. Lack of information on projected impacts of climate change at the local level will undermine the adaptive capacities of most rural dwellers, particularly because they depend on climate sensitive resources for their livelihoods. Timely availability of information is therefore critical in facilitating decision-making by groups such as farmers. Locally, specific information needs to be generated and current knowledge gaps filled.

Overall, adaptation governance in Africa calls for a fresh look at the quality of growth and development and requires a renewed emphasis on equity and efforts to improve levels of public participation and engagement in the formulation and implementation of climate change adaptation responses. There is a need to renew the political drive towards sustainable development and equity at various levels of society and policy-making.

Image on next page:
Riemvasmaak, Northern Cape. By Robert van Rooyen

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