

Report

Tanzania National Climate Change Finance Analysis

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Key messages

- This study provides a first estimate of climate change relevant expenditures that appear in the national budget of Tanzania over the period 2009/10 – 2012/13.
- Climate change relevant expenditure has increased steadily as a proportion of the total budget from 4.2 per cent in 2009/10 to 6.5 per cent in 2012/13. This growth in budget for climate change relevant activities has been driven by an increase in donor funding that is on-budget.
- The 2012 National Climate Change Strategy represents a significant milestone, but it needs to be further strengthened to include: (i) the identification of priority programmes; (ii) their budgeted costs; and (iii) the expected sources of funding.
- The financing of climate change actions appears to be treated primarily as a budgetary rather than a policy issue.
- The composition of climate change relevant expenditure appears to have shifted over the four year period, from projects with a primary focus on either adaptation or mitigation, to projects that appear to combine both objectives.
- There is a considerable amount of spending taking place in ministries without the full realisation of the significance of such spending in terms of its relation to climate change.

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Promoting Effective Climate Finance: ODI is building an evidence base on climate finance delivery and management through a number of country case-studies. This report presents the findings of the country study in Tanzania.

How climate finance is accessed, managed and then spent in ways that effectively reduce vulnerability, promote development and gender equity, and reduce greenhouse gases represents a major challenge for national governments as well as the international community. The tracking of this finance, at both the international and national level, faces the problem that climate-related actions are difficult to identify with precision, and this lack of clarity leads to uncertainty over estimates of spending.

These national studies explore the concept of 'climate finance' and propose pragmatic ways forward that will strengthen the policy debate. All publications of this series are available at: <http://www.odi.org.uk/projects/2537-climate-finance-climate-change-fast-start-finance>

Table of contents

Acknowledgements	ii
Abbreviations	iii
Executive summary	v
Study recommendations	xi
1 Introduction	1
2 Study methodology	4
3 Policy analysis	12
4 Institutional analysis	24
5 Macroeconomic context and public financial management	34
6 Expenditure Review	52
7 Sub-national level analysis	64
8 Conclusions	76
References	77
Annex 1. Measuring the effectiveness of public climate finance delivery at the national level	83
Annex 2. Government climate change-related programmes and projects, 2009/10 – 2012/13	93
Annex 3. Estimation of recurrent spending	109

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The views presented in this paper are those of the authors and do not necessarily represent the views of ODI and the Centre for Climate Change Studies. In particular, no responsibility for the opinions here expressed should be attributed to the Government of Tanzania or DFID, UK.

Abbreviations

BOT	Bank of Tanzania
CDM	Clean Development Mechanism
COP	Conference of the Parties (to the UNFCCC)
EMA	Environmental Management Act
GDP	Gross Domestic Product
GHG	Greenhouse Gases
LGA	Local Government Authority
MDAs	Ministries, Departments and Agencies
MoFEA	Ministry of Finance and Economic Affairs
MRV	Monitoring, Reporting and Verification (of GHG emissions)
MTEF	Medium Term Expenditure Framework
NAPA	National Adaptation Programme of Action
NCCSC	National Climate Change Steering Committee
NCCTC	National Climate Change Technical Committee
NCCFP	National Climate Change Focal Point
NEAP	National Environment Action Plan
NEMC	National Environmental Management Council
NEP	National Environmental Policy
NFP	National Forest Programme
NGO	Non Government Organisation
NPA	National Planning Authority
OPM	Office of the Prime Minister
ODI	Overseas Development Institute
PEFA	Public Expenditure and Financial Accountability Assessment
PFM	Public Finance Management
REDD	Reduced Emissions from Deforestation and Forest Degradation

TNRF	Tanzania Natural Resource Forum
UNFCCC	United Nations Framework Convention on Climate Change
VPO-DOE	Vice President's Office – Division of Environment

In this report Tanzania only refers to the Mainland; it does not include Zanzibar.

Executive summary

Climate finance delivery in Tanzania

Climate finance is central to global efforts that aim to achieve the objectives of the United Nations Framework Convention on Climate Change (UNFCCC). At the international level, climate finance has dominated much of the UNFCCC negotiations, reflecting a divergence in position between developed and developing countries. At the national level, particularly for the least developed countries and African countries such as Tanzania, available funding represents one of the key limiting factors holding back the delivery of national obligations.

The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) will provide an authoritative global view on climate change, yet understanding such change at the national level remains problematic. This uncertainty raises doubts for policy makers who have to determine an appropriate level of funding going to climate change actions among the many development challenges facing the country. This report has been prepared to help build greater awareness on how far the national response to climate change has evolved in Tanzania. Looking forward, the expected rapid growth of spending on climate change actions can be expected to raise governance and management challenges for implementing agencies, which should be considered early in the design and execution of national climate change programmes.

Both the Tanzanian Government and the international community presently do not have sufficient ways of measuring public flows of climate finance, nor of promoting effective practice in the delivery of financial support for climate change-related actions. This study aims to address both of these constraints, by identifying relevant public expenditure and measuring the effectiveness of such spending against an explicit assessment framework (described in annex 1). This is the first time this has been attempted in Tanzania and therefore represents an early exploration of the relevant issues. The methodological approach combines a qualitative analysis of the policy context and institutional arrangements with a quantitative review of public spending on climate change relevant actions.

This study has focused on climate change relevant spending that appears in the national budget over the period 2009/2010 – 2012/13. It is important to acknowledge that expenditure on climate change can come from a variety of sources. These include international climate funds, bilateral and multilateral donor funds, public funds, and private sector funds. This study focuses on funding allocated to finance climate change actions through the national budget, as such spending is most closely aligned with national policy setting and institutional arrangements.

A first step in identifying how government is responding to climate change is to identify which Ministries are actively engaged on this issue. Fifteen Ministries have been identified based on their policy engagement and spending over the four year period. The Government of Tanzania Chart of Accounts does not contain a marker for 'climate change relevant' spending, so the study team had to identify these programmes and projects within each ministry manually. A total of 87 expenditure lines from the development budget were classified as climate change relevant (listed in annex 2). The study team developed a categorization of these expenditures based on the degree of their relevance to climate change. This has allowed a first estimation of climate change relevant expenditures to be made. The methodology separates spending between the two main climate change strategies of adaptation and mitigation.

Policy issues influencing government spending on climate change

Climate change is a recent national policy concern. The earlier emphasis given to sustainable development has provided a platform for climate change to be considered within several sector policy processes. However, in spite of these sector policies there is no over-arching national climate change policy at present, with policy direction remaining anchored in the 1997 National Environmental Policy. The 2004 Environmental Management Act prescribed that the Minister responsible for the environment would assume the national leadership role on climate change, thus setting the course of subsequent action on climate change in Tanzania.

Several national initiatives have been undertaken at the strategy level: the 2007 National Adaptation Programme of Action; the 2012 National Climate Change Strategy; and the 2013 National REDD+ Strategy and Action Plan; all of which received strong development partner support. Climate change is also now recognized as a challenge to national development within the current five-year National Development Plan.

The 2012 National Climate Change Strategy represents a significant milestone, but it needs to be further strengthened to include: (i) the identification of priority programmes; (ii) their budgeted costs; and (iii) the expected sources of funding, if implementation is to be secured. The Strategy was developed through a thorough and extensive consultative process involving different thematic groups, where stakeholders could present their views to provide input and influence the process. What is less clear is how these stakeholder views were later analysed and incorporated into the strategy.

The financing of climate change actions appears to be treated primarily as a budgetary rather than a policy issue, with the national strategy providing only the briefest of references to the financing mechanisms required to implement climate change actions. Mention is made of the leadership required from the Ministry of Finance, whilst at the same time suggesting that a national climate fund may be necessary to manage all sources of finance efficiently.

The Institutional architecture supporting climate finance delivery

Tanzania's institutions are still at an early stage in responding to this new challenge. The lack of delineation between climate change and environmental-related issues has brought about some confusion, as they tend to be treated as one and the same thing. This is reflected in the current institutional architecture, which has been inherited from one that was designed to address environmental issues. This may not be sufficiently robust to allow for the integration of climate change into the plans, programmes, and projects of all relevant sectors of the economy.

A significant absence in the current institutional architecture is the Planning Commission. The Commission is mandated to monitor, analyse and provide advice on long-term sector policies and socio-economic developmental issues. As the country's national planning agency, one would expect to find it embedded in the institutional structure for addressing climate change, yet this does not appear to be the case.

The National Climate Change Steering Committee (NCCSC) and the National Climate Change Technical Committee (NCCTC) are important forums to facilitate the coordination of cross-sector climate change actions. In principle, both committees have been established and are functioning, but they do not appear to meet on a regular basis, and lack a supporting secretariat beyond the National Climate Change Focal Point (NCCFP). In addition, their mandates are not in the public domain and so the extent of their role in coordinating the country's response to climate change remains unclear. So, in practice, the process of coordinating climate change actions across sectors and levels of government remains a formidable challenge.

Ministries have established 'desks' to mainstream climate change in their respective sectors. However, the current capacity of these climate change desks is restricted by limited knowledge on climate change, compounded by the meagre financial resources allocated to the desks. More generally, throughout the government service knowledgeable human resources on climate change-related issues is a major constraint. Further efforts are required to link science, research, innovation and policy formulation on climate change.

Capacity constraints at the national level are amplified at the local government level. Local Government Authorities do not appear to be well prepared to respond to climate change, nor to spend any increased flow of finance in support of relevant change actions. Districts where NGOs are active on climate change issues appear to be better placed in planning and implementing climate change programmes and projects than those without. However, the sustainability of such initiatives is often in doubt since they rely on external finance to support implementation.

Macroeconomic and Public Finance Management context for spending on climate change

Tanzania's macroeconomic performance over the recent past has been strong, with steady growth in GDP since the late 1980s. The country has sustained a real GDP growth rate of at least six per cent for the last 12 years. During this period, Tanzania's economy has changed from one dominated by agriculture to one where services and industry comprise a substantial proportion of growth. The communications sector has generated the strongest economic growth in recent years, with the construction and financial intermediation sectors also performing strongly. Climate change may therefore have less effect on GDP figures in the years ahead due to the higher growth within sectors that are less climate-sensitive, but it will continue to have a significant impact on the livelihoods of smallholder farmers and therefore on national poverty reduction efforts.

Electricity supply has not been able to meet national demand and load shedding during the last 15 years has negatively impacted economic growth. With climate change, securing the national energy supply represents a continuing and major challenge.

While important improvements in public financial management systems and expenditure management have been achieved in recent years, significant challenges remain. These include the need to link medium-term strategies to annual budgets. Tanzania's capacity to implement such national strategies needs to improve if climate change is to be effectively managed in the future. Climate change expenditure related to infrastructure investment in particular will require multi-year planning and management and the effectiveness of this expenditure risks being compromised by weak management systems.

Public expenditure on climate change relevant actions, 2009/10 – 2012/13

Tanzania's budgeted amount for climate change-relevant activities grew from TZS 392 bn (USD 293 mn¹) in 2009/10 to TZS 896 bn (USD 565 mn²) in 2012/13; adjusted for inflation this represents a real growth of 57 per cent in three years.

¹ Exchange rate at July 2009

² Exchange rate at July 2012

	2009/10	2010/11	2011/12	2012/13
Total budget for climate change-relevant activities (Tshs bn)	392	513	811	896
Share of total budget (%)	4.2	4.8	6.4	6.5

Climate change-relevant expenditure has increased steadily as a proportion of the total budget from 4.2 per cent in 2009/10 to 6.5 per cent in 2012/13. This growth in budget for climate change-relevant activities is driven by an increase in donor funding that is on-budget. Domestically sourced finance declined by 4 per cent over the period while foreign-financing grew by 61 per cent, reflecting considerable development partner support.

	2009/10 (09/10 TZS bn)	2010/11 (09/10 TZS bn)	2011/12 (09/10 TZS bn)	2012/13 (09/10 TZS bn)
Total budget for climate-related activities, adjusted for inflation	392	459	656	617
Domestically financed	281	226	219	266
Foreign financed	111	233	437	351
<i>Foreign financing as share of total</i>	<i>28%</i>	<i>45%</i>	<i>54%</i>	<i>39%</i>

Seventy per cent of climate change-relevant funding is allocated to development expenditure, which partly reflects the investment nature of climate-change mitigation and adaptation activities, but also the Ministry of Finance's practice of classifying all projects and programmes (including those funded by donors) as 'development' expenditure. This implies that the boundary between the development and the recurrent budget is somewhat arbitrary, limiting the extent of analysis by these categories of government spending.

Approximately three-quarters of the development budget is spent in most years. However, the government does not publish detailed outturn data which means that it is not possible to determine specifically where these shortfalls in spending occur.

Climate change-relevant expenditure is concentrated in low-relevance projects, meaning that few of the 87 identified projects specifically aim to tackle climate change. There is, therefore, a considerable amount of spending taking place in ministries perhaps without the full realisation of the significance of such spending in terms of its relation to climate change. This warrants further awareness raising and the explicit inclusion of all such activities in the national response to climate change.

The share of high-relevance projects (where addressing climate change is a main objective of the expenditure) has increased from 5 to 13 per cent of the total climate change-related budget between 2009/10 and 2011/12. Such development projects range from the investment in the rapid transport programme for Dar es Salaam to the mainstreaming of sustainable forest management. It is noteworthy that a direct response is more clearly

seen for mitigation activities than for adaptation, and reflects in part the conceptual challenge of separating the latter from good development practice.

High relevant climate change programs within ministries

Ministry	Development Project	Project Objective
Vice President's Office	Climate Change Impacts, Adaptation and Mitigation (CCIAM) programme	To promote natural forest conservation, afforestation, reforestation and better agricultural practices for improved livelihoods
Vice President's Office	Mainstreaming Environment and climate change	To provide guidance on how to mainstream responses to climate change within economic development
Prime Minister's Office	Strengthening National Disaster Preparedness	To enhance national capacity to reduce vulnerability and mitigate disasters.
Prime Minister's Office – Regional Administration and Local Government	Dar es Salaam Rapid Transport Programme	To provide a mass transport program that will help improve the overall mobility of the city and reduce emissions.
Prime Minister's Office – Regional Administration and Local Government	Mainstreaming of Sustainable Forest Management	To support key MDAs and LGAs integrate climate change adaptation and mitigation into their strategies and plans
Ministry of Energy and Minerals	Rural Pv-Market Barrier Removal	To reduce Tanzania's energy-related CO2 emissions by introducing photovoltaic (Pv) as a substitute for fossil fuel (kerosene) utilized for lighting in rural areas
Ministry of Energy and Minerals	Rural Electrification	To avoid deforestation, climate change, air pollution (indoor & outdoor) and land degradation
Ministry of Energy and Minerals	Climate change Adaptation and Mitigation	To support climate change adaptation and mitigation
Ministry of Education	Climate Change Adaptation and Mitigation	To enhance national capacity to reduce vulnerability and mitigate disasters.

Overall, the composition of climate change-relevant expenditure appears to have shifted over the four year period, from projects with a primary focus on either adaptation or mitigation, to projects that appear to combine both sets of activities.

The relationships and linkages between central Ministries, the regional secretariats and LGAs to ensure that relevant expenditure is handled most effectively needs to be better understood. Focusing attention and funding on the central Ministries may not necessarily be the most effective way to engage with the staff actually undertaking climate change-relevant work.

The effectiveness of public spending on climate change actions

The effectiveness of climate finance delivery depends on the linkages that exist between policy formulation processes, the institutional architecture of implementing agencies and the national budgetary system. These interactions are complex and are subject to a wide range of influences. One such external influence is the international attention given to climate change, which may be significant in terms of funding levels for climate change actions.

Much progress has been made, over a relatively short period of time, on developing an overarching policy for climate change in Tanzania. The national climate change strategy provides guidance for both the coordination and implementation challenges that confront the country's response to climate change. In many respects, the trajectory of government's delivery programme has now been set.

More challenges remain in securing the clarity needed in this new area of public policy over institutional mandates, roles and responsibilities. The intent to establish new structures needs to be balanced with the need for established parts of government – notably the Ministry of Finance and the Vice President's Office – to build strengthened capacity. What holds for central governments agencies is magnified at the local government level, where the implementation challenge is most acute.

Delivering public financial resources for climate change-relevant actions depends critically on the strength of the public finance management system. The known weaknesses of the national system (as reviewed through the PEFA process) will lessen the effectiveness of climate finance delivery until they are addressed. The long-term nature of climate change investments places particular demands on this system. Considerable investments in system strengthening will therefore continue to be necessary to allow for an effective national response to climate change. Climate finance delivery needs to be seen in this light.

Study recommendations

Based on the analysis contained within this report, the study team offers the following outline recommendations to government in order to improve the effective delivery of climate finance delivery in Tanzania. They budgetary implications of these measures have not assessed, although timely implementation would likely require support from development partners.

(i) Securing information on climate finance

Issues to be addressed	Recommendations
<ul style="list-style-type: none"> Climate change-relevant expenditure is not recognised through specific coding of expenditure within the national budget, making it very difficult to identify such expenditures. Most climate change-relevant expenditure identified by the study team is concentrated in low-relevance projects, where tackling climate change is not a stated objective of the expenditure. 	<ul style="list-style-type: none"> The possibility of tracking climate change public expenditure within the national budget should be explored with the Ministry of Finance. In the first instance, a design workshop (involving financial statisticians, economists and climate specialists) should be held to address the design issues of tracking climate finance. Climate change finance information, focusing initially on high and medium relevant government programmes, should be compiled by the ministry of finance and the VPO and shared with all key stakeholders. Raising awareness of sector ministry planners should be developed through tailored training opportunities, so that the likely climate change outcome of their development planning is better understood.

(ii) Strengthening the policy setting for effective climate finance delivery

Issues to be addressed	Recommendations
<ul style="list-style-type: none"> The present policy direction for climate change remains anchored in the 1997 National Environmental Policy. The main parameters of national strategy have now been set, within the 2012 National Climate Change Strategy and the 2013 national REDD+ strategy. However, a financing plan for these strategies has not been developed. 	<ul style="list-style-type: none"> An over-arching policy statement on government's overall response to climate change is over-due. Such a policy statement should consider the optimum institutional location for national leadership on climate change. The 2012 National Climate Change Strategy represents a significant milestone, but it needs to be strengthened if implementation is to be secured with an action plan that includes: (i) the identification of priority programmes; (ii) their budgeted costs; and (iii) the expected sources of funding.

(iii) Securing the institutional capacity for effective climate finance delivery

Issues to be addressed	Recommendations
<ul style="list-style-type: none">• The current institutional architecture for climate change has been inherited from one that was designed to address environmental issues. This may not be sufficiently robust to allow for the integration of climate change into the plans, programmes, and projects of all relevant sectors of the economy.• Ministries have established 'desks' to mainstream climate change in their respective sectors. However, the current capacity of these climate change desks is restricted by limited knowledge on climate change issues, compounded by the meagre financial resources allocated to the desks.	<ul style="list-style-type: none">• The Planning Commission needs to become more engaged as part of the institutional response to climate change, in the first instance as an active partner of the NCCSC and NCCTC.• A major skills improvement programme on climate change, starting with the sector climate change 'desks', should be designed and then implemented.

(iv) Supporting PFM environment for effective climate finance delivery

Issues to be addressed	Recommendations
<ul style="list-style-type: none">• While important improvements in public financial management (PFM) systems and expenditure management have been achieved in recent years, significant challenges remain. These include linking medium term strategies to annual budgets. Tanzania's capacity to implement such national strategies needs to improve if climate change is to be managed effectively in the future.• Climate change expenditure related to infrastructure investment in particular will require multi-year planning and management and the effectiveness of this expenditure risks being compromised by present management systems.	<ul style="list-style-type: none">• If climate finance is to be delivered effectively, there is need to further improve cash management and work to enhance the credibility of the annual budget to reduce within-year re-allocations.• Additional investments are required in multi-year planning and budgeting processes through enhancing the capacity for investment planning.

(v) Actions at the local government level

Issues to be addressed	Recommendations
<ul style="list-style-type: none">• The linkages between central Ministries, the regional secretariats and LGAs need to be strengthened to ensure that climate change relevant expenditure is handled most effectively.• A relatively small share of climate change-relevant spending is controlled at the regional level, and this share appears to have halved from 24% in 2009/10 to 12% in 2012/13.	<ul style="list-style-type: none">• Building on innovative project-level actions, new mechanisms to support climate change activities carried out by LGAs should be explored.• Awareness raising and technical support relating to climate change (causes, impacts, and adaptation/mitigation options) should be provided to key district government staff.

1 Introduction

1.1 Significance of the study

Climate change is a new area of public policy that is expected will have a significant impact on national economic development and directly on people's lives and livelihoods. However, at present there is limited understanding of what the cost of responding to climate change will be. An important starting point is to identify the financial resources that are currently being spent by government to fund climate change-related activities. This can provide an indication of how far the national response to climate change has evolved. Looking forward, the expected rapid growth of this expenditure will raise governance and management challenges for implementing agencies, which should be considered in the design and execution of national climate change programmes.

At the international level, the UNFCCC intends to reach an agreement that will avoid the most dangerous impacts of global warming. An important component of the international response is to provide new and additional finance to support actions carried out within the world's vulnerable countries. This is recognised in the goal set by the international community to raise USD 100 billion per year by 2020. International support is already forthcoming to assist countries such as Tanzania prepare for and respond to climate change, but this source of funding raises questions of sustainability and how such support should be channelled into national systems. There is also the question of how to prioritise spending of finite financial resources. Budgetary allocations are never sufficient to meet all public spending needs, making a consideration of the strength of the systems that manage climate change-relevant expenditures important.

Measuring the effectiveness of public spending on climate change actions is fraught with difficulties, due to the definitional ambiguity of such actions (Burton, 2004), the complexity of public funding flows, and a lack of clarity on what effectiveness actually means. There are a number of further challenges to be faced: there is generally limited information on actual expenditures (as opposed to budget estimates); the national budget classification can act as a barrier to the interpretation of climate change actions; and a significant amount of international funding does not pass through the national budget.

So, at present the Tanzanian Government and the international community do not have good ways of measuring public flows of climate finance, nor of promoting effective practice in the allocation of public funds to climate change-related actions. This study aims to address both of these constraints, by identifying relevant public expenditure and measuring the effectiveness of such spending against an explicit assessment framework.

1.2 Objectives of the study

The primary objective of this study is to review public spending on activities that are related to climate change, and to assess the extent to which this expenditure responds to existing policy and institutional demands. This assessment is intended to show how climate change-relevant expenditure passes through the country's budgetary systems in response to national policy setting,

allowing recommendations to be made for the further integration of such expenditure into budgetary allocation and budget execution processes.

The study's objectives are met by examining three interlinked elements: i) the policy context; ii) the institutional architecture; and iii) public expenditures. The last element represents the core focus of the study.

1. Examining the policy context helps to build a picture of the overall policy environment for climate change expenditure, from the formulation of climate change policy to its linkages to spending through national strategies and action plans.
2. Mapping the institutional architecture unpacks the role and responsibilities of institutions involved in managing the response to climate change and their interaction. In doing so, it provides an important basis for understanding public spending on climate change actions.
3. The expenditure analysis quantifies climate change relevant expenditures in the national budget, as well as through other funding channels. This is done by selecting activities, projects and programmes that are recognised as being part of the national response to climate change and then extracting the budget estimates and actual expenditures from the budget documentation.

This study will help to map out a strategic financing framework for climate change that promotes a whole-of-government approach to climate change actions through the use of country systems. It identifies baseline climate change-relevant expenditures, which may assist the development of a tracking framework; it will also help identify funding gaps where there is a need to increase funding from both domestic and international sources

Overall, this study is intended to act as a key building block to help develop a framework that identifies climate change actions, assesses the demand for climate funds, as well as the availability of finance from domestic and international sources. In time, the study methodology can serve as a tool to enable the Government of Tanzania improve the prioritisation, efficiency and effectiveness of the public resources directed at supporting climate change adaptation and mitigation³.

1.3 The study's analytical framework

This study's analytical framework (annex 1) provides an approach to measuring the effectiveness of the national systems that underpin public climate finance delivery. As noted in the preceding section, three interlinked elements of the government administration are assessed: the policy environment that supports climate change expenditures, the institutional architecture that determines relevant roles and responsibilities over funding decisions, and the public financial system through which climate change-relevant expenditures are channelled. Key principles of effective climate finance delivery for each of these three elements have been identified. Criteria and indicators that reflect a progression towards compliance with the principles have also been formulated. Importantly, the indicators are not intended to reflect any 'ideal state', but provide a means by which current practice can be interpreted and highlight important areas for progress.

³ This present study is limited to mainland Tanzania, reflecting the initial exploratory nature of this work. Future analysis will need to include the conditions that apply in Zanzibar.

Four principles of policy development and implementation relevant to the effective delivery of climate change finance have been identified from the international literature. These are: ease of implementation, legitimacy, coherence and transparency. A further three principles relate to institutional performance: coordination, innovation and local anchorage. In terms of public expenditure, the four principles relate to the execution of the budget cycle: planning, execution, reporting and external audit.

Collectively, these principles, criteria and indicators provide an explicit framework for the study, by which the strength of the national climate finance delivery system is assessed, and from which its effectiveness can be considered.

2 Study methodology

Chapter summary

- This study focuses on planned public expenditures in the national budget over the period 2009/10 – 2012/13 that are climate change related. This is the first time this has been attempted in Tanzania and therefore represents an early exploration of the relevant issues.
- The methodological approach combines a qualitative analysis of the policy context and institutional arrangements with a quantitative review of public spending on climate change actions. The budget review depends on several qualitative decisions and assumptions made by the study team.
- The first step in understanding how government is responding to climate change is to identify the Ministries that are actively engaged on this issue. Fifteen Ministries were identified, based on their policy engagement and spending record over the study period.
- The Government of Tanzania Chart of Accounts does not contain a marker for ‘climate change relevant’ spending, so the study team had to identify these programmes and projects manually. A total of 87 expenditure lines were identified over the four year period from the development budget (listed in annex 2).
- The study team developed a categorization of these expenditures based on the degree of their relevance to climate change, following a protocol developed by the same team elsewhere. Significantly, the classification looks beyond spending where a climate change response is the primary objective to capture expenditures where some level of impact on climate change-related outcomes can be ascertained. This allows a first, broad estimation of climate change relevant expenditures to be made.
- The methodology allows for distinguishing between two main climate change strategies: adaptation and mitigation.

2.1 Introduction

This chapter outlines the approach the study team adopted to identify and classify climate change-relevant public expenditure in Tanzania. It is important to acknowledge that expenditure on climate change can come from a variety of sources. These may include: international climate funds, bilateral and multilateral donor funds, public funds, and private sector funds. This study focuses on funding allocated to finance climate change actions through the national budget, as such spending is most closely aligned with national policy setting and institutional arrangements.

2.2 Approach to classifying government expenditure

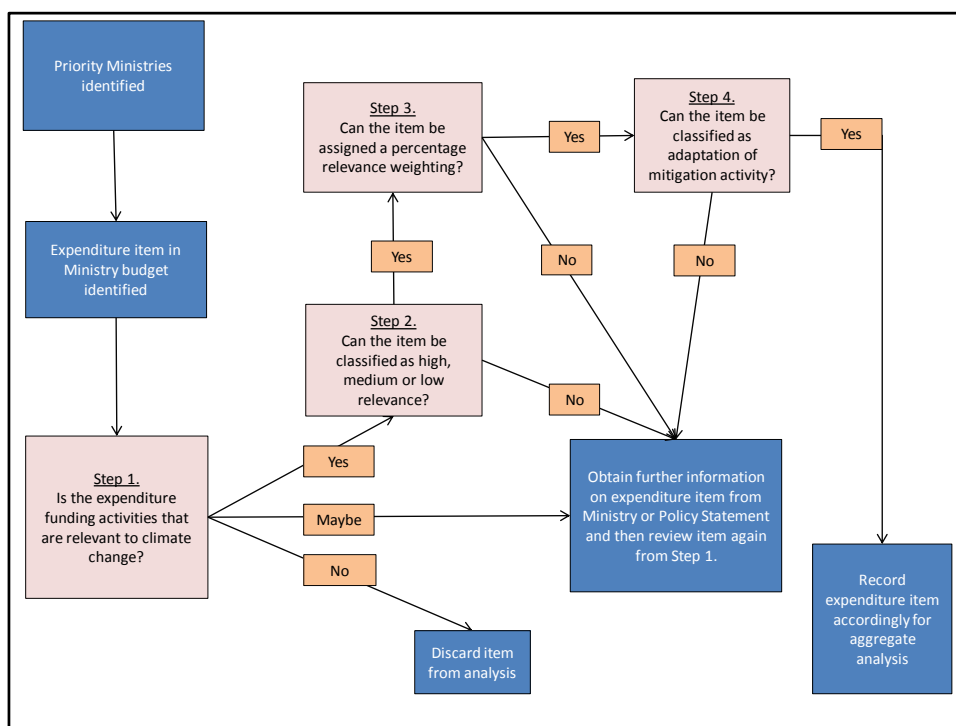
Overall, the methodology aims to classify relevant public expenditure through four stages, by determining: (i) whether spending was relevant or not relevant to climate change; (ii) whether the identified expenditure was of high, medium or low relevance to climate change; (iii) what percentage weighting could be assigned to each item of expenditure; and (iv) whether the

expenditure was focused on adaptation or mitigation impacts. This methodology builds on the experience of climate change expenditure reviews, undertaken primarily in South and South East Asia, conducted in partnership with UNDP⁴ (e.g. Government of Bangladesh 2012; Government of Thailand 2012).

The exercise explicitly takes a ‘prioritised’ approach to identifying climate change-relevant expenditure and does not exhaustively review each and every expenditure item within the national budget. Given the limitations of time, it was not possible to review every last government of Tanzania expenditure item. The methodology begins by identifying those sectors most likely to be related to climate change, and then drills down into the details of sector financing in order to identify and categorise expenditure. As a result, there remains a risk – albeit a small one – that climate change-relevant activities are being undertaken by agencies in sectors considered generally less relevant to climate change (for example, in the defence sector), and that these are being missed by the analysis. The judgement of the review team is that this risk is small, and any climate change-relevant activity that is being undertaken in a ministry not included in the priority list is unlikely to affect the overall conclusions of the analysis.

Figure 2.1 shows a summary stylised view of the process. As can be seen, where issues of classification are uncertain, further investigation is undertaken in order to determine the exact nature of the expenditure item. This can involve detailed review of the relevant project documentation, cross-checking against other government policy statements such as the National Climate Change Strategy, or it can take the form of direct follow up with key informants or relevant personnel in the line ministries.

Figure 2.1: Diagrammatic representation of the study approach to classification of expenditure items



⁴ <http://www.aideffectiveness.org/climatechange/finance>

2.3 Identifying key sectors and Ministries

Nine sectors were identified as being most relevant to climate change in Tanzania. Although the exact impacts of climate change in Tanzania remain uncertain, based on experience in other countries and extrapolations from existing models, the likely impacts of climate change across these sectors are listed in Table 2.1.

Table 2.1: Anticipated impacts of climate change on key sectors in Tanzania

Sector	Example of climate change impact
Agriculture	Changes to crop, livestock and fisheries production levels; losses caused by catastrophic events
Forestry	Changes to crop production levels; losses caused by catastrophic events
Energy	Changes in demand levels; hydro-electricity supply weakened by changing river flows/lake levels
Transport	Physical damage to existing infrastructure; higher maintenance costs
Water and sanitation	Changes in water quantity and quality; greater water demand
Health	Increase in climate-related disease incidence
Housing and settlements	Physical damage to existing settlements caused by catastrophic weather events
Tourism	Potential increases in transportation costs; damage to key tourist areas and natural heritage
Trade	Decline in production, worsening terms of trade resulting from high product prices

Following the identification of these nine sectors, the analysis then related the findings to those Ministries mostly likely to be active in the sectors. In common with budgeting systems across the world, budgets are allocated administratively in Tanzania on the basis of an individual Ministry or other institution, rather than by sector. As a result, identification of spending lines needed to be done on an institution-by-institution basis. The study team reviewed all central government institutions that receive money through a specific Parliamentary appropriation (a 'Vote'). Of the 57 Central Government Votes listed for 2010/11, 30 were identified as likely containing programmes and projects relevant to climate change. Spending by the 25 mainland Regions was also included in the list of Votes to be further investigated.

The identification of the Ministries was cross-checked by reference to the 2007 NAPA document, the 2012 national climate change strategy, and the 2013 REDD Action Plan. All three documents had identified a large number of climate change programmes to be implemented over the coming years, and also the Ministries that are expected to deliver them. Broadly, the list of identified Ministries from the sector analysis was consistent with the highest priority Ministries identified in the strategy documents.

The 15 Ministries where the study team then sought out and identified specific items of climate change-relevant expenditure are shown below in Table 2.2.

Table 2.2: Ministries where climate change-relevant expenditures were identified, 2009/10 – 2012/13

Ministry
President's Office
Vice President's office
Prime Minister's Office
Prime Minister's Office – RALG
Ministry of Finance & Economic Affairs
Ministry of Energy and Minerals
Ministry of Water and Irrigation
Ministry of Agriculture, Food Security & Cooperatives
Ministry of Natural Resources & Tourism
Ministry of Livestock Development & Fisheries
Ministry of Education & Vocational Training
Ministry of Lands & Human Settlements
Ministry of Transport
Ministry of Health & Social Welfare
The Cooperative Development Commission

2.4 Identifying climate-relevant expenditure lines

Once the relevant Ministries were identified, the analysis moved to a detailed review of the individual expenditure lines within each Ministry's development budget. The Government of Tanzania uses a budget system with several layers of information. All expenditure items are coded to express a number of categories that help identify the nature of individual expenditures, including categorisation of expenditures by Ministry, by department, and by economic function. The study team obtained a full list of expenditure items for each of the Ministries identified from the approved development budget, and then began a process of reviewing programmes in terms of their relevance for climate change.

The Chart of Accounts codes accompanying the budget lines were used to identify the type of expenditure. However, the Chart of Accounts does not contain a marker or code for 'climate change relevant' expenditure that would allow for a straightforward exercise in simply extracting from the

budget all expenditure lines with that code. As a result, a manual review of all potentially relevant expenditure was necessary.

Descriptive information provided in the individual expenditure lines was often sufficient to exclude items from the analysis. The description of certain programmes in the budget documents was usually very brief, for example 'Administration' or 'Rural water and sanitation'. It was relatively easy for the team to review and exclude certain items from the expenditure analysis on the basis that they were not related to climate change, for example expenditure on 'International subscriptions'. Certain expenditure items were clearly relevant to climate change adaptation or mitigation (e.g. 'Hydropower construction'), whereas others were less clear (e.g. 'capacity building in the Ministry of Agriculture').

Where expenditure items were less clear in their relationship to climate change, further investigation was undertaken. The first reference point was the MTEF budget submissions from the ministries. This information included statements of the objectives of various programmes as well as output indicators. Using this information it was usually possible to finalise a decision as to whether expenditure items were climate change-relevant or not. Where this was not possible contact was made with relevant individuals in the ministries concerned for further clarification.

Once this was carried out for the development budget, the recurrent budget for each climate relevant ministry was considered. The assumption was made that the same climate relevant share of the development budget for each ministry also applied to the recurrent budget, as this recurrent spending was used to support the execution of the development budget.

2.5 Identifying the source of climate related expenditure

The Tanzanian budget system allows for identification of the source of expenditure. Through the classification in the Chart of Accounts, it is possible to identify the type of funder. The budget identifies expenditure as being recurrent, development or donor funded. Recurrent and development expenditure items are financed from Government of Tanzania revenues, and are therefore domestically funded. Items listed as 'donor' are externally financed.

2.6 Allocating high, medium and low relevance to identified expenditures

Once a relevant expenditure was identified in each Ministry, it was assessed for its relevance to climate change. This process takes into account that most public expenditure has more than one objective. Some programmes have a clear focus on climate change adaptation or mitigation, where the stated primary objective of the expenditure is to deliver specific outcomes that are climate change-related. These are considered highly relevant climate change expenditure items. Medium relevant expenditure items are those projects and programmes that have a secondary objective relating to climate change adaptation and/or mitigation outcomes, but where the primary focus of the expenditure lies elsewhere. The third category of the classification is low relevant expenditure that supports activities that display attributes where indirect adaptation and mitigation benefits may arise. This third category attempts to identify actions where although there was no intention to respond to climate change the outcome of the expenditure leads to greater adaptation or mitigation capacity.

Table 2.3 sets out the definitions used in allocating expenditure lines into high, medium or low relevance categories, using experience gathered from previous studies and building on the national experience of responding to climate change and the actions likely to be part of the country's response. The list of proposed actions described within the national climate change policy statement, and elaborated in the implementation strategy, provided much additional guidance. The study team also drew upon the expertise of government officials in drawing up sector specific lists to guide the identification of relevant actions.

Table 2.3: Examples of high, medium and low relevance expenditures

Relevance	Definition	Examples of projects and programmes
High	Clear primary objective of delivering specific outcomes that improve climate resilience or contribute to mitigation	Energy mitigation (e.g. renewables, energy efficiency) The additional costs of changing the design of a programme to improve climate resilience (e.g. extra costs of climate proofing infrastructure, beyond routine maintenance or rehabilitation) Healthcare for climate sensitive diseases Building institutional capacity to plan and manage climate change, including early warning and monitoring Raising awareness about climate change Anything meeting the criteria of climate change funds (e.g. GEF,PPCR)
Medium	Either (i) secondary objectives related to building climate resilience or contributing to mitigation, or (ii) mixed programmes with a range of activities that are not easily separated but include at least some that promote climate resilience or mitigation	Forestry and agroforestry that is motivated primarily by economic or conservation objectives, because this will have some mitigation effect Water storage, water efficiency and irrigation that is motivated primarily by improved livelihoods because this will also provide protection against drought Bio-diversity and conservation, unless explicitly aimed at increasing resilience of ecosystems to climate change (or mitigation) Eco-tourism, because it encourages communities to put a value of ecosystems and raises awareness of the impact of climate change
Low	Activities that display attributes where indirect adaptation and mitigation benefits may arise	Water quality, unless the improvements in water quality aim to reduce problems from extreme rainfall events, in which case the relevance would be high General livelihoods, motivated by poverty reduction, but building household reserves and assets and reducing vulnerability in areas of low climate change vulnerability General planning capacity, either at national or local level, unless it is explicitly linked to climate change, in which case it would be high Livelihood and social protection programmes, motivated by poverty reduction, but building household reserves and assets and reducing vulnerability.

Expenditure lines may be considered of lower or higher relevance depending on their region of operation. Where expenditure takes place in a particular region that is widely expected to be negatively impacted by climate change, this may increase the relevance of expenditure items. For example, an expenditure line that may be considered to have no, or low, relation to climate change in a particular region (e.g. a water access programme in the capital city) may be considered to have low to medium relevance in a region where climate change is expected to have a significant negative impact (e.g. the same programme in an arid area of the country with expectations of hotter and drier conditions in the future).

2.7 Determining the percentage weights to identified expenditures

Following the logic of the relevance approach, if only a part of the intended impact of a programme is relevant to climate change adaptation and/or mitigation, then only a commensurate part of the expenditure should be counted as climate change-relevant. As a result, percentage expenditure weightings were applied based on the definitions of high, medium and low relevance. Table 2.4 indicates the range of percentages for each level of relevance. The final decision of the actual percentage to be applied to any one item of expenditure was made based on available information for the project using 10 per cent intervals within each relevance category.

Table 2.4: Percentage weighting of expenditure for different levels of relevance

Relevance category	Percentage weighting for expenditure
High	More than 75 per cent
Medium	Between 26 and 74 per cent
Low relevance	Between 10 and 25 per cent

This element of the classification is particularly subject to the judgement of the study team. There is no objectively 'correct' percentage of spending to attribute to climate change expenditure, and so this approach should be viewed as a 'best estimate'. Percentage weightings have been applied to each climate change-relevant expenditure item based on information gathered from the budget documentation, the knowledge of the study team, and individual follow up with relevant officials in the Ministries concerned. It is acknowledged that different researchers might apply different weights. However, using a 'range' approach limits the discretion of those applying a weighted judgement, and increases the likelihood that a different study would come to similar conclusions.

2.8 Adaptation versus mitigation

Mitigation and adaptation are the two main categories for climate change activities and all expenditure items in this review are classified between them. There are conceptual differences between an expenditure that aims to help institutions, systems and communities adapt to the realities of a changing climate; and those that seek to reduce the change in the climate itself by

mitigating the impacts of human activity. Therefore, understanding the relevant balance of climate-related activities between these two policy objectives provides important information on the nature of the Tanzanian government’s response to the public policy challenge of climate change.

Defining expenditures as ‘mitigation’ compared to ‘adaptation’ again requires expert judgement. In a similar way to the classification on relevance, allocation into a mitigation or adaptation category cannot be externally and objectively determined. The definitions used to make these judgments are outlined in Table 2.5. Once again, where information in the budget documentation was insufficient to make a determination, further investigation was undertaken through additional budget documentation and/or direct contact with the Ministry concerned.

Table 2.5: Definitions of mitigation and adaptation

Category	Definition
Mitigation	Human interventions to reduce the sources, or enhance the sinks, of greenhouse gases (GHGs). All climate change mitigation actions aim to reduce the concentration of atmospheric GHGs.
Adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Other classification approaches include additional categories, such as ‘capacity building’ or ‘technology transfer’ alongside mitigation and adaptation, but these have not been used. Given that this is the first attempt at reviewing and classifying climate change public expenditure in Tanzania, the study team decided to use only the two categories of adaptation and mitigation as a starting point. Future analyses could consider expanding the range of activities to be included in the classification so as to gain a clearer understanding of the climate change-related impact of public spending.

3 Policy analysis

Summary

- Climate change is a recent national policy concern. The earlier emphasis given to sustainable development provided the platform for climate change to be considered within several sector policy processes. Despite these sector policies, there is no overarching national climate change policy at present, with policy direction anchored instead in the 1997 National Environmental Policy.
- The 2004 Environmental Management Act prescribed that the Minister responsible for the environment would assume the national leadership role on climate change, thus setting the course of subsequent action on climate change in Tanzania. The adequacy of this Act to provide direction for all issues of climate change is an open question.
- Several national initiatives have been undertaken at the strategy level: the 2007 National Adaptation Programme of Action; the 2012 National Climate Change Strategy; and the 2013 national REDD+ strategy; all of which received strong development partner support. Climate change is also now recognized as a challenge to national development within the current five-year National Development Plan.
- The National Climate Change Strategy represents a significant milestone, but it needs to be strengthened to include the identification of priority programmes, their budgeted costs, and the expected sources of funding if implementation is to be secured.
- The Strategy was developed by means of a thorough and extensive consultative process involving different thematic groups, where stakeholders could present their views to provide input and influence the process. What is less clear is how these stakeholder views were analysed and incorporated into the strategy.
- The financing of climate change actions appears to be treated as a budget rather than a policy issue, with the national strategy providing only the briefest of references to the financing mechanisms required for implementing climate change actions. Mention is made of the leadership required from the Ministry of Finance, and at the same time suggesting that a national climate fund may be necessary to manage all sources of finance efficiently.

3.1 Introduction

Climate change is a global phenomenon whose impacts are now being felt across all regions of the world. However, these impacts are unequally distributed and depend, in part, on the economic and technological capacity of each country. Climate change predictions indicate that Africa south of the Sahara is the region that will be impacted most (IPCC, 2007). In this region, the increase in intensity, magnitude and frequency of climate variability is already causing concern for both national governments and the international community.

In Tanzania, the impact of climate variability/change is being felt in many sectors of the economy and there is evidence to show that such variability/change is disproportionately impacting vulnerable sectors such as land, agriculture, water, energy and forestry. These impacts are further

exacerbated by the complex relationship between climate change, water and poverty. For example, climate change impacts on water systems can result in prolonged droughts leading to a reduction in crop yields, food insecurity, water scarcity and recurrent power shortages; or major floods, leading to massive loss of property and lives, as recently witnessed in Dar-es-Salaam and Rufiji District. Climate variability/change is also interacting with other stress factors such as low levels of technology, poor governance, and limited access to information, to worsen the country's existing vulnerabilities.

Tanzania is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and has participated in the annual Conference of the Parties (CoPs). The outcomes of these CoP meetings include decisions to put in place national policies, strategies and programmes to reduce greenhouse gas emissions and respond to the impacts of climate change. Towards this end, the Government of Tanzania has taken forward several initiatives, including the Initial National Communication in 2003; the National Adaptation Programme of Action in 2007; and the 2012 National Climate Change Strategy. The 2013 national REDD+ strategy and other sector plans have also been prepared and the government has implemented various climate change-related programmes drawn from these strategies, using both national and international resources.

3.2 Climate Change-related Policies in Tanzania

The policy formulation process in Tanzania is the same across all sectors of the economy, being guided by common principles. Policies are developed through participatory processes involving consultation with stakeholders at different levels. All draft policies are submitted to the Inter-Ministerial Technical Committee (IMTC), which is made up of all the Permanent Secretaries from Government Ministries. Once endorsed by the IMTC, draft policies are then presented to the Cabinet for approval and implementation.

Since independence in 1961, more than 30 national policies have been formulated. There is as yet no climate change policy, although it is understood that plans to prepare such a policy are now underway. However, a number of sector policies have incorporated strategies and programmes of action related to climate change. Chronologically, these sector policies include the Land Policy, the National Environmental Policy, the Forestry Policy, the Water Policy and the Energy Policy. At the strategy level, relevant strategies include the Rural Development Strategy, the National Strategy for Economic Growth and Reduction of Poverty, the Tanzania Climate Change Strategy, and, most recently, the National REDD+ Strategy.

Tanzania's long-term development goal is set out in the National Vision 2025 paper, which was launched in 1999. The Vision's main aim is to move Tanzania from a least developed to a middle income country by 2025, with this achievement based on the principles of sustainable development. When it was published, Vision 2025 did not articulate climate change as an overriding issue because at that time climate change had not been identified as a major policy concern in Tanzania. This emphasizes the relatively short time that climate change has attracted national policy attention and its recognition as an issue of significance.

The overall policy environment on climate change is thus a relatively new and evolving one. As the following policy statements show, the emphasis put on sustainable development in the late 1990s and early 2000s provided a platform that by 2003/4 led to the first official policy statements on

climate change. However, in the absence of a national framework policy, there is as yet no overarching policy position on resource mobilization and financing of climate change-related actions.

The 1997 National Land Policy

The National Land Policy (NLP) was adopted in 1997. According to the NLP, a secure land tenure system would facilitate the sustainable use of resources and land management, ensuring that sensitive areas, such as forests, river basins, areas of high biodiversity and national parks are sustainably utilized. This policy is highly relevant to climate change as it focuses on land (its use, access, and allocation) and forest resources. Adopting sustainable land use strategies will not only improve land productivity, but also increase social and natural adaptation capacity towards climate change impacts.

The policy attempted to address the problems related to the two main types of land tenure that had existed since independence – customary (deemed) land rights and granted right of occupancy. The Policy, and the subsequent Land Act 1999 and Village Land Act 1999, added a new category of land ownership: village land, which constitutes all land that in one way or another belongs to a village. Various climate change related initiatives, such as the implementation of REDD+, have to take into account forest land belonging to a given village. Benefits accruing from carbon trading activities, as well as water drilling and water harvesting actions as part of climate change adaptation initiatives, must also take into account this land ownership category. Hence, the importance of the NLP (and its associated legislation) is that it sets clear boundaries of ownership on any land-based response to climate change.

The 1997 National Environmental Policy

The National Environmental Policy (NEP) was formulated in the same year as the NLP, 1997, in response to the condition of the environment in Tanzania. The policy sought to provide a framework to bring environmental considerations into the mainstream of decision making in Tanzania. In many ways, this parallels the current challenge facing the national climate change response and represents an earlier attempt at mainstreaming a national policy issue across all sectors of the economy. The NEP identified priority environmental concerns that called for urgent attention. These included land degradation, lack of access to quality water, pollution of the environment, loss of biodiversity, and degradation of aquatic resources – all of which will be further impacted by climate change.

Although the NEP did not use the term climate change within the policy statement, its primary focus of ensuring environmental protection and sustainable natural resource management is now reflected in many climate change mitigation and adaptation initiatives. The policy laid emphasis on the need to develop ways of encouraging a multi-sector approach to environmental management by integrating environmental concerns into sector policies, strategies and decision making. The overarching vision of the NEP also called for cross-sector planning and coordination, an issue that is equally important for climate change mitigation and adaptation actions.

In order to implement the NEP, the government enacted the 2004 Environmental Management Act. The Act is an enabling instrument and provides a legal framework through which issues related to environmental management can be addressed. By 2004 the challenges brought about by climate change were being recognized in policy circles and as a result climate change is acknowledged in Section 75 of the Act, which details the administrative response of government to the impacts of climate change. Significantly, the Act prescribed that the Minister responsible for matters relating to

the environment would assume the national leadership role in the country's response to climate change. This Act thus set the subsequent course of action for the climate change response in Tanzania.

Box 3.1. Statement of government's response to climate change within the 2004 Environmental Management Act

75. 'The Minister shall, in consultations with relevant Sector Ministries:

- a) *"take measures to address climate change, particularly the impacts of climate change and adaptation measures;*
- b) *issue guidelines periodically to ministries and any other institutions in order to address climate change and its impacts as a result of global warming;*
- c) *require Ministries, independent department to put in place strategies and action plans to deal with climate change as well as schools and higher learning institution in their curriculum;*
- d) *review and approve any measures undertaken to address climate change by any institution, firm, sector or individuals be it foreign or local, including those related to the use of land, water, forests or any other ecosystems within the United Republic to sequester greenhouse gases; and*
- e) *project national positions at global level on how to deal with the problem of climate change in the context of the United Nations Framework Convention on Climate Change, and its related Protocol(s)."*

The 1998 Forest Policy

The 1997 NEP provided a framework for the National Forest Policy, which came into effect the following year. The main objective of the forest policy is to secure sustainable forest management. The policy does not mention climate change explicitly, but it focused on issues where climate change may be expected to have an impact on outcomes: forestry conservation and management. The policy called for the involvement of local communities under joint forestry management as a key strategy to ensure forest conservation. The 2002 Forest Act is the policy's legal instrument.

The National Forest Programme (NFP) was a ten-year strategic plan (2001-2010) to implement the National Forest Policy. The strategy aimed at contributing towards climate change through mitigation measures that included minimizing wood fuel consumption by the development of alternative sources of energy; increased wood fuel energy efficiency; and the promotion of renewable energy resources and energy conservation. These measures were intended to address the complex energy situation in Tanzania where charcoal is the main affordable source of energy for cooking in urban and peri-urban areas and a source of income for many rural micro-entrepreneurs. In some cases, District Councils derive more than 70% of their revenue from licenses and duties imposed on charcoal. Studies show that almost all charcoal is derived from natural forests and woodlands, and is being exploited above sustainable levels, leading to increased GHG emissions.

The 2002 National Water Policy

Whilst there is also no explicit reference to climate change within this key sector policy, the policy prescriptions are compatible with a national climate change response. The policy achieves this through an understanding that water is important to key sectors that are susceptible to climate change such as agriculture, livestock, energy, fisheries, wildlife and tourism, and forestry. The policy recognizes the complex linkages between water and socio-economic development and, in view of this, calls for the adoption of Integrated Water Resource Management in Tanzania. Climate change is addressed through the sustainable water management measures that are outlined in the policy. The conservation of catchment forests is one such measure, which contributes to both climate change mitigation and adaptation. Current efforts to secure a mainstreamed approach to climate change therefore have a supportive policy context within the water sector.

The 2003 National Energy Policy

The National Energy Policy was adopted in 2003 with the main objective of addressing national energy needs. Subsidiary objectives included developing domestic cost-effective energy resources; improving energy reliability, efficiency, and security; and reducing forest depletion. This sector policy statement is significant as it is the first sector policy to refer to climate change explicitly in its text. The energy policy put much emphasis on the promotion of efficient biomass conversion and end use technologies to enhance the conservation of woodlands. Through these objectives the policy is linked directly to climate change, as specified in one of the policy's statements:

'37. Promote efficient biomass conversion and end-use technologies in order to save resources; reduce the rate of deforestation and land degradation; and minimise threats of climate change.'

With now over a decade of policy implementation (and associated public financing), where climate change has been a recognized aim of policy, public expenditure levels can offer insights as to the importance attached to climate change by government.

3.3 National Strategies to Address Climate Change Challenges

The development of relevant national strategies mirrors the increasing attention in policy documents to climate change over the last ten years, building on the earlier focus on sustainable development. However, at the strategy level there is increased evidence of specific initiatives that respond to climate change, beginning with the 2007 National Adaptation Programme of Action to the recent 2012 National Climate Change Strategy and 2013 national REDD+ strategy. As important for the financing of relevant programmes, climate change is now recognized as a challenge to national development in the current five-year National Development Plan.

The 2002 Rural Development Strategy

The Rural Development Strategy provides guidance for rural development/projects/programmes that seek to reduce poverty in rural areas. This is important for addressing climate change mitigation and adaptation since most rural communities depend on natural resources for their livelihoods. Although climate change is not explicitly mentioned, the strategy stipulates the need to address land degradation problems in rural areas and undertake Environmental Impact Assessments for rural development interventions. The strategy also promotes social forestry and agro-forestry for small-scale and medium-sized wood based industries, fuel wood saving techniques, and alternative energy sources to deter the encroachment of forests.

The 2005 National Strategy for Economic Growth and Reduction of Poverty (NSGRP)

The NSGRP is the national organizing framework strategy that focuses on poverty reduction. It merged work under previous poverty reduction strategies within the aspiration of Tanzania's Development Vision 2025, and was adopted by the Cabinet and Parliament in February 2005. The strategy was reviewed in 2010, and a second version, MKUKUTA II, is now being implemented between 2010/11 and 2014/15. MKUKUTA II makes linkages with Vision 2025 and is committed to the Millennium Development Goals (MDGs) as internationally agreed targets for reducing poverty. It aims to reduce poverty through three broad outcomes: growth and reduction of income poverty; improved quality of life and social wellbeing; and good governance and accountability. Climate change is recognized under the first of these outcomes as an externality that needs to be addressed if food security is to be achieved. One of the stated priority actions is: '*providing specific adaptation and mitigation options*' (pg. 61).

The 2006 National Water Sector Development Strategy (NWSDS)

This strategy guides the formulation of the National Water Sector Development Plan and the Water Sector Development Programme. It also supports the re-alignment of other sector policies related to water: energy, irrigation, industry, mining, and environment. The strategy stipulates clearly climate change issues and considers poor communities who are vulnerable to floods and droughts. It emphasises rainwater harvesting as one priority climate change adaptation measure. In addition, the strategy aims to secure the sustainable management of water catchments areas, the maintenance of forest cover in critical highland catchments, improved land management, and the adoption of water conservation technologies.

The 2007 National Adaptation Programme of Action (NAPA)

This national plan directly addresses climate change adaptation. It was designed in recognition that climate change will undermine national efforts to improve livelihoods and the attainment of sustainable development. The focus of the NAPA was to identify immediate and urgent climate change adaptation actions that were considered robust enough to lead to the long-term sustainable adaptation to climate impacts. It therefore contained an assessment of climate change vulnerabilities for different sectors, including forestry, health, human settlements, marine, agriculture, and fresh water resources before recommending a number of key interventions. A total of 72 adaptation activities were proposed from all sectors; these were reduced to 14 project activities and from these activities five costed project profiles were developed. The NAPA also ranked sectors in order of their priority for adaptation activities (Table 3.1).

Table 3.1: Ranked sectors within the NAPA document

Sector	Rank order	Proposed project area	Potential areas
Agriculture and Food Security	1	Irrigation, water harvesting, alternative farming systems	Irrigation and water harvesting suitable in central Tanzania
Water	2/3	Water harvesting/recycling	Water harvesting in rural areas; water recycling in urban areas
Energy	2/3	Alternative clean energy, Co-generation	Both rural and urban areas
Forestry	4	Community based forest management, afforestation	Miombo woodlands
Coastal and Marine Resources	10	Beach management systems	Dar-es-Salaam, Lindi, etc.

Source: URT, 2007

The NAPA addressed climate change adaptation through actions that were intended to minimize the drivers of climate change. However, many of the projects and programmes implemented have yielded little results due to lack of financing, technological problems and poor governance-related constraints.

The 5-year development plan, 2011-2015

Vision 2025 is the long-term development plan that aims to transform Tanzania from a low-income to a middle income country. The National Five Year Development Plan, 2011/12-2015/16 (FYDP I) is the first of three 5-year plans that will chart-out a growth path consistent with the realization of the status of a semi-industrialized country. In developing FYDP I a broad-based consultative approach was undertaken with key stakeholders to identify the national and sector challenges, and to decide on priority interventions that would address the critical constraints on development.

The challenges posed by climate change are acknowledged within FYDP I, e.g. *'The costs from drought is expected to be as high as 2 percent of GDP by 2030 and owing to rising sea level a loss of 274 km² of land is forecast. These impacts have the most adverse effects on the poor who are least capable to mitigate the risks.'* (pg.34.) The need to take urgent action is also noted: *"Tanzania being a signatory to the Kyoto protocol and a participant in the Copenhagen Accord will need to take a more proactive role in climate change programmes during implementation of the Plan. Hence, urgent actions to meet challenges posed by climate change through both mitigation and adaptation measures and formulation of necessary financing frameworks will be accorded top priority"* (pg.53). The 5-year plan also considers the possibility of new financial institutions to help manage international flows of climate finance: *'Tanzania will explore the possibility of creating a National Climate Fund to better access and manage the global climate change finance. This will follow the successful implementation of similar funds in countries such as Brazil, China, and Indonesia.'* (pg.89). All this commentary is evidence of increasing recognition given to the public sector-led national response to climate change, including the fact that new and additional funding will be necessary to cope with the negative impacts of climate change.

The 2012 National Climate Change Strategy

2012 saw the publication of Tanzania's national climate change strategy, which was developed in response to the growing concern over the negative impacts of climate change and climate variability on the country's social, economic and physical environment. The overarching aim of the strategy is to identify measures that will address climate change and provide a platform for sector integration on climate change in policy formulation and sector strategies. The strategy elaborates different roles and responsibilities to be played in mainstreaming climate change by various key sectors as stipulated in the action plan of the strategy.

The approach and methodology employed in the development of this Strategy involved extensive literature review and analysis, which was undertaken to identify the linkages between climate change, natural resource management and socio-economic systems. This was augmented by national consultations with various stakeholders using zonal workshops, which were undertaken to collect and collate views from individuals at the community level, create awareness on climate change impacts and the need for a national strategy to harmonize on-going and future activities.

The strategy covers adaptation, mitigation and cross-cutting interventions. A number of specific objectives are set to achieve the overall goal of the strategy, including the mobilization of resources (in particular financial resources) to address climate change. How this objective will be met is not spelt out, although there is a presumption that international funding will be a significant component. The financial management of the strategy is expected to follow the '*government's financial management guidelines and systems established under the Ministry of Finance*' to ensure effective resource and financial mobilisation (pg.77). However, the strategy also recognises that special arrangements may be required to cope with the emerging complexity in accessing additional international financial support for addressing climate change. The nature of these special arrangements are indicated in the proposal to establish a national Climate Change Fund and a special climate change window under the government's Basket Fund with development partners to finance implementation (pg.78).

However, despite the identification of over 200 strategic interventions, the cost of implementing the strategy has not been established. This is explained by the high level of uncertainty associated with climate change. This is an inherent weakness of the strategy, as without some estimate of costs (at least over the near term) it is difficult to gauge how many of the suggested programme actions will be undertaken. In addition, the absence of any prioritisation of the stated interventions compounds this limitation. The costing of at least the immediate priority actions would provide a platform to facilitate the early implementation of the strategy.

To-date, little funding has been realized from international climate funds, with many of the projects and programmes addressing climate change in Tanzania being undertaken with domestically-sourced funding from central government, supported by traditional development assistance. Tanzania's access to international climate finance is curtailed in part by a lack of adequate knowledge and capacity to access these opportunities. The strategy outlines initiatives to build a critical mass of climate change experts to access available international financial and technical resources to address climate change.

The 2013 National REDD+ Strategy

Tanzania has the potential to participate in international climate change mitigation efforts by enhancing the role of forests. Currently, the country has addressed the drivers of deforestation and forest degradation through the adoption of legal frameworks that promote Participatory Forest Management (PFM) approaches. However, limited financial resources compel the country to identify innovative financing mechanisms to attract new sources of investment in forest management outside traditional government funding channels. The adoption of REDD+ provides an opportunity for Tanzania to benefit from an innovative financial mechanism that takes cognizance of the increasing importance of sustainable forest management in reducing emissions and increasing forest carbon sequestration to mitigate climate change.

The National REDD+ Strategy is a comprehensive strategy for climate change mitigation in the forest sector, linked to all the major sectors susceptible to climate change. Key to this strategy is that it provides guidance on how best to address the underlying causes and impacts of uncontrolled deforestation and forest degradation in the various agro-ecological zones of the country.

3.4 Climate Change Related Programmes and Projects

Climate change policies and strategies aim to guide and support the implementation of relevant government work streams. Various programmes and projects supported by traditional development partners, whose objectives have relevance to climate change adaptation and mitigation, have been implemented in recent years for the purpose of accelerating development in the country. Three such programmes are listed below:

The 2009 Agricultural Sector Development Programme (ASDP)

This government programme is designed to achieve the agriculture sector's objectives and targets. The programme objectives are closely linked to the efforts on reducing vulnerability by increasing adaptation capacity to climate change related impacts. Through knowledge and technological advancement in relation to agriculture, communities are being made aware of drought resistant crops and water harvesting technologies for agriculture, which is part of climate change capacity building.

The 2011 Southern Agricultural Growth Corridor of Tanzania Programme (SAGCOT)

The SAGCOT programme is a public-private partnership dedicated to ensuring food security, reducing poverty and spurring economic development in Tanzania's Southern Corridor. The programme aims at expanding and developing the corridor as a cohesive, modern commercial agricultural area over the next twenty years; and as a new force for rural development and poverty reduction (SAGCOT, 2011). The programme recognises that climate change mitigation and adaptation measures, as well as environmental conservation and natural resources management, as being critical to the programme's success (Milder et al., 2012). Furthermore, SAGCOT intends to support value addition and value chains in building 'climate-smart' agriculture. This support is in form of improving and developing processing facilities, transportation and marketing infrastructure; improving local businesses to bridge the gap between smallholders and larger markets; and promoting eco-certification and market differentiation to link smallholders to lucrative export markets for key crops.

The 2011 Livestock Sector Development Programme (LSDP)

The Livestock Sector Development Programme (LSDP) proposes several interventions that are useful in the formulation of climate change mitigation and adaptation options. For instance, it proposes the development of master plans for grazing land management for each district by 2015. This would be a useful adaptation option, as climate change will likely shrink lands available for livestock keeping. Similarly, with an expected decrease in pastures and water availability for livestock, the LSDP proposes: (i) production and development of improved seeds and fodder trees, (ii) enhancement of the quantity and quality of animal feeds and feed additives, and (iii) the development and maintenance of reliable water sources. Furthermore, in coping with expected climate change-related risks and vulnerabilities, the programme has proposed the increased application of technologies to improve livestock production and productivity.

3.5 The effectiveness of Tanzania's climate change policies

The effectiveness of all these national policy processes in supporting the delivery of climate finance can be assessed through the use of our analytical framework, which is summarized in annex 1 of this report.

3.5.1 First Policy Principle: Climate change policies shall be designed for ease of implementation

In the absence of an overarching policy statement on climate change, Tanzania's climate change policy objectives are stated in the aforementioned policy instruments. A gap in the present policy documentation is that the national adaptation response remains unclear. This is a conceptually difficult area that merges into mainstream development, so some further attention on this issue would be timely. It would also help to clarify what government expects from international support for climate change-related actions compared to traditional official development assistance received from development partners, many of whom now see themselves having a role to play in supporting the national response to climate change.

None of the existing policy documents contain clear timelines for implementation. Whilst this is largely an issue for strategic planning, taking into account the high uncertainty associated with climate change there is a case to be made that policy pronouncements should focus on short-term goals. Such policies could look to establish early public sector activity that would assist in furthering the development of longer-term policies. As climate change is a new area of policy concern it faces the very considerable challenge of 'starting from scratch'. Under such circumstances, it is highly improbable that optimal approaches will be readily identifiable before implementation begins.

National policies are facilitated through the development of subsidiary instruments that detail what is needed to achieve policy goals. The 2012 national climate change strategy represents a significant milestone in this regard, but it needs strengthening to include the identification of priority programmes, their budgeted costs, and the expected sources of funding. All these three elements are necessary to guide implementation. The 2013 REDD+ strategy represents the next stage of such a trajectory, where the timeframe, budget estimates and sources of funding are at least made in qualitative terms.

The national climate change strategy provides only the briefest of references to financing modalities for the implementation of the policy. Mention is made of the leadership required from the Ministry of Finance, whilst at the same time suggesting that a national climate fund may be necessary to

manage all sources of finance efficiently. This is a specialist area of public finance management that warrants attention, as the experience from other countries is that, depending on the specific modalities adopted, the creation of a new national fund is a lengthy and challenging process that is likely to take several years.

3.5.2 Second Policy Principle: The legitimacy of climate change policies shall be recognised by stakeholders

The legitimacy of climate change policies can be evaluated by two criteria: (i) the extent to which diverse stakeholders are represented in the policy-making process, and (ii) whether policy making is evidence-based, which implies the deployment of up-to-date scientific knowledge in helping to inform policy positions. Compliance with this principle is important to secure broad support for public expenditure on climate change related actions, particularly when it may lead to reduced public spending elsewhere.

Tanzania's policy processes are generally considered open and fair. This is also true of the processes that have produced the key policy instruments of Tanzania's climate change response. For example, the national climate change strategy was developed through a thorough and extensive consultative process involving different thematic groups, where stakeholders could present their views to provide input and influence the process. What is less clear is how such stakeholder views were analysed and incorporated into the policy documents. The national climate change strategy refers to '*relevant comments from all stakeholders were then incorporated in this Strategy*' (pg.6), but provides no further evidence of this.

As part of the formulation process for both the climate change and REDD+ strategies, significant background analytical work was undertaken to generate evidence for policy development. However, a key question is whether this background analytical work was then used in the formulation of the final policy proposals and priorities. Again, evidence of this uptake is lacking.

3.5.3 Third Policy Principle: Climate change policies shall be coherent with national development policies

Over the last five years, climate change has risen up the policy agenda of the Government of Tanzania. At least in theory and policy articulation, it is now seen as being an integral part of the development process, as evidenced by its treatment in the present five year development plan. What is less clear is the emphasis given to climate change at the sector level, particularly for those sectors identified as being vulnerable to the impacts of climate change (e.g. agriculture, water and energy). Beginning with these sectors, the impact of climate change on investment programmes needs to be analysed further. This lesson learning will be important in securing the across-sector coordination and coherence of the national response to climate change. It is one thing for the national climate change strategy to adopt a sector approach, but much will depend on a reciprocal acknowledgement in each sector's policy and planning processes.

3.5.4 Fourth Policy Principle: Climate change policies shall promote transparency in climate finance delivery

The current policy on climate change does not identify in explicit terms strategies to ensure that the delivery of climate finance happens in an open and transparent manner. It can be discerned from the available climate change policy documents that the financing of climate change actions is treated more or less as a budget rather than a policy issue. Indeed, this area of climate change is relatively

undeveloped, with the current policies not describing any specific mechanisms for enhancing transparency and accountability in climate finance delivery. The fact that this study has encountered challenges in identifying relevant public expenditures within the national budget, as well as there being no public database of international funding for climate change actions, is evidence that this fourth policy principle is not yet strongly demonstrated.

3.6 Conclusions

This chapter has drawn on various national policies. One obvious aspect to note is that most of the national documents were developed during a time when climate change-related matters were not regarded central to global developmental concerns. This resulted in most climate change-related issues not being treated as core matters in the planning processes for the country's developmental programs and projects. This is now changing with the National Climate Change Strategy.

All matters related to climate change in the country are vested in the Vice President's Office – Division of Environment, as will be described in the next chapter. The momentum developed by the VPO-DoE in addressing climate change-related issues has helped to promote the importance of climate change to the general public, something which has led to increased recognition within the national development planning processes in the country.

4 Institutional analysis

Chapter summary

- The current institutional architecture for climate change has been inherited from one that was designed to address environmental issues. This may limit the opportunity to integrate climate change into the plans, programs, and projects of all relevant sectors of the economy.
- Climate change remains an emerging policy theme for government, and Tanzania's institutions are still at an early stage in responding to this new challenge. The lack of delineation between climate change and environmental-related issues has brought about some confusion, as they tend to be treated as one and the same thing.
- A significant absence in the current institutional architecture is the Planning Commission. The Commission is mandated to monitor, analyse and provide advice on long-term sector policies and socio-economic developmental issues. As the country's national planning agency, one would expect to find it embedded in the institutional structure for addressing climate change, yet this does not appear to be the case.
- The NCCSC and the NCCTC are important forums to facilitate the implementation of cross-sector climate change actions. In principle, both committees have been established and are functioning, but they do not appear to meet on a regular basis, and lack a supporting secretariat beyond the NCCFP. In addition, their mandates are not in the public domain and so the extent of their role in coordinating the country's response to climate change remains unclear. So, in practice, the process of coordinating climate change actions across sectors and levels of government remains a formidable challenge.
- MDAs have established 'desks' to mainstream climate change in their respective sectors. However, the current capacity of these climate change desks is restricted by limited knowledge on climate change, compounded by the meagre financial resources allocated to the desks.
- Lack of human resources knowledgeable on climate change-related issues is a major constraint. Further efforts are required to link science, research, innovation and policy formulation on climate change.
- Districts where NGOs are active on climate change issues are better placed in planning and implementing climate change programmes and projects than those without. However, such initiatives appear rarely sustainable since they rely on external finance to support implementation.

4.1 Introduction

Climate change is a global challenge that requires collective and coordinated action by a large range of institutional actors. The impacts of climate change are already being felt in Tanzania and are projected to increase both in frequency and severity leading to severe socio-economic consequences. Recent food shortages, water scarcity, and acute power shortages signify the vulnerability of the country to the impacts of climate change. Climate change projections indicate that Tanzania will face further development challenges as a result of increasing climate variability

and hence future economic development will depend on how the country's institutions respond to these challenges.

Tanzania's ability to address current and projected impacts of climate change is hindered by a number of factors. These include limitations associated with the present institutional arrangements, as well as insufficient human and financial resources, and technological capacities. Strengthened institutional arrangements will be required to secure the necessary capacity that can oversee and coordinate the implementation of climate change interventions across all sectors of the economy.

4.2 The national institutional framework

Implementation of climate change actions in Tanzania is carried out within the context of the National Environmental Policy and the 2004 Environmental Management Act (EMA), as described in the previous chapter. The Act mandates the Vice President's Office (VPO) – Division of Environment (DoE) – to be the designated lead agency for environment and climate change-related activities in the country. The DoE is both the National Climate Change Focal Point (NCCFP) and the Designated National Authority (DNA) for the Clean Development Mechanism under the Kyoto Protocol.

The EMA also provides for the establishment of various committees at both national and local levels. With regard to responding to climate change, the lead coordination committee is intended to be the National Climate Change Steering Committee (NCCSC), chaired by the Permanent Secretary in the VPO. The NCCSC is an inter-ministerial committee comprised of the Permanent Secretaries from sector ministries responsible for Energy, Finance, Industry, Natural Resources, Justice and Constitutional Affairs, Land, Agriculture, Livestock Development, Foreign Affairs, and International Cooperation. This model developed from an earlier 12-member National Climate Change Committee that oversaw the 2003 Initial National Communication under the UNFCCC. The NCCSC has the role of providing policy guidance to the NCCFP to ensure coordinated actions and participation within various sectors and institutions.

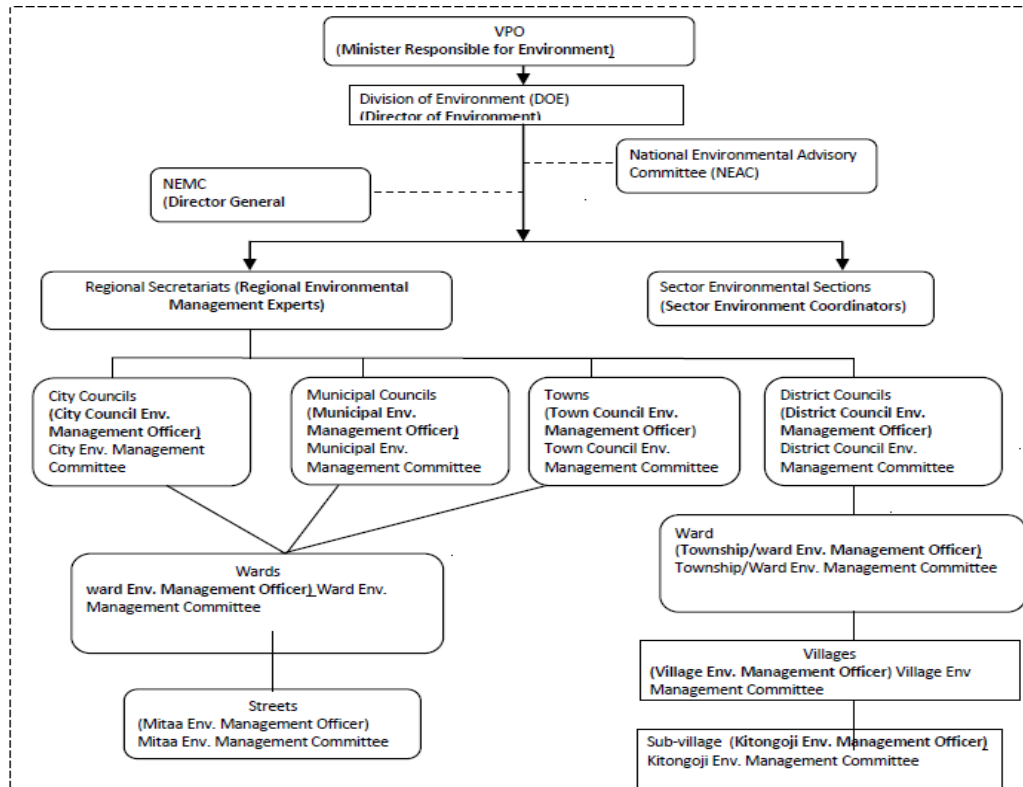
A National Climate Change Technical Committee (NCCTC) has also been created by the government, chaired by the Director of Environment (VPO), to provide technical advice to the NCCFP. The NCCTC is made up of Directors of the various Ministries comprising the NCCSC. Its function is to oversee all technical issues related to the implementation of climate change actions and to stimulate coordinated action and broaden participation to address climate change.

A detailed diagrammatic representation of the institutional arrangements for environmental management is illustrated in Figure 4.1. Climate change issues are currently addressed using this same institutional framework, following the mandate provided by the EMA. At the sub-national level, the Prime-Minister's Office-Regional Administration and Local Government (PMO-RALG) is expected to work in collaboration with sector ministries to implement strategic interventions involving Local Government Authorities (LGAs).

Another relevant national institution is the National Environmental Management Council (NEMC), which was created under the earlier National Environment Management Act of 1983. The NEMC was established to undertake environmental enforcement and compliance controls, and to review and

monitor environmental impact statements, as well as carrying out research and awareness rising. The NEMC is therefore an important actor in the implementation of strategic actions as stipulated in the 2012 National Climate Change Strategy.

Figure 4.1: The institutional architecture for environmental management in Tanzania



Source: VPO, 2013

4.3 Performance of the existing institutional framework

The institutional arrangements provided by the Environmental Management Act underpin the implementation of all public climate change initiatives. The overall coordination of climate change actions is the responsibility of the NCCFP. The NCCFP is also tasked with preparing national climate change frameworks such as National Adaptation Plans (NAPs), Nationally Appropriate Mitigation Actions (NAMAs), guidelines and other relevant national documents, and for monitoring and evaluating the implementation of climate change-related strategies. This represents a very heavy workload for a small unit within the VPO-DoE.

The NCCSC and the NCCTC are intended to be important forums to facilitate the implementation of cross-sector climate change interventions. In principle, both committees have been established and are functioning, albeit in limited ways. For example, the 2012 National Climate Change Strategy and the 2013 National REDD+ Strategy had to be endorsed first by the NCCTC and then tabled at the NCCSC for approval. Likewise, National Position Papers for submission to the UNFCCC COP meetings are first tabled at the NCCTC and the NCCSC for endorsement and onward submission to the inter-ministerial steering committee, chaired by the Chief Secretary. However, both committees do not appear to meet on a regular basis, and lack a functioning secretariat beyond the NCCFP. In addition, their mandates are not in the public domain and so the extent of their role in coordinating the

country's response to climate change remains unclear. One possible reason for the present low profile of both committees may be that insufficient funds have been allocated to prepare for and host their meetings.

The National Climate Change Strategy of 2012 recognizes this limited institutional capacity as one of the major hindrances to addressing the impacts of climate change in Tanzania. It is on these grounds that institutional capacity strengthening at all levels is emphasized in the strategy, recognising that national efforts towards climate change adaptation and mitigation need to be addressed across a range of sectors in a coordinated manner. Among the activities or programmes that the national strategy states require support and need to be implemented include:

- the establishment and implementation of awareness programmes to sensitize the public on climate change impacts as well as adaptation and mitigation options;
- the establishment of adequate research capacity for various R&D and training institutions to address issues related to climate change;
- building sufficient capacities of marginalized groups, including women, to address climate change related disaster risks;
- supporting the acquisition of appropriate technologies, for example, for enhancing early warning systems and weather forecasting; and
- documenting and promoting indigenous knowledge on climate change adaptation in various socio-economic sectors.

These specific initiatives are supposed to be complemented by the integration of climate change adaptation and mitigation actions in all sectors so as to build the capacity of relevant institutions to address climate change challenges at different levels.

Of particular significance in the current institutional architecture is the absence of the Planning Commission. The Planning Commission was established in 2008 as an agency for strategic thinking on the national economy and to provide advice to government on medium and long-term strategies for socio-economic development. The Commission is mandated to monitor, analyze and provide advice on long-term sector policies and socio-economic developmental issues. Therefore, as the country's national planning agency, one would expect to find it embedded in the institutional structure for addressing climate change, as without the involvement of the Planning Commission the mainstreaming of climate change into national strategic plans is made difficult.

Examining the structure of the Planning Commission itself, issues of climate change do not feature in its component clusters and their related sectors. One could argue that since the environment is reflected in the Planning Commission's structure then climate change is assumed to be taken on-board. However, the consideration of issues related to climate change as environmental concerns is an oversimplification, as it is now recognised that the challenges brought about by climate change are much broader than environmental concerns. Hence, the reliance on an institutional architecture that was developed to address environmental issues may not be sufficient to integrate climate change issues in the plans, programs, projects and activities of all the relevant sectors of the economy.

4.4 Institutional Processes

At present, the implementation of specific interventions and activities related to climate change are carried out in the respective Ministries, Departments and Agencies (MDAs) and Local Government Authorities (LGAs) according to their roles and responsibilities under the EMA and their related mandates. Resource mobilization, financial management and reporting is undertaken following the government's financial management guidelines and systems established under the Ministry of Finance.

In principle, the MDAs are supposed to prepare programmes, projects, action plans and cost the interventions relevant to their respective sectors based on the strategic interventions identified in the national climate change strategy. The MDAs are required to prepare sector specific action plans indicating targets to be achieved; the time frame for implementing the interventions in the short, medium and long term; and outcome indicators. These plans are supposed to be subsequently integrated in the Government budget through the Medium Term Expenditure Framework for implementation. Broad and complex interventions may be addressed by preparing and implementing stand-alone programmes or projects. To assist this process, each MDA has established a 'desk' to mainstream and address issues of climate change in their respective sectors. However, there is a question over the current capacity of the individuals manning the climate change desks in the MDAs. In some cases, their limited knowledge on climate change issues, compounded by the meagre financial resources allocated to the desks, pose a major challenge to implementation.

Civil Society Organisations (CSOs) are encouraged to cooperate with the Government in implementing climate change strategies through various projects and/or programmes. The private sector, either individually or in collaboration with the Government under Public-Private Partnership (PPP) arrangements, are also encouraged to implement innovative projects to address climate change related issues. Development partners either bilaterally or through multilateral arrangements are encouraged to support the government in implementing climate change initiatives by providing technical and financial support, as well as facilitating resource mobilization. They are also encouraged to provide capacity building and facilitate technology development and transfer to various stakeholders in implementing climate change strategies.

In reality, the process of coordinating climate change actions across sectors and levels of government remains a formidable challenge. The NCCTC that is supposed to provide technical guidance on climate change related issues at the national level is composed of members who do not necessarily have the required understanding of climate change. This tends to limit their contributions. In addition, representatives on the technical committee from sector ministries all come from one directorate, which in most cases is not representative of the entire sector or in some cases has little relevance to climate change. As a result, environmental management units in various ministries are responsible for climate change by default even when climate change is not in their area of expertise.

4.5 Information and Communication Arrangements

The VPO is the designated office for environmental information management and communication in the country. Climate change information is supposed to be collected from various sources, managed and then communicated to the public by the VPO through the publication of relevant reports,

leaflets and brochures. Other available mechanisms include television and radio programmes, newspapers and cultural performances. To facilitate information communication, the VPO collaborates with key stakeholders dealing with climate change in the country to communicate climate change information. Such stakeholders include MDAs, LGAs, Civil Society Organisations, religious organisations, and research and academic institutions. Although all these avenues exist for communicating climate change information, the effectiveness of this information has not been evaluated and will depend, in part, on how much of the information has been distilled and tailored to suite the targeted audience.

4.6 Reporting Mechanisms

The reporting mechanisms for climate change-related issues follow the established government reporting system, as well as the reporting system specified in the EMA. Under the government reporting system, MDAs and LGAs are expected to report on the implementation of their initiatives annually. In addition, the EMA requires Sector Environmental Coordinators and District/Council/Town Environmental Management Officers to report on the implementation of Environmental Action Plans, which can include climate change issues. Since the MDAs and LGAs are expected to integrate relevant interventions in their respective plans, their quarterly and annual reports should capture information on the implementation of climate change initiatives. This includes financial reports that are subject to audit, following the government regulations. In this case, MDAs and LGAs should report on any financial resources that were allocated for the implementation of specific climate change actions in a given financial year.

However, these reporting mechanisms also face implementation challenges both within and between the different organisations. With the exception of the ministry of agriculture, where the head of the environmental unit reports directly to the Permanent Secretary, in all other sectors they fall under one directorate in the sector. These units are understaffed and often lack the necessary expertise in climate change related issues. At the sub-national level there are departments within the local government authorities that deal with environmental matters. These departments are coordinated through the District Executive Director who reports to the PMO-RALG. Such a framework is present down to the ward and village levels, suggesting a good institutional setting for the implementation of strategic interventions. However, these departments do not have adequate human and financial resources to implement such interventions. Moreover, there is a dis-connect between the local government departments and the sector ministries, thus making sector coordination at the national level to the local level another major challenge.

4.7 Monitoring and Evaluation Framework

Monitoring and evaluation follow Government standard processes and procedures. The VPO monitors the implementation of climate change initiatives through Sector Environmental Sections, the Regional Environmental Experts, and the Town/City/Municipal/District Environmental Management Officers. Furthermore, Environmental Management Officers from the LGAs send their implementation reports to VPO-DoE. In theory, the VPO can then develop indicators and a general monitoring and evaluation framework. These indicators along with the key deliverables and benchmarks should be the main tools for assessing the implementation of various initiatives.

Information can be compiled in various periodical monitoring reports and made available to various stakeholders through quarterly and annual reports, budget speeches and other relevant reports.

In practice, these evaluation activities appear to be organised on an ad-hoc basis. This includes the monitoring carried out during the intervention period, as well as any other evaluation activity that the VPO considers useful for improving the intervention and programme management. However, such evaluations are not put in the public domain, thus excluding any independent assessment of the performance of such investments.

4.8 Climate Change Funding Institutions

Addressing climate change in Tanzania depends on financial support from national sources, including public funding from the government budget as well as private sector investments, in addition to international sources. However, there is no integrated approach to secure a coordinated working system so that funds to address climate change are used to achieve the objectives presented in the various initiatives. To ensure resource availability for different climate change initiatives, the government has recently proposed to establish a National Climate Change Fund with separate funding windows for climate change adaptation and mitigation. It is envisaged that much of the funding will come from national budget allocations, and other sources will complement these efforts. Other sources of funding include International Funds that are financing climate change, such as the Global Environment Facility, multilateral banks and bilateral funds. The institutional location of such a fund appears not to have been determined, although the Ministry of Finance holds the mandate for the national public finance management system.

4.9 The effectiveness of the present institutional arrangements

Our analytical framework sets out three key principles against which a country's institutional arrangement can be assessed to determine its effectiveness for climate finance delivery. These are: (i) the existence of a national mechanism for coordination between institutions involved in climate finance delivery; (ii) whether these institutions demonstrate a strong ability to change and innovate; and (iii) whether the relevant climate change institutions are locally anchored.

4.9.1 First Institutional Principle: a national mechanism shall exist for coordination between institutions involved in climate finance delivery

Effective climate finance delivery involves actions at three critical levels: budget allocations to the relevant spending priorities within the national budgeting process, the delivery of the budgeted funds to the appropriate government agency, and monitoring the implementation of the funded climate change programmes. In assessing whether the mandated institutions can be effective in ensuring the effective delivery of climate finance, four criteria can be used:

- Leadership of the national response to climate change with regard to climate finance delivery is established within the government administration
- The roles played by different actors in the delivery of climate finance is known by key stakeholders

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- Other actors within the policy making process outside of government (e.g. the legislature) are able to review and challenge policy
 - Institutional arrangements are in place for inter-agency collaboration

The Tanzania Climate Change Strategy seeks to establish the roles of the different actors in the delivery of climate finance in the country. The VPO – DoE is the key coordinating agency mandated to deal with all issues of the environment, which at present is considered to include climate change. In particular, this Strategy directs all Government Ministries and Agencies to establish a climate change desk that will address climate change related issues at the sector level and relay the information to the VPO as the national coordinating unit. Yet these desks are not yet securing this important mainstreaming function.

The Ministry of Finance is mandated to manage the budget allocation process for each sector in the country. The national budget is meant to address national priorities of which climate change may now be treated as a new priority issue. In addition, the Planning Commission is mandated to oversee short and long-term plans for the country's development. However, the Planning Commission is silent on climate change related matters through its plans and actions.

Cumulatively, these inadequacies and inconsistencies have undermined efforts to address climate change in a coherent and cohesive way. Efforts are now underway to ensure that a special budgetary allocation for addressing climate change is put in place so that each Ministry has an annual budget component. One major limitation continues to be the inadequate institutional capacity to secure the necessary systems and human capacity to deal with issues related to climate change.

4.9.2 Second Institutional Principle: institutions shall demonstrate a strong ability to change and innovate

Another important criterion for assessing the effectiveness of climate change institutions is whether the mandated institutions are able to change and innovate to respond to climate change and take advantage of new funding opportunities. This implies the ability of institutions to cope with high levels of complexity and uncertainty in the face of new challenges brought about by constantly changing vulnerability contexts. Any assessment of the ability of Tanzania's climate change and climate finance delivery institutions is limited by the fact that the institutions mandated to be responsible for climate change, including climate finance delivery, are taking on a new role for which they have so far received limited support.

Such institutions do not change over-night as institutional innovation is somewhat at odds with the public service ethos. Climate change remains an emerging challenge, and Tanzania's institutions are still at an early stage in their response to addressing climate change. The lack of delineation between climate change and environmental-related issues has brought about some confusion as they tend to be treated as one and the same thing. Furthermore, the majority of programmes and projects implemented in the country that are climate change-related are often regarded as developmental programmes and projects. For example, the water supply program from Lake Victoria to the drier parts of the country is considered as a developmental program although it is responding to the persistent drought in the region. Other climate change-relevant programs are considered as developmental projects and thus very little is documented as being climate change-related.

The Ministry of Science and Technology which is mandated to mainstream new technologies into sector ministries has had minimal activity that is climate change-related. Research on relevant technologies and climate change-related initiatives is missing and hence knowledge gaps are not yet identified and documented.

Above all, at present there is a lack of human resources knowledgeable on climate change-related issues who can inform policy and decision making in the country. Even the little that has been done is not linked to policy. As such, deliberate efforts ought to be undertaken to link science, research, innovation and policy formulation on climate change in an innovative way.

4.9.3 Third Institutional Principle: climate change institutions shall be anchored at the local level

At present, little is known about the capacity of district level institutions to discharge climate change policy or fulfil a climate finance delivery mandate. Both planning and budgeting in the country are guided by central government priorities, which may not necessarily reflect local climate change realities.

Fieldwork conducted for this study in Longido and Rufiji Districts revealed that local governments have little experience in planning for climate change. NGOs that have a certain degree of understanding on climate change issues have facilitated much of the planning at the local level. For example, the Tanzania Natural Resource Forum (TNRFF) has facilitated a project titled 'Mainstreaming climate change adaptation into dry-lands development planning in Tanzania' in partnership with the local government council of Longido District. Likewise, Rufiji District, in partnership with IUCN, has implemented a project called 'Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones of Tanzania'. This project forms part of the government of Tanzania's response to climate change impacts on the coastal zone, and is an integral component of the set of adaptation responses proposed under the national climate change strategy.

Districts where there are NGOs active on climate change issues thus appear to be better placed in planning and implementing climate change programmes and projects than those without. However, such initiatives are rarely sustainable being donor dependent, relying on external finance to support implementation.

4.10 Conclusions

The institutional landscape is clearly evolving at the present time, with the newly created National Climate Change Technical Committee (NCCTC) and the National Climate Change Steering Committee (NCCSC) offering potential to facilitate the implementation of cross-sector climate change action. However, capacity constraints are significant across the government administration, with 'sector desks' restricted in the role they can play by their limited knowledge on climate change issues, compounded by the meagre financial and human resources allocated to these desks. Capacity constraints at the national level are amplified at the local government level. In the absence of any concerted capacity building programme, LGAs do not appear to be well prepared to respond to climate change.

A serious gap in the climate change institutional architecture is the absence of the National Planning Commission. This may be due to the fact that the adopted architecture was the one designed to address environmental issues. With climate change impacts going far beyond environmental

concerns, the climate change agenda should be placed more centrally in the national development planning discourse, requiring the full involvement of the Planning Commission.

Overall, much is needed to strengthen the links between science, research, innovation and policy formulation on climate change. This requires a wide range of different institutions becoming more actively involved.

5 Macroeconomic context and public financial management

Chapter summary

- Tanzania's macroeconomic performance over the recent past has been strong, with steady growth in GDP since the late 1980s. Tanzania has sustained real GDP growth of at least six per cent for the last 12 years.
- Tanzania's economy has changed from one dominated by agriculture to one where services and industry comprise a substantial proportion of growth. The communications sector has generated the strongest growth over recent years, with the construction and financial intermediation sectors also performing strongly. However, electricity supply has been a concern and load shedding during the last 15 years has had a negative impact on the economy. With climate change, securing the national energy supply represents a major challenge.
- Climate change may have increasingly less effect on GDP figures due to the higher growth of certain sectors, but it will continue to have a significant impact on the livelihoods of smallholder farmers.
- Inflation has averaged seven per cent for most of the last decade. As food items make up almost half of the CPI basket, climate variations on agricultural production could impact macroeconomic stability.
- While important improvements in public financial management systems and expenditure management have been achieved in recent years, significant challenges remain. These include the need to link medium-term strategies to annual budgets. Tanzania's capacity to implement national strategies needs to improve if climate change is to be effectively managed. Climate change expenditure related to infrastructure investment in particular requires multi-year planning and management and the effectiveness of this expenditure risks being compromised by weak management systems.
- Climate change-relevant expenditure is not explicitly recognised through specific coding of expenditure within the national budget. Estimates of the level of climate change-relevant spending therefore requires a manual review of all programmes and line items, as has been undertaken in this study.

5.1 Introduction

The previous chapters have discussed the policy and institutional context of the national response to climate change; this chapter provides an introduction to the question of climate change expenditure within the national budget. It provides context and background for the discussion of climate change-relevant public expenditure through a summary exploration of the macroeconomic and fiscal position of government over the recent past; and the strength of the public expenditure management system. The state of the economy and the general position of government finances

will have a substantial bearing on the resources available to fund programmes relevant to climate change. Similarly, as most public resources will flow through government financial management systems, the strength and robustness of these systems will have an impact on the effectiveness of the public sector response to climate change.

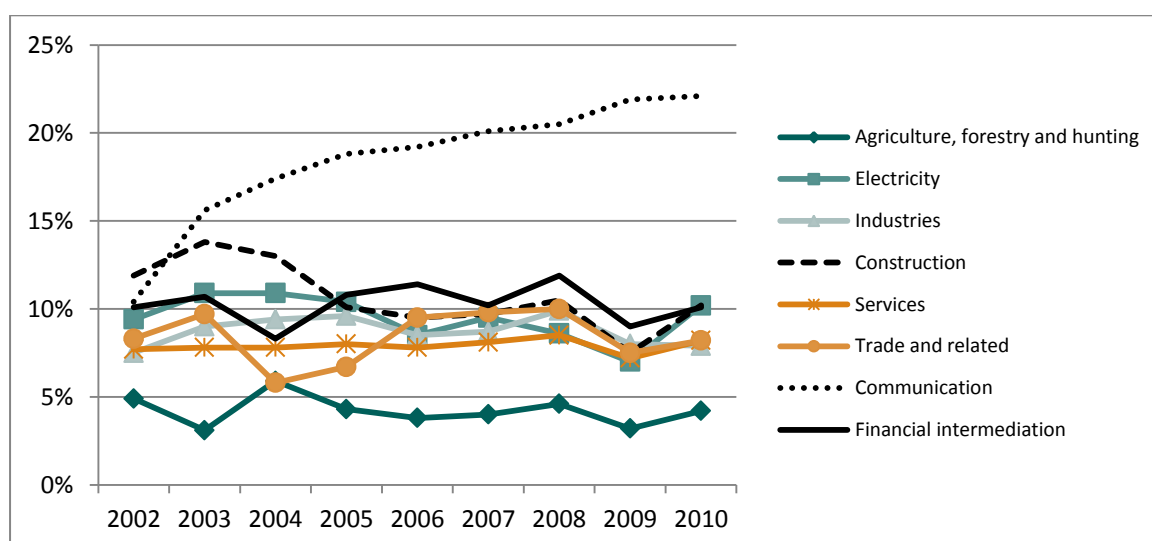
This chapter first reviews the macroeconomic and fiscal position of government before going on to assess public expenditure management systems, in both cases using secondary sources of data. In the case of the macroeconomic and fiscal analysis, Government of Tanzania budget and official macroeconomic data are combined with reports by external observers such as the IMF to provide much of the basis for the analysis. Regarding public expenditure, the main data source consulted is the 2009 Public Expenditure and Financial Accountability (PEFA) assessment (MoFEA 2010).

5.2 Macroeconomic context

Tanzania has sustained real GDP growth of at least 6 per cent for the last 12 years. This represents a success in sub-Saharan Africa. Recent challenges include the impact of the global economic downturn and constrained domestic electricity supplies that have caused slight reductions in growth. However, growth in the second half of 2012 increased to 7 per cent, supported by the communications sector, financial services, manufacturing and trade.

The communications sector has generated the strongest growth over recent years, growing three times faster than the average rate of GDP growth (Figure 5.1). The sector's strong growth performance has been increasing since 2002 and a real annual growth of GDP of over 20 per cent has been maintained between 2007 and 2010, with the sector's GDP almost doubling in less than four years. The construction and financial intermediation sectors have also performed strongly, with average growth rates of 11 and 10 per cent respectively between 2002 and 2010. While these sectors have achieved sustained growth, other sectors have experienced volatility. Notably, mining and energy sector GDP growth has varied greatly. The mining sector experienced growth of almost 8 per cent in 2012, an increase from just over one per cent in 2009 (NBS 2013).

Figure 5.1: Growth rate of key sectors



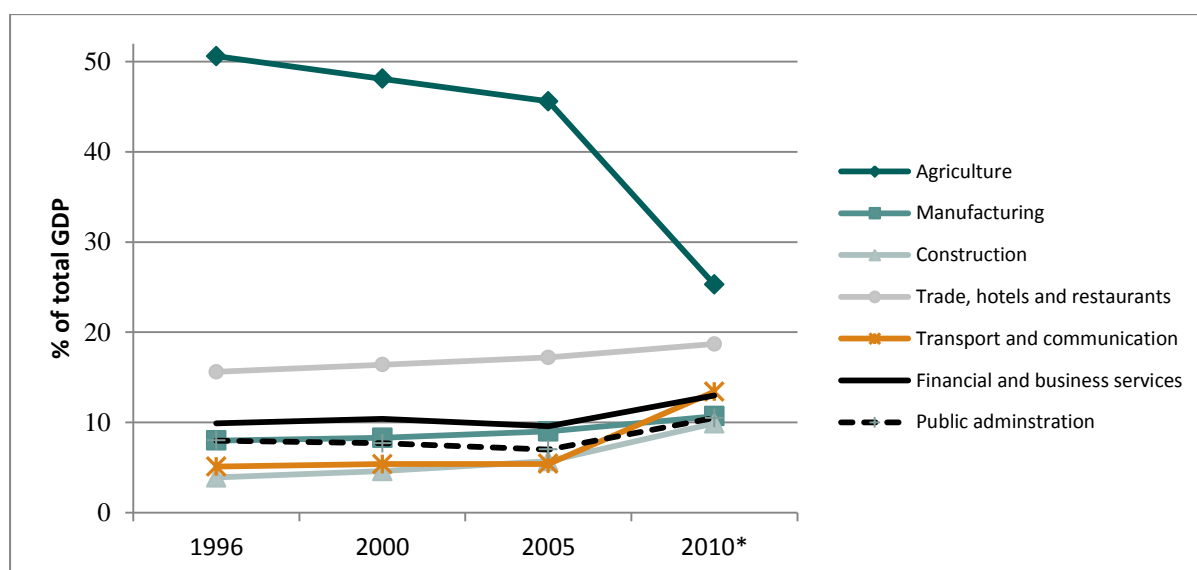
Source: Authors' compilation from MoFEA and BOT data

Electricity supply has been a concern and load shedding during the last 15 years has had a negative impact on economic growth. Generation has recently improved, although it still presents a fiscal risk and is a potential constraint on growth. Oil imports from the private sector bridged the decline in hydropower generation in 2011 and 2012 and reduced the length of the outages. While this caused the current account to deteriorate, it is expected to be alleviated once the new gas pipeline delivers natural gas for electricity generation in 2014. The increase in power tariffs of 40 per cent in 2012 has not alleviated the deficit of TANESCO, the national electricity supplier. Therefore there is a dual risk of fiscal instability and the risk of a negative impact on economic growth (IMF 2013). Hydropower generation is exposed to changes in precipitation and weather patterns that may result from climate change.

Tanzania’s economy has changed from one dominated by agriculture to one where services and industry now comprise a substantial proportion of growth. The contribution of agriculture to GDP has declined markedly during the last 15 years, from around half to one quarter of total growth (Figure 5.2). The average growth of the sector has been 4.2 per cent, less than the national average of 6.7 per cent during the last decade (FYDP 2012). The output of the sector has been impacted by droughts as weather patterns have become increasingly variable. Tanzania’s agriculture sector is mainly rain-fed with a low rate of irrigation. This makes the sector highly vulnerable to variable weather patterns and drought.

An estimated one fifth of the agriculture sector is informal and dominated by smallholder subsistence agriculture (Economic Survey 2005, URT 2012b). As this sector employs almost three quarters of Tanzania’s labour force (ASR and PER 2010/11, ILFS 2006), the low growth of the sector is a concern for poverty reduction efforts. The productivity of the sector has been a strategic issue for a number of years and the infrastructure investment promoted by ‘Kilimo Kwanza’ is an attempt to increase the sector’s productivity rates (URT 2012b).

Figure 5.2: Contribution to GDP of key sectors



Source: Authors’ compilation from the Economic Survey and the Five Year Economic Development Plan 2012

Overall, the sustained growth in national GDP has not translated into a notable reduction of poverty. The proportion of the population living below the poverty line was 33.6 per cent in 2007, only slightly below the 35.7 per cent recorded in 2001 (FYDP 2012). This is partly explained by the sector composition of growth and its urban focus. Eight out of 10 poor Tanzanians live in rural areas, yet the growth patterns have been concentrated in urban centres, particularly Dar es Salaam.

This economic structure represents challenges and opportunities as a result of climate change. The increasing share of GDP that is generated from communications, financial services and construction is less vulnerable to changes in the climate. This will increase economic resilience as further changes in climate are experienced. These sectors are also typically higher valued-added than agriculture, presenting the possibility of higher tax revenues to support public expenditure, which in turn could be directed towards climate change-relevant programmes. However, the predominance of employment in the agricultural sector means that a large number of the population will remain vulnerable to the impact of climate change. In summary, climate change may have increasingly less effect on GDP figures due to the higher growth of certain sectors, but it will continue to have a significant impact on the livelihoods of smallholder farmers.

Government expenditure has outstripped inflation, with actual expenditure doubling in real terms between 2006/07 and 2011/12 (Table 5.1). Thus there has been an increase in fiscal space for new expenditure priorities such as climate change adaptation and mitigation. Increasing revenue collections from natural gas production can be expected in the medium-term, although they need to be effectively managed to ensure fiscal stability. Overall, recent macroeconomic performance presents a positive context within which the government can implement expenditure policies that include adaptation and mitigation activities.

Table 5.1: Inflation and growth in the budget compared

Year	Rate of Inflation (%)	Approved budget (Tshs bn)	% increase in approved budget	Actual expenditure (Tshs bn)	% Increase in actual expenditure
2006/07	5.6	4788.5	-	4,475	16
2007/08	6.3	5998.1	25	5,217	17
2008/09	8.4	7192.1	20	6,907	32
2009/10	11.8	9,271	29	8,312	20
2010/11	10.5	10,770	16	9,439	14
2011/12	17.4	12,640	17	10,765	14

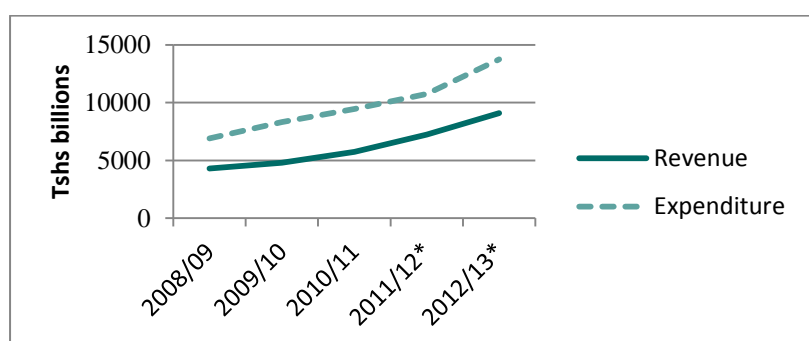
Source: Expenditure data from IMF Staff Tables, March 2013 and Ministry of Finance. Inflation and GDP data

5.3 Trends in government revenue and spending

The growth rate of expenditure has been supported by improved domestic revenue collection that has maintained the budget deficit, although recent declining revenues have created concerns about budget sustainability. There was a spike in the deficit as optimistic revenue projections were not

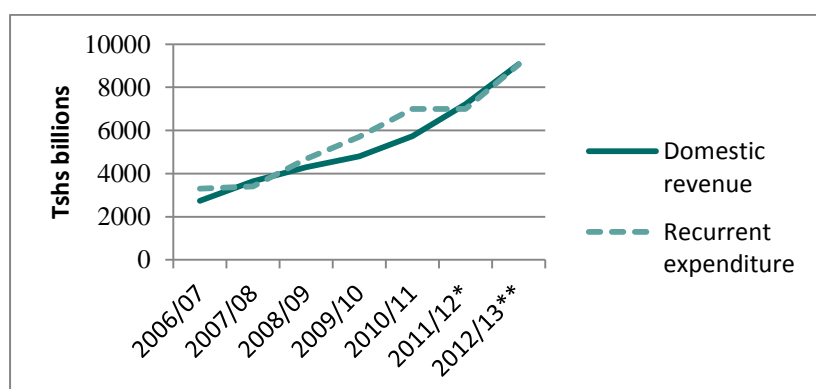
achieved and recurrent expenditure increased following the fiscal stimulus and the 2010 elections, which saw a 120 per cent increase in local development spending and increased arrears related to large infrastructure projects (URT 2012a). Despite this variability, a conservative cash management policy that has been in operation since the late 1990s has generally maintained a manageable fiscal deficit. Figures 5.3 and 5.4 show the trends in total revenue and expenditure and also domestic revenue and recurrent expenditure.

Figure 5.3: Trends of approved total revenue and expenditure growth



Source: IMF 2011, 2013. * preliminary and projected figures

Figure 5.4: Domestic revenue and recurrent expenditure



Source: IMF 2000, 2010, 2011 and 2013. * Preliminary figures ** Projected figures

Tanzania's domestic revenue performance has followed a steady positive trend since revenue administration reforms improved collections. Domestic revenue increased four-fold in nominal terms, from about Tshs 1,774 billion in 2004/05 to an expected Tshs 7,221 billion in 2011/12. Heavy investment in revenue reforms at the Tanzania Revenue Authority have resulted in improvement in the VAT and income tax laws and a good taxpayer education campaign. Tanzania has progressed from having one of the lowest collections in the East Africa region a decade ago, to now having one of the highest.

Whilst the generation of domestic resources has improved, there still exist challenges to raise resources to a level that can sustain the country's development needs. The gap between domestic revenue and expenditure has grown in recent years, and so dependence on external financing persists, as discussed below. This presents an on-going challenge in meeting Tanzania's medium-term development objectives. The ratio of revenue (domestic plus grants) to current spending

(recurrent plus current spending in the development budget) has fallen and is expected to continue to decline as domestic revenue growth slows and public sector recruitment continues. It was 91 per cent in 2010/11 down from 128 per cent in 2007/08 (URT 2012a).

Domestic revenue is generated from tax and non-tax sources. Tax revenue, which constitutes the largest proportion of domestic revenue, is generated from taxes on income, profits and capital gains, taxes on goods and services, which include value added tax (VAT) and excise duty and taxes on permission to use goods or to perform certain activities. The revenue reforms focused initially on large tax payers, who accounted for around two-thirds of total revenue collection, and VAT. There have also been extensive customs and excise and income tax reforms. VAT has been the main revenue type, accounting for an average of one-third of domestic revenue between 2004 and 2010.

This revenue performance is, in part, a structural feature reflecting the stage of development of Tanzania. Typically countries that have not yet experienced a structural transformation of the economy are highly dependent on agriculture and have a large informal sector. They have a narrow revenue base with a predominance of indirect taxes such as VAT. This is compounded by the challenge of reducing high rates of tax evasion and avoidance. It is expected that future revenue gains are likely to be harder to come by compared to the 'quick wins' that have been experienced in recent years, although substantial increases in domestic revenue from hydrocarbon resources in expected from 2020 onwards.

A stimulus package was adopted in 2008/09 and the 2010 elections prompted a rise in expenditure during 2009/10 and 2010/11, with expenditure peaking at 27.5 per cent of GDP (URT 2012a, IMF) (Table 5.2). This fiscal stimulus caused expenditure to increase by 3 per cent of GDP. The increase was focused on recurrent expenditure and in a few ministries (Foreign Affairs, Finance, Energy, and the Prime Minister's Office) (URT 2012a). Public expenditure increased from Tshs 4,475 billion to a preliminary Tshs 10,765 billion between 2006/07 and 2011/12, a growth rate of over 140 per cent (Table 5.3).

Table 5.2: Government expenditure as a share of GDP

Year	Government expenditure (% of GDP)
2008/09	26.1
2009/10	27.5
2010/11	27.0
2011/12	26.2

Source: IMF 2011, 2013

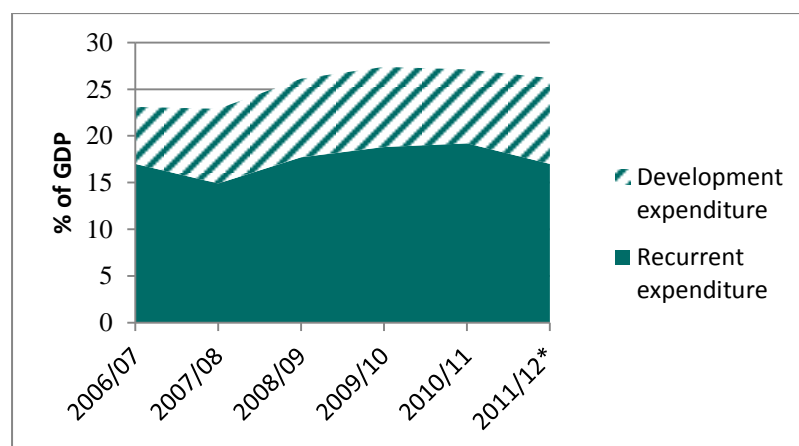
Table 5.3: Government total and recurrent expenditure as a share of GDP

Year	Total expenditure		Recurrent expenditure	
	% of GDP	Tshs billion	% of GDP	Tshs billion
2006/07	23.0	4,475	17.0	3,296
2007/08	22.8	5,217	14.9	3,398
2008/09	26.1	6,907	17.7	4,681
2009/10	27.5	8,312	18.8	5,700
2010/11	27.0	9,439	19.2	6,990
2011/12*	26.2	10,765	17.0	6,990

Source: IMF 2009, 2010, 2011, 2013. * Preliminary figures

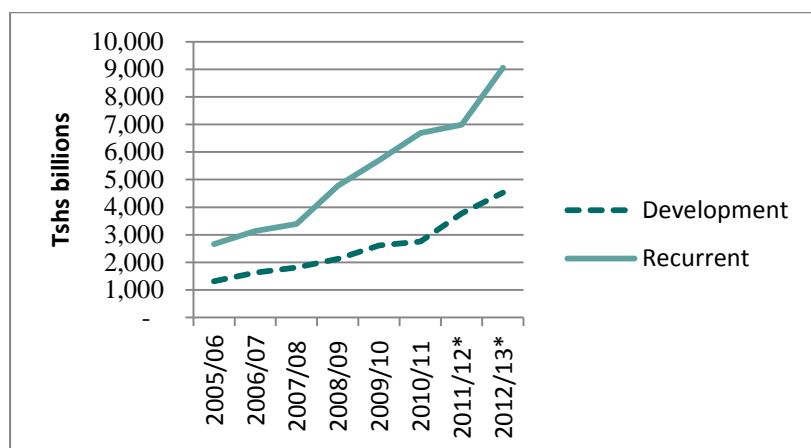
Recurrent expenditure is substantially greater than development expenditure in Tanzania (Figures 5.5 and 5.6), although the split between the two is not an accurate presentation of the amount of spending on current concerns compared to capital investments. The development budget contains substantial recurrent spending that is donor financed; it also includes government’s counterpart funding, in addition to government’s investment spending.

Figure 5.5: Government recurrent and development expenditure as a share of GDP



Source: IMF 2009, 2010, 2011, 2013 * Preliminary figures

Figure 5.6: Comparison of development and recurrent expenditure (2005/06-2012/13)



*Source: Compilation, using approved budget outturns. *Preliminary and projected respectively*

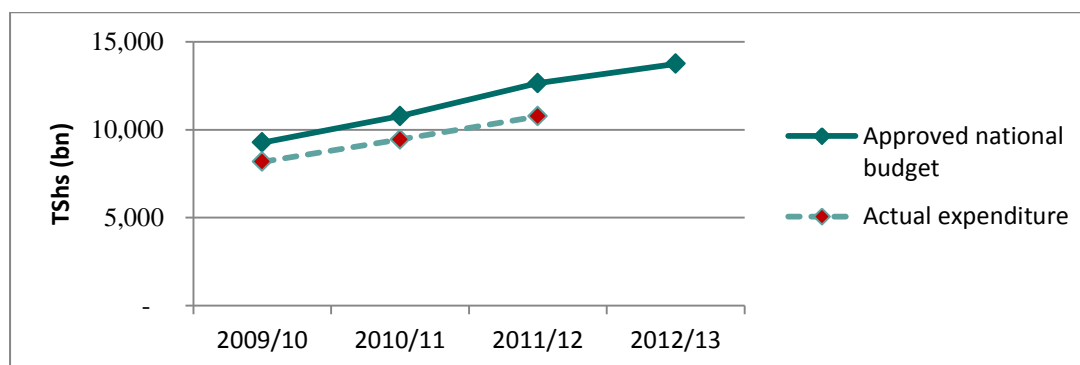
The level of public infrastructure investment spending in the budget is low and this has been further impacted by the low execution rates of the development budget. Despite efforts to improve the execution of the development budget it has remained a challenge and in 2010/11 its execution declined to 59 per cent after non-concessional external borrowing could not be accessed (URT 2012a). Investment planning is being led by the Planning Commission to guide the future programming and prioritisation of investment spending.

Wages and salaries account for around 30 per cent of recurrent expenditure or 10 per cent of GDP. Wages have grown faster than total expenditure in recent years: in 2007/08 they accounted for 23.6 per cent of total expenditure but by 2011/12 this had risen to 31.8 per cent. This is in part due to a Presidential directive to increase salaries in 2008. The local government wage bill also increased as new employees were hired in the education, health and agriculture sectors (URT 2012a: 41).

The increase in the share of development expenditure in the national budget could be vital for the response to climate change. For instance, the growth in public expenditure on infrastructure projects and hydropower investment could help to reduce carbon emissions, and enhance adaptation potentials. Expenditures geared towards increasing electricity distribution could substantially reduce the rate of depletion of forest cover. However, the effectiveness of such expenditures must be balanced against the increased costs required for delivery. For instance, while the supply of electricity has increased in the past year, the cost of electricity has continued to rise. This provides fewer avenues for reducing forest depletion, in the event that forest resources continue to offer a cheaper alternative to hydro energy.

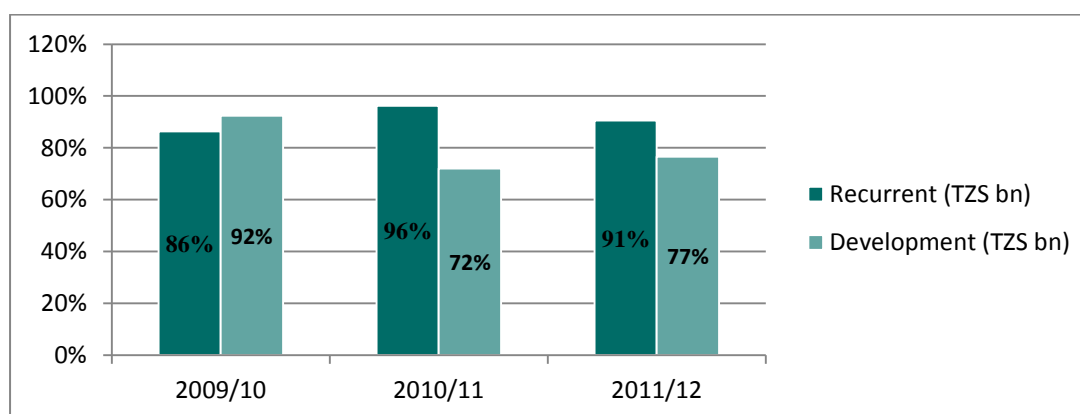
Over the past three years actual expenditure has been consistently lower than the budgeted amounts, with outturns at roughly 85-90% of the budget (Figure 5.7). The development budget has tended to deviate more than the recurrent budget, with only 72% of the development budget spent in 2010/11 and 77% spent in 2011/12 (Figure 5.8). This may affect the pace of delivery of major infrastructure projects related to climate change.

Figure 5.7: Comparison of approved expenditure and actual expenditure



Source: MoFEA data

Figure 5.8: Deviation between planned and actual expenditure by recurrent and development budgets



Source: MoFEA data

External financing

Development assistance grants and loans remain major financing sources for Tanzania’s fiscal deficit, although aid has declined in recent years. Aid has declined from funding over 40 per cent of expenditure in 2008/09 to less than 30 per cent in 2010/11 (URT 2012a). This trend can be expected to continue as OECD-DAC donors face declining aid budgets.

The share of grants in foreign financing has decreased in recent years by 30 per cent, presently funding around 17 per cent of public expenditure. At the peak in 2007/08 grants funded just under one third of total expenditure, amounting to 6.9 per cent of GDP (Table 5.4).

Table 5.4: Foreign grants

Grants	Tshs bn	GDP (%)	Expenditure (%)
2006/07	953	4.9	21
2007/08	1,581	6.9	30
2008/09	1,340	5.1	19
2009/10	1,405	4.6	17
2010/11	1,627	4.7	17
2011/12*	1,855	4.5	17

Source: IMF 2009, 2010, 2011, 2013. * Preliminary figures

Since 2006/07 programme grants have been the largest component of aid, funding 12 per cent of expenditure; followed by programme loans, funding 7 per cent; and project grants funding 6.5 per cent. The recent decline in programme grants has arisen as some donors left the general budget support mechanism.

In the last two years there has been an increase in non-concessional foreign financing, as this was contracted to cover an increased budget deficit that resulted from the decline in foreign grants. Non-concessional external borrowing amounted to 1.4 per cent of GDP in 2011/12. These funds were used for infrastructure investment in the power and roads sectors. The lower than anticipated external borrowing resulted in higher domestic borrowing in 2010/11, financed mainly through treasury bonds (World Bank 2011).

Future expectations of substantial natural gas revenues by 2017-2020 are increasing as new reserves are being reported. This raises issues of expectation management, developing the human, regulatory, legal and institutional capacity to manage the revenues and short-term fiscal sustainability in light of the expectations of higher future revenues. Investment in the gas pipeline being built by the Tanzanian Petroleum Development Corporation (TPDC) equivalent to 10 per cent of total expenditure in 2012/13 is being financed by loans from China (URT 2012a). This will increase the fiscal deficit to 8.3 per cent of GDP.

5.4 Growth in 'discretionary' expenditure that could finance climate change relevant activities

The degree of flexibility within the budget (so-called 'discretionary' expenditure) appears to be growing slowly. Expenditure in the discretionary categories has been growing faster compared to non-discretionary funding (Table 5.5). This provides an indication of the 'fiscal space' for government allocation. However, defining expenditure as 'discretionary' is difficult as different observers consider different parts of the national budget as priorities. Adopting a simple approach, which is focused on the short-term, assumes that wages and salaries and interest payments cannot immediately be re-prioritised (and are therefore 'non-discretionary').

Table 5.5: Exploratory examination of discretionary and non-discretionary spending (% of GDP)

	2007/08	2008/9	2009/10	2010/11	2011/12*	2012/13**
Non-discretionary	6.2	7.0	6.5	7.7	7.7	7.9
Wages and salaries	5.0	6.1	5.7	6.7	6.6	6.5
Interest payments	1.2	0.9	0.8	1.0	1.1	1.4
Discretionary	16.7	19.1	20.9	19.3	18.5	20.3
Goods, services, transfers	8.7	10.7	12.3	11.4	9.3	10.9
Development expenditure	8.0	8.4	8.6	7.9	9.2	9.4

Source: IMF 2010, 2011 and 2013. * Preliminary figures ** Projected figures

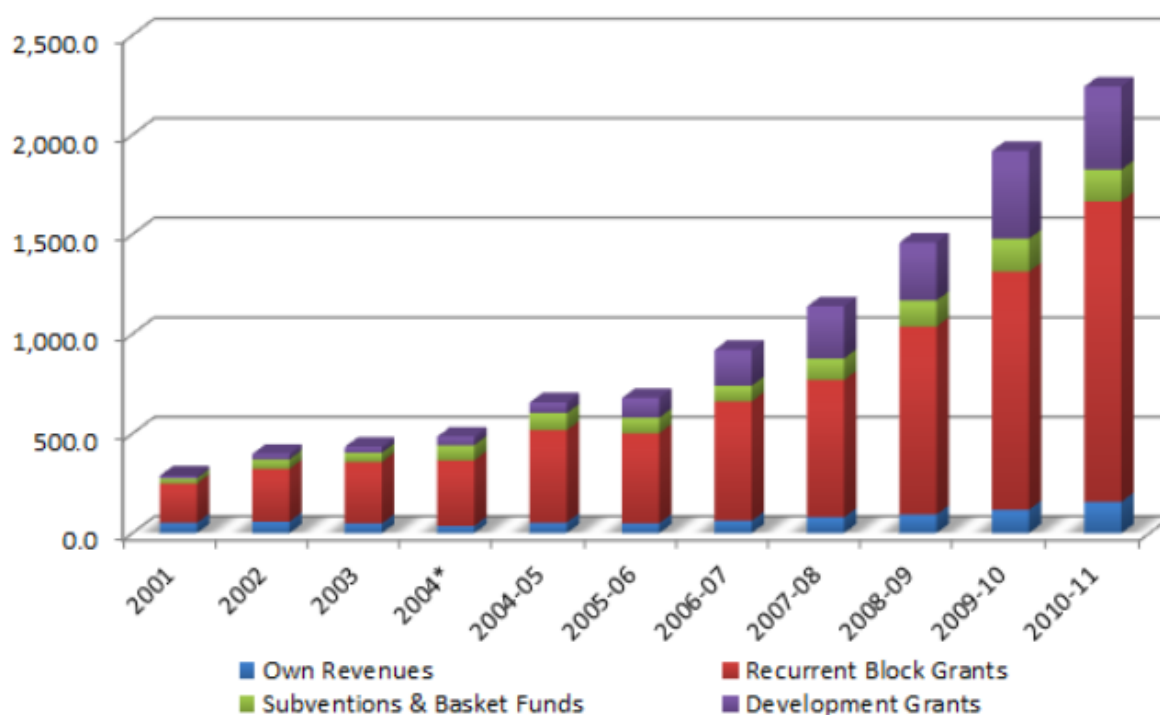
5.5 Flows from central to local government

The administrative structure of government is based on three levels. Levels 1 and 2 consist of central government ministries and the Regions. These have legislative votes approved by Parliament. Level 3 consists of local governments that are under the authority of the Minister for the Prime Ministers Office - Regional Administration and Local Governments (PMO-RALG). The balance of power rests with central government, despite decentralization reforms.

A process of decentralization has been underway for some time (see Chapter 7). The Local Government Reform Programme (LGRP) resulted in the amendment of the 1999 Local Government Act and the Local Government Finance Act to increase the autonomy of local governments to plan their own budgets. LGAs are responsible for delivering basic public services such as primary education, basic health, agriculture extension services, local water supply and roads, although legislation is not explicit about this responsibility. Despite this responsibility of local government to deliver services, sector ministries have remained heavily involved in these sectors, 'while the intersectoral or coordinating ministries have exercised tight control over the allocation and usage of local government inputs (fiscal and human resources in particular)' (Tidemand, Sola, Bofin and Chaligha 2010: 8).

The fiscal autonomy of local government is limited to development funding, as 88 per cent of recurrent budget transfers are earmarked salaries. The Local Government Capital Development Grant (LGCDG) allocates a discretionary per capita grant if minimum planning and financial management conditions are met. Figure 5.9 shows how local government revenue has increased in nominal terms, equivalent to a five-fold real increase during the decade. As a share of total expenditure, local government spending increased only marginally from 17 per cent to 20 per cent between 2005/06 and 2009/10. Of these funds, around 93 per cent come from central government, as locally collected revenues have continued to make only a marginal contribution.

Figure 5.9: Local government revenue sources, Tshs bn



Source: PMO-RALG (2012) Evaluation of LGSP Support for the Local Government Development Grant System.

5.6 Effectiveness of public expenditure management

The previous sections have provided an overview of the background macroeconomic context and overall fiscal position of government. These factors will have an impact on the level of resources available for climate change-relevant expenditure. Beyond questions of the level of resources available, the strength of public expenditure systems in managing climate change-relevant funds will be critical in ensuring their effective application. It would be possible, for example, for significant funds for climate change-relevant expenditures to be available as a result of an improving macroeconomic and fiscal context, but for public expenditure management systems to be unable to manage and deploy these resources to contribute to the delivery of adaptation and mitigation impact. This section reviews, at a summary level, the strength of the public financial management systems of central government to provide an indication of the effectiveness of the utilisation of climate change-relevant finance.

This assessment is relevant to funds that flow through central government systems. However, if extensive use is made of 'off-budget' or non-standard financing systems, then a separate analysis would need to be undertaken to review the effectiveness of these systems in handling climate finance, which is beyond the scope of this study. Similarly, the handling of own-generated funds by local governments is not covered by this discussion. Local governments and climate change-relevant expenditure is discussed in chapter 7 below.

Chapter 2 and Annex 1 set out the framework for assessing the effectiveness of PFM systems in terms of a set of principles, criteria and indicators. This framework aims to identify what effective climate finance management through government systems could look like, acknowledging that the principles may represent an 'ideal' that may not be achievable in the short to medium-term. The

framework approaches climate finance through a standard PFM cycle approach looking at the four main stages of PFM: planning and budgeting; execution; reporting and accounting; oversight and scrutiny. The 2012 PEFA assessment is used as the main source of information for reviewing the performance of the government systems against the framework, and is compared with earlier assessments.

It should be remembered that effective PFM systems do not necessarily equate to effective delivery of government programmes. While an assessment can be made of the effectiveness of public financial management systems, this does not necessarily provide a guide to the level of impact or the nature of outcomes generated by programmes that are funded through public financial management systems. It would be possible for expenditure to be well-managed through government systems and for these systems to provide resources to the correct parts of government, and yet for other reasons – beyond those relating to PFM – such expenditure fails to generate the intended effect. Therefore a direct correlation between strong or weak public financial management and programme impact cannot be assumed.

A summary of the PEFA assessments is presented in Table 5.6. This sets out the aggregate scores for each of the areas of PEFA assessment in 2005, 2009 and 2012. As can be seen, many areas have not shown improvement. However, care should be taken in extrapolating conclusions from changes across the years as in some cases the methodology for calculating PEFA scores has changed from the 2005 report when the methodology was relatively new, and was again revised between 2009 and 2012.

The discussion below highlights particular areas of interest for climate relevant spending and relates these to the four stages of the PFM cycle set out in the framework paper.

Table 5.6: PEFA assessment scores 2005, 2009 and 2012

Credibility of the Budget		2005	2009	2012
PI-1	Aggregate expenditure outturn compared to original approved budget	A	A	C
PI-2	Composition of expenditure outturn compared to original approved budget	D	D	D+
PI-3	Aggregate revenue outturn compared to original approved budget	A	C (B)	C
PI-4	Stock and monitoring of expenditure payment arrears	A	C	C
Comprehensiveness and transparency				
PI-5	Classification of the budget	C	C	C
PI-6	Comprehensiveness of information included in budget documentation	A	A	D
PI-7	Extent of unreported government operations	B	C+	D+
PI-8	Transparency of inter-governmental fiscal relations	C	C+	B+
PI-9	Oversight of aggregate fiscal risk from other public sector entities	C	NR	C
PI-10	Public access to key fiscal information	B	B	B

C.(i)	Policy-based budgeting			
PI-11	Orderliness and participation in the annual budget process	B	C+	B+
PI-12	Multi-year perspective in fiscal planning, expenditure policy and budgeting	B	C	C
C.(ii)	Predictability and control in Budget Execution			
PI-13	Transparency of taxpayer obligations and liabilities	B	NR (B+)	B
PI-14	Effectiveness of measures for taxpayer registration and tax assessment	C	C+	C
PI-15	Effectiveness in collection of tax payment	D+	NR (B)	B+
PI-16	Predictability in the availability of funds for commitment of expenditures	C+	C	C
PI-17	Recording and management of cash balances, debt and guarantees	B	C	C+
PI-18	Effectiveness of payroll controls	C+	C+ (D+)	C+
PI-19	Transparency, competition and complaints mechanisms in procurement	D+	B(NR)	NR (D+)
PI-20	Effectiveness of internal audit controls for non-salary expenditure	C+	C+	D+
PI-21	Effectiveness of internal audit	C	C	D+
C.(iii)	Accounting, recording and reporting			
PI-22	Timeliness and regularity of accounts reconciliation	B	NR (D+)	C+
PI-23	Availability of information on resources received by service delivery units	C	D	C
PI-24	Quality and timeliness of in-year budget reports	C+	C+	C+
PI-25	Quality and timeliness of annual financial statements	B+	B+	B+
C.(iv)	External scrutiny and audit			
PI-26	Scope, nature and follow-up of external audit	D+	B	C+
PI-27	Legislative scrutiny of the annual budget law	C+	C+	B+
PI-28	Legislative scrutiny of external audit reports	C+	D+	D+
Donor practices				
D-1	Predictability of direct budget support	C	A	NR
D-2	Financial information provided by donors for budgeting and reporting on project and programme aid	C	C+	C
D-3	Proportion of aid that is managed by use of national procedures	C	C	B

Source: URT (2010a, 2013b)

* Scores in brackets are the revised scores from the 2013 PEFA application of the revised methodology.

5.6.1 First Public Expenditure Principle: climate change expenditure shall be planned and budgeted for in the annual budget formulation process

Climate change is not recognised as a key policy theme within the budget process, although it has been incorporated in a number of planning documents, as discussed in Chapter 3, including the National Development Plan (NDP) and the National Strategy for Growth and Reduction of Poverty (MKUKUTA II). Despite these strategies, climate change does not yet appear to be an explicit theme that is integrated in the national budget process. The planning documents do however identify a number of operational objectives, strategic interventions and key outputs, and make reference to the National Climate Change Strategy.

Climate change-relevant expenditure is not recognised through specific coding of expenditure within the budget. Attempting to estimate the level of climate change-relevant spending therefore requires a manual review of all programmes and line items, as has been undertaken in this study.

Evidence from the PEFA assessment suggests that medium-term policy based budgeting is weakly institutionalised, including in those NDP areas that are relevant to climate change. The Medium Term Expenditure Framework (MTEF) should guide expenditure over several years, however, in effect it operates on a one-year rolling basis, with frequent changes to ministry and sector allocations between years that are neither linked to a retrospective evaluation of last year's performance nor often to clear national priorities. For example, alignment with MKUKUTA II, has been challenging. The Strategic Budget Allocation System (SBAS) was developed to link budget ceilings to the MKUKUKTA; however links between medium-term policies and the budget remain weak.

Sector Working Groups (SWGs) coordinate government and donor activity and they focus on yearly activities that are captured in a Performance Assessment Framework (PAF), the monitoring framework for general budget support. Where there are sector basket funds (notably education, health and water) they have a stronger medium term plan. There are however often disparities between the strategic plans of sectors and the annual budgets. Similarly, climate change-relevant expenditure – along with all multi-year expenditure programmes – faces annual budgeting constraints related to fund availability.

It is difficult to find examples of the outcomes of previous spending influencing current levels of expenditure on climate change. As noted above, climate change relevant expenditure is not easily identified in the budget, nor does it feature prominently as a priority throughout planning documents. As a result, it is not possible to isolate within key budget document examples of where climate change expenditure has been adjusted to take into account findings of monitoring and evaluation of efficiency throughout the year.

Parliament is involved in the discussion of budget proposals. The Ministry of Finance and Economic Affairs (MoFEA) involves the Budget and Finance Committee of parliament early in the budget formulation process although the time available for the National Assembly to review the budget has been limited to a few days only. The National Assembly is provided with information on macro-fiscal policy mostly in the form of the previous calendar year's economic performance and detailed revenue and expenditure data.

In 2013, the parliamentary budget session was moved forward for the first time to allow the sector budgets to be debated before the harmonised East African Community tabling of the budget speech.

This arises on the same day, in mid-June, two weeks before the start of the budget year. The national assembly then approves the appropriation bill, a brief document that contains the total budget of each MDA. As climate change-relevant expenditure is neither a focus of the budget classification system nor the planning documents it is unlikely that climate change considerations routinely feature prominently in the Parliamentary discussion. The exception to this is where there is a particular climate induced challenge at the local level which makes its way into national level discussions; recent examples of this have included droughts that have reduced the production of major cash crops such as coffee and cotton.

5.6.2 Second Public Expenditure Principle: climate change expenditure shall be executed through government systems during the budget year

Credibility of budget execution, at an aggregate level and for major budget heads, is low and has not improved in recent years. Cash shortfalls, shifting priorities during the year, uneven implementation capacity in ministries, and unrealistic budgeting have resulted in actual expenditure being less than budgeted, both in aggregate and to a greater degree within ministries. To account for these variations MDAs often have to adjust their budget within the year, which if outside their original budget an approved reallocation warrant is required. The contingency funds that put aside 0.5 per cent of the total budget in 2009/10 and 0.9 per cent in 2010/11 allows for spending on salary increases and payroll adjustments, repayment of arrears from the previous year and a contingency item that can be directed towards unforeseen non-wage recurrent expenditure, which would include a natural disaster. This can be considered to be an emergency adaptation fund.

Revenue collections have generally exceeded projections in recent years due to good performance from administration reforms and economic performance. However, the impact of the global recession reduced Tanzania's revenue collections by 10 per cent of that budgeted in 2008/09. This suggests that executing expenditure – including climate change relevant expenditure – will be problematic given the lack of certainty that planned budgets will be adhered to in the year, above and beyond the finding above that multi-year budgeting also remains a challenge.

A conservative cash management policy ensures fiscal stability, although it frequently leads to delays in the purchase of goods and services.⁵ This arises because funds are often neither released in equal tranches throughout the year nor in line with the cash flow forecasts of MDAs. The result is that implementation plans are often not met, a time consuming resource allocation process takes place in MDAs each month, goods and services do not reach the local level on time and unspent balances arise at the end of the fiscal year.

Cash management and procurement plans are outside the Integrated Financial Management System (IFMS), which undermines the coherence of the expenditure control system. These challenges greatly impact on the effective implementation of the budget and when compounded by un-budgeted operations, final spending can differ substantially from the original budget. Most of this impact is felt in non-salary recurrent expenditure, although weak payroll controls mean that wages and salaries may also not be implemented as planned. Budget execution has been particularly problematic in certain sectors, notably roads, as it was compounded by delays in procuring and

⁵ The cash budget limited aggregate expenditure in a month to average revenue (domestic plus external) in the previous three months (Ngowi 2005). This has gradually been relaxed but cash controls are still in place, allowing the budget to be generally kept in balance.

implementing complex contracts. Cash management is now a reform priority and a Cash Management Unit has been established in the Accountant General's Department. These issues also affect climate change-relevant expenditures as cash constraints risk negatively impacting on this expenditure unless it is strategically prioritised.

Internal controls and internal audit are now a focus of reform efforts. Commitment controls implemented in 2001 have improved control over expenditure and reduced the accumulation of spending arrears. However some weakness in the system remain, notably the ability of the MoFEA to make substantial adjustments during the fiscal year. An internal Auditor General position has been established for the internal audit department in the ministry, aiming to improve the quality of internal audits and to strengthen this function.

The combined effect of this suggests that Ministries will struggle to maintain an oversight of their climate change-relevant expenditure and therefore struggle to anticipate and manage unexpected financial shocks. The findings above imply that Ministries can receive increases or sudden decreases in their approved budget throughout the year, and that in practice multi-year budgeting is weak and subject to significant uncertainty. Cash to fund these budgets also appears to be managed erratically with delays and unexpected changes to requested levels of cash. In this situation, maintaining close management of climate change relevant expenditure – or indeed any expenditure – will be a challenge.

5.6.3 Third Public Expenditure Principle: climate change-related expenditure shall be subject to reporting and accounting

The Integrated Financial Management System (IFMS) has strengthened accounting and reporting in Tanzania. It is a central payment, accounting and reporting system, that covers all central government ministries and all 22 sub-Treasuries across the country, most of which are now computerised. However, the bank reconciliation module in IFMS is not yet fully operational, and manual reconciliation is frequently undertaken, routinely for around 5 per cent of transactions between MOFEA and the Central Bank.

Financial statements of MDAs and RASs are produced in line with international public sector accounting standards (the cash-basis IPSAS), although there are some compliance challenges (URT 2013b) In-year monitoring of expenditure, through management reports, is done through IFMS upon request but is not routinely made publically available.

Climate change relevant expenditures are unlikely to differ from this general trend. As noted, such spending is not separately and comprehensively identified within the budget, and therefore all that can be surmised is that it is likely to follow the same path regarding correctness of procedures for reporting and accounting. The overall impression is one of relative strength in the area of reporting transactions and accounting for the use of funds, in contrast to weaknesses in the area of budget execution. Crucially, the reporting of government expenditure on the basis of the original budget would allow expenditure to be tracked from the approved budget through to actual spending for key climate change relevant programmes, but this does not take place at present.

5.6.4 Fourth Public Expenditure Principle: climate change-related expenditure shall be subject to oversight and scrutiny

External audit reports are submitted to the legislature within nine months of the end of each financial year. These include the consolidated fiscal accounts. A Public Audit Act passed in 2008

strengthened the independence and powers of the Auditor General to make recommendations for legislative revisions and to manage his own staff. Audits adhere to INTOSAI standards. The external audits of MDAs comprise financial transaction testing (including whether accounts have been properly kept, rules and procedures followed, and resources used for intended purposes), and also assess compliance with the Public Procurement Act, internal controls and internal audit functions. Performance audits are carried out for selected sectors each year. Climate change-relevant expenditure is covered as part of the same process.

Capacity in external oversight has increased in recent years as capacity building of the members of the Public Accounts Committee (PAC) has helped the committee to reduce the backlog in the production of its report on the external audit report. A weakness that remains is the formal MoFEA follow up to PAC reports, although main issues raised in the audit are responded to in the annual budget support review in November each year. A substantial number of cases of previous audit issues remain unresolved as MDAs do not respond to the recommendations made in MoFEA's follow up. Since climate change change-relevant expenditure is not explicitly recognised within the budget, it is unlikely to receive particular attention in Parliamentary oversight.

5.7 Conclusions

Steady projected economic growth in the medium-term and low inflation suggests a positive macroeconomic context for climate change-relevant expenditure. Government expenditure is easier to plan, budget and manage in the context of macroeconomic stability and low inflation. Whilst there are some short-term concerns, the prospects for such stability appear positive over the medium-term; although this is dependent in part on well-judged economic and fiscal policies that prioritise stability and growth and an absence of significant external shocks.

While important improvements in public financial management systems and expenditure management have been achieved in recent years, significant challenges remain. There has been progress in accounting, external audit and scrutiny of the budget - related to the computerisation of the accounting system which has enhanced internal controls and improved external audit capacity. Areas where there is scope for improvement and that are of particular relevance for the management of climate finance include budget planning and execution. There are challenges in linking medium term strategies to annual budgets and therefore Tanzania's capacity to implement strategies needs to improve if climate change is to be effectively managed in the future. Climate change expenditure related to infrastructure investment in particular will require multi-year planning and management and the effectiveness of additional expenditure risks being compromised by weak management systems.

6 Expenditure Review

Chapter summary

- Total spending on climate change-relevant activities is estimated at 4-6 per cent of government expenditure, and this has increased steadily since 2009/10 on account of increased donor funding for such activities. Domestically financed climate change-relevant activities have fallen marginally in real terms since 2009/10, while foreign-financing for such activities has risen by 60 per cent.
- There is a variance between budgeted amounts and actual outturns, with only about three-quarters of the development budget actually spent in most years. However, the government does not publish detailed outturn data which means that it is not possible to determine where these shortfalls in spending occur.
- Approximately 70 per cent of climate change-relevant funding is allocated to development expenditure, which partly reflects the investment nature of climate-change mitigation and adaptation activities, but also the Ministry of Finance's practice of classifying all projects and programmes (including those funded by donors) as development expenditure.
- Climate change-relevant expenditure is concentrated in low-relevance projects, meaning that few projects specifically aim to tackle climate change. However, the share of high-relevance projects (where addressing climate change is a primary objective of the expenditure) has increased from 5 per cent to 13 per cent of the total between 2008-2010 and 2011-2013.
- The composition of climate change-relevant expenditure has shifted over the four year period, from projects with a primary focus on either adaptation or mitigation to projects that appear to combine both sets of objectives.
- Relevant expenditure is presently heavily concentrated in a few Ministries: Water & Irrigation, Energy & Minerals, Finance and Agriculture. With the exception of Water & Irrigation, it appears primarily to be focused on supporting adaptation.
- A better understanding of the relationships and linkages between central Ministries and the local government authorities is required to ensure that relevant expenditure is handled most effectively. Focusing attention and funding on the central Ministries may not necessarily be the most effective way to engage with the agencies and staff actually undertaking climate change-relevant activities.

6.1 Introduction

Tanzania is highly vulnerable to climate change and climate variability. For several years, though not systematically documented, the country has embarked on a range of projects and programs that either seek to mitigate or adapt to climate change and variability. In addition, there are a range of government programs where although the objective of the expenditure is not to secure mitigation or adaptation to climate change the outcome of the expenditure leads to these objectives being met. This chapter considers all such climate change-relevant activities from an expenditure perspective, analysing the share of public resources currently devoted to climate change adaptation or mitigation and the composition of this expenditure.

6.2 Summary of data sources used

The approved budget figures were obtained from the Ministry of Finance and Economic Affairs (MoFEA) for the years 2009/10, 2010/11, 2011/12, and 2012/13.⁶ Other statistics, including GDP and the rate of inflation were sourced from the IMF and Economic Survey data of 2012. An examination of programmes was carried out for the development budget. The climate change relevant share of the development budget for each ministry was then applied to the recurrent budget of each ministry, so that the recurrent spending that supports the execution of the development budget could be estimated (Annex 3).

6.3 Budgeted expenditure for climate change-relevant activities

Overall trend

Tanzania has seen a significant increase in the national budget allocation for climate change-relevant activities since 2009/10, both in absolute and relative terms over the four-year period studied (Table 6.1). Tanzania's budgeted amount for such activities grew from TZS 392 bn in 2009/10 to TZS 896 bn in 2012/13; adjusted for inflation this represents a real growth of 57% in three years.

Table 6.1: Total budgeted climate change-relevant expenditure

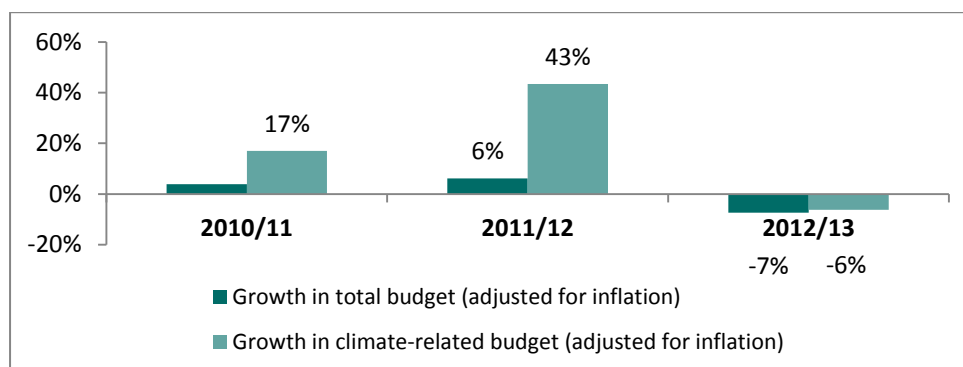
	2009/10	2010/11	2011/12	2012/13
Total budget for climate change-relevant activities (Tshs bn)	392	513	811	896
Share of total budget (%)	4.2	4.8	6.4	6.5

Source: Calculations from MoFEA data

Year-on-year trend

The budget for climate change-relevant activities grew by 17% in real terms in 2010/11 over the previous year, then increased by 43% in 2011/12, before levelling out in 2012/13 (Figure 6.1).

Figure 6.1: Growth in the national budget versus allocations to climate change-relevant activities

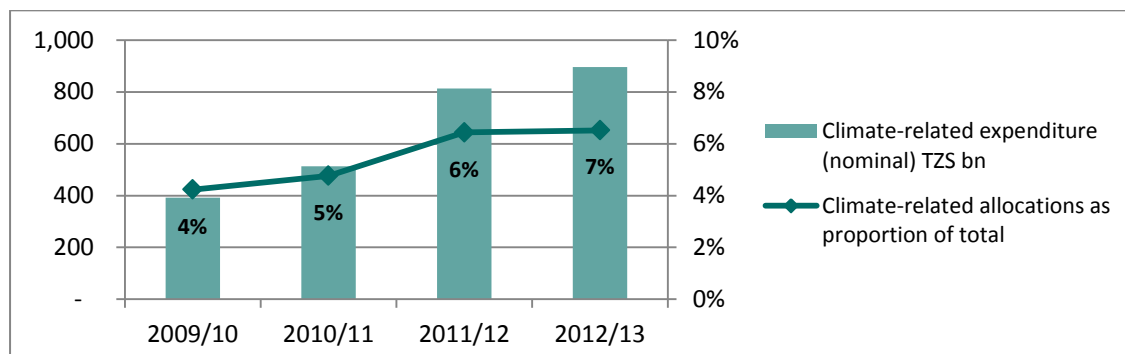


Source: Calculations from MoFEA data

⁶ Although not publically available, the approved budget was used as this is a more reliable estimate of actual spending, rather than the budget speech.

Climate change-relevant expenditure has increased steadily as a proportion of the total budget from 4.2% in 2009/10 to 6.5% in 2012/13 (Table 6.1 and Figure 6.2).

Figure 6.2: Climate change-relevant allocations and as share of total budget



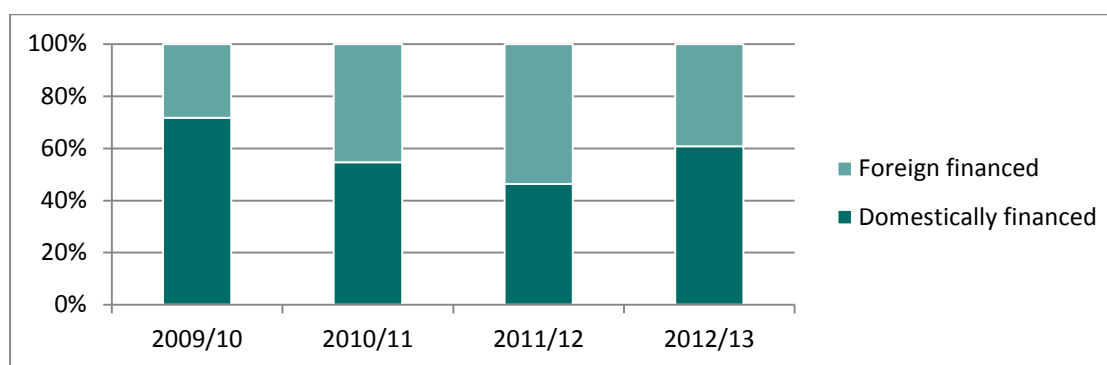
6.4 Source of expenditure

This growth in budget for climate change-relevant activities is driven by an increase in on-budget donor funding (Table 6.2). In fact, the domestically financed climate change-relevant budget declined by 4% over this period while foreign-financing grew by 61%. Foreign financing comprised approximately 28% of all climate change-relevant budgeted funds in 2009/10 but increased to account for more than half in 2011/12, before falling again in 2012/13 to 39% (Figure 6.3).

Table 6.2: Climate change-relevant budget adjusted for inflation and disaggregated by source

	2009/10 (09/10 Tshs bn)	2010/11 (09/10 Tshs bn)	2011/12 (09/10 Tshs bn)	2012/13 (09/10 Tshs bn)
Total budget for climate-related activities, adjusted for inflation	392	459	656	617
Domestically financed	281	226	219	266
Foreign financed	111	233	437	351
<i>Foreign financing as share of total</i>	<i>28%</i>	<i>45%</i>	<i>54%</i>	<i>39%</i>
<i>Year-on-year growth – overall</i>		<i>17%</i>	<i>43%</i>	<i>-6%</i>
<i>Y-o-y growth - domestic</i>		<i>-14%</i>	<i>-1%</i>	<i>7%</i>
<i>Y-o-y growth – foreign</i>		<i>31%</i>	<i>44%</i>	<i>-13%</i>

Figure 6.3: Composition of climate change finance by source of funds



Source: Calculations from MoFEA data

6.5 Recurrent and development expenditure

The majority of climate change-relevant funding is allocated to development expenditure, which partly reflects the investment nature of climate-change mitigation and adaptation activities, but also the Ministry of Finance’s practice of classifying all projects and programmes (including those funded by donors) as development expenditure. The expenditure analysis has therefore been undertaken on a programmatic basis for development expenditure, with supporting recurrent expenditure being estimated (see Annex 3 for methodology used). For the four year period studied, the climate change-relevant development budget was approximately 70% of all such spending (Table 6.3).

Table 6.3: Climate change-relevant budget by development and recurrent budget and source of funding

	2009/10 Tshs bn	2010/11 Tshs bn	2011/12 Tshs bn	2012/13 Tshs bn
Total budget for CC-relevant activities	392	513	811	896
Recurrent	136	156	203	296
Development	256	357	608	600
Domestically financed	145	124	171	249
Foreign financed	111	233	437	351
<i>CC development budget as share of total</i>	<i>65%</i>	<i>70%</i>	<i>75%</i>	<i>67%</i>

Source: Calculations from MoFEA data

6.6 Actual expenditure on climate change-relevant activities

Actual expenditure on climate change-relevant activities is estimated to be lower than the amounts budgeted. Poor availability of outturn data does not allow us to compare actual expenditure by activity, so outturn expenditure is estimated based on the overall ratio of budgeted to actual expenditure for the recurrent and development budgets respectively.

In 2009/10, approximately 90% of the climate change-relevant budget was spent, subsequently dropping to 80% (Table 6.4). This expenditure still shows a considerable increase in proportion to total government expenditure from 4.3% in 2009/10 to 6.1% in 2011/12, although the growth is less sharp than if the budget had been executed in full (Figure 6.4 and Table 6.5). In absolute terms, actual climate change-relevant expenditure is estimated to have grown by 48% in this period, adjusted for inflation, compared to a growth in the climate change-relevant budget of 60%.

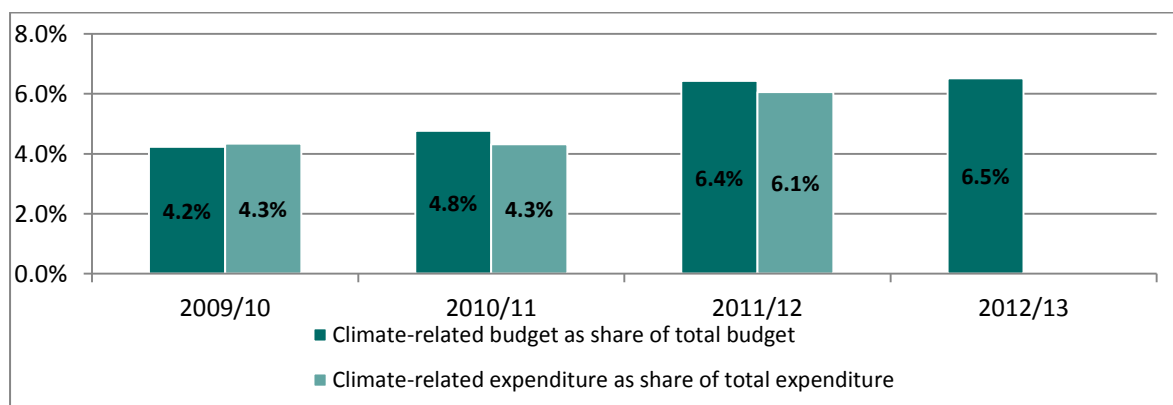
Poor execution of the climate change-relevant budget is largely a result of the problems with the execution of the development budget overall. The execution rate of the development budget was only 72% in 2010/11 and 77% in 2009/10 due to delays in project and contract implementation. This affects the overall rate of climate change-relevant expenditure.

Table 6.4: Budgeted versus actual expenditure on climate change-relevant activities

Source	2009/10			2010/11			2011/12		
	Budget (Tshs bn)	Actual* (Tshs bn)	(%)	Budget (Tshs bn)	Actual* (Tshs bn)	(%)	Budget (Tshs bn)	Actual* (TZS bn)	(%)
Recurrent Budget	136	117	86%	156	150	96%	205	186	91%
Development Budget	257	237	92%	357	257	72%	608	466	77%
Total	392	354	90%	513	407	79%	813	652	80%

Source: Calculations from MoFEA and IMF data.* Estimate based on applying the deviation of the total recurrent and development budgets to actuals to climate-related activities.

Figure 6.4: Climate change-relevant activities as percentage of national budget and expenditure



Source: Calculations from MoFEA and IMF data

Table 6.5: Estimated actual climate change-relevant expenditure as share of total government spending

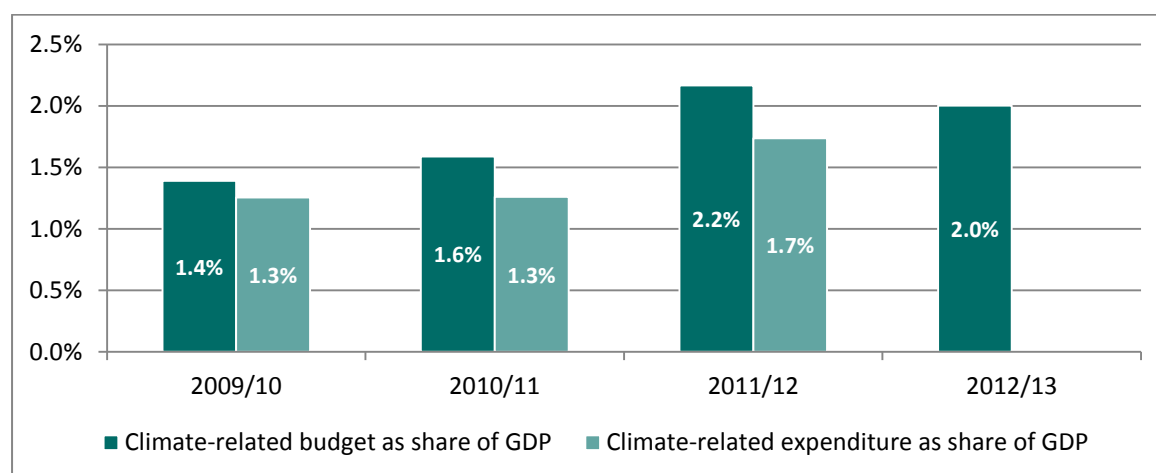
	2009/10 %	2010/11 %	2011/12 %
Climate change-relevant expenditure as share of total expenditure	4.3	4.3	6.1
Recurrent	2.1	2.2	2.7
Development	9.1	9.3	12.3

Source: Calculations from MoFEA, IMF and URT Economic Survey 2012 data

6.7 Climate-related expenditure as share of GDP

Climate-related expenditure has risen as a share of GDP, from 1.3% in 2009/10 to 1.7% in 2011/12, reflecting the sharp absolute growth in climate change-relevant expenditure that has outstripped GDP growth. Had the budget been executed fully, this growth would have been even more pronounced, with the climate-related budget rising from 1.4% of GDP in 2009/10 to 2.2% in 2011/12. In comparison, total government expenditure has remained relatively constant at 29% of GDP. Figure 6.5 shows the climate change-relevant budget and actual expenditure as a percentage of GDP and Table 6.6 presents the budgeted and actual expenditure on climate change-relevant activities.

Figure 6.5: Budgetary and actual allocation to climate change as a percentage of GDP



Source: Calculations from MoFEA, IMF and URT Economic Survey 2012 data

Table 6.6: Climate-related expenditure as share of GDP

	2009/10	2010/11	2011/12
Total GDP (Tshs bn)	28,213	32,293	37,533
Total public expenditure as share of GDP	29.0%	29.2%	28.7%
Climate change-relevant expenditure as share of GDP	1.3%	1.3%	1.7%
Climate change-relevant budget as share of GDP	1.4%	1.6%	2.2%

Source: Calculations from MoFEA and URT Economic Survey 2012 data

6.8 Relevance of expenditure

The majority of climate change-related expenditure is spent on programmes with relatively low climate change relevance⁷ (Table 6.7). Approximately 85% of all climate-related expenditure in Tanzania is of low relevance, meaning that it funds activities that indirectly contribute to adaptation and mitigation, although this is not the project's primary objective. The share of high-relevance projects has increased from 5% to 13% of the total between 2009/10 and 2011/12.

Table 6.7: Relevance of climate-related expenditure

Climate change relevance	2009/10		2011/12	
	No. of projects	Share of total budget (%)	No. of projects	Share of total budget (%)
High	3	5	9	13
Medium	4	7	2	3
Low	51	88	57	84
Total	58	100	68	100

Source: Calculations from MoFEA data

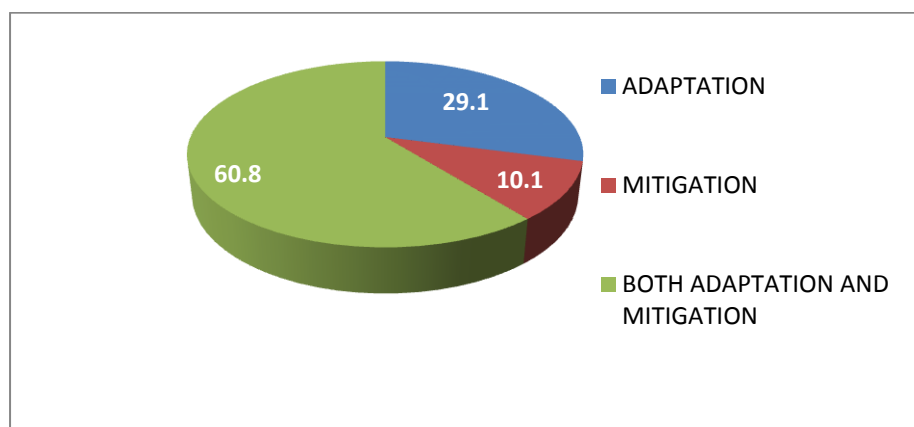
6.9 Adaptation and mitigation

The composition of climate change-relevant expenditure appears to have shifted over the four year period, from projects with a primary focus on either adaptation or mitigation to projects that combine both sets of activities. Chapter 2 explores the difference between these two concepts in greater depth. Each project has been classified according to whether the impact of the project is likely to mitigate the effects of climate change or help communities adapt to its effects. Tanzania now has a large and growing number of projects that do both. Between 2009/10 and 2012/13 the share of funding for adaptation activities fell from 62% to 37% and funding for mitigation projects

⁷ The definition of high, medium and low relevance projects is set out in Chapter 2.

fell from 25% to 13%, whilst the share of funding for projects which address both mitigation and adaptation rose from 13% to 50% (Table 6.8 and Figure 6.6).

Figure 6.6: Composition of climate change-related projects in Tanzania 2011-2013



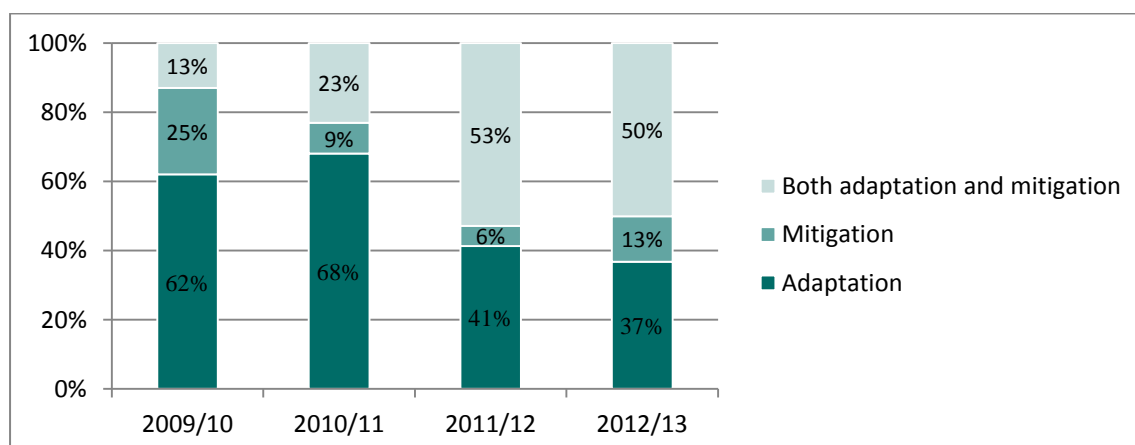
Source: Calculations from MoFEA data

Table 6.8: Types of climate change-relevant expenditure (development budget only) (TZS bn)

Category of project	2009/10 Tshs bn	Share (%)	2010/11 Tshs bn	Share (%)	2011/12 Tshs bn	Share (%)	2012/13 Tshs bn	Share (%)
Adaptation	159	62	243	68	251	4	221	37
Mitigation	64	25	32	9	35	6	79	13
Both adaptation and mitigation	33	13	82	23	320	53	301	50
Total	257		357		606		601	

Source: Calculations from MoFEA data

Figure 6.7: Percentage budgetary allocations by the major categories of climate change programs (development budget only)



Source: Calculations from MoFEA data

6.10 Climate change-relevant expenditure by government ministry

Climate change-relevant spending was identified in a large number of programmes across 15 ministries (Table 6.9 and Annex 2). The number of programmes grew from 58 in the first two-year period to 68 in the second two-year period. The level of spending reflected this increasing number of programmes, increasing from TZS bn 246 to TZS bn 304 over the same two time periods (Table 6.10).

Table 6.9: Number of climate change-relevant programmes within the development budget by Ministry, 2009/10 – 2011/12

Ministry	2009/10	2011/12
Ministry of Energy & Minerals	11	20
Ministry of Water & Irrigation	12	12
Prime Minister's Office – RALG	10	8
Vice President's Office	9	7
Ministry of Agriculture, Food Security & Cooperatives	4	6
Ministry of Finance	2	4
Prime Minister's Office	-	3
Ministry of Education & Vocational Training	2	3
President's Office	-	1
Ministry of Natural Resources & Tourism	4	1
Ministry of Livestock Development & Fisheries	1	1
Ministry of Transport	1	1
Ministry of Lands & Human Settlements	-	1
Ministry of Health & Social Welfare	1	-
The Cooperative Development Commission	1	1
Total	58	68

Spending is concentrated in a relatively few ministries: the ministries of Water & Irrigation and Energy & Minerals stand out, being natural focal points for government's response to adaptation and mitigation respectively. The ministries of Agriculture and Finance are also committing significant expenditure to climate change-relevant activities, although in the latter case this represents only a very small percentage of the ministry's spending, and therefore is unlikely to

feature in ministerial spending plans. For the three other ministries (Water & Irrigation, Energy & Minerals and Agriculture) climate change-relevant spending amounts to approximately a quarter of the ministry's development budget in the period 2011/12 and so climate change may be expected to feature more strongly in their spending plans.

Whilst the absolute level of spending within the VPO is not high, it is significant in percentage terms, reflecting the fact that the VPO-DOE is the national climate change focal point. Relevant spending by PMO-RALG has diminished over the time period, mirrored by less spending at the regional level.

Table 6.10: CC-relevant expenditure as a percentage of Ministry development spending, 2009/10–2011/12

Ministry	2009/10			2011/12		
	Total spend (Tshs bn)	CC-relevant spend (Tshs bn)	CC-relevant (as % total)	Total spend (Tshs bn)	CC-relevant spend (Tshs bn)	CC-relevant (as % total)
Ministry of Water & Irrigation	443.5	55.8	12.6	448.8	110.9	24.7
Ministry of Energy & Minerals	298.4	72.6	24.3	364.5	92.2	25.3
Ministry of Finance	663.9	4.2	0.6	600.6	31.8	5.3
Ministry of Agriculture, Food Security & Cooperatives	93.8	45.1	48.1	126.8	30.5	24.0
Prime Minister's Office	76.1	0.6	0.7	115.0	15.5	13.5
Ministry of Education & Vocational Training	-	-	-	563.7	13.5	2.4
Vice President's Office	28.0	3.4	12.3	16.9	4.0	23.9
Ministry of Livestock Development & Fisheries	-	-	-	26.8	1.9	7.1
Ministry of Transport	1,643.0	0.5	0.0	263.2	1.6	0.6
Prime Minister's Office – RALG	191.5	59.0	30.8	101.8	0.9	0.9
Ministry of Lands & Human Settlements	61.3	0.03	0.0	31.4	0.9	2.9
Ministry of Natural Resources & Tourism	64.9	4.4	6.8	-	-	-
Ministry of Health & Social Welfare	1,105.4	0.5	0.0	-	-	-
Total		246			304	

In terms of the different categories of climate change relevance, the number of highly relevant programmes, i.e. those designed specifically in response to climate change, has increased from three programmes in three ministries to nine programmes across five ministries (Table 6.11). These represent the present core of government's explicit response to climate change. It is noteworthy that a direct response is more clearly seen for mitigation activities than for adaptation, and reflects in part the conceptual challenge of separating the latter from good development practice. With all activity in the ministries of Water & Irrigation and Agriculture being of low relevance, this suggests that policy discussions on climate change are at an early stage within these two key sectors.

Table 6.11: Number of high, medium & low relevance expenditure items by Ministry, 2009/10-2011/12

Ministry	2009/10				2011/12			
	High	Medium	Low	Total	High	Medium	Low	Total
Ministry of Energy & Minerals	1	3	7	11	3	2	15	20
Ministry of Water & Irrigation	-	-	12	12	-	-	12	12
Prime Minister's Office – RALG	-	-	10	10	2	-	6	8
Vice President's Office	1	-	8	9	2	-	5	7
Ministry of Agriculture, Food Security & Cooperatives	-	-	4	4	-	-	6	6
Ministry of Finance	-	-	2	2	-	-	4	4
Prime Minister's Office	-	-	-	-	1	-	2	3
Ministry of Education & Vocational Training	1	-	1	2	1	-	2	3
Ministry of Natural Resources & Tourism	-	1	3	4	-	-	1	1
Ministry of Livestock Development & Fisheries	-	-	1	1	-	-	1	1
Ministry of Transport	-	-	1	1	-	-	1	1
The Cooperative Development Commission	-	-	1	1	-	-	1	1
Ministry of Lands & Human Settlements	-	-	-	-	-	-	1	1
Ministry of Health & Social Welfare	-	-	1	1	-	-	-	-
Total	3	4	51	58	9	2	57	68

6.11 Climate change-relevant expenditure by level of government

The majority of climate change-relevant expenditure is controlled by ministries at the central level, and this share has been increasing. A relatively small share of the climate-related programmes are controlled at the regional level, and this share has halved from 24% in 2009/10 to 12% in 2012/13 (Table 6.13).

Table 6.13: Climate-related budget by level of government

Spending entity institutional level	Climate Change Budgetary Allocations Spent by the Respective Entities			
	2009/10	2010/11	2011/12	2012/13
MDAs (central) level	76%	71%	84%	88%
Tshs bn	298	364	681	788
Regional level	24%	29%	16%	12%
Tshs bn	94	149	130	108

Source: Calculations from MoFEA data

6.12 Conclusions

Climate change-relevant expenditure accounts for 4-6% of the budget, and has grown steadily since 2009/10 on account of increased donor funding for such activities. Domestically financed climate-related activities have fallen marginally in real terms since 2009/10, while foreign-financing for climate-related activities rose by 60%.

There is a variance between budgeted amounts and actual outturns in Tanzania, with only about three-quarters of the development budget actually spent in most years. However, the government does not publish detailed outturn data which means that we are unable to confirm where these shortfalls in spending occur. Better budget data are required to determine how climate change-relevant budgets actually fare.

Climate change-relevant expenditure is concentrated in low-relevance projects, meaning that few of these projects specifically aim to tackle climate change. There is, therefore, a considerable amount of spending taking place in ministries, perhaps without the full realisation of the significance of such spending in terms of its relation to climate change. This warrants further awareness raising and the explicit inclusion of all such activities in the national response to climate change.

7 Sub-national level analysis

Chapter summary

- Tanzania has 163 Local Government Authorities (LGAs) and 25 Regions, with the latter providing a supporting function to LGAs. The Regional Administration and Local Government section in the Prime Minister's Office (PMO-RALG) is responsible for overseeing the LGAs. As yet, local governments have limited experience in planning for climate change.
- Climate change is locally associated with increasing temperatures and more erratic rainfall accompanied by droughts or floods. District leaders have participated in climate change training and adaptation activities undertaken by different NGOs in their respective localities. Adaptation appears to be better understood than mitigation by many of the consulted officials.
- Districts where NGOs are active on climate change are better placed in planning and implementing climate change programmes and projects than those without. However, continuity of effort is a major challenge as such initiatives are donor dependent, relying on external finance to support implementation.
- LGAs are accountable for the funding they receive from central government, which constitutes more than 95% of the total budget for most rural LGAs. However, since local planning is guided by central government priorities, which emphasise spending on social services, there is minimal funding for climate change-relevant activities at present, with little scope for reflecting local priorities.

7.1 Introduction

The foregoing chapters have focussed on national-level policies, institutional arrangements and public expenditures relevant to climate change. However a study of this nature is not complete unless it also examines climate finance delivery at the sub-national level. The justification for this is based on the fact that policy decisions made by central government are often implemented at the sub-national level. Similarly, centrally-made decisions on climate change adaptation and mitigation are linked directly to local government institutions and actions, hence the complementarity of these two settings. Analysis of local government climate finance can provide evidence of the strength of the linkages between national policy and local implementation, and provide insights on how climate change-relevant investments are translated into local expenditures and actions.

A mix of quantitative and qualitative methods was adopted for this part of the study, which represents a first, brief exploration of the relevant issues. These included a review of the policies that have guided the decentralisation reforms in Tanzania, semi-structured interviews with key informants on their understanding of climate change activities and investments at the local government level, and a mapping of the sources of financing for climate change activities. Moreover, interviews were conducted with representatives of implementing institutions, both government and non-governmental organisation (NGOs).

The analysis aimed to meet the following objectives:

- to achieve a better understanding of the roles, responsibilities and functions of different institutions and agencies responsible for responding to climate change;
- to secure a better understanding of the governance structures at the sub-national level e.g. the level of autonomy of local government to determine policy that reflects local needs;
- to map the role of local government in service delivery and the implementation of climate change-relevant programmes.

7.2 The administration of sub-national government⁸

Tanzania has 163 Local Government Authorities (LGAs) and 25 Regions, with the latter providing a supporting function to LGAs. The Regional Administration and Local Government section in the Prime Minister's Office (PMO-RALG) is responsible for overseeing the LGAs. In addition, there are parallel political structures, with Regional and District Commissioners being accountable to the President, whilst locally elected District Councils are accountable to the communities. District Executive Directors act as the chief executives of the LGAs, and are administratively accountable to PMO-RALG.

Sector ministries are responsible for policy guidance, implementation and monitoring of activities in their sectors. They are also responsible for technical backstopping and providing capacity building support to local government staff. For example, most District Councils have a District Forest Officer charged with implementing national forest policies at the local level. However, in other areas of the government administration there are only weak links between sector ministries and the district and regional administrations, making the coordination of activities difficult. As discussed in chapter 4, climate change issues are currently addressed using the same institutional framework as for environmental management, following the mandate provided by the 2004 Environmental Management Act. At the present time central government institutions, including the sector ministries, have limited capacity to provide administrative and technical guidance on climate change to the LGAs.

There are also very few self-financing revenue sources that local administrations can draw on. District Councils formally control the funding received from central government, which for most rural LGAs constitutes more than 95% of their total budget. Following a budget request from the district, central government grants are normally earmarked for specific sectors such as education, health and water, leaving approximately 20 - 30% for resource allocation to other sectors such as natural resources, land, community development, agriculture, livestock, cooperatives and marketing.

7.3 Decentralisation reforms in Tanzania

Tanzania has gone through a long experience with decentralization from the colonial period to the present day. The objectives of delegating responsibilities, resources and power to lower levels of

⁸ In Tanzania, Local Government is not a Union matter so in this study we are referring to administrative structures found in Tanzania Mainland.

government have varied with changing times and perspectives, though some of the basic objectives have remained the same.

In 1972, the Local Government system was abolished and replaced by 'Madaraka Mikoani' ('powers to the regions'). This was a deliberate attempt by the government to de-concentrate responsibilities from the centre in Dar es Salaam to the regions. At the same time, the government unified the system of administration at the district and sub-district level so that instead of there being two tiers of officials (central officials reporting to their Ministry headquarters and Local Government officials) there was to be a unitary system under the central government to which all government officials were to belong. The functions, resources and powers to be delegated were outlined in the Decentralization of Government Administration (Interim provision) Act No. 27 of 1972, and administrative matters were further clarified in Establishment Circular No. 8 of 1972. This policy intended to give power to local decision makers, allowing them to decide on their development priorities and to implement development programmes using local resources, assisted by central government.

However, due to weaknesses in the implementation of this decentralization system, the government re-introduced the local government system ten years later, in 1982. The new local government authorities inherited the good points of the decentralization system while trying to correct the weaknesses, particularly by providing an institutional framework that was devoted to securing people's participation in decision making on matters affecting their livelihoods and well-being at all local levels. These structure, functions and powers of the local government authorities (LGAs) were codified under the Local Government (District Authorities) Act No. 7 of 1982 and Local Government (Urban Authorities) Act 1982.

The role of Local Government was further developed under the Constitution of the United Republic of Tanzania, within the Fifth Constitutional Amendment, which came into force in early 1985. These provisions vested in parliament the power to determine the kind of Local Government Authorities to be established in the country. They emphasized the use of LGAs to enhance local democracy in maintaining law and order and performing local government functions.

Following the enactment of the Regional Administration Act 1997 (Act No. 19 of 1997) the regional administration was re-structured, with the regional development directorates being replaced by smaller regional secretariats. The main role of the regional secretariats became to back-stop the LGAs within their respective regions. Further, the 1982 Local Government Acts were amended through Act No. 6 of 1999 to give effect to a new relationship between central and local government. This new legislation provided for leadership by democratically elected persons, with enhanced transparency and greater accountability. In addition, the new legislation provided for decentralized management of staff and finances to LGAs, thus paving way for a largely autonomous local government system.

The Decentralisation-by-Devolution (D-by-D) Policy of 1998 spelt out the government's intention of devolving powers and responsibilities to autonomous LGAs. This devolution has four main dimensions: political, financial, administrative, together with a re-definition of the central/local government relationship. An implication of this policy was that LGAs should further decentralise responsibilities to lower levels, including the ward and village governments. According to this policy, the role of the central ministries and regions was expected to shift focus to policy development, regulatory control, maintenance of law and order, setting of standards, coordination and capacity

building. Planning for decentralisation has been on-going since the early 2000s; however it has been a highly contested process and the devolution of fiscal authority to local governments has been limited such that they have little fiscal autonomy⁹.

External financial support to LGAs

The Government has also developed a modality for discretionary development funding at LGA level with development partners: the Local Government Capital Development Grant (LGCDG). Since 2005, the LGCDG has provided discretionary funding to all LGAs on mainland Tanzania if they fulfil basic access conditions, including financial management. Funds are distributed according to a pre-set formula, with average annual district allocations of approximately 500 Mill Tshs. LGAs can determine how to use these funds locally as long as investments fall within a broad menu of eligible investments (including investments for support to local agricultural development). The Ministry of Finance has (on behalf of the Government) declared the LGCDG system as the preferred modality for development financing at the LGA level and expects both development partners and sectors to integrate into this system.

As part of the same system, all LGAs also receive a Capacity Building Grant (CBG), with an initial average funding per LGA of 35 mill Tshs. This grant is a discretionary grant to LGAs for capacity building, primarily of staff but also councilors at district, ward and village levels. The grant can be used for technical assistance (local consultancy contracts, short-term hire of qualified accountants and other critical staff), training (primarily short-term skills courses but also career development), and various equipment purchases.

Within the agriculture sector, recent work by the joint Government and Donor support group has recommended additional development funding to LGAs for agricultural-related investments. This proposed District Agriculture Development Grant (DADG) would be managed generally according to the same procedures as the LGCDG.

In order to enable LGAs to improve their performance and manage increasing amounts of development funds they will also be provided in future with a top-up to the existing Capacity Building Grant. Whereas funding for district level agriculture investments is recommended to follow the above modalities, it is recommended that additional funding for extension services be provided through a consolidated Extension Block Grant.

The recent progress on LG fiscal reforms and in particular the introduction of the LGCDG and the proposed DADG should enable LGAs to plan and implement development activities with greater autonomy than before. The LGA budgets for development planning have hitherto been very limited or dependent on financing from various area-based programmes that covered less than half the country; these present reforms are country-wide.

7.4 The case study districts: Rufiji and Longido

Two LGAs were selected as exploratory case studies for the purposes of this study: Rufiji and Longido. The choice of these two districts was determined by the following considerations: i) the

⁹ The 2006 Local Government (Miscellaneous Amendments) Act and other legislative changes were meant to strengthen the LGAs by providing them with more autonomy, yet this has yet to happen.

limited time available to conduct the investigation; ii) climatic differences; and iii) existence of on-going climate change-related projects.

- *Rufiji district* is one of the districts implementing climate change adaptation activities under a project named 'Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones of Tanzania'. The objective of this project is to address the vulnerability of the coastal zone in the face of sea-level rise and erratic precipitation across four targeted vulnerable coastal sites.
- *Longido district* hosts the DFID-funded project on 'Mainstreaming Climate Change Adaptation in Drylands Development Planning'. The aim of this project is to strengthen the technical capacities of district-level authorities and civil society actors to design and implement approaches and mechanisms to mainstream climate change adaptation into their development planning. A second objective is to secure national level interest, including the identification of mechanisms to ensure that project experience informs national policy processes and programmes in support of climate change adaptation and mitigation.

Rufiji District

Rufiji, the first case study district, is one of six administrative districts that comprise the Coast Region. The District is located in the southern part of Coast Region (Figure 7.1). The district covers an area of 13,300 km² equivalent to 40% of the total Coast Region area. Rufiji district is made up of six administrative divisions, 27 wards and 96 registered villages (Table 7.1).

Figure 7.1: Location of Rufiji District

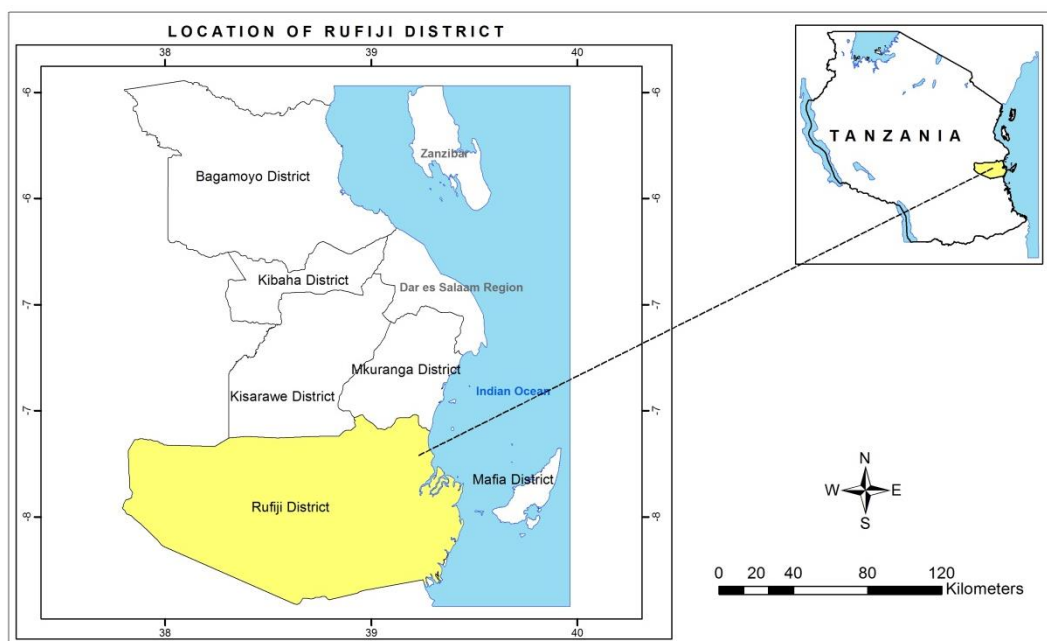


Table 7.1: Rufiji District Administrative Units

Division	Wards	Villages
Mkongo	7	15
Kibiti	9	37
Muhoro	2	11
Kikale	3	12
Mbwera	3	12
Ikwiriri	3	9
Total	27	96

Source: District Executive Director's Office (Planning and Trade Department), Rufiji District, (2010)

According to the August 2002 Population and Household Census, the district population was approximately 203,000 (URT, 2003). By August 2012, the population had reached 217,000 (URT, 2013). The economy of Rufiji District is predominantly based on subsistence agriculture and includes the cultivation of cereal crops (paddy rice, maize, cassava, sorghum, beans, sweet potatoes) as well as other crops such as bananas, cashew nuts, and coconuts. Most crops are grown in the river floodplain between Mloka and Ikwiriri, with coconuts along the coastal strip. Livestock keeping is becoming an important economic activity in the district, carried out both as a source of food and supplementary income.

Other economic activities include the exploitation of forest resources (a significant source of local public revenue) as well as fishing activities, since the district stretches along the Indian Ocean. All these activities contribute to the district's own financial sources (Table 7.2).

Table 7.2: Contribution of Natural Resources to the Economy of Rufiji District

Source	Collection 2009/2010 (Tshs mn)	Percentage (%)
Forest Products	465	53.6
Fees and Charges	161	18.5
Agricultural products	145	16.7
Fisheries	44	5.1
Wildlife	44	5.1
Exchange Transactions	4	0.5
Others	4	0.5
Total	867	100.0

Source: Rufiji District socio-economic profile, 2012

Longido District

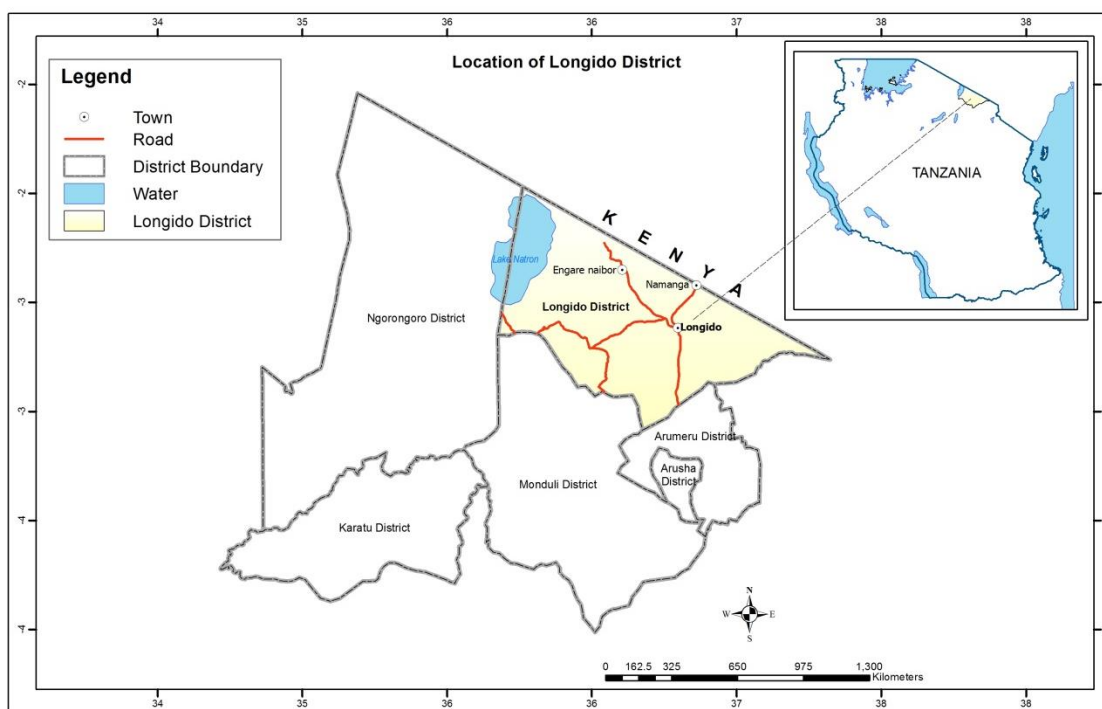
The second case study district, Longido, is one of Arusha region's six districts. It has a total area of approximately 7,800 km², 82% of which is set aside for livestock grazing and wildlife conservation (Table 7.3). The district is bordered by Kenya to the north (Figure 7.2). The district is divided into four administrative divisions, 16 wards and 41 villages. The district has a total of approximately 23,700 households, of which 95% are pastoralists (mainly *Maasai and Waarusha*). The 2012 population census estimated the population of Longido to be approximately 123,000.

Table 7.3: Longido District Land Use Patterns

Land-use	Area (sq. km)	Area (%)
Grazing land/Game area	6,392	82.1
Arable land	1,024	13.2
Forest	366	4.7
Total	7,782	100.0

Source: District Director's Office Longido, 2010.

Figure 7.2: Location of Longido District



Longido has a semi-arid climate, with mean monthly temperatures ranging from 20°C to 35°C whilst annual rainfall varies from less than 500mm to 900mm. The severe drought during 2008 and 2009 reduced the number of livestock substantially. With much of the district consisting of game controlled (wildlife and grazing land) areas, there is good potential for tourism investments.

7.5 Understanding of climate change at the Local Government level

Interviews with the District Executive Director (DED) in Rufiji District and the District Planning Officer (DPLO) in Longido District showed that climate change is locally associated with increasing temperatures and more erratic rainfall accompanied by droughts or floods. Interviews with Agriculture Extension Officers and other NGO officers in Longido District revealed that the 2008/09 drought remains the most recognised climate-related disaster in the district, which resulted into extensive out-migration of pastoralists.

Both the DED and the DPLO have participated in climate change training and adaptation activities undertaken by different NGOs in their respective localities. Adaptation is better understood than mitigation, although there are initiatives that are seen to be climate change mitigation measures such as Participatory Forest Management activities in Rufiji district.

Understanding of climate change in Rufiji District

A number of studies conducted in Rufiji District reveal that the local climate, in terms of rainfall and temperature patterns, has changed in recent years. Temperature records indicate a gradual increase and drought conditions have also increased.

Climate change adaptation initiatives in Rufiji began in 2009 under an IUCN project: the 'Climate Change and Development Project'. This was implemented in partnership with the Tanzania Forest Conservation Group (TFCG), and the Eastern Selous Project, supported by the Belgium Development Agency. Rufiji district council and a number of communities carried out climate change vulnerability assessments. These assisted in the identification of major climate change hazards (e.g. floods, drought, unpredictable rainfall and strong winds). The communities were then supported to develop adaptation strategies to strengthen community livelihoods. Among the funded adaptation activities were:

- Training on climate change
- Conservation farming training
- Irrigation farming
- Watershed management

Understanding of climate change in Longido District

Longido district is one of the country's semi-arid areas that is already experiencing the negative impacts of climate change. The 2008/2009 drought resulted in the death of livestock that was estimated in monetary terms at over Tshs 100 billion. A re-stocking project initiated in 2012 by President Jakaya Kikwete followed an assessment of pastoral communities that had revealed that close to 3,000 households in all 41 villages within the district had been severely impacted. In supporting this project, the Prime Minister's Office – Disaster Management facilitated a re-stocking programme of Tshs 57 billion. Each identified household received improved breeds of 5 cows and 5 goats.

7.6 Mapping of climate change expenditure at the Local Government Level

The Local Government Reform Programme (LGRP) entrusted local government with financial and human resources as well as political responsibilities. Funding for local government development and operation is primarily devoted to social services provision in education (primary and secondary), water supply, and health. This has meant that early support for local action on climate change has heavily relied on international support. International climate change funding is provided bilaterally and to a limited extent through global funding mechanisms. It is delivered primarily as grants, increasingly with technical support for building institutional capacity around climate change.

In both case study localities local governments have plans for climate change adaptation projects. However, inadequate funding limits the implementation of these activities, in part because planning is guided by central government priorities that do not yet appear to prioritise climate change adaptation in an explicit manner.

Climate change investments in Rufiji District

Most climate change-relevant activities carried out within Rufiji District since 2009 have been externally funded projects. Implemented by both government institutions and NGOs at a cost of approximately Tshs 5,600 million, these actions have focused on improving the resilience of climate sensitive sectors (e.g. water, agriculture and infrastructure) (Table 7.4).

To put this spending in context, the total budget of the Rufiji LGA over the same three-year period was Tshs 52,224 million, of which approximately one third was sourced from donor funds (Table 7.5).

Table 7.4: Rufiji LGA climate change-relevant budgeted expenditure (2009-2012)

Climate change-relevant actions	Funding from Central Govt Tshs (millions)	Funding from donors Tshs (millions)
National Water Supply and Sanitation Programme	1,623	2,260
Agriculture Sector Development Programme	0	1,134
Road Fund	1,355	1,069
District Irrigation Fund	0	1,040
Participatory Forest Management Project	0	99
Total	2,978	5,602

Source: Rufiji District Council Treasury, 2013

Table 7.5: Rufiji LGA total budgeted expenditure

Source	2009/10 (Tshs mn)	2010/11 (Tshs mn)	2011/12 (Tshs mn)
Central government transfers	9,237	11,663	12,904
Donor funds	5,597	5,863	5,412
Local community contributions	370	613	565
Total	15,204	18,139	18,881

Source: Rufiji District Council Treasury, 2013

Rufiji District Council is also in the process of contributing to a new GEF-funded project 'Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones of Tanzania Project'. This project seeks to implement priority adaptation investments and fill capacity gaps, as identified in the National Adaptation Programme of Action for Tanzania and further refined in the National Strategy on Climate Change. It was submitted as Tanzania's first Least Developing Countries Fund (LDCF)¹⁰ intervention to address the vulnerabilities of coastal and marine zones, particularly sea-level rise and erratic rainfall that is negatively affecting coastal natural ecosystems, infrastructure, agriculture and community livelihoods. The project intends to rehabilitate buffering ecosystems, such as mangroves, that provide protective and productive services in coastal zones. The project will also rehabilitate and upgrade key protective infrastructures to ensure their resilience and continued protection of coastal assets, settlements, and community livelihoods, as well as supporting the relocation of water wells and boreholes where these have shown greater salinity or where they have been inundated by sea-level change.

The five year (March 2012-March 2017) project is being implemented by UNEP and executed by the Tanzanian Government, through the Vice-President's Office, Division of Environment, with participation of district-level administrations. The total project budget is 71 million USD, of which Rufiji district LGA will receive grant finance of 1.4 million USD, with in-kind support from the LGA of 285,000 USD.

Climate change investments in Longido District

As in Rufiji district, a small number of donor-supported initiatives are underway in Longido district. Despite the very different climatic conditions between these two districts, project activity is almost identical in the two areas, due to their being part of national initiatives to improve the resilience of climate sensitive sectors (Table 7.6). The budgeted expenditure is significantly less than in Rufiji, in part because of the more limited agricultural potential of the district. In contrast, securing sustainable sources of water supply are of greater local concern. Table 7.7 sets the context of this

¹⁰ LDCF was created with the objective of funding urgent and immediate adaptation needs in the Least Developed Countries as identified in their NAPAs

budgeted expenditure, in a district that has seen reduced transfers from central government since 2009/10.

Table 7.6: Longido LGA climate change-relevant budgeted expenditures (2010/11 to 2012/13)

Climate change-relevant actions	Funding from central govt (Tshs mn)	Funding from donors (Tshs mn)
Participatory Forest Management Project and Forest Conservation	93	
Agriculture Sector Development Programme	101	474
National Water Supply and Sanitation Programme	0	563
Feasibility study by government on permanent sources of water	450	
Road Fund	1,700	
Total	2,344	1,037

Source: Longido District Council Treasury, 2013

Table 7.7: Longido LGA total budgeted expenditure

Source	2009/10 (Tshs mn)	2010/11 (Tshs mn)	2011/12 (Tshs mn)
Central government transfers	9,001	6,906	6,634
Donor funds	1,020	926	719
Local community contributions	66	60	70
Total	10,087	7,892	7,423

Source: Longido District Council Treasury, 2013

The DFID-funded project on ‘Mainstreaming Climate Change Adaptation in Drylands Development Planning’ that is operating in Longido District has also shown the importance of the linkages between local and national planning for climate change. As a direct result of project activity the following national-level relevant developments have occurred, involving key government institutions (TNRF & IIED, 2012):

- The Director of the Tanzania Meteorological Agency (TMA) has designated a focal person within TMA to liaise, link and follow the progress of the project, as well as to ensure good information exchange between central and local government.

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- Lessons from the project will be shared with the VPO to help shape and influence policies and strategic development at the national level.
 - Links have been made with the Ministry of Finance, with the Directorate of Poverty Reduction participating in a May 2013 workshop.
 - PMO-RALG has invited the project to have consultations in Dodoma to identify further the ways to link activities from project at district level to the regional and national levels.

7.7 Conclusions

These findings from Longido and Rufiji districts indicate that local governments are starting to gain experience in planning for climate change. However, present funding levels constrain implementation. Although LGAs formally control the funding they receive from central government, spending priorities are guided by central government priorities which do not yet highlight climate change adaptation. Under these circumstances, external funding and NGO activity provide complementary service provision.

8 Conclusions

This study set out to identify climate change-relevant public expenditures within the Tanzanian national budget system, and to carry out a preliminary assessment of whether such funding was being effectively deployed. Effectiveness has been measured through a governance and institutional lens, by examining how national policy processes and the institutions responsible for delivering government's climate change strategy relate to decisions over budget allocations.

These are clearly early days in the national response to climate change. This is not surprising considering the as yet ill-defined boundary that exists between present day climate variability and any significant shift in the parameters of Tanzania's climate. The publication in 2014 of the fifth assessment report of the International Panel on Climate Change will provide an authoritative global view; understanding change at the national level remains problematic. This uncertainty raises doubts for policy makers who have to determine the appropriate level of funding going to climate change actions among the many development challenges facing the country. However, much has happened over the last five years, with a theme that had little policy attention now established in national planning processes. Awareness of the potential impact that climate change will have on the country's developmental trajectory clearly needs to be strengthened further. The 2012 national climate change strategy has made an early contribution, but much remains to be done, particularly at the sector and sub-national levels, where the implementation challenge will be greatest.

The policy and institutional context helps to explain the funding patterns that this study has identified. The absence of a national climate change policy statement signals that a purposeful financing package has yet to mature. This is reflected in the fact that this study has identified very few explicit strategic investments in response to climate change across government's spending programmes over the period studied. Now is the time for awareness raising and capacity strengthening of the relevant government ministries, departments and their staff – and an improvement in their administrative systems; otherwise, Tanzania will be inadequately prepared for the many climate change-related challenges that lie ahead.

Further analysis required

This study highlights the fact that much remains unknown about climate finance delivery at the national and sub-national levels, and so further empirical research will be needed to guide the development of public policy in this area.

Given the fact that there is no coding for climate change-relevant expenditure in the current public finance management system, further research to re-test and reaffirm the criteria adopted in this study would provide useful empirical guidance for policy making and implementation.

Finally, the two local government case studies conducted as part of this study provide only a glimpse into the unfinished business of designing appropriate policy responses and climate finance delivery mechanisms at the sub-national level. An in-depth study that builds on this preliminary analysis to improve understanding of the implications of the current financing architecture for climate change at this level is needed to support the full implementation of the national climate change response.

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Annex 1. Measuring the effectiveness of public climate finance delivery at the national level¹¹

1 Introduction

This framework proposes the use of a hierarchy of principles, criteria and indicators (PCI) that, taken collectively, can provide guidance for the analysis of how public climate finance is managed. The principles are drawn from the international literature and indicate what climate finance delivery should look like in an ideal world. The criteria and indicators differ in nature, as they are limited to reflect a progression towards compliance with the principles. They are not intended to define an ideal, but provide a pragmatic challenge to current practice and highlight important areas for progress. The framework provides, therefore, an outline for ‘lines of enquiry’ rather than a ‘best practice’ ideal.

In many ways, the principles attempt to formulate what ‘good governance’ in the sphere of climate finance management should look like. Extensive literature supports, challenges and critiques the ‘good governance’ approach and the (mis)use of international ‘best practice’ formulas to guide development interventions in low income countries. Building on this discussion, it is important to recognise that most government institutions, their policies and spending patterns are often far from ideal. Country context varies enormously, from middle-income high-capability states through to fragile low-income states with weak government capacity. The application of this framework therefore needs to acknowledge these differing contexts and will depend on further country-specific refinement.

2 What makes climate finance delivery effective in the national context?

In the absence of an internationally agreed definition of what makes national climate finance delivery effective, we have identified three interlinked elements of national public administration that can provide information on the performance of the systems in place to manage climate finance delivery. These elements are not separate spheres of activity, but are intimately related, with many interactions:

- first, the overall policy environment that supports climate change expenditure, from the formulation of climate change policy to its linkages to spending through national strategies and action plans.

¹¹ Adapted from <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8303.pdf>

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- second, the institutional architecture that determines the role and responsibilities of the different parts of the government administration involved in managing the response to climate change, and their interaction.
 - third, the financial systems through which climate change-related expenditures are channelled, e.g. the national budget and other funding mechanisms. Such funding supports activities, projects and programmes that are recognised as being part of the national response to climate change.

This approach builds on the methodology adopted for a series of country studies implemented by the United Nations Development Programme (UNDP) in South-East Asia that began the detailed analysis of climate finance delivery at the national and sub-national levels (Bird et al., 2012).

There are already many methodologies and tools available to assess the effectiveness of public administration and public expenditure management in developing countries. There are both high level summary indices (e.g. the World Bank Institute ‘World Governance Indicators’) and very specific diagnostic tools (e.g. the Public Expenditure and Financial Accountability (PEFA) framework). The approach taken in this paper is to develop a more ‘meso’ or ‘intermediate’ level of analysis that is specific to climate change. This provides more detail than that found in high level indices – which do not have a specific ‘climate financing’ element – or those specific metrics that provide detailed scoring, such as PEFA. The hope is that this intermediate level of analysis will capture more contextual detail on the real day-to-day operation of policies, institutions and public expenditure management and make the analysis more relevant for both country governments and the international community.

3 Applying the principles, criteria and indicators (PCI) approach within each of the three elements

The PCI approach comprises principles (fundamental laws or truths, expressing a core concept), criteria (operational standards by which to judge the principles), and indicators (information to measure or describe observed trends) (Prabhu et al., 1996). This approach can be applied to each of these three elements of the national public administration to draw together a composite picture of whether or not finance for climate change-related actions is being delivered effectively. The next three sections list the principles, criteria and indicators that we have identified under each element.

3.1 Policy requirements for effective climate finance delivery

We identify four principles from the literature that underpin the development and implementation of policy, and are relevant to the effective delivery of national climate change finance:

- ease of implementation (Nill and Kemp, 2009; van den Bergh, 2013)
- legitimacy (Bierman and Gupta, 2011)
- coherence (Bird et al., 2012)
- transparency (Bird, 2010)

Climate change policies shall be designed for ease of implementation

Any framework to assess climate change policies needs to address the issue of implementation. Ultimately, the effectiveness of any policy is measured by its outcomes, as ‘no matter how effective

a policy may be at achieving certain goals in principle, it is useless if it cannot be implemented' (Thomas and Grindle, 1990: 1178). To allow for implementation, a policy should be costed (which is proving a major challenge for climate change policies), should have explicit, time-bound objectives and be supported by relevant instruments, including economic and regulatory measures as well as administrative norms. In short, if climate change policy is going to ensure the effective delivery of finance it needs to come with a set of implementing instruments and regulations: a complete 'policy package'.

The legitimacy of climate change policies shall be recognised by stakeholders

In many cases, climate change policies will require new governance arrangements and involve a wide set of stakeholders, as climate change requires interdisciplinary and cross-sectoral involvement. In general terms, legitimacy refers to the procedural processes of decision-making as well as the related governance arrangements (Biermann and Gupta, 2011). Legitimacy in the policy-design process is aided by the representation of different stakeholders, including those at greatest risk from climate change (Burton et al., 2002). However, the equal representation of different groups is unlikely, in reality, as it depends on the relative influence of different actors. For instance, those directly affected by climate change at the local level are unlikely to have a powerful voice with which to influence the executive and policy-makers in government.

Climate change policies shall be coherent with national development policies

Climate change policies need to be coherent with policies related to national development (Nill and Kemp, 2009). The national climate change response is often characterised by several strategy and planning processes and their integration to ensure the coherence of resource allocation is a major challenge. Although this challenge is not limited to climate-related policy, the interdisciplinary and cross-sectoral nature of climate change makes it essential to secure strong coordination and coherence, which may have to overcome vested interests.

Climate change policies shall promote transparency in climate finance delivery

Transparent funding decisions are essential to demonstrate effectiveness in climate finance delivery. Climate change policy should, therefore, contain appropriate guidance that commits all the key actors along the climate finance delivery chain to high standards of transparency. Transparency of policies and public spending plans may be secured through the official records of the national legislature.

These four principles can be developed further by identifying criteria that are consistent with each principle, and indicators of compliance for each that reflect current-day practice (Table 1). These criteria and indicators are not intended to be comprehensive, but focus on areas where the authors have observed some debate and traction in policy circles.

Table 1: Policy-related effectiveness principles, criteria and indicators (PCI) for climate finance delivery

Principle	Criteria	Indicators
<i>Climate change policies shall be designed for ease of implementation.</i>	<ul style="list-style-type: none"> Policy objectives are clearly expressed. 	<ul style="list-style-type: none"> Targeted objectives are listed in the policy documentation. Timelines to achieve the set policy objectives are articulated in the relevant policy documents. The method for mobilising financial resources to implement the policy is contained within the policy statement.
	<ul style="list-style-type: none"> Subsidiary instruments for implementation accompany the policies. 	<ul style="list-style-type: none"> Subsidiary instruments to achieve specific policy objectives are identifiable within the policy documents. Timelines are in place to establish appropriate subsidiary instruments. Appropriate subsidiary instruments are legally gazetted.
<i>The legitimacy of climate change policies shall be recognised by stakeholders.</i>	<ul style="list-style-type: none"> Key stakeholders' interests are represented in policy-making processes. 	<ul style="list-style-type: none"> Policy-making platforms exist, where key policy decisions are made (e.g. policy working groups, expert working groups, sector working groups). Existing policy platforms provide for representation of key stakeholders from both government and civil society. Existing policy platforms provide opportunities for stakeholders to contribute to the policy-making process.
	<ul style="list-style-type: none"> Policy-making is evidence-based. 	<ul style="list-style-type: none"> The policy formulation process is preceded by, and benefits from, background analytical work. Policy think tanks and research institutions provide evidence-based analysis to support the policy process. Relevant policy documents contain explicit references to background analytical work and contributions from policy think tanks.
<i>Climate change policies shall be coherent with national development policies.</i>	<ul style="list-style-type: none"> Policy statements on climate change acknowledge national development goals. 	<ul style="list-style-type: none"> Reference is made to national development in the national climate change policy.
	<ul style="list-style-type: none"> Climate change actions are consistent with strategies and planning processes for national development. 	<ul style="list-style-type: none"> Climate change strategy documents and national development goals refer to each other.
<i>Climate change policies shall promote transparency in climate finance delivery.</i>	<ul style="list-style-type: none"> Climate change policies provide for the establishment and operationalisation of mechanisms and modalities to promote transparency. 	<ul style="list-style-type: none"> Mechanisms and modalities exist to promote transparency of climate finance.

3.2 Institutional requirements for effective climate finance delivery

Effectiveness is a performance measure and its scope depends on the identification of an objective or problem to be solved, which is determined within a particular context. In this case, an institutional assessment would help determine to what existing institutions enable or hinder climate finance delivery, allowing an understanding of their ability (or lack of ability) to achieve this objective. It is important to keep in mind that different disciplines ‘look at effectiveness through different lenses and routinely reach divergent conclusions’ (Young, 2003:99). An explicit analytical framework is needed, therefore, to conduct the assessment in a replicable manner. The proposed approach consists of an investigation of public, private, and civil society organisations, as well as the rules governing their interaction and dynamics, as part of the institutional architecture for effective climate finance delivery. With this in mind, a literature review was conducted to identify common principles that underpin institutional performance.

We identified three principles from the literature that relate to institutional performance and that are relevant to the effective delivery of national climate change finance:

- coordination (Booth, 2010; Flynn, 2011)
- having the capacity to change and innovate (Imperial, 1999; Peters et al., 2012)
- use of locally-anchored institutions (Booth, 2010)

A national mechanism shall exist for coordination between institutions involved in climate finance delivery

Coordination implies the organisation of different participants to enable them to work together in a systematic way. A government-led process of service delivery is a co-production that involves the participation of diverse types of institutions, including government and non-government, formal organisations and informal collaborations. This mix of actors requires coordination capacity and incentive structures (Booth, 2010), as well as reporting systems (Flynn, 2011) across diverse levels of government. Institutional coordination for effective climate finance delivery is made more complex by the fact that ‘the governance of climate change is highly dispersed and fragmented [...]. Responsibilities are shared among a multitude of actors operating across numerous scales and in a bewildering number of sites’ (Newell, 2011: 34). In most cases, the Ministry of Environment holds the lead on climate change policy and is the national UNFCCC focal point, but decisions over the majority of climate-related public expenditures are often made in parallel by the Ministry of Finance or Planning (Miller, 2012). Fragmentation of inter-ministerial decision-making is exacerbated by multiple channels of external financial flows (Thornton, 2011). A robust coordination mechanism between national leads on climate change policy and expenditure would ensure that when national climate policies are put in place, those priorities are translated into expenditure decisions in the budgetary process.

When parts of external finance are channelled through extra-budgetary funds, donor agency programmes and civil society organisations, an extended mechanism would also involve liaison and, to some extent, coordination, with extra-budgetary fund administrators, multiple donors and civil society representatives.

Institutions shall demonstrate a strong ability to change and innovate

Ability to cope with high levels of complexity and uncertainty in the face of new challenges is crucial in terms of capacity for change (Harris and Penning-Rowsell, 2009). Considering that climate change policy – and hence its funding – is relatively new, and that the vulnerability context changes constantly because of the interactions between social and environmental conditions (Eriksen et al., 2011), the ability to demonstrate such innovation is an important institutional characteristic to secure the effective delivery of climate finance. Mapping how the current institutional infrastructure responds to such challenges indicates the level of change and innovation capacity of the institutions concerned.

Climate change institutions shall be anchored locally

‘Meeting the needs of the most vulnerable to climate change will require a strong local financial delivery mechanism’ (Bird, 2012: v). Such a mechanism will depend on the capacity of institutions that have a local (i.e. sub-national) presence or anchorage. Institutions that enable local collective action comply with a double sense of local anchorage: ‘the rules they incorporate are problem-solving in the local context and they make use of institutional elements inherited from the past’ (Booth, 2010: 34). This principle can, therefore, be expected to exert a strong influence on the effectiveness of climate change finance delivery.

The effectiveness of climate change finance delivery will depend on how far these three institutional principles are respected. Table 2 lists these principles, together with the criteria and indicators that we have selected to support the assessment of progress towards each of the principles.

Table 2. Institutional effectiveness principles, criteria and indicators (PCI) for climate finance delivery

Principle	Criteria	Indicators
<i>A national mechanism shall exist for coordination between institutions involved in climate finance delivery.</i>	<ul style="list-style-type: none"> Leadership of the national response to climate change in terms of climate finance delivery is established within the government administration. 	<ul style="list-style-type: none"> The national lead institution has appropriate authority to determine or advise on what constitutes climate finance. The national lead institution provides specific inputs and guidance into the budget process and the budget on what constitutes climate finance.
	<ul style="list-style-type: none"> The roles played by actors in the delivery of climate finance are known by key stakeholders 	<ul style="list-style-type: none"> All mandated national institutions report their expenditures on climate change activities each financial year.
	<ul style="list-style-type: none"> Other actors within the policy making process outside government (e.g. the legislature, party-governing committees) review and challenge policy. 	<ul style="list-style-type: none"> Relevant actors provide opportunities (presentation of memoranda, petitions, convening of public hearings) and encourage non-state actors working on climate change to present their voices.
	<ul style="list-style-type: none"> Institutional arrangements are in place for inter-agency collaboration 	<ul style="list-style-type: none"> Mechanisms for inter-agency collaboration between climate change institutions and other national institutions can be identified. Reports on inter-agency collaboration and

Principle	Criteria	Indicators
		climate financed activities are available to the public.
<i>Institutions shall demonstrate a strong ability to change and innovate</i>	<ul style="list-style-type: none"> The national response to climate change facilitates the adoption of change and promotes innovation. 	<ul style="list-style-type: none"> New institutional arrangements are established as demand occurs through appropriate policy, administrative or political action (e.g. through the production of national strategies and action plans).
<i>Climate change institutions shall be anchored at the local level</i>	<ul style="list-style-type: none"> Institutional arrangements respond and adapt to local needs. 	<ul style="list-style-type: none"> Funding is directed within the national budgetary system to local climate change institutions.

3.3 Public expenditure frameworks to assess the effectiveness of climate finance delivery

Policies and institutions provide the guidance and background against which climate finance will actually flow and there is, therefore, a strong interrelationship and feedback across all three PCI elements. We will now examine what effective expenditure management systems should look like to support climate finance. High level principles for effective public financial management (PFM) are set out in numerous handbooks provided by various leading donors agencies (e.g. Schiavo-Campo and Tommasi, 1999; Allen and Tommasi, 2001; Shah, 2007; Potter and Diamond, 1999). In addition, the PEFA methodology represents the most developed and widely-used diagnostic tool to assess country performance in public expenditure management. As noted, the approach outlined here does not use the PEFA methodology, as this approach aims to assess a more intermediate level of government effectiveness that allows for greater understanding of the context in which climate financing is being handled.

Climate change expenditure shall be planned and budgeted for in the annual budget formulation process

Good practice budget preparation would involve the scrutiny and challenging of spending proposals, based on the results of the monitoring and evaluation of performance in previous years. It would also involve consultations with external stakeholders, such as local civil society institutions, culminating in detailed information on the proposed budget and an understandable public explanation of the budget's intentions.

This matters for climate change expenditure as it helps to ensure compatibility with other areas of spending, ensuring that the adaptation and mitigation goals that are incorporated support climate-compatible development. Where climate spending is 'off-budget', such mainstreaming and scrutiny becomes less likely. An effective planning and budgeting process should require all climate-related expenditure bodies that submit expenditures to the Ministry of Finance to highlight their climate-related plans. A political process would then determine the relative priority of these proposals and generate agreement among climate expenditure agencies that they will abide by the results of the process. This prioritisation process should be informed by monitoring and evaluation of climate-related expenditure from previous years to give decision makers an understanding of the progress being made against overall climate change adaptation and mitigation strategies.

The proposed budget would, ideally, identify climate-related expenditures across different categories of spending (e.g. current versus capital spending; allocations to different ministries) supported by publicly-available budget documents. This is, typically, an area of weakness for national budgets, as few have systems in place to identify climate-related spending, which makes it difficult to track. Ministries of Finance tend to approach budgeting on a case-by-case consideration of increases or decreases to a specific ministry's budget, rather than on the basis of a cross-government programme of expenditure, such as the response to climate change.

Climate-related expenditure shall be executed through government systems using the budget

Spending agencies should follow a standard process: commit expenditure, verify delivery of goods and services, authorise and make payment, and then record the transaction appropriately (Potter and Diamond 1999: Section IV). The Ministry of Finance, as the agency with overall responsibility for overseeing delivery of the approved budget, should have information systems that are robust enough to allow it to monitor and track expenditure on a regular basis. Ministries themselves should actively monitor and manage their expenditure to anticipate expenditure shocks, and to ensure that climate-related activities they have outlined in their budget proposals are reflected in their expenditure.

Effective cash management is often a challenge as domestic revenue and international funding may not be spread equally across the budget period. This presents knock-on challenges for spending agencies that implement plans without sufficient funds to pay for the necessary goods and services. Such challenges are often particularly acute for sub-national governments (e.g. district and provincial authorities) as they are, typically, less powerful than central government agencies. They may not be fully connected to the integrated financial management system, while also facing communication difficulties because of sheer geographic distances. Many of these will have formal responsibility for the delivery of local services that may have significant climate-related impacts.

Given the challenges of identifying climate-related spending within the budget, regular reports for all expenditure generated by the Ministry of Finance are unlikely to provide information on the in-year position of climate-related spending. As donors are likely to have contractual requirements for spending reports on their financing, additional reporting requirements may well be in place for specific projects or funds. Although this means that the contractual requirements of the funds or projects can be met, too little information on climate spending is available to government and stakeholders.

Climate-related expenditure shall be subject to reporting and accounting

Ideally climate-related expenditure would follow the standard pattern of reporting and accounting, with PFM systems able to capture and record expenditure as part of a comprehensive system of accounting. Accounting for expenditure should be done on the same basis as the original budget, allowing for rapid and straightforward comparison of expenditure against original plans. In practice, this means classifying individual expenditures against the same coding system used in budget planning.

The climate public expenditure and institutional reviews carried out in South-East Asia¹² highlighted the progress needed to establish common financial reporting systems across government for climate change-related activities. It found that, in general, the systems in place are not comprehensive. In

¹² <http://www.aideffectiveness.org/CPEIR>

Nepal, for example, donors, central government and local government use different reporting systems, and in Bangladesh the budget submissions of ministries do not identify climate change activities (Government of Nepal, 2011; Government of the People’s Republic of Bangladesh, 2012). In Samoa, it was recommended that financial monitoring and tracking systems should be strengthened in terms of both inputs and outputs (ODI, 2012).

Analyses of spending on climate-related activities is only possible if a system to identify climate spending is in place, or by ensuring that budgets for climate adaptation and mitigation activities contain adequate funding to monitor and evaluate climate-related expenditure.

Climate-related expenditure shall be subject to external oversight and scrutiny

Climate-related expenditures should be seen as part of the whole-of-government approach to audit and scrutiny. External audit and scrutiny aims to review the degree to which the budget has been executed correctly, in accordance with the law and administrative regulations. Typically, this is the role of a publicly-appointed ‘Auditor General’ or equivalent. This entity is responsible for reviewing the government’s published accounts and assuring the accuracy of transactions and the correct reconciliation of accounts, and assessing the evidence that correct procedure has been followed.

Expenditure for climate change adaptation and mitigation strategies should be reviewed and audited in the same way as any other government expenditure. Audit reports should highlight areas of incorrect practice, non-observance of financial rules and any grounds for concern over fraud or misappropriation. Where climate-related expenditures are identified, it should be possible for the audit body to focus on performance in this area of the budget. However, given the current absence of systems to track and monitor climate-related expenditure, specific climate analysis is unlikely. Instead, climate spending that is on-budget is captured within the wider audit. For off-budget funds, specific audit requirements are likely to be in place that are signed off by the funds’ governing bodies.

It is also normal for the legislature to be involved in scrutiny and oversight through its review of budget implementation after the end of the year. It might be that the entire legislature is involved in the review of the previous year’s budget execution and audit report through debates on the audit findings, or this work may be delegated to specific finance or public expenditure committees that review audit reports in detail and challenge governments to respond to specific findings. Climate-related spending may well be included in the remit of such committees alongside other types of spending, and is unlikely, therefore, to receive specific attention. This is yet another area where the challenges of separately identifying and monitoring climate-related spending has a negative impact on the understanding of national climate change adaptation and mitigation.

Table 3 details criteria and indicators that are relevant to assessing present day practice against these four principles for public expenditure management.

Table 3. Public expenditure effectiveness principles, criteria and indicators (PCI) for climate finance delivery

Principles	Criteria	Indicators
<i>Climate change expenditure shall be planned and budgeted for in the annual budget formulation process.</i>	<ul style="list-style-type: none"> Budget preparation captures the actors involved in climate-related expenditures. 	<ul style="list-style-type: none"> Adherence by all climate-related actors to a budget calendar for the formulation of the national budget. Representation of climate concerns in the discussion and scrutiny of spending proposals, resulting in the development of the national budget's priorities. Ex ante scrutiny, challenge and approval of the national budget, and its climate change provisions, by a legitimate authority (e.g. the national legislature).
	<ul style="list-style-type: none"> Budget preparation identifies key climate-related expenditure. 	<ul style="list-style-type: none"> Budget classification structures allow for climate-related expenditure to be identified across ministries, departments and agencies. Budget information that includes climate-related expenditure is publicly available.
	<ul style="list-style-type: none"> Budget preparation captures climate-related expenditure in a medium-term policy framework. 	<ul style="list-style-type: none"> The government has a medium-term policy and expenditure framework for key areas of spending, including climate-related expenditure.
	<ul style="list-style-type: none"> Budget preparation takes into account the findings of the evaluation and monitoring of government programmes. 	<ul style="list-style-type: none"> The key recommendations of any monitoring and evaluation exercises for climate-related programmes are considered.
<i>Climate change expenditure shall be executed through government systems during the budget year.</i>	<ul style="list-style-type: none"> The Ministry of Finance manages cash flow to ensure that resources are available to spending agencies in line with the approved budget. 	<ul style="list-style-type: none"> Cash is available to agencies to fulfil their climate-related commitments in line with the approved budget.
	<ul style="list-style-type: none"> In-year adjustments to the budget are done only when unavoidable and aim to maintain delivery on the government's budget priorities. 	<ul style="list-style-type: none"> Spending agencies maintain oversight of their climate-related operations to manage any unexpected financial shocks.
	<ul style="list-style-type: none"> Climate funds are spent in line with the planned budget. 	<ul style="list-style-type: none"> Expenditure tracking reports against the budget for climate-funds are available to fund management committees to meet in-year reporting requirements.

<p><i>Climate change-related expenditure shall be subject to reporting and accounting.</i></p>	<ul style="list-style-type: none"> • Government accounts for all expenditure, including climate-related expenditure, are undertaken. 	<ul style="list-style-type: none"> • Spending agencies record and reconcile climate-related transactions as part of routine accounts reconciliation processes. • Government accounts that cover climate-related and all other expenditure are published in a timely manner after the end of the budget period. • Accounts can be related back to the original budget format, allowing assessment of climate-related expenditure compared to the approved budget.
<p><i>Climate change-related expenditure shall be subject to external oversight and scrutiny.</i></p>	<ul style="list-style-type: none"> • Government accounts are audited. 	<ul style="list-style-type: none"> • An independent audit authority undertakes a timely audit – to international public sector standards – of government financial statements, including those of climate-related elements. • Findings from these financial audits are made public. • As a result of these audits, recommendations are made to government on ways to improve their handling of public finances, including climate-related expenditures where appropriate.
	<ul style="list-style-type: none"> • The legislature reviews government accounts and audit findings and provides challenge and scrutiny. 	<ul style="list-style-type: none"> • Audit findings, including those relevant to climate expenditure, are transmitted to the legislature and/or its relevant committees. • The legislature and/or its relevant committees are able to understand and use the financial information presented. • The legislature and its relevant committees engage in a scrutiny and challenge function regarding government financial performance, including performance against climate-related objectives, based on their findings.

4 Conclusion

This framework is, primarily, a research tool that is intended to assist country level studies on climate finance delivery. It approaches the effectiveness question through a focus on institutional and governance processes and, by so doing, emphasises the earlier stages of the impact continuum. Further study will be required on effectiveness measures based on substantive outcomes associated with the national response to climate change.

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Annex 2. Government climate change-related programmes and projects, 2009/10 – 2012/13

Vote	Sector	Project	Code	Project Objective	CC Relevance	CC weight	Adaptation/ Mitigation
24	THE COOPERATIVE DEVELOPMENT COMMISSION	Project 4489 Coop. Reform & Modernization Programme	4489	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1
30	PRESIDENT'S OFFICE AND CABINET SECRETARIAT	Project 6391 Uongozi Institute	6391	The main objective of Uongozi Institute is to support leaders to excel in their role of transforming society to realise Africa's development	LOW	5	3
31	VICE PRESIDENT'S OFFICE	Project 5301 Climate Change Impacts, Adaptation and Mitigation (CCIAM) programme	5301	To promote natural forest conservation, afforestation, reforestation and better agricultural practices for improved livelihoods	HIGH	90	3

31	VICE PRESIDENT'S OFFICE	Project 5306 Mainstreaming Environment and climate	5306	The overall objective of the project is to provide guidance on how to mainstream responses to climate change within economic development	HIGH	100	3
31	VICE PRESIDENT'S OFFICE	Project 4936 Land Management Programme	4936	To strengthen land management practices, together with the people who depend on the land	LOW	10	3
31	VICE PRESIDENT'S OFFICE	Project 6504 Int. Environment into NSGRP	6504	To ensure Food And Nutrition Security, Environmental Sustainability	LOW	15	3
31	VICE PRESIDENT'S OFFICE	Project 6505 Lake Victoria Environment Management Project	6505	To collect information on the environmental status of the lake, its catchment and the practices being used by the communities living around the lake	LOW	20	1
31	VICE PRESIDENT'S OFFICE	Project 6506 Lower Kihansi Environment Management Project	6506	To put in place a series of medium-term measures to ensure the long-term conservation of the Kihansi Gorge ecosystem and upstream catchment areas	LOW	10	3
31	VICE PRESIDENT'S OFFICE	Project 6507 NEMC	6507	To provide advice on all matters pertaining to environmental conservation and management	LOW	20	3

31	VICE PRESIDENT'S OFFICE	Project 6509 Tanzania Coastal Management Project	6509	To facilitate the National Environment Management Council (NEMC) to implement the National Integrated Coastal Environment Management Strategy	LOW	20	3
31	VICE PRESIDENT'S OFFICE	Project 6569 Lake Tanganyika Environment Management Project	6569	To coordinate the implementation of the Convention on the Sustainable Management of Lake Tanganyika	LOW	15	3
31	VICE PRESIDENT'S OFFICE	Project 6571 EMA Implementation Support	6571	To improve the state of the environment in Tanzania, through more effective coordination and implementation of the key environmental law across government at the central and local levels.	LOW	15	3
37	PRIME MINISTER'S OFFICE	Project 6575 Strengthening National Disaster Preparedness	6575	To enhance national capacity to reduce vulnerability and mitigate disasters.	HIGH	90	3
37	PRIME MINISTER'S OFFICE	Project 4493 Southern Agricultural Growth Corridor	4493	To foster inclusive, commercially successful agribusinesses that will benefit the region's small-scale farmers, and in so doing, improve food security, reduce rural poverty and ensure environmental sustainability	LOW	20	1
37	PRIME MINISTER'S OFFICE	Project 6403 Tanzania Strategic Cities Project	6403	To improve the quality of and access to basic urban services in participating Local	LOW	15	3

43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 4409 PADEP	4409	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1
43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 4490 Cleaner Integral Utilisation of Sisal Waste	4490	To increase the profitability of sisal production and processing, and to reduce environmental degradation caused by the disposal of currently unutilised and untreated sisal waste	LOW	20	3
43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 4491 Accelerated Food Security Project	4491	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1
43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 4492 Compasive Agri. Dev.Lower Rufiji	4492	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1
43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 4486 Agriculture Sector Development Program	4486	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1

43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 4488 DASIP	4488	To increase productivity and incomes of rural households in the project area within the overall framework of the country's agricultural sector	LOW	20	1
43	MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES	Project 6505 Lake Victoria Environment Mgt Project	6505	To collect information on the environmental status of the lake, its Catchment and the practices being used by the communities living around the lake	LOW	20	1
46	MINISTRY OF EDUCATION & VOCATIONAL TRAINING	project 6575 Climatic Change Adaptation and Mitigation in Tanzania	6575	To enhance national capacity to reduce vulnerability and mitigate disasters.	HIGH	90	3
46	MINISTRY OF EDUCATION & VOCATIONAL TRAINING	Project 2229 Support on Research and Development	2229	To increase access to Higher Education for the Poor in Tanzania	LOW	15	3
46	MINISTRY OF EDUCATION AND VOCATIONAL TRAINING	Project 4302 Program for Agriculture & Natural Resources	4302	To provide a framework addressing forestry issues within the ... forest goods for agricultural expansion, livestock and other land users	LOW	15	3

48	MINISTRY OF LANDS AND HUMAN SETTLEMENTS DEVELOPMENT	Project 2327 Land Management Project	2327	To mobilize and organize the local communities, make them aware about the sustainable land management practices	LOW	15	3
49	MINISTRY OF WATER AND IRRIGATION	Project 3216 Expansion and rehabilitation of rural water supplies	3216	To ensure access to improved and sustained water and sanitation	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3223 Borehole Drilling & Dam Construction	3223	To help bring low-cost drilling to both rural and urban areas and provide clean water	LOW	10	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3306 Rehab & Expansion of Urban Water Supply	3306	To expand existing water supply systems in urban areas	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3307 Rehabilitation & Expansion of Urban Water Supply-WSDP	3307	To expand existing water supply systems in urban areas	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3309 Rehabilitation of Urban Water Supply-Morogoro	3309	To carry out rehabilitation and expansion of the water supply system in Morogoro municipality	LOW	15	1

49	MINISTRY OF WATER AND IRRIGATION	Project 3402 Construction of Urban Water Supply	3402	To provide urban and rural areas with equitable access to safe drinking water	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3403 Lake Victoria Shy/Kahama Water Supply	3403	To improve water supply in Shinyanga	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3435 Water Quality and Ecosystem Management	3435	To facilitate integrated river basin management (IRBM) to ensure adequate water supply of sufficient quality for ecosystems and basic human needs.	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3437 DWSSP	3437	To improve operating efficiency and to rehabilitate and extend the water and sewerage systems in Dar es Salaam	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3438 Kidunda dam Construction	3438	To improve reliability of the main water supply source of Dar es Salaam, the commercial city of Tanzania	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3439 Kimbiji and Mpera Water Project	3439	To strengthen the capacity of potential sectors of the Government of Tanzania	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 6545 Development and Management of Water Resources	6545	To develop a comprehensive... development and Management of water resources	LOW	10	3

49	MINISTRY OF WATER AND IRRIGATION	Project 3308	Water Sector Institutional strengthening	3308	To ensure access to improved and sustained water	LOW	15	1
49	MINISTRY OF WATER AND IRRIGATION	Project 3436	Sector Capacity Building	3436	To strengthen the capacity of potential sectors of the Government of Tanzania	LOW	15	1
50	MINISTRY OF FINANCE AND ECONOMIC AFFAIRS	Project 3308	Rehabilitation of Urban Water Supply-DSM	3308	To ensure access to improved and sustained water	LOW	15	1
50	MINISTRY OF FINANCE AND ECONOMIC AFFAIRS	Project 3310	Lower Ruvu Plant Extension	3310	Increase water supply to Dar es Salaam city	LOW	15	1
50	MINISTRY OF FINANCE AND ECONOMIC AFFAIRS	Project 3143	Constr. of Malagarasi Hydropower Distr.	3143	construction of water retaining, transfer and diversion structures, power houses, a spillway	LOW	10	3
50	MINISTRY OF FINANCE AND ECONOMIC AFFAIRS	Project 3144	Rehabilitation and Extension of TANESCO District System	3144	Investment in rehabilitation and infrastructure improvement so as to maintain power quality	LOW	10	3

50	MINISTRY OF FINANCE AND ECONOMIC AFFAIRS	Project 3309 Rehabilitation of Urban Water Supply-Morogoro	3309	To carry out rehabilitation and expansion of the water supply system in Morogoro municipality	LOW	15	1
52	MINISTRY OF HEALTH AND SOCIAL WELFARE	Project 2208 Health Sector Development Programme	2208	To improve resource management and health infrastructures to enable better health services	LOW	15	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4285 DSM Rapid Transport Programme	4285	To provide a mass transport program that is both affordable of high-quality that will help improve the overall mobility of the city and reduce emission.	HIGH	80	2
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4646 Mainstreaming of Sustainable Forest Management	4646	Key MDAs and LGAs integrate climate change adaptation and mitigation in their strategies and plans	HIGH	100	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4302 Program for Agriculture & Natural Resource	4302	To provide a framework addressing forestry issues within the ... forest goods for agricultural expansion, livestock and other land users	LOW	15	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 3280 Rural Water Supply and Sanitation	3280	To bring general improvements in time savings as a result of the reduction in time people spent in collection of water	LOW	15	1

56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 3436 Water & Sanitation Projects	3436	To strengthen the capacity of potential sectors of the Government of Tanzania	LOW	15	1
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4457 Agriculture Sector Programme Support	4457	To increase donor co-ordination in the sector through a basket funded support	LOW	10	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4486 Agriculture Sector Development Programme - Livestock Component	4486	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 6539 Wetland Management and Sustainable Development	6539	To prepare plans for the conservation, management and wise use of wetlands	LOW	10	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4628 Participatory Forest Management	4628	To promote sustainable forest management through improved participatory forest management systems and tangible forest-based livelihoods, to meet local and national needs.	LOW	20	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 6403 Tanzania Strategic cities Programme(TSCP	6403	To improve the quality of and access to basic urban services	LOW	15	3

56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4404 District Agriculture Development Support (DADPS)	4404	To increase donor co-ordination in the sector through a basket funded support	LOW	20	3
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4488 DASIP	4488	To enable farmers to have better access to and use of agricultural knowledge, technologies, and infrastructure; all of which contribute to higher productivity, profitability, and farm incomes	LOW	20	1
56	PRIME MINISTER'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	Project 4936 Land Management Project	4936	To strengthen land management practices, together with the people who depend on the land	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3117 Rural Pv-Market(Barrier Removal)	3117	To reduce Tanzania's energy-related CO2 emissions by introducing photovoltaic (PV) as a substitute for fossil fuel (kerosene) utilized for lighting in the rural areas	HIGH	100	2
58	MINISTRY OF ENERGY AND MINERALS	Project 3151 Climate change Adaptation and Mitigation	3151	Advancing Capacity to Support Climate Change Adaptation and Mitigation	HIGH	100	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3112 Rural Electrification	3112	Conservation of environment to avoid deforestation, climate change, air pollution (indoor & outdoor) and land degradation	HIGH	100	2

58	MINISTRY OF ENERGY AND MINERALS	Project 3102 New and Renewable Energies	3102	To provide term loans for renewable energy and energy efficiency projects	MEDIUM	60	2
58	MINISTRY OF ENERGY AND MINERALS	Project 3109 10th EDF Energy Programme	3109	To promote rural socio-economic development in Tanzania through increased access to modern energy services to households	MEDIUM	60	2
58	MINISTRY OF ENERGY AND MINERALS	Project 2327 GST Infrastructure Development Project	2327	To provide high quality and cost effective geo-scientific data and information to stakeholders in order to enhance the knowledge and use of earth resources,	LOW	15	2
58	MINISTRY OF ENERGY AND MINERALS	Project 3110 TZ-Access Expansion Project	3110	To improve the availability and reliability of the system components of the selected 132/33 kV grid network and substations as well as reduction of technical and non-technical losses in the distribution networks of Dar es Salaam, Arusha and Kilimanjaro regions.	LOW	10	2
58	MINISTRY OF ENERGY AND MINERALS	Project 3111 Support Project for Stable Power Supply	3111	To create a power supply using V-MOSFET technology to support amplifiers while producing 100 Watts power output	LOW	10	2
58	MINISTRY OF ENERGY AND MINERALS	Project 3121 132 KV Makambako-Songea	3121	To improve life and development to communities	LOW	10	3

58	MINISTRY OF ENERGY AND MINERALS	Project 3146 Capacity Development REA	3146	To promote access to modern energy services in rural areas of Mainland Tanzania.	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3147 Emergency Power Plants	3147	To address acute power shortage in the country	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3191 Electricity V Project	3191	Transmission and Distribution system Upgrade for Dar es Salaam, Moshi and Arusha in order to improve the electricity transmission and distribution network performance	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3113 Rural Energy Agency & Rural Energy Fund	3113	To promote access to modern energy services in rural areas of Mainland Tanzania.	LOW	10	2
58	MINISTRY OF ENERGY AND MINERALS	Project 3148 Energy Facilities	3148	Reinforcement of transmission and distribution facilities	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3154 Improving Power Supply reliability -DSM	3154	To construct underground high-voltage cables for improving power supply in Dar es Salaam	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project 3155 Rehabilitation of subst &trans Project	3155	Achieving fuel savings from substantial reduction in transmission system	LOW	10	3

58	MINISTRY OF ENERGY AND MINERALS	Project Ener. Rural TZ-Power supp- Ngara,Brm, Mp	3156	3156	To provide for an agreed basin-wide framework to fight poverty and promote socio-economic development	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project Iringa-Shy Backbone Trans investmt Prog	3157	3157	To improve Living Standards in Tanzania and Stimulating the Economy through Construction of Stronger Backbone Transmission Lines	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project Rehabilitation of Hale hydro power Plant	3158	3158	To provide electricity, help in flood control, supply water for irrigation, be a reservoir for drinking water, and fisheries	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project Institutional Cooperation TANESCO	3159	3159	To consolidate and sustain the comprehensive structure and institutional reforms	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project North - West Grid Extension 220KV	3166	3166	To extend electricity to more people in the North western part of Tanzania	LOW	10	3
58	MINISTRY OF ENERGY AND MINERALS	Project Cross Border electrification Marongo-Kikagati	3167	3167	To promote the least-cost development of energy resources to supply affordable energy while protecting the environment	LOW	10	3

62	MINISTRY OF TRANSPORT	Project 4290 TMA Radar and Equipment	4290	To provide weather forecast that distinguishes time and spread of events three hours before desired start time.	LOW	10	3
69	MINISTRY OF NATURAL RESOURCES AND TOURISM	Project 4641 National Forest Resource Monitoring and Assessment	4641	To provide reliable forest resource information for national forest policy	MEDIUM	40	3
69	MINISTRY OF NATURAL RESOURCES AND TOURISM	Project 4629 Support to Forest (National Programme)	4629	To support Private Forestry and Value Chains in Tanzania	LOW	15	3
69	MINISTRY OF NATURAL RESOURCES AND TOURISM	Project 4630 Forest Conservation and Management Project	4630	To assist the Government of Tanzania in implementing its forest policy	LOW	20	3
69	MINISTRY OF NATURAL RESOURCES AND TOURISM	Project 4645 Conservation of Biological Biodiversity	4645	To map out factors affecting conservation and sustainable use of various components of biological diversity in Tanzania	LOW	20	3

99	MINISTRY OF LIVESTOCK DEVELOPMENT & FISHERIES	Project 6501 Marine & Coast Environment Management Project	6501	To improve the regulatory and institutional framework for management of marine resources- particularly establishing the links between the marine environment and the fishery resource and what are expected to be conservative estimates of sustainable commercial exploitation of marine fishery resources	LOW	15	3
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Annex 3. Estimation of recurrent spending

Climate change expenditure analysis depends on the availability and consistency of the expenditure data. The case of Tanzania is neither bad nor good; several gaps have been noted in the available data files. These include lack of consistent actual expenditures by fiscal years, lack of a clear and consistent naming or labelling of projects in the sub votes, and lack of easily convertible excel data files. These are data problems which hamper climate change expenditure analysis in several ways including an inability to make comparison between budget and outturns of funds at the various levels and by the various vote holders.

All budgetary allocations or expenditure on specific programs and projects, whether new or continuing, are classified as development spending in the national budget. Thus, it is fairly easy to get all the budgetary financed projects by votes and amount allocated yearly. This is the list that has been used to identify climate change related projects. The assessment of climate change relevance, as discussed earlier, gave percentage attribution to expenditure on climate change for each climate change-related program and project. The respective percentage was multiplied by the corresponding budgetary allocation or expenditure for each project in any given fiscal year. Adding up the resulting climate expenditures at program or project level gives national aggregates.

However, recurrent expenditures are not specific of the programs and projects they finance; they are generic on the recurring expenditure of the respective vote-holder institutions. This is about financing the central services like coordination, supervision, auditing, controls, monitoring, etc. Thus, such expenditures are also part of climate change-related development projects.

The study team had to come up with a way of apportioning recurrent central expenditures to cover recurrent expenditure on climate change-related development projects. The assumption that was made was that the same climate relevant share of the development budget for each ministry also applied to the recurrent budget, as this recurrent spending was used to support the execution of the development budget. The climate change relevant percentage of the recurrent budget averaged 4.5 per cent in 2009/10 and 4.8 per cent in 2011/12. The average recurrent share of total climate relevant spending was 20 per cent for the financial year 2009/10 and 15 per cent in 2011/12.

The recurrent climate relevant share as a percentage of total recurrent budget by ministry is shown in Table A3.1 for selected years.

Table A3.1: Estimate of climate change relevant recurrent budget as a percentage of total ministry recurrent budget

Ministry	2009/10 (%)	2011/12 (%)
Ministry of Water and Irrigation	12.6	6.2
Ministry of Energy and Minerals	24.4	25.3
Prime Minister's Office- RALG	3.8	0.9
Prime Minister's Office	0.7	13.5
Vice President's Office	1.2	2.4
Ministry of Agriculture, Food Security & Cooperatives	4.8	2.4
Ministry of Natural Resources & Tourism	0.7	0.0
Ministry of Finance	0.6	5.3
Ministry of Education & Vocational Training		0.2
Ministry of Health & Social Welfare	0.05	
Ministry of Livestock Development & Fisheries		0.7
Ministry of Transport	0.03	0.6
Ministry of Lands & Human Settlements	0.05	0.3



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