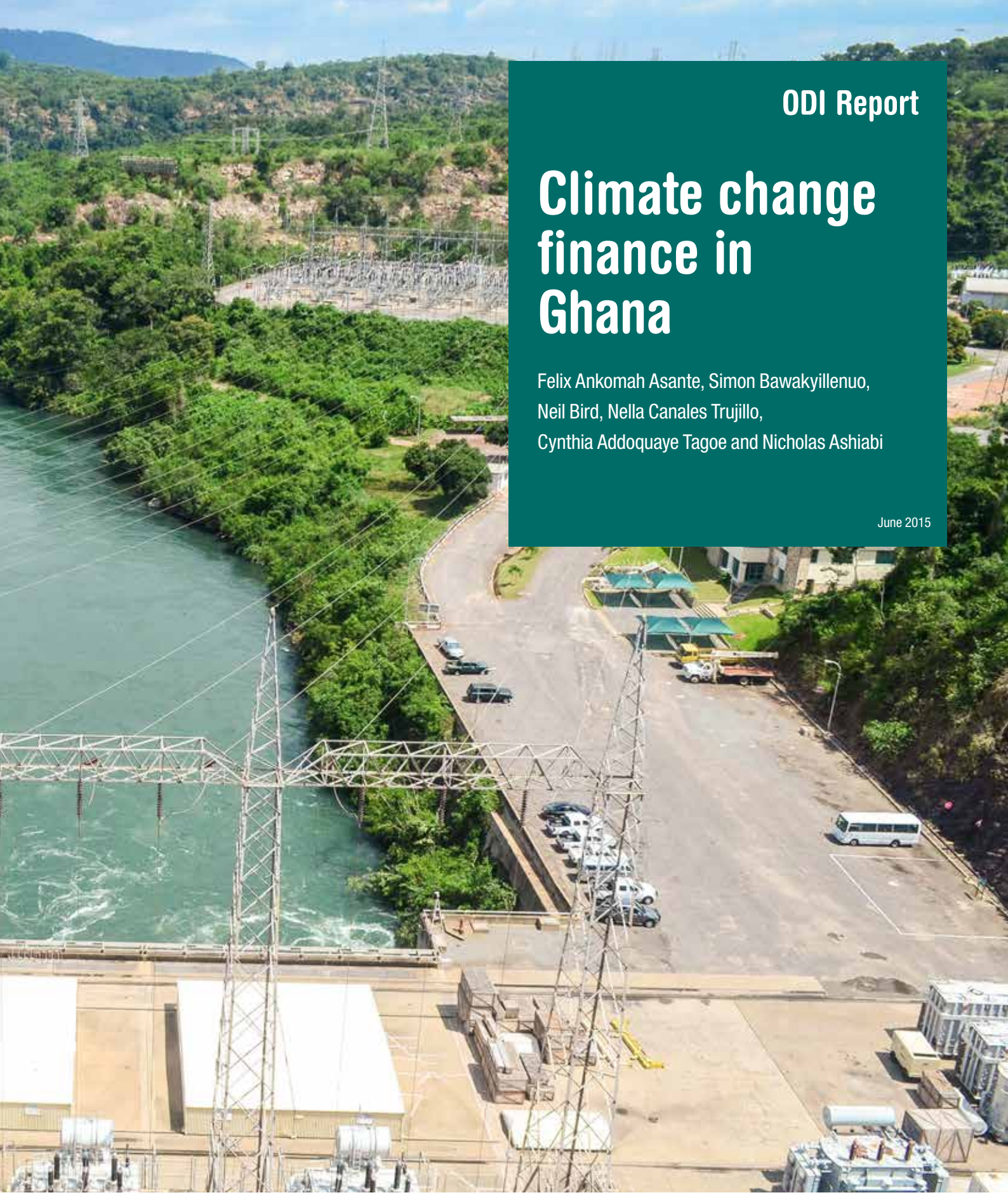

ODI Report

Climate change finance in Ghana

Felix Ankomah Asante, Simon Bawakyillenuo, Neil Bird, Nella Canales Trujillo, Cynthia Addoquaye Tagoe and Nicholas Ashiabi

June 2015

ISSER
University of Ghana
Knowledge for Development

REPUBLIC OF GHANA
MINISTRY OF FINANCE

Report

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Key messages

- Much progress has been made, over a relatively short period of time, to develop a national policy framework for climate change in Ghana. The national policy, together with its accompanying draft master plan, provides detailed guidance to address the implementation challenges that confront the country's response to climate change.
- The current budget allocation for climate change relevant actions of GH₵ 637 million in 2014 (approximately US$ 210 million) represents a very low base upon which the National Climate Change Policy (NCCP) has to build over the next five years to accomplish its objectives.
- For several of the ministries highlighted in the NCCP master plan, the projected budget associated with the NCCP would transform the ministry. The biggest proposed increase is for the Ministry of Gender, Children and Social Protection, which would require an almost ten-fold increase over the present budget allocation.
- Much needs to be done at the local government level to secure implementation. At present there is little awareness of what the national climate change policy is, what it requires of sub-national government, and the likely level of spending necessary.

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2015

Overseas Development Institute (ODI), London and the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana.

A report prepared with the support of the Ministry of Finance, Government of Ghana

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

How climate change 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, is confronted with the challenge that climate change 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 change 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

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Acknowledgements

We would like to express our thanks to all those interviewed as part of this study who gave freely of their time and provided information that allowed the study team to cover much ground in a relatively short time. In particular, we acknowledge the support and guidance provided by the Ministry of Finance through Kwabena Boadu Oku-Afari, Director of the Real Sector Division, as well as Adwoa Fraikue, Robert Mensah and Ebenezer Nortey of the Natural Resources, Environment and Climate Change Unit. Assistance for the sub-national analysis was provided by Jonathan Azasoo and Winfred Nelson of the NDPC, together with staff of Keta Municipal Assembly and Atiwa District Assembly.

The research support of Franklin Nkudefe Adjotor is gratefully acknowledged. We are also grateful for helpful comments provided by peer reviewers Ebenezer Nortey and Jérôme Dendura and for the comments received from the study's oversight committee on the draft report.

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

Abbreviations

AAP	Annual Action Plan
CC/DRR	Climate Change/Disaster Risk Reduction
DACF	District Assembly Common Fund
DPs	Development Partners
EPA	Environmental Protection Agency
FOAT	Functional Organizational Assessment Tool
GDP	Gross Domestic Product
GMet	Ghana Meteorological Services Agency
ISSER	Institute of Statistical, Social and Economic Research
MDAs	Ministries, Departments and Agencies
MESTI	Ministry of Environment, Science, Technology and Innovation
MMDAs	Metropolitan, Municipal and District Assemblies
MoEP	Ministry of Energy and Petroleum
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
MGCSP	Ministry of Gender, Children and Social Protection
MLGRD	Ministry of Local Government and Rural Development
MLNR	Ministry of Lands and Natural Resources
MRV	Monitoring, Reporting and Verification (of GHG emissions)
MTEF	Medium Term Expenditure Framework
MWRWH	Ministry of Water Resources, Works and Housing
NADMO	National Disaster Management Organization
NCCAS	National Climate Change Adaptation Strategy
NCCC	National Climate Change Committee
NCCP	National Climate Change Policy
NDPC	National Development Planning Committee

NGO	Non-Governmental Organization
NRECC	Natural Resources, Environment and Climate Change Unit of the Ministry of Finance
ODI	Overseas Development Institute
ODA	Official Development Assistance
PEFA	Public Expenditure and Financial Accountability Assessment
PFM	Public Finance Management
PoA	Programme of Action
POCC	Potential, Opportunities, Constraints and Challenges analysis
REDD+	Reduced Emissions from Deforestation and Forest Degradation
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

Climate change finance in Ghana

The National Climate Change Policy (NCCP) was publicly launched by the President of Ghana, H. E. John Dramani Mahama in July 2014 to give policy direction to the government's response on climate change. The Vision of the NCCP is to ensure a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth.

The NCCP and its supporting master plan make additional demands on government spending. However, the nature and scale of this spending is presently unclear. The Ministry of Finance has established a Natural Resources, Environment and Climate Change Unit and one of its first tasks is to improve understanding on current and future levels of public spending on climate change.

This study contributes to this task by describing how climate change related budgets and expenditures are being integrated into the national budgetary system, something which has not been attempted before. It therefore represents a first exploration of the issues associated with resourcing the national response to climate change.

Policy issues influencing government spending on climate change

The National Climate Change Policy goes beyond the two-pronged mitigation and adaptation dimensions of climate change action, by taking into account the national emphasis placed on social development. Overall, implementation of the NCCP is estimated to cost approximately US$ 9.3 billion (GH₵ 35 billion) over the period 2014-2020. The NCCP has four focus areas within the social development policy area, namely human health, access to water and sanitation, gender issues, and migration. These receive the highest proposed allocation of funds in the NCCP (at 47 percent of total funding).

The mobilization of financial resources is fundamental to ensure that Ghana can address the many challenges associated with climate change. It is essential not only to budget for climate change activities, but also to show the sources and means of raising the necessary funds. In the current NCCP document, however, an explicit funding strategy that describes the methods for mobilizing both domestic and international resources for climate change is absent. Equally, the NCCP does not identify the measures that will need to be undertaken to ensure that the delivery of climate finance takes place in a transparent and accountable manner.

The Institutional architecture supporting climate finance delivery

Twenty-two Ministries, Departments and Agencies (MDAs) are expected to provide programme leadership on climate change as laid out in the NCCP master plan. Four ministries account for approximately half of the planned public expenditure: MLNR, MoEP, MLGRD and MGCSP. These ministries therefore have the potential to provide leadership for the implementation of the NCCP.

However, much is needed to be done in terms of institutional strengthening to allow the proposed funding to flow. For several of the ministries highlighted in the NCCP master plan, the projected budget associated with the NCCP would transform the ministries. The MLNR projected climate change budget is more than double its overall 2015 budget allocation; the biggest proposed increase would be for the Ministry of Gender, Children and Social Protection, where the ministry's annual budget would need to increase almost ten-fold over the present budget allocation.

An effective institutional response to climate change requires strong coordination between the various implementing agencies. A National Climate Change Committee (NCCC) was established by the President in 2009 and hosted by MESTI to help secure this function. However the NCCC has not met since 2012, effectively ceasing to function. As a consequence, a vacuum exists regarding the institutional coordination and harmonization necessary for effective action on climate change.

The Ministry of Finance created the Natural Resources, Environment and Climate Change Unit in 2010 to oversee, coordinate and manage the financing of natural resources and climate change activities. This leadership role is, however, weakened as the Unit has presently no mechanism to track resources generated for climate change actions within the country or from external sources.

Oversight by the legislature is poorly developed in the absence of a parliamentary committee charged to oversee climate change issues across the whole economy. A 'network of parliamentarians' exists among MPs interested in the subject; however, such a grouping does not have the same influencing potential as a select committee in parliament.

Macroeconomic and Public Finance Management context for spending on climate change

Although Ghana achieved middle income status in 2011, it has subsequently experienced a decline in its annual GDP growth. The country has witnessed macroeconomic challenges especially in 2014, reflected by rising inflation rates. Generation of domestic revenue has improved, although challenges continue to exist to raise public resources to a level that can sustain the country's development needs. This mainly explains the recent structure of the economy, characterized by fiscal deficits and rising public debt levels.

Capital expenditure has fallen short of the approved budget estimates in the years under consideration. These deviations in capital expenditure could affect the pace of delivery of major infrastructure projects related to climate change. Capital expenditure in Ghana is largely foreign-financed thereby making it heavily dependent on development partners.

An upward trend in total debt stock, which comes with an increasing debt servicing burden, poses a challenge for the economy in the medium term, including spending on climate change related activities.

Though certain areas of Ghana's public finance management system have shown improvement in recent years, most have either remained the same or deteriorated between 2009 and 2012, according to two standardized international PEFA assessments.

Public expenditure on climate change relevant actions, 2011 – 2014

Fourteen MDAs were identified as having climate change relevant spending in the national budget between 2011 and 2014. However, budget allocations are very small, with a total budgeted expenditure of GH₵ 637 million (approximately US$210 million) in 2014. Climate change relevant expenditure is approximately two percent of government expenditure and 0.5 percent of GDP.

This level of budget allocation represents a very low base upon which the NCCP has to build over the next five years to accomplish its policy objectives. The scale of build-up can be seen by comparing the 2014 budget figure of GH₵ 637 million with the planned annual budget under the NCCP Master Plan of GH₵ 4,127 million – a six-fold increase.

Only five budget policy objectives within the national budget system were identified as being highly relevant climate change actions (by including a direct reference to climate change). An additional 39 policy objectives were identified as having medium relevance, where the description related to actions identified in the NCCP master plan. The planned expenditures for highly relevant actions is less than one percent of the total climate

change relevant budget; almost all climate change funding is therefore being directed at policy objectives that are consistent with the goals of the NCCP, but are not explicitly labelled as climate change actions.

A greater budget allocation is directed at adaptation (68 percent) compared to mitigation actions (22 percent). The budget allocation in support of REDD+ activities has remained at approximately 10 percent over the period.

Accounting for all DP funded climate change relevant expenditure is not possible at the present time**.** Domestic spending is captured in the national budget according to standardized coding. Donor expenditure is not captured with the same level of consistency, and donor funds do not all flow through one single financial system. Support from one of the country's bilateral international climate funds, Germany's International Climate Initiative (IKI), takes place wholly outside the national public finance management system, with IKI projects effectively running in parallel with government systems.

Delivering climate finance at the local level

The National Climate Change Policy is relatively new and therefore its dissemination has not reached all local governments. For example, the content of the NCCP, and the responsibilities that this document places upon Metropolitan, Municipal and District Assemblies (MMDAs), were not acknowledged by those officers interviewed in the two districts of this study. The National Development Planning Commission guidebook for the Medium-Term Development Plan represents the most significant policy instrument in terms of climate change mainstreaming in both districts studied.

The NCCP identifies a series of activities to be conducted by MMDAs. In Keta and Atiwa, there is experience in implementing community-led sanitation activities and building infrastructure within rural settlements (e.g. roads, footbridges). However, there is no experience in improved drainage, and this could represent a high burden for the implementation of the NCCP master plan. Whereas MMDAs are familiar with some of the proposed NCCP activities, there is no conscious link between the implementation of these activities and climate change, emphasizing the limited awareness of climate change actions within local government.

The NCCP master plan highlights the leading role to be played by the Ministry of Local Government and Rural Development as well as the Local Government Service in implementing the national climate policy, with a significant share of resources being allocated to these institutions. However, their role does not appear to be recognized at the MMDA level.

The effectiveness of public spending on climate change actions

The effectiveness of climate finance delivery depends on the linkages that exist between policy formulation, the institutional architecture of implementing agencies and the national budgetary system. These interactions are complex and are subject to a wide range of influences. Much progress has been made, over a relatively short period of time, on developing an overarching policy framework for climate change in Ghana. This national policy, together with its accompanying master plan, provides detailed guidance to address the implementation challenges that confront the country's response to climate change. In many respects, the trajectory of the government's delivery programme has now been set. However, considerable investment is needed to strengthen the public finance management system and build capacity within implementing institutions so as to secure the success of the strategy.

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 in Ghana. The budgetary implications of these measures have not been assessed, although timely implementation would likely require support from development partners.

(i) Improving information on climate change finance

Issues to be addressed	Recommendations
• Climate change relevant expenditure is not yet recognized through any specific tagging 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 actions where tackling climate change is not a stated objective of the expenditure. • The scale of climate change relevant spending that is 'off-budget' is a major unknown at the present time (both donor-funded projects and domestic sources).	1. An initiative to develop the tracking of climate change spending within the national budget should be supported. This could involve lesson learning from other countries that have made similar initiatives (e.g. Nepal). 2. Raising awareness, and building capacity, of sector ministry planners on climate change issues should be developed through tailored training opportunities, so that the likely climate change outcome of their development planning is better understood. These people could become the recognised focal persons for climate change issues in their respective ministries 3. Off-budget climate change relevant spending should be collated in a manner consistent to the national budget to allow for a comprehensive assessment of all relevant funding.

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

Issues to be addressed	Recommendations
• The main parameters of the national climate change response have now been set within the National Climate Change Policy master plan. However, a national financing strategy has not been developed. • The NCCP master plan sets out an ambitious national agenda. This task cannot be achieved by government alone, but will require the concerted efforts of all sectors of society. • The NCCP master plan is silent on how transparency and accountability can be promoted in climate change finance delivery.	4. The National Climate Change Policy, and its master plan, represents a significant milestone, but it needs to be strengthened if implementation is to be secured by developing a national financing strategy. This strategy should include: (i) the identification of priority programmes; (ii) their budgeted costs and timing; and (iii) the expected sources of funding. 5. Parliamentary oversight of the budget process as it relates to climate change expenditures should be strengthened. Consideration should be given to establishing a parliamentary select committee on climate change.

(iii) Supporting the institutional response for effective climate finance delivery

Issues to be addressed	Recommendations
• Line Ministries with major implementation responsibilities in the NCCP (e.g. MWRWH, MLNR, MGCSP, MoF (NRECC)) need to build the necessary capacity to allow implementation of priority actions. • Securing coherence on climate change actions across the government administration is a major challenge in the absence of a national coordination committee. • Climate change finance requires a strong focal point in the government administration	6. A major skills improvement programme on climate change, starting with a number of priority ministries, should be designed and implemented. 7. A replacement mechanism to the NCCC (or its re-constitution) should be established as soon as possible to provide the necessary oversight for the implementation of the NCCP master plan. 8. The NRECC Unit in the Ministry of Finance should oversee the development of a national tracking tool for climate change finance that captures relevant end-of-year outturn expenditures. This mandate could be backed by a legislative instrument to ensure compliance from other MDAs.

(iv) Supporting PFM environment for effective climate change finance delivery

Issues to be addressed	Recommendations
• Significant challenges remain in the public financial management (PFM) system and expenditure management. These include linking medium term strategies to annual budgets. Ghana's capacity to implement national strategies has 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 weaknesses in management systems.	9. If climate finance is to be delivered effectively, there is a need to further improve cash management and work to enhance the credibility of the annual budget. 10. Additional investments are required in multi-year planning and budgeting processes to enhance the capacity for investment planning.

(v) Climate change actions at the local government level

Issues to be addressed	Recommendations
• The linkages between the MLGRD, the Local Government Service and MMDAs need to be strengthened to ensure that climate change relevant expenditure is handled most effectively at the local level.	11. Awareness raising and technical support relating to climate change (causes, impacts, and adaptation/mitigation options) should be provided to MMDA staff.

Chapter 1. Climate change finance in Ghana

1.1 The national interest in climate finance

The National Climate Change Policy (NCCP) was publicly launched by the President of Ghana, H. E. John Dramani Mahama in July 2014 to give policy direction to the government's response on climate change. The Vision of the NCCP is to ensure a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth. The NCCP and its supporting master plan make additional demands on public spending as this is a new area of public policy. However, the nature and scale of this spending is poorly known at the present time.

The Ministry of Finance has created a Natural Resources, Environment and Climate Change Unit within the Real Sector Division to oversee, coordinate and manage the financing of, and support to, natural resources and climate change activities in the country. One of the unit's first tasks is to improve understanding on current and planned future levels of public spending on climate change actions. The importance of such an exercise was signaled when the government indicated its intention to conduct a study of climate change finance in Paragraph 449 of the 2015 Budget Statement, with the expectation that this would lead to climate sensitive budgeting in the medium term:

> *'Mr. Speaker, in 2015, government will implement measures to undertake climate change and green economy programmes and projects that promote a clean environment, job creation and poverty reduction. In addition, government will undertake a Climate Public Expenditure and Institutional Review (CPEIR) leading to climate sensitive budgeting in the medium term.'*[1]

This study fulfils the latter objective, and is reflected in the strong level of interest shown in the study by the Ministry of Finance.

1.2 Objectives of the study

Climate change is a new area of public policy that will have a significant impact on people's lives in Ghana. However, at present there is limited understanding of what the cost of responding to climate change will be. Equally, there is little knowledge of current spending on climate change related activities. The overall objective of this study is to provide information that will help government set the direction of its implementation programme on climate change. In addition, it aims to:

- help raise awareness on climate change spending in Ghana;
- support the implementation of the national climate change policy;
- facilitate the integration of the policy into plans and budgets; and
- strengthen transparency and accountability over climate change expenditures.

The study's two sub-objectives are: (i) to refine a nationally-appropriate methodology and conduct an analysis that shows how climate change related expenditures are integrated into the national budgetary system; and (ii) to provide recommendations for their further integration in budget allocation and execution to help guide the effective allocation of resources.

[1] http://www.mofep.gov.gh/sites/default/files/budget/Budget-Statement-2015_0.pdf

1.3 Definitional issues

Climate change refers to the expected substantial change in global climate patterns brought about as a consequence of human-induced increases in greenhouse gas emissions. There is already considerable evidence that the global climate is changing and projections from the Intergovernmental Panel on Climate Change suggest that the rate of change will increase in the future (IPPC, 2014). Given the stage of economic development in Ghana, where there is a continuing heavy dependence on rain-fed agriculture, the country is particularly vulnerable to the adverse impacts of climate change.

The provision of climate finance (or more correctly climate change 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 been an important topic of the UNFCCC negotiations and remains an area where agreement has yet to be reached between developed and developing countries. At the national level, available public funding is one of the key limiting factors holding back the delivery of national obligations in many vulnerable countries.

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 finance. This study focuses on public funds allocated to finance climate change actions through the national budget, as such spending is most closely aligned with national policy setting and domestic institutional arrangements.

In the absence of an internationally recognised definition of climate finance, studies such as the present one have to build on national understanding to determine the boundaries to such spending. For the purpose of this study, climate finance is taken to be any public funding that supports actions identified in the National Climate Change Policy and its supporting master plan.

1.4 The approach taken by the study

This is a new type of analysis, although it builds on previous work that has reviewed public expenditure at sector and thematic levels. Being the first attempt to identify climate change relevant spending in Ghana, there is need for a credible analytical framework; so developing a sound methodology for this type of work is as important as the results obtained. The emphasis of the study is on present and future expenditure rather than on past spending, hence the exploratory nature of the study. An important aspect is an examination of national-local linkages in order to assess how climate finance can best reach the most vulnerable communities.

The Overseas Development Institute (ODI) has developed a body of work on climate finance delivery, with studies recently concluded in Uganda, Tanzania and Ethiopia. The objective of these studies has been to refine a general methodology so that it is appropriate in each national context and then to conduct an analysis at both the national and local level on climate finance delivery. These studies have shown how climate change related expenditure is being integrated into national budgetary systems in response to national policy setting.

The Institute of Statistical, Social and Economic Research (ISSER) at the University of Ghana has a long standing record in providing policy relevant economic and social research, including its annual flagship report on the state of the Ghanaian economy.

This study represents a collaborative research effort between ISSER and ODI and was undertaken over a five month period from January to May 2015. The research approach included an initial review of the literature, detailed analysis of government planned spending (as recorded in ministries' Medium Term Expenditure Framework reports), and a series of semi-structured interviews with key informants. The study team was supported by an oversight committee convened by the Ministry of Finance specifically for this study. This committee provided technical and policy-related advice and guidance to the research team and comprised representatives from the National Development Planning Commission, the

Ministry of Environment, Science, Technology and Innovation, the Ministry of Local Government and Rural Development, as well as several relevant line ministries. The oversight committee met formally at the start of the study on 27th January 2015 and then on 26th May 2015 to review the draft report. A larger review workshop, which included representatives from a wide range of government institutions and development partners, was held on 3rd June. Feedback and review comments received by the research team were subsequently incorporated into this report.

1.5 The analytical framework used by the study

This study's analytical framework (Annex 1) provides an approach to measuring the effectiveness of the national systems that underpin public climate finance delivery. Three interlinked elements are assessed: (i) the policy environment that supports climate change expenditures; (ii) the institutional architecture that determines relevant roles and responsibilities over funding decisions; and (iii) the public finance system through which climate change-relevant expenditures are channeled. Key principles of effective climate finance delivery for each of these three elements have been identified from the literature. 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.

Four principles of policy development and implementation that are relevant to the effective delivery of climate change finance have been identified. 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 in terms of 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.

1.6 The themes of the study

Building on the research experience of ODI in other countries, this study has examined three aspects of the national budget system vis-à-vis climate finance:

1. *Understanding the policy context:* 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:* to unpack 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:* to quantify climate change related expenditures in the national budget. This is done through a process of selecting activities, projects and programmes that are recognized as being part of the national response to climate change.

The structure of this report follows these themes: chapters two and three address the policy and institutional issues that influence the level of public spending on climate change actions in Ghana. The country's recent macroeconomic performance and general measures of public finance management are then described in chapter four, as a prelude to a detailed review of climate change relevant public expenditure within the national budget in chapter five. This national-level analysis is complemented by an exploratory examination of relevant spending in two districts in chapter six. Chapter seven concludes the study.

Chapter 2. Climate change finance policy analysis

Chapter summary

- The 2013 National Climate Change Policy aims to create a 'climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana'. Implementation of the NCCP is estimated to cost approximately US$ 9.3 billion over the period 2014-2020.
- Significantly, the outlined policy themes in the NCCP go beyond the two-pronged mitigation and adaptation dimensions of climate change action, taking into account the national emphasis placed on social development.
- The NCCP has four focus areas within the social development policy area, which receives the highest proposed allocation of funds in the NCCP (at 47 percent of total funding). However, it is not known what factors informed the budgetary allocations for the different focus areas and hence the differences in proposed budgets.
- Mobilization of adequate financial resources is fundamental to ensuring that Ghana can address the many challenges associated with climate change. Thus, it is essential not only to budget for climate change activities, but also to show the sources and means of raising the necessary funds. In the current NCCP document, however, an explicit statement of funding strategies and/or the methods for mobilizing both domestic and international resources for climate change is absent.
- The NCCP does not identify the measures to be undertaken to ensure that the delivery of climate finance takes place in an open and transparent manner.
- The government of Ghana has demonstrated its intention to support the adoption of low carbon technologies through various policies and initiatives. One recent fiscal reform has been the decision to phase out subsidies on fossil fuels.

2.1 Introduction

Increasing climate variability is a threat to Ghana's national development. This is as a result of the impacts of tropical storms, the influence of the Atlantic Ocean, and the Sahel[2]. Temperature increase, sea-level rise, greater rainfall variability (including unpredictable and extreme events), increasing greenhouse gas emissions and the loss of carbon sinks are some of the established evidence associated with climate change in Ghana[3]. These impacts could thwart the country's vision of becoming a stable middle-income nation by 2020[4] because they will compound existing socio-economic inequalities. Sectors such as agriculture, water resources, land, fisheries, forestry and energy, which most people depend on for their livelihoods,[5] will be severely affected.

In addressing the challenges of climate change, the government of Ghana has undertaken a series of climate related activities, including the ratification of international environmental conventions and the enactment of national policies and strategies. This chapter will examine the extent to which climate

[2] MESTI,(2013)
[3] GoG, (2011)
[4] Government of Ghana (GoG) (2014a)
[5] Environmental Protection Agency (EPA) (2011); MESTI,(2013)

policies, especially the 2013 National Climate Change Policy (NCCP), are in line with the following principles of effective climate finance delivery[6]:

- Climate change policies are designed for ease of implementation
- The legitimacy of climate change policies is recognized by stakeholders
- Climate change policies are coherent with national development policies
- Climate change policies promote transparency in climate finance delivery

The development of climate change policies in Ghana are discussed first in order to set the context for such as assessment.

2.2 Background to the national climate change policy in Ghana

Ghana ratified the United Nations Framework Convention on Climate Change (UNFCCC) as a Non-Annex I Party in September 1995, and has since engaged in national policy development and the setting up of measures to address climate change.

The country's Initial National Communication (INC) to the UNFCCC was published in May 2001, covering the period of 1990 to 1996. This publication centered on the formulation of climate change activities that were considered consistent with the then national development plan. The INC served as the foundation for the development of subsequent climate change initiatives in the country. For example, it contributed to the development of the Strategic Environmental Assessment (SEA) used to review the Ghana Poverty Reduction Strategy (GPRS I). However, whilst the INC helped to shape poverty reduction strategies within vulnerable communities, it did not influence a broader incorporation of climate change (as well as environmental issues) in this medium-term development plan[7].

Ghana's Second National Communication (SNC) to the UNFCCC[8] was published in September 2011. The SNC described policies and measures in the areas of mitigation and adaptation to climate change. The central theme of the SNC was the pursuance of harmonized and coordinated actions to reduce climate change impacts on the most vulnerable people, while continuing to advance national economic development[9]. In this regard, the SNC sought to develop a Low Carbon Growth Strategy for the country. Gaps and constraints on effective action since Ghana's signing of the UNFCCC in 1995 were also identified (Box 2.1).

With regard to climate change finance, the SNC identified potential international funding sources such as the Global Environment Facility and the National Communication Support Programme to aid climate financing in Ghana. Regarding technology, the SNC advocated for the establishment of a Technology Development and Innovative Centre to enhance research on climate change and other related areas.

Box 2.1 Some key challenges identified during the SNC process

- Institutional arrangements for climate change activities were ad-hoc, because they were mostly built around individuals.
- There were no clear entry points for institutions.
- Institutional assessment of data was limited due to the ad-hoc nature of the climate change response.
- Country-specific data on emission factors were not available for all sectors.
- Data providers usually restricted access to information.

Source: Environmental Protection Agency (EPA) (2011)

[6] Bird et al. (2013)
[7] Nelson and Agbey (2005)
[8] EPA (2000); EPA (2011)
[9] EPA (2011)

The SNC led to the National Climate Change Policy Framework (NCCPF) discussion paper, which in turn served as the foundation for the formulation of the 2013 National Climate Change Policy (NCCP). The main aim of the NCCPF was to provide a platform for the definition of the national scope of climate change actions through various national consultative processes and debates. Thus, the NCCPF discussion paper[10] that came out in 2010 advocated for national development that was 'climate resilient and climate compatible while achieving sustainable development and equitable low carbon economic growth for Ghana'[11]. Specifically, it emphasized a strategy for low carbon growth, effective adaptation to climate change, and social development. The NCCPF influenced part of chapter four[12] of the Ghana Shared Growth and Development Agenda (GSGDA I), 2010-2013, outlining key issues of climate change and variability and the measures required to tackle them.

On the basis of the NCCPF discussion paper in 2010, processes leading to the formulation of the NCCP were initiated, with the final policy document published in 2013. These included the appointment of an accomplished climate change scientist to lead the process, overseen by a National Climate Change Committee (NCCC), with numerous consultations[i] with all segments of Ghanaian society. The rationale for the extensive consultation was to ensure strong national ownership of the final output of the policy.

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

2.3.1 Targeted objectives are listed in the policy documentation

The 2013 NCCP of Ghana aims to create a 'climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana'. It identifies the need for a green economy transition that takes advantage of opportunities when addressing climate change whilst at the same time reducing its impact on affected communities.

The goals of the NCCP are cross-cutting, having taken into account the various sectors' development plans as well as the country's development goals[13]. Through national consultations, each sector's objectives and programmes were examined to help with the prioritization of the NCCP and to enhance its holistic development[14]. The NCCP identified five key policy areas and ten focus areas (Table 2.1).

[10] Ministry of Environment Science, Technology and Innovation (MESTI) (2010)
[11] Ministry of Environment Science, Technology and Innovation (MESTI) (2010)
[12] Government of Ghana (GoG) (2010b). (Chapter four of GSGDA I 'Accelerated Agricultural modernization and sustainable natural resource management').
[13] MESTI (2013); Government of Ghana (GoG) (2010b)
[14] Key informant interview with the Head of Climate Change and Sustainable Development at MESTI (01/03/2015)

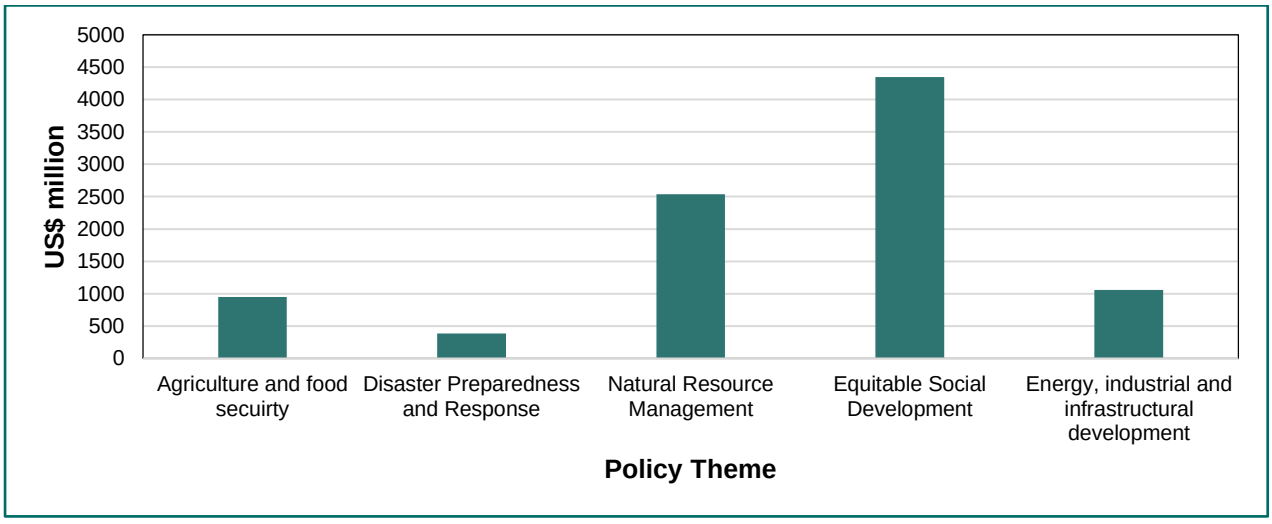
Table 2.1: The key policy and focus areas of the NCCP

Policy Area	Focus Area
Agriculture and Food Security	Develop climate-resilient agriculture and food security systems
Disaster Preparedness and Response	Build climate-resilient infrastructure Increase resilience of vulnerable communities to climate-related risks
Natural Resource Management	Increase carbon sinks Improve management and resilience of terrestrial, aquatic and marine ecosystems
Equitable Social Development	Address impacts of climate change on human health Minimize impacts of climate change on access to water and sanitation Address gender issues in climate change Address climate change and migration
Energy, Industrial and Infrastructural Development	Minimize greenhouse gas emissions.

Source: *MESTI, 2013*

Overall, implementation of the proposed NCCP work programmes is estimated in the draft NCCP Master Plan to cost approximately US$ 9.3 billion over the period 2014-2020, with most funding directed at policy theme four: achieving equitable social development (Figure 2.1 and Appendix 2.1).

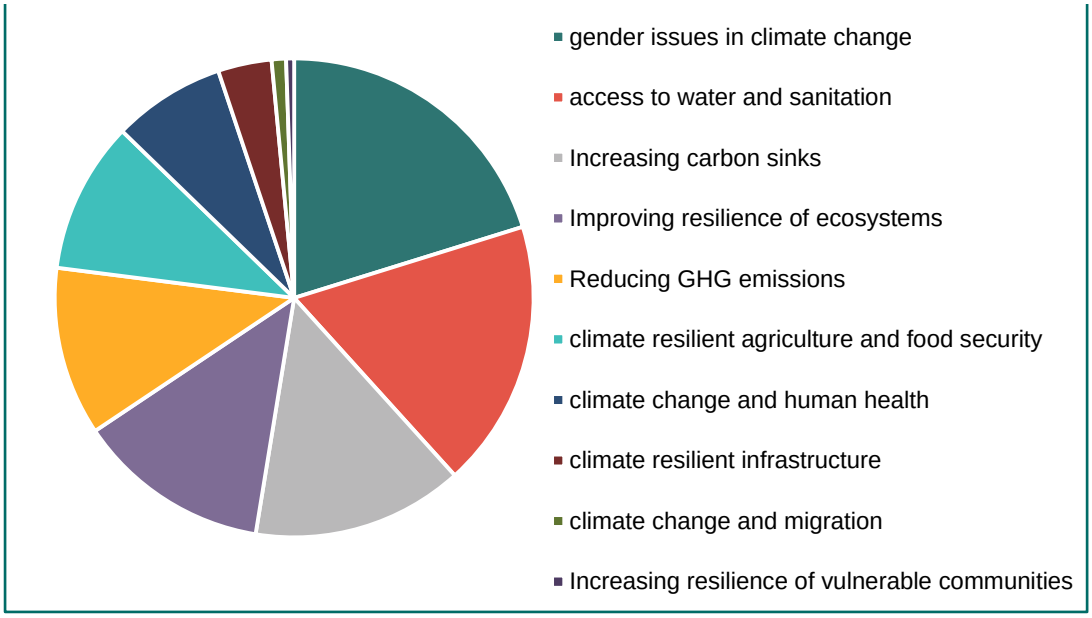
Figure 2.1: NCCP projected spending, 2014-2020



Source: *National Climate Change Policy Master Plan 2015 -2020, MESTI, 2014*

Each focus area of the NCCP is made up of several budgeted work programmes. The broad allocation between the ten focus areas is shown in Figure 2.2.

Figure 2.2: Proposed budgetary allocation for the NCCP's ten focus areas



Source: *National Climate Change Policy Master Plan 2015 -2020, MESTI, 2014*

The agriculture and food security policy area has one focus area with the aim of developing climate-resilient agricultural and food systems in all agro-ecological zones, and to develop the human resource capacity for climate-resilient agriculture. This is to be attained by 2020 with an indicative budget of US$ 950 million. This planned spending represents approximately 10 percent of the total indicative budget for climate financing in Ghana under the NCCP (Appendix 2.1).

Building climate-resilient infrastructure and increasing the resilience of vulnerable communities to climate-related risks are the two focus areas under the disaster preparedness and response policy area. This policy theme has the least amount of proposed funding under the NCCP[15]. As little as 4 percent of the total budget outlined to finance climate change is directed at this policy focus area: US$ 336 million for climate-resilient infrastructure and US$ 50 million for increasing resilience to climate change.

The natural resource management policy area of the NCCP has two focus areas: increasing carbon sinks and improving the management and resilience of natural ecosystems. To increase carbon sinks the policy aims to support activities that minimize the destruction of natural ecosystems and the enhancement of carbon stocks through programmes that restore degraded forests and other natural ecosystems. To achieve this, programmes such as sustainable wood fuel production and the development of alternative biofuels are planned; as is plantation development; and the conservation of trees through sustainable forestry and on-farm practices. This policy area has the second highest (27 percent) proposed budget allocation under the NCCP[16].

Owing to the seriousness of climate change on the socio-economic development of Ghana, the NCCP has four focus areas within the social development policy area, which receives the highest (47 percent) proposed allocation of funds in the NCCP[17]. This policy area aims to address the impacts of climate change on human health; minimizing impacts of climate change on access to water and sanitation; addressing gender issues in climate change; and addressing climate change and migration.

The energy, industrial and infrastructural development policy area has a single strategic focus area, to minimize greenhouse gas emissions. This is to be achieved through the strengthening of actions that will reduce emissions, as measured through a national greenhouse gas inventory. Twelve percent of the

[15] Appendix 2.1
[16] Appendix 2.1
[17] Appendix 2.1

proposed funding has been allocated to support the implementation of work programmes in this policy area.

Significantly, the outlined policy themes in the NCCP went beyond the two-pronged mitigation and adaptation dimensions of climate change action, taking into account the national emphasis placed on social development[18]. However, some shortcomings appear to exist with respect to other dimensions of its objectives. First, within the NCCP and its associated Master Plan there are no clear timelines for the implementation of the various programmes and hence no guidance on the sequencing of actions. Second, it is not known what factors informed the budgetary allocations for different focus areas. However, it is believed that a separate document[19] containing budget breakdowns per programmes and years is now being worked on and is expected to be published by MESTI.

Costing for the programmes under the different focus areas was undertaken by the different consultants[ii] who prepared the focus area documents. In addition, MDAs (including the Ministry of Finance (MoF)) made inputs to these costings during the validation workshops. While one key informant is of the view that the budget for the focus area with the highest amount (gender – see Figure 2.1) is on the low[iii] side, an important aspect of the costings for these focus areas that still remains unexplained relates to the parameters that informed their unevenness, an issue the MoF[iv] has also raised.

2.3.2 Timelines for achieving the set policy objectives are articulated in the relevant policy documents

A cursory examination of Ghana's NCCP[20] document reveals the absence of well-articulated timelines for the execution of its various programmes. Similarly, the NCCPF focused solely on the climate compatible development pathways the nation needs to follow and did not set timelines for the achievement of the policy objectives. However, through key informant interviews[21], it has emerged that a supplementary document to the NCCP is now being prepared on the focus areas, and within it, precise time-frames for the accomplishment of each programme are being outlined. Since the document is yet to be finalized and made accessible to the public, it is difficult to comment on the extent of precision of these timelines as well as the likelihood of whether the programmes can be accomplished within the set periods.

2.3.3 The method for mobilizing financial resources to implement the policy is contained within the policy statement

Mobilization of adequate financial resources is fundamental for addressing climate change challenges in the country. Thus, it is imperative not only to budget for climate change activities, but also to show the sources and means of raising the necessary funds. In the current NCCP document, however, an explicit statement of funding strategies or the methods for mobilizing both domestic and international resources for climate change is absent.

The need to come up with funding strategies for climate change appears to have been an afterthought during the last validation[v] workshop on the policy document, after some stakeholders (including the MoF) raised concerns on how climate change programmes will be funded. Regarding international funding, whilst the document spells out the hope of receiving external financing, the means by which such external funds will be sought have not been outlined[22]. Meanwhile, one key informant argues that although the NCCP has not indicated the funding strategies for climate change in Ghana, funding for climate change actions are implicit in the MMDAs budgets as climate actions have been tied to existing MMDAs actions[23].

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[18] MESTI (2013); Government of Ghana (GoG) (2010c)
[19] Key informant interview with the Assistant to the Head of Climate Change and Sustainable Development at MESTI (04/3/2015).
[20] MESTI (2013); MESTI (2014)
[21] Key informant interviews with the Head of Climate Change and Sustainable Development at MESTI and the Assistant (01/3/2015 and 04/3/2015).
[22] MESTI (2013)
[23] Views expressed by the scientific lead for the Ghana NCCP document (07/3/2015).

2.4 Subsidiary instruments for implementation accompany the policies

Ghana has developed several subsidiary instruments to support the implementation of the NCCP[24]. The 2010 National Climate Change Adaptation Strategy (NCCAS) aimed to help strengthen Ghana's adaptive capacity and build resilience of the society and ecosystems against the impacts of climate change. The NCCAS demonstrated Ghana's preparedness and seriousness in dealing with climate change issues. As a supplementary document to the NCCPF, the NCCAS identified important sectors and possible actions that should be considered in the formulation of the NCCP[25]. Moreover, its implementation period i.e. 2010 to 2020 influenced the choice of timelines for programmes within the focus areas of the NCCP[26].

The supplementary documents on the ten focus areas of the NCCP are important subsidiary instruments to help implement the NCCP. These documents aim to provide programme budgets and timelines and to help identify policy implementation agencies and institutions. Ghana's 2014 Environmental Policy as well as the 2010 Energy Policy are other subsidiary instruments providing support for the implementation of the NCCP[27].

2.5 Second Policy Principle: The legitimacy of climate change policies shall be recognized by stakeholders

2.5.1 Key stakeholders' interests are represented in the policy making processes

Various stakeholders, drawn from public and private institutions, NGOs and international organizations, made inputs to the NCCP and its subsidiary documentation through consultative workshops. For instance, in the case of the NCCP, stakeholders were drawn from a wide range of MDAs, research institutions and academia, civil society and development partners[28]. Over 15 stakeholders' workshops were undertaken to firm up the content of the policy. The main NCCP document was subjected to several discussion workshops, while each of the ten focus areas documents benefited from a separate validation workshop[vi]. Critically, the launch of the NCCP without objections from any section of society, is testament to the inclusiveness of the policy formulation process.

2.5.2 Policy making is evidence-based, using the latest scientific knowledge

Ghana's NCCP has benefited from a number of existing policy documents including the INC, SNC, as well as publications from the Ghana Environmental Protection Agency. These provide evidence on the rising dangers posed by climate change to the Ghanaian economy[29]. The scientific documents that underpinned the drafting of the NCCP are captured in Box 2.2. The NCCP also benefited from scientific inputs from the Institute of Environment and Sanitation Studies (IESS) of the University of Ghana, Legon as the lead institution that worked on its formulation[30], as well as from other leading academic institutions (e.g. Kwame Nkrumah University of Science and Technology, departments in the University of Ghana,) that are working on climate change issues.

[24] The launch of the NEP and NCCP documents in 2014 by His Excellency President John Mahama on 24 July 2014. Available at: www.gbc.ghana [Accessed: 10/3/2015].
[25] Government of Ghana (GoG) (2010a)
[26] Government of Ghana (GoG) (2010a); Appendix 2.1
[27] MESTI (2012)
[28] MESTI (2013:2)
[29] List of EPA's publication appears at the reference section of MESTI, 2013
[30] MESTI (2013:4)

Box 2.2 Scientific publications that informed the formulation of the NCCP

1. UNDP - EPA (2012) "Mapping and Documenting Indigenous Knowledge in Climate Change Adaptation".
2. EPA (2011): *Ghana's Second National Communication, under the United Nations Framework Convention on Climate Change*, Accra: Environmental Protection Agency, 168pp
3. UNDP - EPA (2012): *National Climate Change Adaptation Strategy (NCCAS)* Accra: Environmental Protection Agency
4. UNDP - EPA (2011): *Atlas of indigenous knowledge in climate change adaptation in six selected districts in Ghana*.
5. MEST (2003): *Climate Change Technology Needs and Needs Assessment Report*.
6. MEST (2010): *Ghana Goes for Green Growth: National engagement on climate change*.
7. Reid, H., M. Alam, R. Berger, T. Cannon, S. Huq, and A. Milligan. (2009): "Community-based adaptation to climate change: an overview." In: *Participatory Learning and Action*, issue 60, pg. 13, IIED.
8. Agyemang-Bonsu, K W. (2002): "Ghana's Technology Transfer Needs Assessment Report on Scoping Phase". (EPA).
9. Cameron, C. (2011): "Climate Change Financing and Aid Effectiveness".
10. CC DARE (2011): "National Climate Change Adaptation Strategy".
11. CC DARE (2012): "Integrating Climate Change and Disaster Risk Reduction into National Development, Policies and Planning in Ghana".
12. Environmental Protection Agency (EPA) Policy Advice Series No 1 to 18 (2012)

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

Ghana's NCCP aligns strongly with various national development policies. For example, it fully recognizes the need to foster the sustainable development priorities identified in the Ghana Shared Growth and Development Agenda I (2010-2013). It also has a strong link with the 2010 Coordinated Programme of Economic and Social Development Policies[31]. These documents in turn are coherent with the NCCP, as climate change issues were clearly recognized in them (Boxes 2.3 and 2.4). Currently, the NCCP has strong linkages with the current national development policies including the Ghana Shared Growth and Development Agenda II (2014-2017) and the 2014 Coordinated Programme of Economic and Social Development Policies. These policy documents acknowledge their coherence with the NCCP in order to achieve the country's objectives on climate change[32]. The national response to climate change has become a cross-cutting issue in all national development plans and is being mainstreamed into national sectoral programmes, including some Metropolitan, Municipal, and District Assemblies (MMDAs)[vii viii].

[31] GoG (2010c)
[32] GoG (2014a)

Box 2.3 Links between the Coordinated Programme of Economic and Social Development Policies (2010-2016) and the 2013 NCCP

'Climate variability and change constitute a major threat to national development. From a decline in precipitation to floods, climate change imposes a limitation on the ability of the national economy to unleash its full production potential. Another impact of climate variability and change is the rise in sea levels and the consequent coastal erosion it engenders, which affects the livelihoods of the people in the coastal communities. Similarly, climate change is manifesting in increasing levels of desertification in the northern savannah zone. This undermines the agricultural potential and the economic viability of the northern ecological zone and its capacity to contribute to national development. The challenge is to turn climate change and variability into an opportunity to expand national output and productivity and embark on systemic protection programmes' (page xvi).

'Vulnerability and adaptation assessments have demonstrated that the economy will be adversely affected by climate change since it depends on sectors that are predominantly susceptible to the impacts of climate change. There is a commitment to tackling climate change. However, efforts to improve national resilience to climate change have achieved mixed results due to limited capacity both technically and financially. Key policy objectives to effectively cope with the threats of climate change include: adapting to the impacts of, and reduced vulnerability to climate variability and change; mitigating the impacts of climate variability and change; and low-carbon emission growth strategy' (page 63).

Source: GoG (2010c). 'The coordinated programme of economic and social development, 2010 – 2016'.

Box 2.4 Links between the GSGDA I (2010-2013) and the 2013 NCCP

'Adaptation is the principal way to address the potential impacts of climate change. Strategies identified to achieve this objective include the following: increase resilience to climate change impacts, identifying and enhancing early warning systems; alternative livelihoods: minimizing impacts of climate change for the poor and vulnerable, enhance national capacity to adapt to climate change through improved land use management; adapt to climate change through enhanced research and awareness creation; development and implementation of environmental sanitation strategies to adapt to climate change; manage water resources as climate change adaptation to enhance productivity and livelihoods; minimize climate change impacts on socio-economic development through agricultural diversification; minimize climate change impacts on human health through improved access to healthcare; demand and supply side measures on adapting the national energy system to impacts of climate change; and adapt to climate change: sustain livelihoods through enhanced fisheries resource management' (page 51)

Source: GoG (2010b) 'Ghana shared growth and development agenda, 2010-2013'.

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

The NCCP of Ghana did not identify the measures to be undertaken to ensure that the delivery of climate finance takes place in an open and transparent manner. However, the promotion of transparency in how funds will be managed in climate change issues is a key pillar to the success of climate change activities. The Ghana NCCP has hinted indirectly at the need to ensure transparency in the management of resources meant for climate change actions under the sub-section on Monitoring and Reporting[33]. Under this sub-section, the policy document points to the need for monitoring and reporting to ensure the effective utilization of resources for the implementation of climate change activities. In addition, the policy advocated for the enforcement of the 'Measurement, Reporting and Verification' concept to help monitor the amount of international support both in monetary and non-monetary terms being received

[33] MESTI (2013), pg. 47.

by the country, and to aid in evaluating the successes and failures of implemented climate change interventions.

2.8 Supportive policies for the adoption of low carbon technologies

The government of Ghana has demonstrated its intention to support the adoption of low carbon technologies through various policies and initiatives. In respect of energy technologies, the government has shown commitment to develop energy infrastructure in a way that stabilizes energy supply while reducing carbon emissions and maximizing efficiency. For example, in the 2010 National Energy Policy of Ghana, the government set an ambitious target of 10 percent total energy supply from renewable technologies in the national energy mix by 2020 (Government of Ghana, 2010d). To help achieve this ambitious target the Renewable Energy Act (Act 832) was passed in 2011 to establish the framework for promoting renewable energy technologies in the country and stipulates with regard to funding:

- a feed-in tariff guaranteeing the sale of electricity generated from renewable sources at a premium to the electricity price. The rates – which were announced in August 2013 – vary by technology and will be payable to a project with a Power Purchasing Agreement for the first ten years of operation and will be reviewed every two years after that;
- a renewable energy fund providing financial resources for the promotion and development of renewable energy sources as well as to fund the feed-in tariff;
- a requirement for power distribution utilities and bulk consumers to include a certain percentage of renewable energy in their portfolio (Kojima, 2013).

In addition, an environmental fiscal reform measure the government has embarked on is the decision to phase out subsidies on fossil fuels (Box 2.5). Also, the government launched pilot projects to incentivize the use of energy efficient appliances to boost the climate change mitigation goal. For example, incandescent lamps were phased out in 2007 through a legislation instrument (LI 1932), with six million CFL bulbs distributed to replace the incandescent bulbs for free. Similarly, in 2012 and at present, financial incentives have been provided for the purchase of energy efficient refrigerators in exchange for older ones.

Box 2.5 Removal of fossil fuel subsidies in Ghana

In February 2013 and in response to a 2012 budget deficit of 12.1 per cent (double the target for the year) the government announced that the price of petroleum products would be adjusted by between 15 and 50 percent. Further adjustments in June 2013 resulted in the total elimination of subsidies on petroleum products and the price adjustment mechanism was restored in July 2013. The price is now based on the recent price of petroleum products in the North West European market, which meets most of Ghana's demand.

Source: National Petroleum Authority (NPA), 2013.

Ghana government procurement policies have not yet acknowledged the promotion of low carbon technologies. However, the implementation of sustainable public procurement through the Swiss-Ghana Sustainable Public Procurement (SPP) Project could ensure that the country's procurement policies take account of the promotion of low carbon technologies. The overall goal of the SPP Project is 'to embed the principles of transparency, accountability and sustainability in public procurement by strengthening the monitoring and evaluation system and by increasing the supply of more sustainable goods and services procured by the government'[34]. The targeted outcomes focus on introducing a national system for SPP and on strengthening the existing monitoring and evaluation system by incorporating

[34] International Institute for Sustainable Development (IISD) (2012)

sustainability criteria. The SPP process is modeled in accordance with the Marrakech Task Force approach to SPP and addresses the three dimensions of sustainability: economic, social, and environmental.

2.9 Conclusions

In its quest to address the challenges of climate change, the Government of Ghana has initiated climate change related activities, including the ratification of international environmental conventions and the enactment of national policies and strategies. With the development of the National Climate Change Policy Framework Discussion Paper and its accompanying National Climate Change Adaptation Strategy in 2010, a foundation was laid for the development of the substantive National Climate Change Policy in 2013. This policy is supported by other supplementary documents to enhance its implementation.

On the basis of the framework adopted for measuring effectiveness by this study, there are indications that the climate change policy environment in Ghana has both strengths and weaknesses that will affect the effective delivery of climate finance. These could play influential roles over the extent to which the country succeeds or fails with the implementation of the national response to climate change.

With respect to its strengths, climate change has been mainstreamed across all sectors of the country, with indicative sector budgets set for the implementation of the NCCP. The NCCP instrument has been well designed for ease of implementation, the promotion of its legitimacy, and is coherent with both previous and the current medium-term development plans of the country. For instance, the NCCP goals were developed taking into account the various sectors' development plans as well as the country's development goals. To achieve these objectives, the NCCP identified five key policy areas and ten focus areas, which together address not just mitigation and adaptation, but other social challenges associated with climate change.

These strengths aside, our analysis also points to some weaknesses with respect to the present draft NCCP Master Plan. There is little explanation of the factors that informed the budgetary allocations for different focus areas. In addition, the NCCP master plan document lacks any explicit statement of funding strategies or the methods for mobilizing both domestic and international resources for climate change activities. Further, the NCCP master plan is silent on how it will promote transparency in climate finance delivery. Perhaps, if monitoring and reporting as well as the concept of 'Measurement, Reporting and Verification' are pursued vigorously, they could assist in the achievement of transparency in climate finance delivery.

Appendix 2.1

Compilation of budgetary estimates for programmes within the policy areas of the NCCP (2014-2020)

Policy Area	Focus Areas	Programmes	Budget (US$ millions)
Agricultural and food security	Develop climate resilient agriculture and food security systems	Improved marketing systems	500
		Development and promotion of climate resilient cropping systems	150
		Improved post-harvest management	100
		Risk transfer and alternative livelihood systems	55
		Support to water conservation and irrigation systems	50
		Support to adaptation in the fisheries sub-sector	45
		Institutional capacity development for research and dissemination	35
		Adaptation of livestock production systems	15
		Sub-Total	**950**
Disaster preparedness and response	Build climate resilient infrastructure	Protection of coastal resources and communities	250
		Flood prevention activities	30
		Climate resilient sectoral and local development planning	20
		Develop climate resilient infrastructures for key services	12
		Build capacity to design climate resilient infrastructure	10
		Knowledge management and coordination	6
		Ensure that existing key infrastructure is climate proof	8
		Sub-Total	**336**
	Increase resilience of vulnerable communities to climate related risks	Public education on adaptation skills	12
		Early warning mechanisms	11
		Rapid response and disaster management	8
		Financial support and insurance schemes	7
		Social support systems	7
		Improved key public social services	5
		Sub-Total	**50**

Natural resource management	Increase carbon sinks	Plantation development (Afforestation, reforestation and forest restoration)	600
		Securing integrity of forest and other natural ecosystems	250
		Sustainable wood-based fuel production and development for domestic energy supply	250
		Conservation of trees through agro-forestry and on-farm practices and Greening of Urban Areas	150
		Improve governance, capacity and regulatory structures	75
		Sub-Total	**1,325**
	Improve management and resilience of terrestrial and aquatic ecosystems	Ecosystem-based adaptation	360
		Community-based natural resource management	300
		Economic incentive measures	300
		Improved marine and coastal ecosystem management	250
		Sub-Total	**1,210**
Equitable social development	Address impacts of climate change on human health	Strengthened disease surveillance and response systems	300
		Emergency health preparedness	200
		Social protection and improved access to healthcare	100
		Climate related health research	50
		Improve public health measures especially in climate vulnerable communities	50
		Capacity building of health providers and groups	5
		Collaboration and partnership for improved nutrition, water and sanitation	1
		Sub-Total	**706**
	Minimise impacts of climate change on access to water and sanitation	Improved access to safe drinking water	715
		Recycling of solid waste	254
		Improved access to sanitation	230
		Environmental sanitation education and hygiene education	213
		Improved drainage in urban areas	156
		Construction of water storage systems	50
		Wastewater reduction, treatment and re-use	36
		Climate related Research	19
		Water and Land Management	5
		Sub-Total	**1,678**

	Addressing gender issues in climate change	Livelihood protection, alternative and sustainable livelihoods and poverty reduction	1,800
		Gender responsiveness in natural resource management	50
		Gender responsive climate change research	18
		National budget allocation on gender and climate change	6
		Sub-Total	**1,874**
	Climate change and migration	Alternative livelihoods	20
		Social protection for migrant poor	40
		Structures for dialogue between migrants and hosts communities to prevent conflicts	5
		Improve access to health and education	5
		Measures to enhance existing livelihoods	10
		Measures to enhance remittance flows	10
		Sub-Total	**90**
Energy, industrial and infrastructural development	Minimise greenhouse gas emissions	Minimize gas flaring and fugitive emissions	500
		Comprehensive waste management for renewable energy production	300
		Improve efficiency in consumption and production of energy	120
		Renewable energy and nuclear energy development	70
		Low emission and clean energy technology research, development, diffusion, deployment and transfer	60
		Improve capacity of relevant sectors for GHC emission reduction	5
		National Institutional framework for Greenhouse Gas Industry	2
		Sub-Total	**1,057**
Grand Total			**9,276**

Source: *National Climate Change Policy Master Plan 2015 -2020, MESTI, 2014*

Chapter 3. Climate change finance institutional analysis

Chapter Summary

- 22 Ministries, Departments and Agencies are expected to provide programme leadership on climate change in the NCCP master plan. Four ministries account for approximately half of the planned public expenditure on climate change actions: MLNR, MoEP, MLGRD and MGCSP.
- For several of the ministries highlighted in the NCCP master plan, the projected spending associated with the NCCP would transform the ministry. The MLNR projected climate change spending is more than double its 2015 budget allocation; the biggest proposed increase would be for the Ministry of Gender, Children and Social Protection, where the ministry's annual budget would need to increase almost ten-fold over the present budget allocation.
- The capacity at the local institutional level to handle climate change issues hardly exists within many MMDAs' jurisdictions.
- A National Climate Change Committee (NCCC) was established by the President in 2009 and hosted by MESTI. However the NCCC has not met since 2012, and therefore has effectively ceased to function. As a consequence, a vacuum exists for climate change activities regarding institutional coordination and harmonization.
- The Ministry of Finance created the Natural Resources, Environment and Climate Change Unit in 2010 to oversee, coordinate and manage the financing of natural resources and climate change activities. This leadership role is, however, weakened as the Unit has no mechanism to track resources generated for climate change actions within the country or from external sources.
- Oversight by the legislature is weakened in the absence of a parliamentary committee charged to oversee climate change issues across the whole economy. Whilst a parliamentary committee on climate change does not exist, there is a 'Network of Parliamentarians' interested in the subject.
- A fundamental challenge with most development partner (DP) support is the lack of harmonization between DP projects, with the consequent potential of duplication of efforts.

3.1 Introduction

The focus of this chapter is an assessment of the institutional arrangements for climate change in Ghana that will influence government spending. This assessment is shaped or directed by the following three principles of effective national climate finance delivery: (i) a national mechanism shall exist for coordination between institutions involved in climate finance delivery; (ii) institutions shall demonstrate a strong ability to change and innovate; and (iii) climate change institutions shall be locally anchored. However, before undertaking this assessment, the institutional interplay concerning the national response to climate change is described.

3.2 The institutional arrangements for climate change in Ghana

Ghana has experienced intermittent droughts, floods and devastating storms in different parts of the country. The main institution that has been mandated to address these disasters since 1996 is the National Disaster Management Organization (NADMO), with support from agencies and departments having oversight responsibilities for the sectors where the disasters have taken place. NADMO was formed by Act 517 after Ghana responded to the United Nations Declaration GAD 44/236 of 1989, declaring 1990 to 1999 as the International Decade for Natural Disaster Reduction[35]. Prior to the formation of NADMO, the National Mobilization Programme, set up after the 1982–1983 crises of drought, bushfires, and famine, served as the implementing agency of the Disaster Relief Committee. While these long-existing institutional arrangements are not directly linked to climate change, they nevertheless show planned efforts by government to address environmental risks and stresses.

At the international level, the country was among the first countries from the developing world to participate in the international climate negotiations[ix]. Ghana became a signatory to the UNFCCC in 1995[36] and this action helped to mainstream climate change into national development policies[37], and also envisaged the mainstreaming of climate change as a subject into the educational system[38]. The Parliament of Ghana was instrumental in Ghana becoming part of the Kyoto Protocol in 2002[39] through debating and lending support to the Protocol.

Currently, there are Parliamentary Select Committees on Environment, Science and Technology and on Lands and Forestry. These two parliamentary committees give legislative backing to environment-related issues in Ghana. Whilst a parliamentary committee on climate change does not exist, there is a 'Network of Parliamentarians' interested in the subject. This network organizes workshops to keep abreast of climate change issues and its members attend relevant international conferences. The network also invites the Ministry of Environment, Science, Technology and Innovation (MESTI) to update its members on climate change events. It has scrutinized ministries' budgets to identify the amount being devoted to climate change[40].

Other key institutions that shape the institutional landscape of climate change in Ghana through their involvement in climate-related issues are presented below.

3.2.1 National Climate Change Committee of Ghana

A National Climate Change Committee (NCCC) was established by the President in 2009 and hosted by MESTI. This committee was mandated to give policy direction on climate change; to coordinate activities leading to the effective functioning of the policy; and to review related policies and programmes[41,42]. It was chaired by a former Chief Director of MESTI and a former chairman of the Board of the Forestry Commission. The composition of the NCCC ensured it had multi-stakeholder[43] representation from Ministries, Departments and Agencies (MDAs), Parliamentarians, Civil Society Organizations (CSOs), research institutions, the private sector and development partners. However the NCCC has not met since 2012, and has thus effectively ceased to function[44].

3.2.2 Ministry of Environment, Science, Technology and Innovation

The Ministry of Environment, Science, Technology and Innovation (MESTI) underwent re-structuring in 2009 in order to respond to the need for the integration of science, technology and innovation into

[35] http://www.nadmo.gov.gh/index.php/about-nadmo/28-history (Accessed: 20/3/2015)
[36] MESTI (2000)
[37] GoG (2010)
[38] GoG (2014)
[39] MESTI (2013)
[40] Key informant interview with the Head of Climate Change and Sustainable Development at MESTI (01/03/2015)
[41] Key informant interview with the Head of Climate Change and Sustainable Development at MESTI (01/03/2015)
[42] MESTI (2013)
[43] Benefoh and Nelson (2012)
[44] Plans are currently underway to re-constitute the NCCC (Head of Climate Change and Sustainable Development at MESTI, personal communication, 26/5/2015)

national development policies[45]. Its mandates include the protection of the environment through policy formulation, setting standards and regulating activities regarding the application of science and technology, planning urban and rural areas, and undertaking coordination and supervision of sustainable development activities.

MESTI operates through its key agencies: the Environmental Protection Agency (EPA); the Council for Scientific and Industrial Research (CSIR); the Ghana Atomic Energy Commission (GAEC); and the Town and Country Planning Department (TCPD). It is the lead institution for climate change activities in Ghana, serving as the National Designated Authority for the Clean Development Mechanism under the Kyoto Protocol through the EPA.

The EPA is responsible for coordinating the implementation of technical activities on climate change through its Energy Resources and Climate Change Unit. This unit serves as the technical hub for climate change as well as the link for international cooperation programmes. It is the focal point for the UNFCCC, the IPCC, and coordinates the preparation of national communications to the UNFCCC[46]. It also acts as the national 'desk' for the implementation of climate change related actions, including the coordination of activities of working groups and climate change study teams[47].

3.2.3 Ministry of Finance

The Ministry of Finance (MoF) created the Natural Resources, Environment and Climate Change Unit under the Real Sector Division in 2010 to oversee, coordinate and manage the financing of, and support to, natural resources and climate change activities[48]. Through this unit, the MoF is mandated to coordinate all support from both domestic and international sources to climate change related activities in Ghana in a bid to avoid potential overlaps and duplication of efforts. However, as will be shown in section 3.4, the NRECC unit at the MoF is faced with a number of challenges as it strives to implement this mandate.

3.2.4 National Development Planning Commission

The National Development Planning Commission (NDPC), as the national institution at the apex of development planning, supports the institutional architecture concerned with climate change activities in Ghana. Through its close collaboration with MESTI, EPA and MoF, the NDPC has ensured that the medium-term development policy framework, currently the Ghana Shared Growth and Development Agenda (GSGDA II) (2014 – 2017), includes climate change dimensions. The NDPC has translated climate change issues into planning guidelines and subsequently trained the Metropolitan, Municipal and District Assemblies (MMDAs) in relation to approaches to be used to mainstream climate change issues into local development plans[49].

Through the African Adaptation Programme (AAP) at the EPA, the NDPC in collaboration with the Fiscal Decentralization Unit at MoF developed an indicator (Box 3.1) for climate change in 2011 that was incorporated into the District Functional Organizational Assessment Tool (FOAT)[x]. FOAT (Box 3.2) is an assessment tool used to determine the amount of funding released to each District. With respect to monitoring, NPDC (in collaboration with all MDAs) oversees the mainstreaming of indicators, including those for climate change, into the national monitoring and evaluation plan to guide implementation.

[45] MESTI (2009)
[46] Benefoh and Nelson (2012)
[47] MESTI (2013)
[48] Key informant interview with personnel at the Climate Change Unit at MoF (05/3/2015).
[49] MESTI (2013)

Box 3.1: Evidence of climate change indicator in the Functional Operational Assessment Tool (FOAT) and budget guidelines

"The budget guidelines provided by MoF contain one reference to 'climate change.' In 2014–16, a new Local Climate Adaptation Living Facility (LoCAL) will be piloted to support activities within climate change in 3 MMDAs—Efutu Municipal, Fanteakwa District and Ada East District. The funds should be budgeted for taking into account the investment menu for LoCAL and linked to the DDF Operational Manual.

In the FOAT section 'planning system', there is an indicator for 'climate change interventions'. The FOAT guidelines state 'if 5% or more of the programme and/or physical projects in the Annual Action Plan focus specifically on climate change and disaster risk reduction (CC/DRR) issues, score 1, if not score 0'. The entire planning system section is valued at 18 points for the FOAT assessors.

Source: Savo et al, 2014 (p.10)

Box 3.2: Objectives of the Functional Operational Assessment Tool (FOAT)

- To verify the compliance of MMDAs with existing provisions in laws, regulations and national binding guidelines
- To inform the District Development Facility (DDF) allocation to a specific MMDA
- To identify the capacity building needs of MMDAs through identification of the major functional and organizational gaps
- To harmonize the current disjointed approaches to performance assessment.

Source: Ministry of Local Government and Rural Development, 2009

3.2.5 Ministry of Local Government and Rural Development

The Ministry of Local Government and Rural Development (MLGRD) is mandated to promote the establishment and development of a decentralized government system, ensuring good governance and balanced rural development. On climate change and environment, the MLGRD, with support from the NDPC, has the potential to play an important role in the mainstreaming processes of climate change into local-level development policies. The MLGRD took part in the formulation of the NCCP through its participation in the many consultative workshops that were held as part of the formulation of this policy and hence is aware of the national policy goals for climate change.

3.2.6 Ministry of Health

The Ministry of Health (MoH) is mandated to ensure a healthy and productive population in the country[50]. On climate change, the MoH provides support to integrate climate change into the management of priority health risks in Ghana, in harmony with national health development priorities[51]. Several major diseases are believed to be exacerbated by climate change, particularly malaria, diarrhoeal diseases, meningococcal meningitis and infectious respiratory diseases.

3.2.7 Ministry of Water Resources, Works and Housing

The Ministry of Water Resources, Works and Housing (MWRWH) is concerned with the development of Ghana's infrastructure with respect to public works, housing, water supply and sanitation, and hydrology[52]. MWRWH mandates are strongly related to climate change and environmental

[50] MoH (2014)
[51] MESTI (2013)
[52] MESTI (2013)

management. Through its agencies (the Departments of Hydrology, Public Works, and Rural Housing) the MWRWH carries out climate response measures for coastal protection and drainage works.

3.2.8 Ministry of Food and Agriculture

The Ministry of Food and Agriculture (MoFA) is responsible for the development of food security and agricultural activities. MoFA is presently leading the implementation of the national Food and Agriculture Development Policy (FASDEP II) and its investment plan, the Medium-Term Agriculture Sector Investment Plan (METASIP). In relation to climate change, the MoFA is helping to build the capacity of extension officers at the regional and district levels to enable them to mainstream climate change through their extension activities with farmers.

3.2.9 Ministry of Energy and Petroleum

The Ministry of Energy and Petroleum (MoEP) is Ghana's public institution charged with formulating, monitoring and evaluating energy related policies. It does this in conjunction with its two Commissions: the Ghana Energy Commission and the Public Utility Regulatory Commission. On issues of climate change, it had representation on the NCCC that influenced the development of the NCCP. Also, in relation to climate change mitigation, it developed the 2010 Energy Policy, which seeks to promote clean energy with less use of wood fuel and charcoal to safeguard the nation's forests that are important carbon sinks.

3.2.10 Ministry of Lands and Natural Resources

The Ministry of Lands and Natural Resources (MLNR) is mandated to oversee the management of Ghana's land, forest, wildlife and mineral resources. It works closely with the Forestry Commission and Forestry Research Institute of Ghana to execute its activities. The MLNR has been involved in climate change issues since the 1990s and was represented on the NCCC. The MLNR is the lead national entity responsible for the oversight and direction of 'Reducing Emissions from Deforestation and Forest Degradation (REDD+)' activities in Ghana. Hosted by the Forestry Commission, the REDD+ Secretariat serves as the secretariat for the National REDD+ Working Group and coordinates the implementation of REDD+ readiness activities, as outlined in the National REDD+ Preparation Proposal (R-PP), with support provided by the Forest Carbon Partnership Facility (FCPF) of the World Bank[53].

3.2.11 Ministry of Communications and the Ghana Meteorological Services Agency

Set up in 2004 under the Ministry of Communications, the Ghana Meteorological Services Agency (GMet) provides weather services through the collection, processing, storage and dissemination of meteorological data to end users. The dissemination of these data plays a significant role in shaping individuals' autonomous as well as institutionally planned adaptation measures to climate change.

3.2.12 Ministry of Roads and Highways

The Ministry of Roads and Highways **(**MoRH) mandates span the provision and maintenance of an integrated, cost-effective and sustainable road transport network. An activity currently being supervised by the MoRH with implications for climate change mitigation is the implementation of the Bus Rapid Transit (BRT) system within Accra (Box 3.3). Successful implementation of the BRT will lead to more environmentally sustainable transport modes that will help lower transport-related greenhouse gas emissions.

[53] MESTI (2013)

Box 3.3 Bus Rapid Transit System in Accra

"The first phase of the Bus Rapid Transit (BRT) system in Accra will commence in December this year, on a pilot basis with 87 buses to help ease traffic in the capital. The BRT is a system aimed at reducing traffic congestion on the roads, reducing air pollution and helping to increase productive hours in the Metropolis. This was revealed by The Mayor of Accra Metropolis, Dr. Alfred Oko Vanderpuije who is also the chairman of The Greater Accra Passenger Transport Executive (GAPTE), a transport regulatory body responsible for planning and regulation of passenger transportation in the Greater Accra Metropolitan Area (GAMA), when he inspected the three terminals earmarked for the piloting of the first phase of the project on Tuesday.

The corridors, which fall under the first phase, are Amasaman to the Central Business District (CBD), Ofankor to CBD, and Achimota to CBD. Each terminal would have a holding bay where buses will be kept, a maintenance centre, a fuel depot for fuelling the buses , a ticketing centre, administration, a passenger waiting area and a washing bay where water to wash the buses would be recycled to avoid waste. This initiative is the first of its kind in the country. There will also be a parking space with adequate security for those who patronize the BRT to park their vehicles and join the buses to their various destinations and later come back for them".

Source: City of Accra –AMA, 5th November 2014

3.2.13 Non-State actor's involvement in Climate Change

Non-governmental Organizations/Civil Society Organizations (NGOs/CSOs) involvement in climate change activities in Ghana has been extensive, including climate change initiatives at the community level; climate change policy advocacy at the national and international levels; education and research; and the promotion of community level consultation and participation.

Key NGOs/CSOs involved in climate change activities in Ghana include Conservation International, Ghana; Friends of the Earth; ClimateCare; Nature Conservation and Research Centre; Abantu for Development; Environmental Applications and Technology Centre (ENAPT Centre). Apart from NGOs/CSOs representation on the NCCC[54] they benefited from a support mechanism called 'KASA'[xi] for capacity building, taking into account their critical role in natural resources and environmental governance in Ghana. However, despite NGOs/CSOs extensive involvement in climate change activities, their influence on climate change issues has been constrained by several challenges. Fundamental among these challenges are weak technical capacity to research climate change issues, inadequate funding and poor coordination[55].

International organizations' involvement in climate change activities in Ghana either through capacity building or financial support is well established. The Embassy of the Kingdom of the Netherlands, the UK Department for International Development (DFID), the European Union, the French Development Agency, the World Bank, UNEP, UNDP, and DANIDA are among the development partners that have offered various technical support in the area of climate change. A fundamental challenge with most DP support, however, is the lack of harmonization between donor projects, which sometimes leads to duplication of efforts. Coordination between international organizations is also lacking, mainly because prior to the development of the NCCP, there existed no formal framework for DPs to channel their support through.

[54] MESTI (2013)
[55] MESTI (2013)

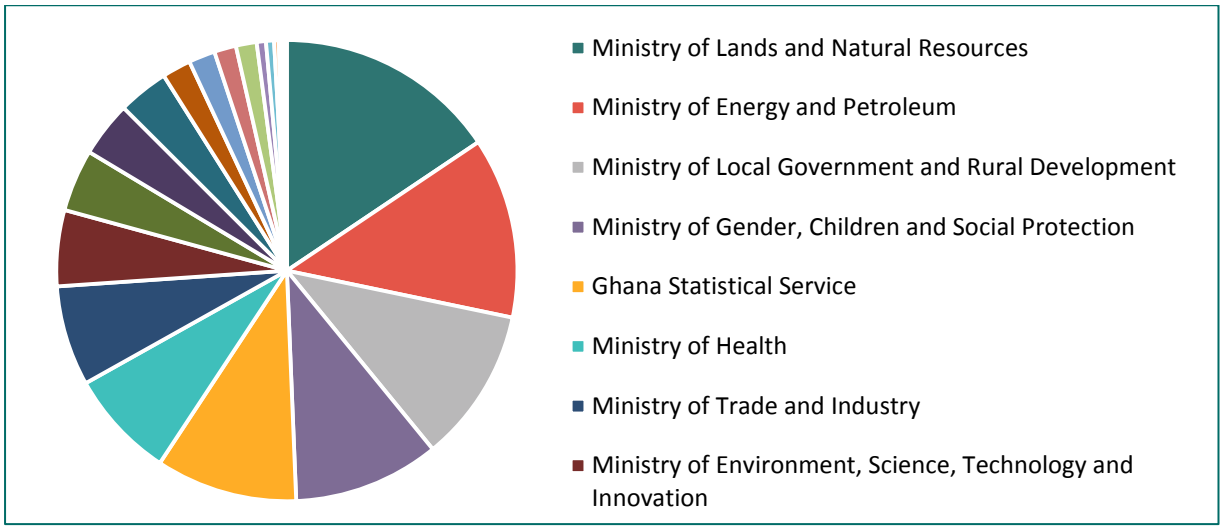
3.3 Planned institutional spending associated with the National Climate Change Policy

The NCCP prioritized five policy areas to address the critical issues of climate change facing Ghana (Chapter 2). Each policy area was then developed into a variable number of focus and programme areas, for which lead institutions and indicative budgets were listed within the draft national climate change policy master plan, 2015-2020. The inclusion of programme budgets allows a first exploration of the level of public expenditure required to resource the implementation of the NCCP. For each programme, a lead government agency was highlighted together with a list of collaborating organizations. For the purpose of examining the planned institutional spend associated with implementing the NCCP it was assumed that 80 per cent of the proposed programme budget would pass through the lead agency, and that annual expenditures will remain the same over the six year planning horizon.

3.3.1 Cost of implementing the national climate change strategy by ministry

A total of 22 Ministries, Departments and Agencies are identified as providing programme leadership in the NCCP master plan. Four ministries account for approximately half of the planned expenditure, signifying the main implementation institutions (Figure 3.1).

Figure 3.1: NCCP: projected annual spending by MDA (percent contribution)



Source: *MESTI, 2014*

Planned annual expenditures of over US$50 million are recorded for nine MDAs (Table 3.1). The Ministry of Lands and Natural Resources is the major spending centre (with US$150 million per year having been earmarked for forest plantation development and reforestation). Although at a smaller scale, the projected expenditure through the Metropolitan, Municipal and District Assemblies (in four out of the nine focus areas of the NCCP), together with programme budgets for the Ministry of Local Government and Rural Development, offers potential for climate change actions to be mainstreamed at the local level.

Table 3.1: Estimated annual expenditure for NCCP implementation by MDA

Ministry	Annual Budget (US$ million)
Ministry of Lands and Natural Resources	193
Ministry of Energy and Petroleum	157
Ministry of Local Government and Rural Development	134
Ministry of Gender, Children and Social Protection	127
Ghana Statistical Service	123
Ministry of Health	94
Ministry of Trade and Industry	87
Ministry of Environment, Science, Technology and Innovation	66
Ministry of Food and Agriculture	54

Source: *MESTI, 2014 and Authors' compilation*

3.3.2 Comparison between NCCP projected spend with 2015 budget allocations by ministry

An insight into the likely implementation challenges of the NCCP can be obtained by comparing the level of projected spending on climate change related actions (as outlined in the NCCP master plan) with ministries' current annual budget allocations (Table 3.2). This comparison provides some indication of the level of demand that will be placed on the ministries to implement the NCCP.

Table 3.2: Comparison of planned spending on climate change and ministry annual budgets

Ministry	Estimated Annual CC Budget (US$ mill)	2015 budget estimates (GHC)	2015 budget estimates (US$)	2015 budget estimates (US$ mill)	CC as % of 2015 Budget estimates
Ministry of Lands and Natural Resources	193	276,234,724	82,870,417	83	233
Ministry of Energy and Petroleum	157	799,615,234	239,884,570	240	65
Ministry of Local Government & Rural Development	134	290,983,971	87,295,191	87	153
Ministry of Gender, Children and Social Protection	127	43,631,694	13,089,508	13	970
Ministry of Health	94	3,068,244,628	920,473,388	920	10
Ministry of Trade and Industry	87	183,831,356	55,149,407	55	158
Ministry of Environment, Science, Technology and Innovation	66	243,399,833	73,019,950	73	90

Ministry of Food and Agriculture	54	411,821,430	123,546,429	124	44
Ministry of Fisheries and Aquaculture Development	23	72,514,577	21,754,373	22	106

Source: *MESTI, 2014 and Authors' compilation*

As Table 3.2 shows, for several of the ministries highlighted in the NCCP master plan the projected spending associated with the NCCP would transform the ministry. The MLNR projected climate change spending is more than double the 2015 budget allocation for the ministry; the biggest proposed increase would be for the Ministry of Gender, Children and Social Protection, where the ministry's annual budget would need to increase almost ten-fold over the present budget allocation.

3.4 Effectiveness of the proposed institutional arrangements

This study's analytical framework[56] sets out three key principles against which a country's institutional architecture can be assessed to determine the effectiveness of climate change finance delivery.

3.4.1 First Institutional Principle for Effective Climate Finance Delivery: a national mechanism shall exist for coordination between institutions involved in climate finance delivery

The assessment of the existence of mechanism for coordination between institutions involved in climate finance delivery in Ghana involves addressing the following indicators.

a) Leadership of the national response to climate change in terms of climate finance delivery is established within the government administration

The MoF has been assigned the leadership role for the coordination of all forms of support (financial and non-financial) on climate change related activities by the 2013 NCCP. In consequence, the Natural Resources, Environment and Climate Change Unit is empowered to oversee the distribution of the country's climate change resources. This leadership role on climate change finance by the MoF is, however, weakened as it has no mechanism[xii] to track the resources generated for climate change actions within the country or from external sources. In this light, the possibility of overlap and the occurrence of duplication of efforts cannot be ruled out.

The MoF was nominated for accreditation as the National Implementing Entity (NIE) to the Adaptation Fund in 2010. However, the accreditation application was not successful on account of insufficient evidence[57] to show that it met all of the fiduciary standards of the Adaptation Fund related to financial management and integrity matters (Box 3.4).

[56] Bird et al. (2013)

[57] Reasons for refusal to give accreditation to MoF as the nation's NIE were contained in a letter to the then MOFEP, dated January 11, 2011 and signed by the manager, Marcia Levaggi, to the Adaptation Fund Board Secretariat.

Box 3.4 Accreditation to the Adaptation Fund, an international climate change fund

The Ministry of Finance's application to be accredited as a National Implementing Entity of the Adaptation Fund demonstrated that the financial statements for the year 2009 had a positive opinion from the Auditor General of Ghana. However, the balance sheet of the then Ministry of Finance and Economic Planning (MOFEP) had expanded between 2007 and 2009. In the view of the Accreditation Panel, the implications of this situation on the internal control framework of the MoF were unclear. In addition, the Accreditation Panel observed that the application did not demonstrate that the fiduciary standards relating to the requisite institutional capacity were met. The Panel was therefore not convinced that MoF had the required control structures in place to ensure that funding from the Adaptation Fund would be used in an efficient and effective manner. Other reasons for not becoming accredited included insufficient evidence of MoF's ability to manage implementation control functions of development projects.

b) The roles played by actors in the delivery of climate finance are known by key stakeholders

As the national financial management institution, the role of the MoF's Natural Resources, Environment and Climate Change Unit as the anchor for financial issues on climate change are clearly spelt out[58] and well known to many stakeholders, based on the fact that they all took part in the formulation of the NCCP. Moreover, MMDAs are constitutionally required to report their financial standing (revenues and expenditures) to the MoF[59] and are aware of its interest in assessing the climate change indicator that was jointly developed with EPA and NDPC. It is clear, however, that irrespective of the provisions mandating MDAs and MMDAs to supply such information to MoF, expenditure information on climate change at the disaggregated level are currently not sent to MoF.

c) Other actors within the policy making process outside government (e.g. the legislature, party-governing committees or other political institutions) review and challenge policy

Non-state actors including NGOs, CSOs and international organizations have played a significant role in respect of the content of policies and strategies on climate change. Particularly, NGOs/CSOs contributions through research (Box 3.5) and debates during the consultative workshops preceding the final output of the NCCP[60] reinforced this policy's content.

Box 3.5 Research made by non-state actors as cited in the 2013 NCCP

1. Reid, H., M. Alam, R. Berger, T. Cannon, S. Huq, and A. Milligan. (2009): "Community-based adaptation to climate change: an overview." In: *Participatory Learning and Action*, issue 60, pg. 13, IIED.
2. UNDP – EPA (2011): *Atlas of indigenous knowledge in climate change adaptation in six selected districts in Ghana*.
3. Agyemang-Bonsu, K W. (2002): "Ghana's Technology Transfer Needs Assessment Report on Scoping Phase". (EPA).
4. Cameron, C. (2011): "Climate Change Financing and Aid Effectiveness".

[58] MESTI (2013)
[59] Government of Ghana (2013)
[60] MESTI (2013)

Oversight by the legislature is weakened in the absence of a parliamentary select committee charged to oversee climate change issues across the whole economy (and not limited to environment and natural resources).

d) Institutional arrangements are in place for inter-agency collaboration

Ghana lacks a functioning institutional arrangement to enhance inter-agency collaboration in respect of climate change. This important role was vested in the NCCC, but the committee stopped functioning in 2012. Notwithstanding the presence of MESTI, in practical terms the only national coordination body for climate change in Ghana was the NCCC[xiii]. Based on its inactivity[xiv], the NCCC has now lost that recognition as the national body to create the necessary inter-agency linkages for climate change activities. As a consequence, a vacuum exists for climate change activities regarding coordination and harmonization, a concern expressed by all key informants interviewed for this study. Some suggestions have been recently mooted to create an alternative[xv] institutional infrastructure to replace the NCCC.

3.4.2 Second Institutional Principle for Effective Climate Finance Delivery: Institutions shall demonstrate a strong ability to change and innovate

Similar to the issues discussed in the previous sub-section, the effectiveness of Ghana's institutional architecture to adapt to scientifically proven innovation and further incorporate changes to climate mitigation and adaptation measures shall be evaluated on the basis of the following indicator.

a) The national response to climate change facilitates the adoption of change and promotes innovation

MESTI is the lead institution responsible for climate change and environment related activities. Its restructuring and re-organization over the years was underpinned by the need to be relevant to the country development pathways by being in tune with constantly changing technology. Primarily, its establishment was to help institute science, technology and innovation (STI) into national development policies[61]. Overall, MESTI as the lead institution for climate change activities in Ghana adopts innovative approaches in addressing environmental issues, strongly assisted by other innovative and technology inclined allied institutions. Table 3.3 shows some relevant publications of its supporting organizations, which are innovative in content.

Table 3.3: Work outputs from MESTI supporting organizations

Council for Scientific and Industrial Research (CSIR)	Ghana Atomic Energy Commission (GAEC)	Environmental Protection Agency (EPA)
Gyau-Boakye and Dapaah-Siakwan (2000) "Ground water as source of rural water supply in Ghana" *journal of applied science and technology (JAST), Vol. 5, No. 1&2, pp.77-86*	GoG (nd) "Business Plan" Ghana Atomic Energy Commission	UNDP - Environmental Protection Agency (2012): Mapping and Documenting Indigenous Knowledge in Climate Change Adaptation.
Adu-Dapaah, H.K. Ahenkora, K., Asafo-Adjei, B., Adjei, J. and Asafo-Agyei, J.N. (2005). Performance of some local and improved cowpea lines as dual purpose (leaf/fodder and grain) Ghana J. Agric. Sci. (NARS Edition 1). 155-160.	GoG (nd) "Ghana-The Nuclear Agenda: 1963-2013" Ghana Atomic Energy Commission	EPA Policy Advice Series No. 1 (2012): PAS01 Ghana's National Development, Planning, Climate Change and Disaster Risk Reduction.
Aboagye, L.M. Obiri-Opareh, N. Amissah, L. and Adu-Dapaah, H.		EPA Policy Advice Series No. 2 (2012): PAS02 Can Ghana feed itself

[61] MESTI (2009)

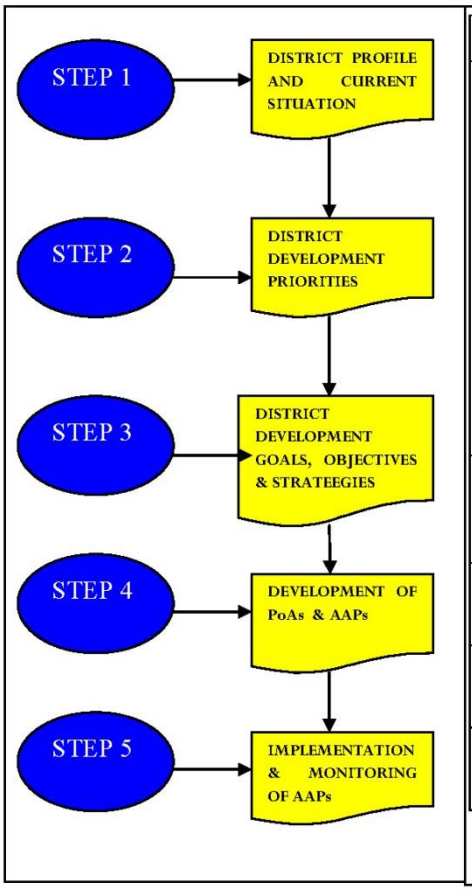
2007. Analysis of existing policies that enable or inhibit the wider use of under-utilized plant species. (GFU). Via dei Denari, 472a. Maccarese, Fiumicino, Italy. 29 p.

in the face of climate change impacts

3.4.3 Third Institutional Principle for Effective Climate Finance Delivery: Climate change institutions shall be anchored at the local level

Explicitly acknowledged in the NCCP and GSGDA I&II documents is the importance of anchoring and strengthening climate change activities at the local level. Practically, the collaborative efforts of MLGRD, NDPC, EPA and the climate change unit at MoF helped to develop and mainstream the climate change indicator into the FOAT in 2011. Capacity building through training[62] at the local level has also been undertaken within some districts to align MMDA-level planning and budgeting with climate change issues. Figure 3.2 shows the steps that guide the integration of climate change/disaster risk reduction (CC/DRR) issues into the District development planning process. However, these processes remain very preliminary in scope in relation to coverage of MMDAs. In addition, the depth and length of training is limited by available resources, while there is a clear challenge of retaining already trained personnel[xvi]. In essence, the capacity at the local institutional level to handle climate change issues hardly exists within many MMDAs' jurisdictions.

Figure 3.2: Integrating CC/DRR Issues into District Development Planning Processes



Steps/Things to Do	Expected deliverables	Responsibility
Step 1 • Awareness creation on CC/DRR. • Performance Review highlighting on CC/DRR issues • Conduct Situational Analysis capturing District Vulnerability to CC/DRR • Summarise District Development issues including CC/DRR issues • Conduct POCC on District Development issues including CC/DRR issues. •	• Key stakeholders awareness on CC/DRR created. • CC&DRR issues reflected in performance review. • Situational Analysis report reflects District vulnerability to CC/DRR. • District Development issues captures CC/DRR issues. • POCC analysis highlights CC/DRR issues.	Planning team and other stakeholders
Step 2 • Prioritise District Development issues	Prioritised District Development issues incorporates CC and DRR issues	Planning team, political leaders and other stakeholders
Step 3 Development of Goal/obj. & strategies with CC/DRR issues included.	CC and DRR incorporated in District goals, objectives and strategies.	Planning team and other stakeholders
Step 4 Develop of PoA, AAPs and Budget with CC/DRR issues captured.	CC/DRR issues incorporated in PoAs, AAPs and Budget.	Planning team and other stakeholders
Step 5 CC/DRR integrated in the implementation & M&E of AAPs	CC/DRR issues reflected in the implementation and M&E of AAPs.	Planning team, Departments of the district

Source: UNDP-EPA (2010) (p. 35)

[62] Key informant interview with a Deputy Director within the Plan Coordination Unit at NDPC (8/3/2015)

3.5 Conclusions

Ghana has a long-standing national institutional architecture for disaster management. Whilst these arrangements are not directly linked to climate change, they demonstrate planned efforts to address environmental risks and stresses. Climate change related issues in Ghana gained recognition within the national agenda in the 1990s with the signing of international conventions and the enactment of national legislation. On paper, the institutional architecture appears extensive, encompassing committees, ministries, NGOs/CSOs and international organizations.

The leadership of the NCCC provided support for the development that led to the first comprehensive NCCP in 2013. However, the NCCC has lost this leadership role since it stopped meeting in 2012. Consequentially, the coordination of institutions to foster climate change actions has been significantly weakened. This has increased the likelihood of overlap and duplication of efforts not only among domestic institutions, but also international organizations and NGOs/CSOs.

With the ambitious projected spending on climate change actions, there arise significant implementation challenges associated with these actions, particularly considering that the sources of funding have not been outlined in the NCCP master plan. In addition, much information (particularly financial information) on climate action is not being shared among institutions. The leadership role on climate finance intended to be played by the Ministry of Finance is therefore presently not secure and as a consequence strategic oversight of the resourcing of the NCCP is lacking.

Chapter 4. Macroeconomic and public finance management context for climate change finance

Chapter summary

- Although Ghana achieved middle income status in 2011, it has experienced a decline in annual GDP growth since then. The country has witnessed macroeconomic challenges especially in 2014, reflected by rising inflation rates.
- Although generation of domestic revenue has improved, challenges continue to exist to raise resources to a level that can sustain the country's development needs. This mainly explains the recent structure of the economy, characterised by fiscal deficits and rising public debt levels.
- Capital expenditure has fallen short of the approved budget estimates in the years under consideration. These deviations in capital expenditure could affect the pace of delivery of major infrastructure projects related to climate change. Capital expenditure in Ghana is largely foreign-financed thereby making it heavily dependent on international Development Partners.
- An upward trend in total debt stock, which comes with an increasing debt servicing burden, poses a challenge for the economy in the medium term, including spending on climate change related activities.
- Though certain areas of Ghana's Public Financial Management have shown improvement, most have either remained the same or deteriorated between 2009 and 2012, according to standardized PEFA international assessments.

4.1 Introduction

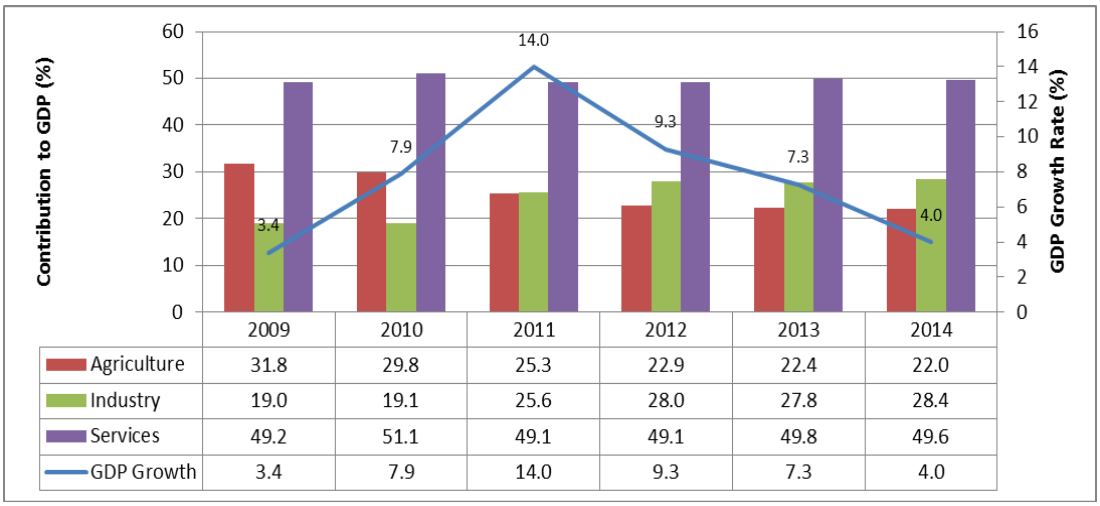
This chapter presents the macroeconomic framework and the fiscal context for public expenditure on climate change relevant activities in Ghana. These factors fundamentally determine the level of resources that are available for spending on government activities, including climate change relevant actions. Furthermore, the sustainability of climate change spending is dependent on these factors. A robust and sustainable economy will therefore support government's ability to raise and deploy funds for climate change actions.

The chapter also analyzes the strength of the public finance management system since the effectiveness of spending is dependent on the system in place. Irrespective of the amount of resources available, a strong public finance management system helps to minimize waste and ensure that maximum benefits are achieved.

4.2 The macro economy

Ghana attained lower middle income status in 2011, with a GDP value of approximately GH₵ 60 billion (US$ 40 billion) and a per capita GDP of GH₵ 2,370 (US$1,566)[63]. The 2011 GDP growth rate of 14.0 per cent was one of the highest in the nation's history. This growth rate was about twice the 2010 growth rate and about four times the 2011 world average of 3.8 per cent. However, this growth was highly associated with the initial commercial extraction of oil and gas in that particular year. Political stability, good governance and traditional exports were other factors that led to this very impressive growth rate[64]. Since 2011, Ghana has experienced a decline in annual GDP growth from 14.0 per cent in 2011 to 9.3 per cent in 2012, 7.3 per cent in 2013 and 4.0 per cent in 2014 – the slowest growth rate since 2009 when the economy grew at 3.4 per cent (Figure 4.1).

Figure 4.1: GDP Growth Rate and Sectorial Contribution to GDP (%), 2009 - 2014



	2009	2010	2011	2012	2013	2014
Agriculture	31.8	29.8	25.3	22.9	22.4	22.0
Industry	19.0	19.1	25.6	28.0	27.8	28.4
Services	49.2	51.1	49.1	49.1	49.8	49.6
GDP Growth	3.4	7.9	14.0	9.3	7.3	4.0

Source: *GSS, 2015*

Sector composition of the national output has changed over the years. The contribution of the agricultural sector – formerly the dominant sector – to GDP has been on the decline in favour of the services and industrial sectors. The agricultural sector, which accounted for about 32 per cent of GDP in 2009, accounted for approximately 22 per cent of GDP in 2014 (Figure 4.1). Despite the declining contribution of the agricultural sector to GDP, the sector continues to play a key role in Ghana's economic development by offering employment to 44.3 per cent of the labour force[65].

Apart from 2011, the services sector has been the main driver of GDP growth since 2010. The growth rate of this sector increased from 5.6 per cent in 2009 to 9.8 per cent in 2010 before declining slightly to 9.4 per cent in 2011. The industrial sector led the GDP growth rate in 2011 with a growth rate of 41.6 per cent, largely attributed to the commercial production of crude oil in the country. The contribution of the industrial sector however swiftly declined to 6.6 per cent in 2013 and 0.9 per cent in 2014. The agricultural sector, which had been experiencing low growth, began to witness an increase in growth rate from 0.8 per cent in 2011 to 2.3 per cent and 5.7 per cent in 2013 respectively before declining to 4.6 per cent in 2014.

[63] GSS, 2015
[64] UNEP-Ghana, 2013
[65] GSS, 2014

Table 4.1: Annual Growth Rates in GDP Sectors (%), 2009 - 2014

Sector	2009	2010	2011	2012	2013	2014
Agriculture	7.2	5.3	0.8	2.3	5.7	4.6
Industry	4.5	6.9	41.6	11.0	6.6	0.9
Services	5.6	9.8	9.4	12.1	10.0	5.7

Source: *GSS, 2015*

The main development strategy of the government is 'to lay the foundation for the structural transformation of the economy within the decade ending 2020, through industrialization especially manufacturing, based on modernized agriculture and sustainable exploitation of Ghana's natural resources, particularly minerals, oil and gas'[66].

Such structural change in the economy presents major opportunities with regard to climate change adaptation. An increasing share of the services and industrial sectors' contribution to GDP could increase the economic resilience of the country in the face of climate change with its attendant effects. This is because these sectors are less directly vulnerable to changes in the climate. Besides, these sectors add higher value than agriculture, thereby raising the prospect of larger public revenues – through taxation – to support higher public expenditure in climate relevant programmes. However, such a shift could adversely affect the employment situation in the country since agriculture offers employment to a large proportion of the labour force. Furthermore, climate change will have a significant continuing impact on the livelihoods of smallholder farmers.

Ghana's economic performance in recent years has been considered one of Africa's success stories due to its resilience in the face of the global recession, although the growth rate has been declining since 2011[67]. Ghana faced significant macroeconomic challenges in 2014 as its fiscal and current account deficits remained very high. By the end of December 2014, the stock of public debt stood at 67.1 per cent of GDP compared to 55.5 per cent of GDP at the end of December 2013 and the fiscal deficit at the end of that period (December 2014) was 7.0 per cent of GDP[68]. The surge in the budget deficit as well as other factors (such as the exchange rate regulation implemented in the first quarter of 2014) led to a sharp depreciation of the Cedi currency, especially in the first eight months of 2014 before strengthening against the major trading currencies from September onwards when the controls were relaxed. The 'pass through' effects of the cedi depreciation as well as fuel and utility price adjustments helped to drive inflation upwards in 2014.

4.3 Inflation

Inflation volatility adversely affects every aspect of the macro economy especially government expenditure (including expenditure on climate change related activities). Inflation creates discrepancies between projected expenditure and actual expenditure. It is thus one of the main factors that affects the certainty and integrity of the budgeting process.

Ghana experienced very high inflation rates and volatility in the 1980s and early 1990s. Due to prudent economic management inflation in the economy stabilized in the 2000s and Ghana began experiencing single-digit inflation from mid-2010. However, single-digit inflation was short-lived as inflation rates began picking up in early 2013 (Table 4.2). The high inflation rates in recent times are mainly attributed to the 'pass through' effects of the Cedi depreciation as well as fuel and utility price adjustments,

[66] NDPC, 2010
[67] ISSER, 2014
[68] MoF, 2014b and BoG, 2015

although developments in the international commodities market also helped in driving the rates upwards.

Table 4.2: Inflation rates in Ghana, 2009-2014

Inflation (%)	2009	2010	2011	2012	2013	2014
Year-on-year	16.0	8.6	8.6	8.8	13.5	17.0
Monthly Average	19.3	10.8	8.7	9.2	11.5	15.5

Source: *Ghana Statistical Service*

To address the challenges of an increasing inflation rate, the Central Bank (Bank of Ghana) and the government have pursued tight monetary and fiscal policies. Some of these include increasing the Monetary Policy Rate (MPR) and the introduction of new taxes as well as increasing the rates of existing ones.

Increasing inflation is one of the main factors accounting for the consistent nominal increases in government expenditure over the years. The trends in Table 4.3 reveal that there have been increases in both budgeted and actual expenditures over the study period. The figures however indicate that growth in government expenditure outstripped inflation rates during the period under consideration - thus indicating growth in government expenditure in real terms. This suggests that government's capacity to spend, including a potential to finance climate change related activities has risen over the years.

Table 4.3: Inflation and growth in government budget and expenditure

Year	Inflation Rate (%) (year-on-year)	Approved budget (million GH₵)	Increase in approved budget (year-on-year, %)	Actual Expenditure (million GH₵)	Increase in actual expenditure (year-on-year, %)
2011	8.6	13,534		13,429	
2012	8.8	19,035	40.7	20,944	51.4
2013	13.5	28,163	48.0	27,463	31.1
2014*	17.0	33,783	20.0	32,368	17.8

Source: *MoFEP, 2012; MoF, 2013, 2014a, 2014b*

**Actual expenditure in 2014 is an estimated figure in the 2015 Budget Statement*

4.4 Trends in public revenue and spending

The tight fiscal policy coupled with an improvement in tax administration, has led to significant increases in domestic revenue. Domestic revenue in nominal terms has more than doubled from 2011 to 2014, by increasing from GH₵ 11,811 million in 2011 to GH₵ 23,937 million in 2014 (Table 4.4). Correspondingly, total government revenue has been on the rise since 2011. Total revenue primarily comprises domestic revenue (both from tax and non-tax sources) and external grants. The government however contracts loans – both internally and from external sources – to supplement its total revenue in order to meet its expenditure in a particular year.

The main forms of tax revenue include VAT, personal income tax, company tax, NHIL and excise duties, whereas non-tax revenue mainly comprises revenue from the sale of crude oil and fees and incomes mobilized from the operations of public institutions. Tax revenues usually make up more than three-quarters of the total domestic revenue in each year.

Table 4.4: Sources of government revenue and expenditure (GH₵ Million), 2011-2014

Revenue Source	2011	2012	2013	2014
Domestic (Tax and Non-tax)	11,811	15,508	18,732	23,937
External Grants	1,231	1,160	739	802
Total Revenue	13,043	16,668	19,471	24,739
Recurrent Expenditure	10,155	17,360	22,671	26,896
Capital Expenditure	3,681	3,584	4,791	5,471
Total Expenditure	13,837	20,944	27,463	32,368

Source: *MoFEP, 2012; MoF, 2013, 2014a, 2014b*

Although there have been significant increases in domestic revenue between 2011 and 2014, external grants have declined from GH₵ 1,231 million in 2011 to GH₵ 802 million in 2014 (Table 4.4). The increasing share of domestic revenue in total government revenue indicates an increasing ability of government to finance a larger proportion of its expenditure. Nonetheless, the growth in domestic revenue has not kept pace with the country's public expenditure. This is attributed to the relatively small tax base of the Ghanaian economy. Ghana is largely dominated by the informal sector where almost all activities are outside the tax base. Although there are policies and strategies to capture the informal sector in the tax net, such efforts have proved ineffective due to the nature of the sector.

Although generation of domestic revenue has improved, challenges continue to exist to raise resources to a level that can sustain the country's development needs. This mainly explains the recent structure of the economy, characterized by fiscal deficits and rising public debt levels. The fiscal deficit as a percentage of GDP increased from 4.0 per cent in 2011 to 11.5 per cent in 2012 before declining to 10.1 per cent in 2013 and is projected to fall further to 9.5 per cent in 2014[69].

Ghana has relied on external loans to help finance its expenditures. The shortfalls in external grants have compelled various governments to rely on borrowing, resulting in a consistent rise in the yearly loans used to finance government expenditure. The grants-loans mix is changing in favour of loans[70]. Besides 2011 when there was a shortfall, actual loans taken by government have usually exceeded the budgeted figures. In 2012, actual loans exceeded the budgeted figure by GH₵ 476 million whereas in 2013 there was a difference of GH₵ 351 million[71]. As a result, Ghana's public debt has assumed an upward trend, increasing from 36.3 per cent of GDP in 2009 to 55.5 per cent in 2013 and then to 67.1 per cent at end of December 2014[72]. This upward trend in total debt stock, which comes with an

[69] MoFEP, 2012; MoF, 2013, 2014a, 2014b
[70] ISSER, 2014
[71] ISSER, 2014
[72] MoF, 2014b and BoG, 2015

increasing debt servicing burden, poses a challenge for the economy in the medium term, including spending on climate change related activities[73].

4.5 Public expenditure and GDP

Total government expenditure as a percentage of GDP has also been on the rise from 23.7 per cent in 2011 to 29.5 per cent in 2013, but is projected to reduce to 28.5 per cent in 2014 (Table 4.5).

Table 4.5: Total Government Expenditure as a percentage of GDP

Year	Total Expenditure (% of GDP)
2011	23.7
2012	28.6
2013	29.5
2014*	28.5

Source: *ISSER, 2014; MoF, 2014a; MoF, 2014b*
**Calculated based on Projection*

4.6 Expenditure patterns in the recurrent and capital budget

Increasing government expenditure has largely been driven by recurrent spending although the capital expenditure – in nominal terms – is also on the increase. The share of capital expenditure in total expenditure has declined from 27.5 per cent in 2011 to 16.9 per cent in 2014 (Table 4.6).

Table 4.6: Share of recurrent and capital expenditure in GDP and total expenditure

	2011		2012		2013		2014*	
Expenditure	% of GDP	% of Total Expenditure	% of GDP	% of Total Expenditure	% of GDP	% of Total Expenditure	% of GDP	% of Total Expenditure
Recurrent	17.2	72.5	22.2	77.6	24.4	82.9	23.7	83.1
Capital	6.5	27.5	6.4	22.4	5.1	17.1	4.8	16.9

Source: *ISSER, 2014; MoF, 2014a; MoF, 2014b*
**Calculated based on Projection*

Recurrent expenditures are classified into two groups: interest and non-interest expenditures. Non-interest expenditures comprise wages and salaries (personal emoluments), subventions, utility price subsidies and transfers to households, whereas interest payments on domestic and external debts make up the interest expenditure sub-group. Personal emoluments have been the largest driver of both non-interest and recurrent expenditures during the years under consideration, rising from 33.9 per cent of

[73] ISSER, 2014

total expenditure (or 8.1 per cent of GDP) in 2011 to 35.2 per cent of total expenditure (or 10.6 per cent of GDP) in 2013, but are projected to fall to 8.2 per cent of GDP in 2014[74].

Capital expenditures also comprise two groups, namely domestic and foreign financed expenditures. Domestic financed expenditures include the District Assembly Common Fund (DACF), Road Fund, National Health Fund and Ghana Education Trust Fund (GETFund), whilst Multilateral Debt Relief Initiative (MDRI) funding is part of foreign financed expenditures. Foreign-financed capital expenditure has been the largest contributor of capital expenditure in Ghana even though its share in total expenditure has been declining[75].

4.7 Variation of approved and actual expenditures

Actual expenditures at the end of the financial year often deviate from originally planned budgets. Actual total expenditures have usually fallen short of the approved budget estimates in the years under consideration except in 2012. Whereas in some cases recurrent expenditure outturn exceeded the approved budgets, capital expenditure outturn has always fallen short of the budget estimates (Table 4.7). In 2012 for instance, recurrent expenditure outturn was 22.3 per cent higher than budgeted for whilst capital expenditure was 16.8 per cent lower than the approved budget. This is not surprising as capital expenditure is largely foreign-financed thereby making it vulnerable to fluctuation given the fact that it is heavily dependent on Development Partners. Such deviations in capital expenditure in Ghana could affect the pace of delivery of major infrastructure projects related to climate change.

Table 4.7: Trend in budget and actual expenditures (GH₵ Million), 2011-2014

	2011		2012		2013		2014*	
Expenditure	**Budget/ Revised** [76]	**Actual**	**Budget/ Revised**	**Actual**	**Budget/ Revised**	**Actual**	**Budget/ Revised**	**Actual**
Capital	4,311	3,724 (-13.6%)	5,972	4,971 (-16.8%)	5,155	4,791 (-7.1%)	5,990	5,471 (-8.7%)
Recurrent	9,222	9,704 (5.2%)	13,063	15,973 (22.3%)	23,008	22,671 (-1.5%)	27,792	26,896 (-3.2%)
Total	13,534	13,429 (-0.8%)	19,035	20,944 (10.0%)	28,163	27,463 (-2.5)	33,783	32,368 (-4.2%)

Source: *MoFEP, 2012; MoF, 2013, 2014a, 2014b*

Note: Figures in parenthesis are percentage change over revised budget estimate

The continual deviation in total government expenditure affects the credibility of its budgets since some of the activities in the budget cannot be executed as planned. A credible budget is a positive contributor to effective expenditure management, and would suggest that climate change related expenditure – as part of general expenditure – has a better chance of being executed as planned.

[74] ISSER, 2014; MoF, 2014b

[75] Calculated from MoF, 2014b

[76] In Ghana, there is usually an adjustment or a revision of the budgeted indicators in a particular year. This is mainly due to developments in the global economy, political reasons and unexpected disasters and expenditure.

4.8 Growth patterns of discretionary and non-discretionary expenditure

Government expenditure is categorized into discretionary and non-discretionary expenditures. Expenditures that are at the discretion of the government are discretionary expenditures whereas those that are mandated by law are non-discretionary. The share of discretionary expenditure in total expenditure is important as it shows the proportion of expenditure that can be re-prioritized by government to meet emerging challenges such as climate change. However, some components of discretionary expenditure such as personal emoluments (wages and salaries) cannot be readily re-prioritized[77] and hence are considered non-discretionary. Nevertheless, wages and salaries usually constitutes a small proportion of the total discretionary expenditure - though its share has been increasing over the years - thereby giving government some fiscal space to finance climate change-related activities.

Discretionary expenditure has been the larger of the two groups of government expenditures since 2000. The share of discretionary expenditure increased from 67.5 per cent in 2011 to 78.3 per cent in 2012 before declining marginally to 75.4 per cent in 2013. As a share of GDP, discretionary expenditure was 16.4 per cent in 2011, 25.8 per cent in 2012 and 21.3 per cent in 2013, whereas non-discretionary expenditure was 7.9, 7.1 and 8.8 during the same period (Table 4.8). Payment of the DACF (a component of non-discretionary expenditure) is usually in arrears and thus shows a declining share of payment in each year as a result of late releases of funds each year. The rising share of discretionary expenditure in total expenditure increases the degree of flexibility in the budget, thereby giving government ability to reprioritize expenditure in favour of climate change.

Table 4.8: Shares of discretionary and non-discretionary in total expenditures (%)

Expenditure	2011	2012	2013
Discretionary *(% of GDP)*	67.5 (16.4)	78.3 (25.8)	75.4 (21.3)
Personal Emoluments (% of discretionary exp.)	*45.6*	*35.7*	*33.4*
Total Investments (% of discretionary exp.)	*38.8*	*24.7*	*17.7*
Non-Discretionary *(% of GDP)*	32.5 (7.9)	21.7 (7.1)	24.6 (8.8)
External Debt Service (% of non-discretionary exp.)	*20.01*	*22.99*	*17.98*
DACF (% of non-discretionary exp.)	*14.02*	*7.92*	*6.27*

Source: *ISSER, 2014*

Note: Figures in parenthesis are shares in GDP (%)

4.9 Effectiveness of public expenditure management

The previous sections have provided an overview of the macroeconomic context and the overall fiscal position of the government. Any changes in these contexts would significantly affect the level of resources available for climate change related actions. However, these factors only deal with the level of resources available for such expenditures. The strength of public expenditure systems in managing

[77] ISSER, 2014

climate change relevant funds is also critical in ensuring the effective application of available resources. This is because climate change relevant expenditure would be ineffective without strong and efficient public expenditure management systems even in the presence of adequate resources. This section therefore summarizes the strengths of Ghana's public financial management systems at central government level and also provides an indication of its effectiveness in ensuring the delivery of public finances. This assessment does not cover the handling of funds at the local government level.

The 2012 PEFA review (GoG, 2013), which compared assessments made in 2009 and 2012, is used as the main source of information for reviewing the performance of government systems. The report sets out the aggregate scores for each of the areas of the PEFA assessment (Table 4.9). It is evident that even though certain areas have shown an improvement over the time period, most have either remained the same or deteriorated between 2009 and 2012.

Table 4.9: PEFA Performance Indicators, 2009 and 2012

		2009	2012
A: PFM OUT-TURNS: Credibility of the Budget			
PI-1	Aggregate expenditure outturn compared to original approved budget	C	C
PI-2	Composition of expenditure outturn compared to original approved budget	C	NR
PI-3	Aggregate revenue outturn compared to original approved budget	B	C
PI-4	Stock and monitoring of expenditure payment arrears	NR	D
B: KEY CROSS-CUTTING ISSUES: Comprehensiveness and transparency			
PI-5	Classification of the budget	C	C
PI-6	Comprehensiveness of information included in budget documentation	B	C
PI-7	Extent of unreported government operations	A	C+
PI-8	Transparency of inter-governmental fiscal relations	D+	D+
PI-9	Oversight of aggregate fiscal risk from other public sector entities	D+	C
PI-10	Public access to key fiscal information	A	B
C: BUDGET CYCLE			
C(i): Policy-based budgeting			
PI-11	Orderliness and participation in the annual budget process	A	B
PI-12	Multi-year perspective in fiscal planning, expenditure policy and budgeting	C+	C+

C(ii): Predictability and control in Budget Execution

PI-13	Transparency of taxpayer obligations and liabilities	C+	C+
PI-14	Effectiveness of measures for taxpayer registration and tax assessment	C	C
PI-15	Effectiveness in collection of tax payment	C+	D+
PI-16	Predictability in the availability of funds for commitment of expenditures	D+	D+
PI-17	Recording and management of cash balances, debt and guarantees	C+	C+
PI-18	Effectiveness of payroll controls	C+	C+
PI-19	Transparency, competition and complaints mechanisms in procurement	B+	C
PI-20	Effectiveness of internal audit controls for non-salary expenditure	D+	D+
PI-21	Effectiveness of internal audit	D+	C+

C(iii): Accounting, recording and reporting

PI-22	Timeliness and regularity of accounts reconciliation	C	D+
PI-23	Availability of information on resources received by service delivery units	B	D
PI-24	Quality and timeliness of in-year budget reports	C+	C
PI-25	Quality and timeliness of annual financial statements	C+	C+

C(iv): External scrutiny and audit

PI-26	Scope, nature and follow-up of external audit	C+	C+
PI-27	Legislative scrutiny of the annual budget law	D+	D+
PI-28	Legislative scrutiny of external audit reports	D+	D+

D: Donor practices

D-1	Predictability of direct budget support	A	D+
D-2	Financial information provided by donors for budgeting and reporting on project and programme aid	C+	C+
D-3	Proportion of aid that is managed by use of national procedures	D	C

Source: *GoG, 2013*

4.10 First public expenditure principle for effective climate finance delivery: climate change expenditure shall be planned and budgeted for in the national budget formulation process

Climate change related expenditure has not been explicitly recognized through specific coding of expenditure as a policy theme within the national budget, although it has been incorporated in a number of national planning documents such as the Ghana Shared Growth and Development Agenda (I and II), The Coordinated Programme of Economic and Social Development Policies (2010-2016) and (2014-2020). These planning documents identify a number of climate change operational objectives, strategic interventions and key outputs, and also make reference to the National Climate Change Policy (NCCP) and the National Climate Change Adaptation Strategy (NCCAS).

Due to the absence of climate change as an explicit policy theme in the budget, attempts to estimate the level of climate change-relevant spending requires a manual review of all programmes and line items from the various Ministries, Departments and Agencies (MDAs).

Since the early 2000s, Ghana has adopted a multi-year perspective to its budget formulation process. The process considers principally revenue, expenditure and debt forecasts informed by the macro-economic context and different policy initiatives. Furthermore, there are several measures aimed at reforming Public Financial Management (PFM) in the country. Such measures include the introduction of Programme Based Budgeting (PBB) and the Ghana Integrated Financial Management Information System (GIFMIS)**.** The introduction of PBB might offer an opportunity in the future to monitor climate change relevant activities through the tracking of specific budget programmes. However, the effectiveness of these PFM reforms is undermined by the lack of a single, coordinated and overarching strategic framework for PFM reform.

4.11 Second public expenditure principle for effective climate finance delivery: climate change expenditure shall be executed through government systems during the budget year

The effectiveness of climate change finance depends largely on the execution rate of planned expenditure. A higher execution rate implies a higher likelihood that planned climate change-related activities will take place. In Ghana, total expenditure execution is relatively high, at over 95 per cent for the years considered. However, this high execution rate is usually accompanied with huge budget deficits and expenditure arrears due to shortfalls in revenue outturn. This tends to affect the credibility of the budget as the PFM performance review indicates low credibility of the budget in both 2009 and 2012.

Though revenue collection has improved, it has generally been lower than projections in recent years. As a result, there is the introduction of cash planning which is largely informed by procurement plans and cash flow requirements. Similarly, MDAs are provided with a budget ceiling for three years by the Ministry of Finance (MoF) though the focus is on the budget year, with the two outer years being indicative only. The short-fall in revenue coupled with the current practices of cash planning, the lack of reliability and short horizon of ceilings for expenditure commitments, as well as weak commitment control all lead to the accrual of arrears, a fact that ultimately impacts upon the quality of service delivery (GoG, 2013), including climate change activities.

4.12 Third public expenditure principle for effective climate finance delivery: climate change-related expenditure shall be subject to reporting and accounting

Between 2009 and 2012, there has been deterioration in the performance of the budget with regard to accounting, recording and reporting of financial activities. This is mainly because the integrity, timeline

and accuracy of public accounts remain a challenge. The current reconciliation and reporting practices have also adversely affected the performance of the budget. Although monthly bank reconciliations are completed for all public bank accounts managed by the Accountant General's Department, there is usually a backlog of up to three months for most of the accounts except for the sub-consolidated fund accounts where there is a one month delay. Un-acquitted cash imprest accounts, which sometimes take two months to be cleared, also make the reconciliation of public accounts challenging (GoG, 2013).

There are also substantial challenges in respect to reporting practices. The financial reports prepared and presented by MDAs and consolidated by the Controller and Accountant General's Department (CAGD) in practice do not capture expenditure at the commitment level. This is because the monthly financial reports do not report on revenue and expenditure arrears. Furthermore, delays in submitting weekly district expenditure transcripts to CAGD, particularly in ministries where significant amounts of budget funds are spent at the district level, affects the accuracy of public financial statements. This is because in such instances, the CAGD only uses transfers to MDAs instead of actual expenditures in preparing financial reports. The accuracy of public financial statements could explain why monthly financial reports are not published.

The challenges with accounting and reporting of public expenditure make it difficult to track all government activities, especially at local levels. This brings the challenge of ensuring that expenditure by government – including climate change related activities – are adequately scrutinized.

4.13 Fourth public expenditure principle for effective climate finance delivery: climate change-related expenditure shall be subject to external oversight and scrutiny

One of the strengths of the government's budget is external oversight and scrutiny. According to the 2012 PFM report, the external audit of public revenue and expenditure is well established and professional, adhering broadly to INTOSAI (International Organization of Supreme Audit Institutions) auditing standards. However, the auditing system is confronted with capacity challenges, which are largely responsible for the delays in the issuance of external audit reports, except for the audit reports on the Consolidated Fund and MDAs.

Parliament could play a role in the oversight of the budget, both at the proposal stage and the scrutiny of the budget audit. However, Parliamentary scrutiny is challenged by two aspects. First, legislative review of the budget offers limited time for meaningful debate on the budget in the House. Most of the legislative time on the budget is spent on organizing the review process and the individual review of budget proposals, due to the absence of a Technical Office to support the select committee on the budget. The time left is usually not sufficient for a meaningful debate on the budget. Second, the effectiveness of scrutiny of external audits is adversely affected by the backlog of audit reports to be examined by the legislature, which undermines discussions, and leads to ineffective follow-up. As the Public Accounts Committee (PAC) itself notes, the same errors and issues re-occur each year, indicating that its recommendations are not being addressed effectively.

4.14 Conclusions

Though Ghana attained middle-income status in 2011, it has been confronted with macroeconomic challenges since that time, with the most difficult year occurring in 2014. This has led to a decline in the growth of the nation's total output, a rise in inflation, an upsurge in the budget deficit, and an increase in government debt levels.

Government expenditure has experienced an upward trend and this growth provides an opportunity for government to direct some of this expenditure to support climate change relevant activities. This is

reinforced by the large proportion of discretionary relative to statutory expenditures. With increased capacity associated with the relatively high budget execution rate, Ghana appears to be in a relatively favourable position to invest in climate change relevant activities. However, the level of actual expenditure on climate change depends on the priority given to this policy area by government and will be undermined by any deterioration in the public financial management system.

Chapter 5. Public expenditure review of climate change actions

Chapter summary

- 14 MDAs were identified as having climate change relevant spending between 2011 and 2014. However, budget allocations are very small, with a total budgeted expenditure of GH₵ 637 million in 2014. Climate change relevant expenditure is approximately two percent of government expenditure and 0.5 percent of GDP.
- This level of budget allocation represents a very low base upon which the NCCP has to build over the next five years to accomplish its policy objectives. The scale of build-up can be seen by comparing the 2014 budgeted expenditure of GH₵ 637 million with the planned annual spend under the NCCP Master Plan of GH₵ 4,127 million – a six-fold increase.
- Five budget policy objectives were identified as being highly relevant climate change actions, as they included a direct reference to climate change. An additional 39 policy objectives were identified as being of medium relevance, where the description related to actions identified in the NCCP master plan.
- The planned expenditures for highly relevant actions is less than one percent of the total climate change relevant budget; almost all climate change funding is being directed at policy objectives that are consistent with the goals of the NCCP, but are not explicitly labelled as climate change actions.
- A greater budget allocation is directed at adaptation (68 percent) compared to mitigation actions (22 percent). The budget allocation in support of REDD+ activities has remained at approximately 10 percent over the period.
- Accounting for all DP funded climate change relevant expenditure is not possible at the present time**.** Domestic spending is captured in the national budget according to standardized coding. Donor expenditure is not captured with the same level of consistency, and Development Partner funds do not all flow through one single financial system.
- Approximately US$13 million of international grant finance was disbursed in Ghana between 2009 and 2013 in support of climate change related actions in the forest and related sectors. In terms of international support to government MDAs, for the three years for which data sets overlap (2011 – 2013), international funds made a relatively modest contribution towards the implementation of national REDD+ actions.
- Support from one of the country's bilateral international climate funds, Germany's International Climate Initiative (IKI), takes place wholly outside the national public finance management system, with these projects running in parallel with government systems.

5.1 Climate change relevant public expenditure

This report has so far reviewed the policy and institutional response of the Ghanaian government in relation to its spending on climate change actions. The previous chapter covered Ghana's economy, focusing on an analysis of trends in macroeconomic performance, public finance and public expenditure management. This chapter takes the analysis to the stage of discussing the nature and quantity of public

expenditure that is focused on climate change. The chapter undertakes a close scrutiny of the national budget to identify climate change relevant budgeted expenditures. The approach to identify such expenditures has been one of:

- Identifying sector ministries and institutions involved in climate change relevant activities;
- Identifying climate change relevant expenditures from these ministries' budgets for the period 2011 to 2014;
- Further classifying such expenditures as being of high or medium relevance to climate change;
- Assigning a weight to the high and medium relevance expenditures reflecting the percentage of the activity considered to be climate change related;
- Classifying the activities as adaptation or mitigation actions.

5.2 Data sources used in the expenditure analysis

Government budget data of approved spending by ministry for the four-year period (2011 to 2014) was used as the basis for the analysis. These budget data came from published sources of the Ministry of Finance, principally the Annual Estimates contained within each sector's medium term expenditure framework report.

An effort to collate the end of year outturns for the identified budget codes proved unsuccessful, as the sector ministries' reporting frameworks do not record spending disaggregated to the policy objective level. As a result, line ministries were unable to provide the expenditure data to the Ministry of Finance. The analysis therefore considers only the proposed allocation within the national budget for climate change actions and not actual expenditures.

5.3 Contextual issues about the budget process in Ghana

All ministries and their respective departments and agencies have four potential sources of funding: (i) the Consolidated Fund of the Government of Ghana; (ii) Internally Generated Funds (IGF) raised by the relevant MDA; (iii) Special Funds from the Ministry of Finance; and (iv) donor funds. Where these sources are recorded in the national budget documentation they are included in the following analysis. There are also substantial extra-budgetary funds in operation in Ghana. These latter funds are not included in the budget of the Central Government and are therefore not covered in this study.

5.4 Treatment of donor grants

The ability to identify internationally sourced funds varies according to the nature of the channel of funding adopted. There are three channels through which development partner (DP) grants are disbursed:

- The first channel follows the normal government financial channels and these funds are fully captured under the budget.
- The second channel is where funds are disbursed by DPs to sector ministries rather than the financial bodies of the government; these may also be captured in the budget where the sector ministries report to MoF.
- DP grants disbursed directly to projects and programmes operating outside government systems.

This study's analysis of budget data considers spending by DPs included within the national budget through the first, and potentially, the second channel. The third channel is not covered by the analysis. Additional discussion of DP support for climate change actions is considered at the end of this chapter.

5.5 Identifying ministries with climate change relevant activities

The first step in the expenditure analysis was to identify the MDAs where climate change relevant expenditure might be expected to occur, based on the policy direction of the NCCP. A total of 19 MDAs were identified. This list was reduced to 16, as budget data were unavailable for the Ministries of Health and Education and the DACF. All subsequent analysis was based on these 16 MDAs (Table 5.1).

Table 5.1: List of MDAs identified for expenditure analysis

Sector	Nos.	Head Description
Administration (3)	~~7~~	~~District Assemblies Common Fund~~
	10	Ministry of Finance
	11	Ministry of Local Government and Rural Development
	13	National Development Planning Commission
Economic (7)	15	Ministry of Food and Agriculture
	16	Ministry of Fisheries and Aquatic Development
	17	Ministry of Lands and Natural Resources
	18	Ministry of Trade and Industry
	19	Ministry of Tourism, Culture & Creative Arts
	20	Ministry of Environment, Science, Technology and Innovation (EPA and CSIR)
	21	Ministry of Energy and Petroleum
Infrastructure (4)	23	Ministry of Water Resources, Works and Housing (Water Resources Commission)
	24	Ministry of Roads and Highways
	25	Ministry of Communications (GMet)
	26	Ministry of Transport
Social (1)	~~28~~	~~Ministry of Education~~
	~~33~~	~~Ministry of Health~~
	34	Ministry of Gender, Children and Social Protection
Public Safety (1)	41	Ministry of Interior (NADMO)
	16	**Total of climate change relevant budget lines**

Source: *Authors' own compilation*

Not all ministries had climate change relevant activities (and hence spending) in all four years under consideration. In fact, no climate change relevant spending could be identified over the four year period under two budget heads (the National Development Planning Commission and the Ministry of Tourism, Culture and Creative Arts). In addition, some ministries were restructured after 2012. For example, the Ministry of Women and Children Affairs became the Ministry of Gender, Children and Social Protection and the Ministry of Energy became the Ministry of Energy and Petroleum. Currently, the Ministry of Energy and Petroleum has been restructured into the Ministry of Power and the Ministry of Petroleum.

5.6 Climate change relevant expenditures by policy objective

Climate change relevant spending was identified at the policy objective level [five digit budget codes], with the exception of unspecified entries, where relevant programmes [six digit budget codes] were identified. This was carried out for each ministry and for each year under review. For example, a review of the 2014 budget data identified climate change relevant spending plans in 12 out of the 16 MDAs (Table 5.2). No budget allocation for climate change relevant actions could be identified in the Ministries of Fisheries, Trade, Tourism and the NDPC in 2014.

Table 5.2: 2014 planned spending by MDA

Sector	Nos.	Head Description	CC relevant Budget Codes
Administration	~~7~~	~~District Assemblies Common Fund~~	
	10	Ministry of Finance	010002
	11	Ministry of Local Government and Rural Development	51103, 51103
	13	National Development Planning Commission	-
Economic	15	Ministry of Food and Agriculture	30101, 30103, 30104, 30105, 012002
	16	Ministry of Fisheries and Aquatic Development	-
	17	Ministry of Lands and Natural Resources	30201, 30203, 30301 30401, 30402, 30501 30502, 30701, 30901 30903, 31001, 31101 51107, 013003
	18	Ministry of Trade and Industry	-
	19	Ministry of Tourism, Culture & Creative Arts	-
	20	Ministry of Environment, Science, Technology and Innovation (EPA and CSIR)	30201, 30901, 30903, 50304, 50504, 70408, 71109
	21	Ministry of Energy and Petroleum	50502
Infrastructure	23	Ministry of Water Resources, Works and Housing (Water Resources Commission)	50607, 50608, 50609 51101, 51102, 51105
	24	Ministry of Roads and Highways	50106
	25	Ministry of Communications (GMet)	50304

	26	Ministry of Transport	50106
Social	~~28~~	~~Ministry of Education~~	
	~~33~~	~~Ministry of Health~~	
	34	Ministry of Gender, Children and Social Protection	51105
Public Safety	41	Ministry of Interior	30901, 50609, 037002

Source: *Authors' own compilation*

5.7 Overall magnitude of spending on climate change relevant activities

The total budget allocation on climate change relevant activities is very small. It has grown relatively strongly in cash terms, from a very low base over the four year period under review. However, this should be considered alongside high and volatile inflation, as discussed in the previous chapter. Table 5.3 shows the growth in climate and non-climate change related budget allocation in comparison to the prevailing inflation in order to give a sense of the real purchasing value of the currency. 2011 saw a high budget allocation on account of two large planned investments made by the Ministry of Energy (to increase the proportion of renewable energy) and the Ministry of Water (to accelerate provision of adequate drinking water). Thereafter the climate change relevant budget increased from GH₵ 394 million to GH₵ 637 million over a three year period, representing an average annual increase of 38 percent. Allowing for inflation, this represents a real increase in planned government spending on climate change actions over the study period.

Table 5.3: Growth in climate change relevant budget vs. non climate change budgeted expenditure

Budget year	Inflation (year-on-year)	Climate change relevant budget (million GH₵)	Increase from previous year (%)	Non-CC relevant budget (million GH₵)	Increase from previous year (%)
2011	8.6	573		12,961	
2012	8.8	394	-49.3	18,641	46.1
2013	13.5	588	49.1	27,575	47.9
2014	17.0	637	8.4	33,146	20.2

Source: *GSS, 2015 and authors' own compilation*

Comparison of the growth in the climate change relevant budget compared to the total government budget and GDP show a similar trend (Tables 5.4 and 5.5). The percentage share of climate change relevant proposed expenditure compared to the total government budget was higher in the first year (on account of the two above mentioned investment programmes), subsequently falling back to a fairly constant level of approximately two percent of the government budget in each of the following three years. Comparison of the climate change relevant budget with GDP shows the same trend, at approximately 0.5 percent of GDP.

This level of budget allocation represents a very low base upon which the NCCP has to build over the next five years to accomplish its policy objectives. The scale of build-up can be seen by comparing the 2014 budgeted expenditure of GH₵ 637 million with the planned annual spending under the NCCP Master Plan of GH₵ 4,127 million – a six-fold increase.

Table 5.4: Climate change relevant budget as a share of the total government budget

Budget year	Total government budget (million GH₵)	Total CC relevant budget (million GH₵)	CC relevant budget as % of government budget
2011	13,534	573	4.2
2012	19,035	394	2.1
2013	28,163	588	2.1
2014	33,783	637	1.9

Source: *MoF and authors' own compilation*

Table 5.5: Climate change relevant budget as a percentage of GDP

Budget year	GDP (million GH₵)	Total CC relevant budget (million GH₵)	CC relevant budget as a % of GDP
2011	59,816	573	0.96
2012	75,315	394	0.52
2013	94,939	588	0.62
2014	113,436	637	0.56

Source: *GSS, 2015 and authors' own compilation*

5.8 Climate change relevant expenditure by ministry

This section presents an analysis of climate change relevant budgeted expenditure by Ministry over the period under review. As noted above, 16 Ministries and Agencies were identified as potentially implementing climate change relevant programmes and projects between 2011 and 2014. For each of these institutions, every policy objective within the MDA's Annual Estimates was examined for its relevance to climate change, and the relevant budget codes were identified for analysis.

The number of climate change relevant budget codes is greatest in the Ministry of Lands and Natural Resources, MLNR (Table 5.6). MLNR, together with three other ministries: the Ministry of Environment, Science, Technology and Innovation (MESTI), the Ministry of Water Resources, Works and Housing (MWRWH) and the Ministry of Food and Agriculture (MoFA), contain over three quarters of all relevant budget codes in 2014. Overall, there was a significant jump in the number of relevant codes between 2011 and 2012, perhaps associated with an increasing awareness of the need for public spending on climate change at the time of the NCCP formulation. The fact that such spending has been planned across all sectors of the Ghanaian economy, with the majority of initiatives in the economic sector, signals a certain degree of success in the mainstreaming of climate change issues by government.

Table 5.6: Number of climate change relevant policy objectives by Ministry

Ministry	2011	2012	2013	2014
MLNR	2	14	15	14
MESTI	3	12	9	7
MWRWH	2	6	6	6
MoFA	2	5	4	5
MINT	2	3	2	3
MoC	1	1	1	1
MoEP	1	1	1	1
MLGRD	0	2	3	1
MGCSP	0	2	1	1
MoRH	0	1	1	1
MoT	0	1	1	1
MoF	0	0	0	1
MOFAD	0	0	1	0
MoTI	2	0	0	0
Total	15	48	45	42

Source: *Authors' own compilation from ministries' MTEF reports*

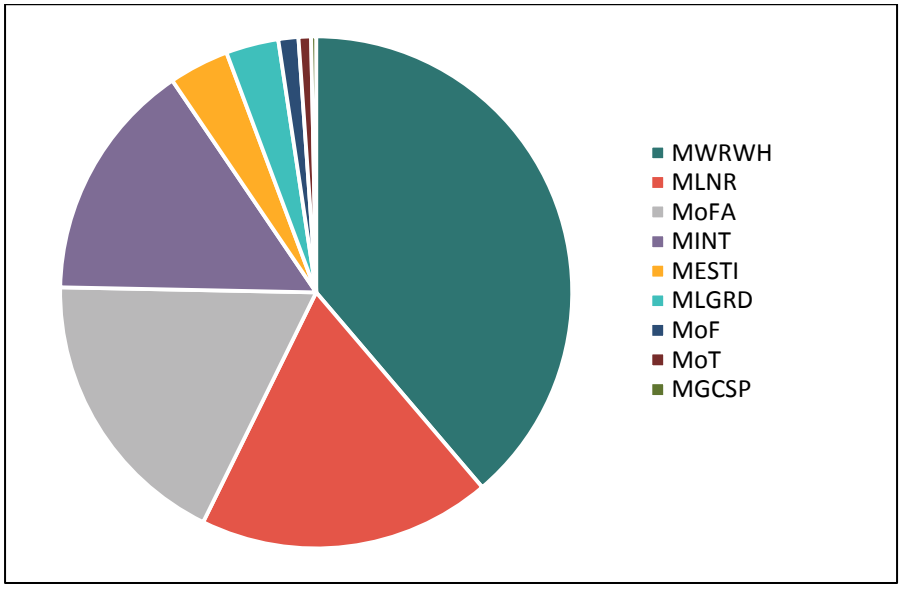
The distribution of planned spending across ministries shows a slightly different pattern to that of the number of budget codes. In terms of the level of the annual budget, the ministry receiving the largest allocated budget for climate change relevant actions is the Ministry of Water Resources, Works and Housing (MWRWH), followed by MLNR and MoFA (Table 5.7 and Figure 5.1).

Table 5.7: Climate change relevant budget by Ministry

	2011			2012			2013			2014		
	Total Budget (mill GH₵)	CC relevant (mill GH₵)	CC relevant (%)	Total Budget (mill GH₵)	CC relevant (mill GH₵)	CC relevant (%)	Total Budget (mill GH₵)	CC relevant (mill GH₵)	CC relevant (%)	Total Budget (mill GH₵)	CC relevant (mill GH₵)	CC relevant (%)
MWRWH	558	258	46.1	283	53	18.7	598	226	37.8	531	246	46.3
MLNR	98	59	60.2	217	86	39.2	226	84	37.0	359	118	32.7
MoFA	221	38	16.9	262	74	28.0	292	89	30.5	306	115	37.2
MINT	301	3	1.0	406	14	3.5	825	16	1.9	1,013	97	9.5
MESTI	177	11	5.9	123	20	16.2	139	11	7.9	245	24	9.8
MLGRD	226	0	0	223	-	0.04	447	16	3.5	239	21	8.9
MoF	178	0	0	446	0	0	292	0	0	23	8	35.2
MoT	18	0	0	99	-	0.92	187	-	0.03	89	5	5.7
MGCSP	13	0	0	15	-	1.1	38	15	39.0	91	3	2.8
MoC	29	-	0.01	66	-	0.6	56,	-	0.00	93	-	0.45
MoEP	405	204	50.4	657	-	0.01	1,061	-	0.02	1,340	-	0.06
MoRH	335	0	0	907	147	16.1	706	131	18.5	699	-	0.02
MoTI	82	-	0.85	157	0	0	124	0	0	256	0	0
MOFAD	0	0	0	0	0	-	48	-	0.30	128	0	0

- : Spending less than GH₵ 1 million

Figure 5.1: Climate change relevant budgeted expenditure by ministry, 2014



Source: *Authors' own compilation*

5.9 Climate change relevant budgeted expenditures by relevance

Two categories of climate change relevant expenditure were distinguished in the analysis:

- High relevance, where the description of the policy objective in the budget documentation contained an explicit reference to climate change. For these policy objectives all the budgeted expenditure was included in the analysis (100%);
- Medium relevance, where the policy objective description could be readily linked to actions listed under each programme and focus area of the NCCP master plan; for these policy objectives half of the budgeted expenditure was included in the analysis (50%). The intensive planning effort completed during the preparation of the NCCP and its master plan provides a comprehensive listing of activities that can be considered as being relevant to the response to climate change in Ghana.

Overall, five policy objectives were identified as being high relevant climate change actions due to the inclusion of a direct reference to climate change (Table 5.8). An additional 39 policy objectives were identified as having medium relevance, where the objective description related to actions identified in the NCCP master plan (for complete listing of policy objectives and budget codes see Annex 2). Table 5.9 shows the breakdown of high and medium relevant policy objectives by Ministry and by year.

Table 5.8: High relevant policy objectives by Ministry

Policy Objective	Budget Code	MDAs
Enhance capacity to adapt to climate change impacts	31001	MLNR, MGCSP
Mitigate the impacts of climate variability and change	31002	MLNR, MESTI
Use low carbon growth as a specific approach to development	31003	MLNR, MESTI
Enhance capacity to mitigate and reduce risk	31101	MLNR, MGCSP, MLGRD
Options for renewable energy	50504	MESTI

Table 5.9: The number of high and medium relevant policy objectives by Ministry

	2011		2012		2013		2014	
	High	Medium	High	Medium	High	Medium	High	Medium
MLNR	0	2	2	12	3	12	2	12
MESTI	0	3	3	9	1	8	1	6
MWRWH	0	2	0	6	0	6	0	6
MoFA	0	2	0	5	0	4	0	5
MINT	0	2	0	3	0	2	0	3
MoEP	0	1	0	1	0	1	0	1
MLGRD	0	0	0	2	1	2	0	1
MoC	0	1	0	1	0	1	0	1
MGCSP	0	0	2	0	0	1	0	1
MoRH	0	0	0	1	0	1	0	1
MoT	0	0	0	1	0	1	0	1
MoF	0	0	0	0	0	0	0	1
MOFAD	0	0	0	0	0	1	0	0
MoTI	0	2	0	0	0	0	0	0

Source: *Authors' own compilation*

As shown in Table 5.10, the planned expenditures for highly relevant actions – where climate change is an explicit policy objective – is extremely small (at less than one percent); almost all funding is being directed at policy objectives that are consistent with the goals of the NCCP, but are not being explicitly labelled as climate change relevant expenditures.

Table 5.10: Climate change relevant budgeted expenditure by relevance as a percentage of total climate change relevant expenditure, 2011-2014

Budget year	High (%)	Medium (%)
2011	0.0	100.0
2012	1.5	98.5
2013	0.6	99.4
2014	0.2	99.8

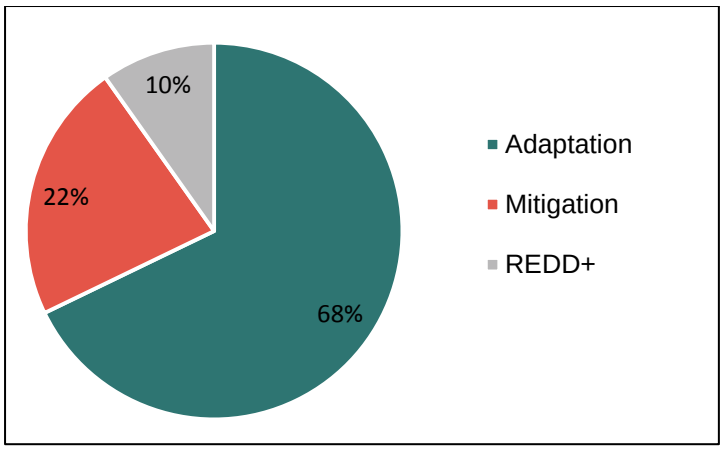
Source: *Authors' own compilation*

5.10 Climate change strategies

Allocations within the budget have been classified as mitigation or adaptation depending on the activities being undertaken. Government policy objectives were reviewed against their intended impact, and classified according to whether these impacts are concerned with climate change mitigation or adaptation.

Overall, there is a significantly greater budget allocation directed at adaptation than mitigation activities (Figure 5.2), with an increasing trend towards adaptation actions over the four years, 2011 -2014 (Table 5.11). The budget allocation in support of REDD+ activities has remained at approximately 10 percent over the period.

Figure 5.2: Climate change strategies, 2011 - 2014



Source: *Authors' own compilation*

Table 5.11: Budgeted expenditure on, and percentage of, adaptation compared to mitigation activities for climate change relevant budgeted expenditures across all Ministries, 2011 – 2014

Budget year	Adaptation (mill GH₵)	% of total climate budget	Mitigation (mill GH₵)	% of total climate budget	REDD+ (mill GH₵)	% of total climate budget
2011	310	54	204	36	59	10
2012	215	55	148	38	31	8
2013	406	69	132	22	50	9
2014	556	87	6	1	75	12
Total	1,487	68	490	22	215	10

Source: *Authors' own compilation*

5.11 International Climate Change Funding

Accounting for all development partner (DP) funded climate change relevant expenditure is not possible at the present time. Public spending flowing through government systems is captured in the national budget according to standardized coding, which has allowed the preceding analysis and review. DP expenditure is not captured with the same level of consistency, and DP funds do not all flow through one single financial system. Original data collection of all DP and their associated projects to review activities for climate change relevance was beyond the scope of this study. Further complicating the issue is the fact that some DP funds are spent via government systems, leading to the risk of double counting of expenditures. Given these limitations, and to maintain the focus of discussion on government actions and capabilities, this study has undertaken only a limited review of DP expenditure, largely using secondary sources. Two areas of focus are described: international funds in support of the REDD+ strategy in the forest sector, and support from one of the bilateral international climate funds, Germany's International Climate Initiative (IKI).

5.11.1 International REDD+ funding, 2009 -2013[78]

Level of international funding

Approximately US$13 million of international grant finance was disbursed in Ghana between 2009 and 2013 in support of climate change related actions in the forest and related sectors. The annual level of funding increased significantly, from just below US$500,000 in 2009 to over US$3.5 million in 2012. This funding aimed to promote the reduction of carbon emissions from deforestation and forest degradation. Twenty four initiatives were supported, most of which were small-scale, with the level of financing for 20 of the projects being under US$500,000 each.

Recipients of funding

In terms of the recipients of these international funds (Table 5.12 and Figure 5.3), one Government Agency, the Ghana Forestry Commission, stands out on account of a US$7.8 million grant from JICA to support the Forest Preservation Programme. The main NGO beneficiary of REDD+ funds over the period was the Nature Conservation Research Centre. The largest single project financed in the NGO sector was in support of IUCN's pro-poor REDD+ initiative, funded by the Ministry of Foreign Affairs of Denmark.

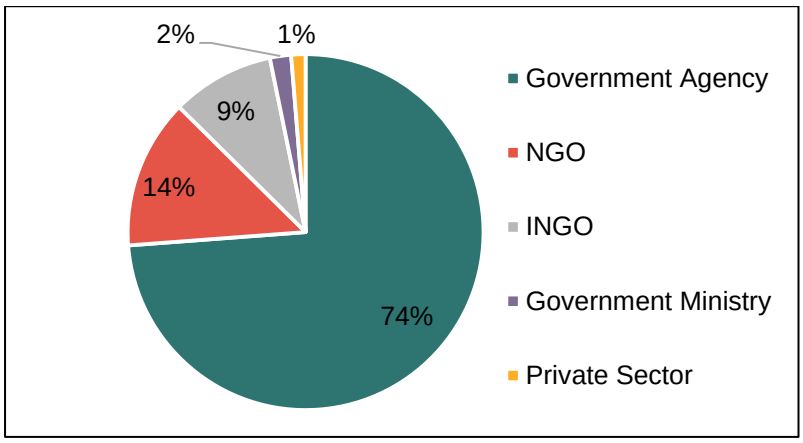
Table 5.12: International REDD+ funding to Ghana by main recipient categories, 2009 - 2013

Recipient type	International grant finance (US$)
Government Agency	9,555,921
National NGO	1,761,868
International NGO	1,211,559
Government Ministry	250,000
Private Sector	168,000

Source: *Adapted from Ashley Asare et al., 2013*

[78] The data summarised in this section comes from the Forest Trends REDDX report *Ghana: mapping REDD+ finance flows 2009-2012* by Rebecca Ashley Asare et al., 2013: http://www.forest-trends.org/documents/files/doc_4199.pdf

Figure 5.3: International REDD+ funding to Ghana by main recipient categories, 2009 -2013



Source: *Adapted from Ashley Asare et al., 2013*

In terms of international support to government MDAs, for the three years for which the data sets overlap (2011-2013), Table 5.13 shows the relatively small contribution that international funding made towards implementation of national REDD+ actions.

Table 5.13: International and domestic REDD+ grant funding disbursed to government agencies

Budget year	International grant finance (US$)	National Budget (US$)[79]
2011	2,658,716	38,918,100
2012	2,400,000	16,315,700
2013	847,205	24,821,700

Source: *Adapted from Ashley Asare et al., 2013*

Source of international finance

Seven countries provided grant finance for REDD+ actions, principally through official development assistance channels. Japan provided most funds (Table 5.14 and Figure 5.4). Three US-based private philanthropic foundations supported REDD+ actions in Ghana: the Rockefellar, Moore and Skoll Foundations. The two multilateral agencies that provided grant finance during the period were the World Bank and the International Tropical Timber Organization.

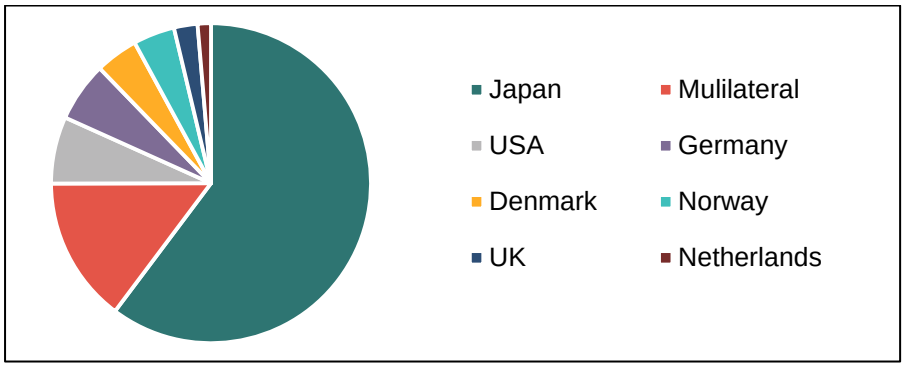
[79] Using Ghana Cedi/US Dollar exchange rates as of 1st June for 2011,2012 and 2013

Table 5.14: International REDD+ funding to Ghana by source of funding, 2009 - 2013

Source	International grant finance (US$)	Percentage contribution
Japan	7,800,000	60.2
Multilateral	1,905,921	14.7
USA	876,357	6.8
Germany	779,478	6.0
Denmark	559,797	4.3
Norway	542,895	4.2
UK	308,776	2.4
Netherlands	174,124	1.3

Source: *Adapted from Ashley Asare et al., 2013*

Figure 5.4: International REDD+ funding to Ghana by source of funding, 2009 - 2013



Source: *Adapted from Ashley Asare et al., 2013*

5.11.2 Climate finance contributions from Germany's International Climate Initiative (IKI)

The IKI website[80] lists 16 supported projects tackling a wide range of climate change issues in Ghana[81]. Fourteen of the projects operate at a regional or global scale, with Ghana being one of several participating countries. Only two projects – '*innovative insurance products for climate change adaptation'* and '*sustainable energy and water supply for the University of Ghana'* – operate solely in Ghana. Whilst some government agencies are listed as partner institutions (e.g. MESTI, MLNR) alongside multinational organizations, implementing institutions are wholly international organizations. This implies that project implementation takes place outside the national public finance management system, with these projects running in parallel with government systems. The role of the implementation organization is dominated by the UN agencies (UNDP and ENEP) together with Germany's technical assistance provider, GIZ.

The IKI website lists a total of €68.5 million has been invested in these 16 projects (although all this funding has not been disbursed, with some project duration extending to 2017). Table 5.15 and Figure

[80] http://www.international-climate-initiative.com/en/ [Accessed 20/02/2015]
[81] Accessed 20th February 2015

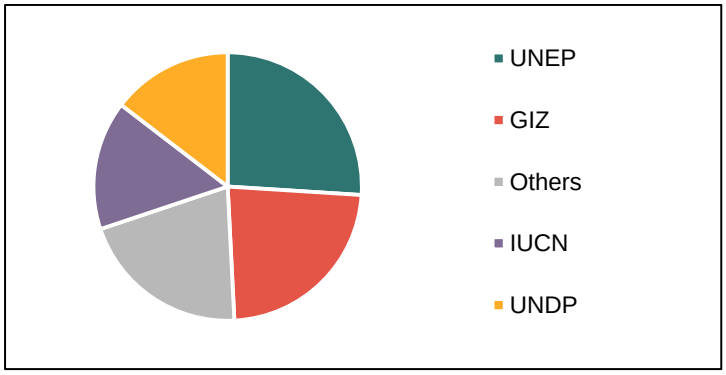
5.5 shows the breakdown of this investment by implementing organization. One international NGO, IUCN, plays a significant role in the delivery of German climate finance in Ghana.

Table 5.15: International REDD+ funding to Ghana by source of funding, 2008 - 2017

Implementing organization	BMUB grant (€)
UNEP	17,830,142
GIZ	15,904,529
Other organizations	14,163,884
IUCN	10,663,822
UNDP	10,000,000

Source: *downloaded from IKI website (http://www.international-climate-initiative.com/en/) on 20th February 2015*

Figure 5.5: Implementing organizations for IKI investments in Ghana and associated project countries



Source: *downloaded from IKI website (http://www.international-climate-initiative.com/en/) on 20th February 2015*

5.12 Conclusions

Climate change relevant budget allocations have been identified under this study across a large number of MDAs, signaling that the mainstreaming of climate change has begun within the public sector in Ghana. However, this spending is not recognized as such in the budget documentation, so although it is consistent with the aims of the NCCP it is not explicitly labelled as such. As challenging is the absence of end-of-year outturn data which would be necessary to assess the credibility of the budget figures.

The low level of budget allocation against the needs identified in the NCCP master plan suggests that MDA budgets will have to see a substantial rise if all the programmes of the NCCP are to be implemented. Already, some ministries are showing a significant proportion of spending on climate change relevant actions, suggesting where institutional leadership may be forthcoming; MWRWH, MLNR, MoFA all show potential in this regard.

Climate change relevant spending is dominated by adaptation actions. This is consistent with the NCCP and reflects the country's needs. On the other hand, government's commitment to increase the proportion of renewable energy is not yet reflected in budget expenditure. Also missing from public expenditure is the contribution being made by international climate funds. The one such fund reviewed by the study disburses its funding completely outside of the national budget system.

Chapter 6. Sub-national analysis of climate change spending

Chapter summary

- The National Climate Change Policy (NCCP) is relatively new and therefore its dissemination has not reached all local governments. The content of the NCCP, and the responsibilities that this document pose upon Metropolitan, Municipal and District Assemblies (MMDAs), were not acknowledged by those officers interviewed in the two districts of this study.
- The National Development Planning Commission guidebook for the Medium-Term Development Plan represents the most significant policy instrument in terms of climate change mainstreaming in both districts studied.
- The Planning Department is the focal point for climate change mainstreaming in MMDAs.
- There is a large difference between budgeted and actual funds received from central government, particularly due to delays in the release of funds from the District Assembly Common Fund (DACF). At the MMDA level, centralization of expenditures is done only at aggregated levels by the Finance Department. Therefore, any analysis of expenditures will be partial and incomplete.
- The NCCP identifies a series of activities to be conducted by MMDAs. In Keta and Atiwa there is experience in implementing community-led sanitation activities and building infrastructure with rural settlements (e.g. roads, footbridges). There is no experience in drainage activities, which could represent a challenge for the implementation of the NCCP Master Plan. Whereas MMDAs are familiar with some of the proposed NCCP activities, there is no conscious link between the implementation of these activities and climate change.
- The NCCP Master Plan highlights the leading role of the Ministry of Local Government and Rural Development as well as the Local Government Service in the implementation of the national climate policy, with a significant share of resources allocated to these institutions. However, their role was found to be not recognized at the MMDA level.

6.1 Introduction

There are 216 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana, distributed in ten regions. An analysis of how much funding within MMDAs is climate change relevant can provide evidence of the linkages between national planning on climate change and local planning and implementation.

This chapter examines two MMDAs: Keta Municipal Assembly and Atiwa District Assembly. These assemblies were selected to illustrate climate finance delivery at the sub-national level; however, they are not intended to be a representative sample of local government. The timeframe to carry out this research was very short (from January to March 2015), and therefore an important site selection criterion was where the team already had established local government contacts that would allow for ease of entry and follow-up data collection. In addition, the selection criteria emphasized the national

ecological regions of the coastal zone and the high forest zone, as guided by the study's oversight committee.

The methodology used included the review of the composite budgets and capital expenditures for 2012 to 2014 for the two DAs; the tagging of climate change relevant expenditures; and semi-structured interviews with assembly staff from climate related offices within the local government units[82].

6.2 Keta municipality and Atiwa district

Keta Municipality is one of the 25 administrative districts in the Volta Region. It is located about 160 km to the east of Accra within the coastal zone. Its economy is based on climate sensitive activities, mainly agriculture, fishing and livestock keeping (KeMA, 2014). The total surface area is 1,086 km^2, including the Keta Lagoon, which is about 12 km at its widest and 32 km long (MLGRD & MPMS, 2006). According to the latest population and housing census (2010) the municipality's population is 147,618 with more than half (53 percent) living in urban areas, making the municipality the most urbanized district in the region. The municipality is low-lying and therefore vulnerable to coastal erosion, flooding and high sea tidal waves. These threaten transport networks, other infrastructure such as power and water supply lines, and the livelihoods of local communities. The finalization of the Keta Sea Defence in 2003 has contributed to reducing the vulnerability of the area to coastal erosion.

The Atiwa District Assembly is one of the 21 district assemblies in the Eastern Region, covering an area of 2,950 km^2. Its economy is also based on agriculture (which employs 59 percent of the labour force). In addition, there are also some services (employing 34 percent) and industrial activities (employing 7 percent of the population) (ADA, 2014). Atiwa District had a population of 110,622 in 2010. The district is rural in nature with fewer people living in towns (33 percent) (GSS, 2013; 2014). The district is sparsely-populated, which has implications for the provision of socio-economic infrastructure and public revenue mobilization. It is located within the moist semi-deciduous forest zone and includes the Atewa Range Forest Reserve covering the Atiwa Scarp and its surroundings. Generally, the land is suitable for intensive agricultural and agro-based industrial activities including food processing, sawmilling and wood processing (ADA, 2014). The district has challenges with regards to deforestation, aggravated by pollution from mining in the Birim river. Additionally, the district lacks a good drainage system which compounds communities' vulnerability to annual flooding[83].

6.3 Political and financial decentralisation in Ghana

The decentralization process in Ghana began with the promulgation of the Local Government Law in 1988 (PNDCL 207) that established district assemblies as the basic unit of local government. This process was further legitimized with the coming into force of the Republic Constitution of 1992 and the Local Government Act of 1993. These provided the legal framework to operationalize the national decentralization policy. Article 254 was inserted into the 1992 Constitution to demonstrate the importance of the decentralization process and the national commitment for further decentralization:

> *'Parliament shall enact laws and take steps necessary for further decentralization of the administrative functions and projects of the Central Government but shall not exercise any control over the District Assemblies that is incompatible with their decentralized status or otherwise contrary to law'.*

[82] These included key personnel such as the Chief Executive, Coordinating Director, Planning Officer, Finance Officer, Environmental Health Officer, Works Engineer; staff of the District Agricultural Development Unit; the District Health Office; the National Disaster Management Organization (NADMO); Fire Service; Wildlife, Department of Parks and Gardens and a farmer in the community. A key member of NDPC was also interviewed.

[83] Interviews with Planning Officer, NADMO Officer and Environmental Health and Sanitation Officer at the district and Analysis of Quarterly NADMO reports.

Districts are demarcated based on various factors including population size, demographic and ethnic characteristics and ability to meet development needs from internally generated sources (Table 6.1). Legislative Instrument 1589 sets out the sub-district structures for effective decentralization: urban, town, zonal, and area councils down to the unit committees. Each district has its own establishing Legislative Instrument (LI) which shows the confines, limitations and boundaries of the district jurisdiction.

Table 6.1: MMDA characteristics

Assembly type	Characteristics
Metropolitan	One local government unit Population size >250,000 It includes sub-metropolitan areas: Population size > 100,000
Municipal	One-town local government unit Population size > 95,000
District	Local government unit with population >75,000 < 95,000

6.3.1 Fiscal Decentralisation/Local Government Financing

Fiscal decentralization involves the transfer of responsibility over expenditure or revenue from central government to lower levels of government (Thomi et al., 2000). In Ghana, some fiscal powers have been transferred to the MMDAs. The 1993 Local Government Act (Act 462) gave legal backing to allow every District Assembly to create and maintain its own sources of revenue. MMDAs generate revenue through different sources, including the District Assembly Common fund (DACF); fees and charges, licenses, rents and investment. They also raise revenue from public-private partnerships and donations (Table 6.2).

Ghana's decentralization process faces a number of challenges. These include inter-ministerial conflicts, particularly around the budget process between the Ministry of Finance and the Ministry of Local Government and Rural Development, as well as conflicts between Members of Parliament and District Chief Executives on how to address their constituents' needs. There is also a high dependence on the DACF as the main source of income in many DAs. Another issue has to do with the political decisions associated with the creation of districts, during which development efficiency was sacrificed for reasons associated with political expediency. Therefore, some districts from the very beginning were unable to sustain themselves in terms of financing public development programmes.

Table 6.2: Description of local government sources of funding

Source of Funding	Description	Means of transfer and use
Central GoG	Central government funds transferred to MMDAs for the decentralized departments	Funds are transferred by the Ministry of Finance to MMDAs sub-consolidated accounts. The funds are used for development and administrative activities, including operations and recurrent expenditure. The funds are transferred to MMDAs on a quarterly basis.
IGF-retained	Revenue collected by the assembly at the local level	Funds are used for administrative expenses and development projects included in annual plans.

District Assembly Common Fund (DACF)	Established through Act 455 in 1994, and currently supported by a 7.5 percent share of total national revenues[84].	DACF is transferred from the office of the common fund administrator to the MMDAS quarterly. The fund is supposed to be strictly used for development projects. However, in 2014 the MMDAs were authorized to use up to 40 percent of the amount for recurrent expenses.
Common Fund (MP)	Members of Parliament use a 4 percent share from the total allocation of the DACF for development projects within their own constituencies. However there is no legal provision for this[85] (Lindberg, 2010; Appiah-Agyekum, et al., 2013).	The decision making on how these funds are used within the Assembly is unknown, but it obeys generally political interests. These funds are generally used for small infrastructure projects such as school buildings, toilets, roofing sheets, boreholes, or for scholarships depending on the needs of each constituency (Lindberg, 2010).
District Development Facility (DDF)	This is a source of funding established by central government and development partners to provide another source of funding for MMDAs	The fund is transferred from the DDF secretariat to MMDAs sub-consolidated accounts. The transfers are done each year depending on the performance of MMDAs.

Source: *Authors' own compilation*

6.4 Climate change policy implementation at sub-national level

Implementation of national policies generally happens at the sub-national level and climate change is no exception. In this section we examine the NCCP and other related policy instruments including the NCCP Master Plan, the National Adaptation Strategy and the Guidebook on Integrating Climate Change and Disaster Risk into National Development, Policies and Planning from a sub-national perspective, analyzing the level of effectiveness for the sub-national delivery of climate change finance.

6.4.1 The NCCP at the sub-national level

The NCCP does not have specific objectives for district assemblies. However, it does identify local level needs. These include having governance mechanisms to address local-level priorities; capacity building for the implementation of local initiatives on climate change; information and research on what works for local people; and strengthening observation systems linked with early warning systems, in particular for rural areas (MESTI, 2014). The NCCP is accompanied by a Master Plan for the period 2015-2020. The Master Plan includes programmes to be led by MMDAs, the Ministry of Local Government and Rural Development, and the Local Government Service. However, it is not made clear how financial resources are going to be transferred to MMDAs. It appears to be assumed that this will happen through the established funding channels.

The NCCP is relatively new and remains poorly known at the local level. For example, from the 12 interviews in Keta, none of the officers were familiar with the content of the NCCP or the responsibilities that this document places upon them. Some officers had heard about the policy, but they had little knowledge on its content. A similar situation was observed in Atiwa where three of the ten interviewed (the District Coordinating Director, the Planning Officer and Fire Service Officer) indicated having heard about the NCCP, having participated in a workshop[86] during which the policy was mentioned.

[84] Allocation should not be less than 5% of annual revenues.
[85] In the 1992 Constitution there is no provision for the MPs Common Fund
[86] At a workshop organized by NDPC where the team from the district that participated included the District Coordinating Director, Planning Officer, Budget Officer, the Town Planning Officer, the District Directors of Agriculture, Education and Health.

6.4.2 The national adaptation strategy at sub-national level

Sub-national level institutions are considered as the implementing entities for the national adaptation strategy, in particular at the district level. The implementation of this strategy relies on financial support from a mixture of sources, with a high expectation on international financial resources, in particular the Adaptation Fund (MESTI, 2012). However, the Adaptation Fund currently has a US$ 10 million cap per country, and is project-based, so it will not be sufficient to support the implementation of Ghana's adaptation strategy.

6.4.3 Climate change in sub-national development planning

The Guidebook on Mainstreaming Climate Change and Disaster Risk Reduction into National Development Planning was developed by the EPA in collaboration with NDPC and NADMO, with financial support from UNDP (MESTI, 2014). This NDPC guidebook suggests a 5-step process to integrate disaster risk reduction (DRR) and climate change into the planning process at the district level. This process should result in projects or programmes being included within the district composite budget (Nelson, et al., 2010). This is done under the assumption that all planning activities will then be funded. However, financial sources are not clearly identified or are linked loosely to the District Assembly Common Fund (DACF). Even in the cases where the planned mainstreaming is sourced through internal generated funds (IGF), implementation is challenged by the very limited funding capacity at district level.

The NDPC guidebook for the Medium-Term Development Plan (MTDP) represents the most significant policy instrument in terms of climate change mainstreaming in Keta and Atiwa districts. Six regional workshops were organized in 2011 to introduce the tool and use the guidelines to prepare the 2014-2017 MTDP (EPA, 2011). These guidelines include the topic of climate change among the cross-cutting issues required and therefore climate change activities should be included in the planning process. However, only the Assistant Planning Officer and the Finance Officer appeared to recognize this guidebook in Keta, while in Atiwa only the Planning Officer was familiar with the guidelines.

6.5 Institutions for climate finance delivery at sub-national level

In this section we analyze the institutions that deal with climate change at sub-national levels. The structure of the MMDAs is presented and the NCCP implementation arrangements are used as a guide to identify key climate change units.

6.5.1 The Municipal and District Assembly (MMDA) Structure

Under the Decentralization and Local Government System in Ghana, the MMDA structure can be divided in two dimensions depending on the level of control at the MMDA. Schedule 1 Departments are those under the management of the MMDA, whereas Schedule 2 Departments are under the control of central government. For the purpose of this study, the following Schedule 1 departments were considered as being climate change relevant: (a) Works, (b) Agriculture and (c) Waste Management (d) Urban Roads and (e) Transport; whilst (a) Disaster Prevention and Management, (b) Natural Resource Conservation, (c) Health and (d) Planning are considered relevant Schedule 2 departments (Table 6.3).

Table 6.3: Schedule 1 and 2 Departments in MMDA

Schedule 1 Departments	Schedule 2 Departments
• Central Administration • Works • Agriculture • Social Welfare and Community Development • Legal • Waste Management • Urban Roads • Budget and Rating • Transport	• Planning • Trade and Industry • Finance • Education, Youth and Sports • Disaster Prevention and Management • Natural Resource Conservation • Health (including the Environmental Health Unit)

Source: *The Composite Budget of the Keta Municipal Assembly for the 2015 Fiscal Year (KeMA, 2015)*

The Environmental Protection Agency (EPA) is the national government focal point for climate change. However, the EPA is an authority without an institutional structure at the MMDA level. Evidence that funding was transferred for climate change related activities from the EPA to MMDAs was found for Keta Municipal Assembly during the present study. However, this funding was not within a programmatic approach, but was for a single project, the Africa Adaptation Programme (AAP) during 2012-2013. In the case of Atiwa there was no transfer of funds from the EPA as Atiwa was not part of the AAP.

In Keta there is no district committee for climate change, although there are some *ad hoc* climate change committees for specific projects. For example, there was a project-related climate change committee during the AAP, and there is one now for the implementation of a project on health and climate change[87].

Similarly in Atiwa, after severe floods devastated the district in 2011, a 21-member Disaster Risk Reduction and Climate Change Adaptation (DRRCCA) Committee was set up in 2012 to take charge of planning and the drawing up of a District Disaster Preparedness Plan to reduce the effects of natural disasters. However, the statutory District Disaster Management Committee (DDMC)[88] also in existence since 2012 is responsible at the local level for disaster preparedness, responsiveness and implementation. There is also a sub-committee on Agriculture and Environment in the assembly to which related issues are referred, leading to some overlap in terms of institutional lead on climate change issues.

The main strategy around climate change and local level development is to mainstream climate change into development planning (Nelson, et al., 2010). According to the EPA guidebook, the focus is on the district planning coordination units (DPCUs). There are plans to set up EPA offices at MMDA level by 2020 (Adam, 2014), however, the current focal point on climate change at the local level is the Planning Officer.

In Keta Municipal Assembly, both the Municipal Chief Executive and the Coordinating Director have a personal understanding of climate change, but they both advocated for more institutionalized mainstreaming, including financial resources for the MMDA through the DACF, in a similar way to the two percent allocation for activities with People with Disabilities (PWD). Capacity on climate change within the MPCU in Keta was developed by the NDPC through the activities of the Africa Adaptation Project (AAP)[89], which included capacity building workshops. In Keta, climate change is an additional

[87] Also funded through UNDP.

[88] This committee is legitimised by Section 15 of Act 517, 1996. It has the following as members: the District Chief Executive as chair, the Atiwa Constituency MP, the District Director of Health Services, District Information Officer, District Police Commander, the District Fire Officer, the Assembly Member(s) of the area affected by a particular disaster and the District NADMO Coordinator as secretary. The committee has the Planning Officer, Budget Officer, Works Engineer, MoFA Director and others as seen fit as co-opted members

[89] The AAP was a global project financed by the Japanese Government, administered by UNDP, and implemented by the EPA between 2010 and 2012. The Ghana chapter (US$ 2.7 million) included a test case of translating policies into local actions, including mainstreaming of climate change into district level planning and budgeting and research on indigenous populations (AAP, 2013). The AAP included training on

task for the Planning Officer that is considered during the development of the Composite Budget. This has guaranteed the inclusion of climate change relevant activities within the budget.

A similar situation pertained in Atiwa, where the Planning Officer is responsible for the integration of climate change issues in the Atiwa Development Plan. He participated in a workshop organized by the Ministry of Finance in collaboration with the NDPC and the AAP on integrating climate change into development planning. The Coordinating Director and the Planning Officer[90] also had an understanding of climate change issues, but had yet to see a hard copy of the NCCP[91]. In their view, the financing of climate change activities has been left to the discretion of the DPCU and local politicians. They advocated for a statutory allocation of funds for climate change activities, as is the case for People with Disability under the DACF, rather than leaving the allocation on a discretionary basis. Until that is done, they were of the opinion that not much headway would be made.

6.5.2 Schedule 1 departments

The Agriculture Department is within Schedule 1. This means that the planning and budgeting for the Department is done at MMDA level through the composite budget. However, the Ministry of Food and Agriculture (MoFA) at central government level remains in control of agricultural programmes, including the Fertilizer Subsidy Programme and the Irrigation Development Programme (Mogues & Owusu-Baah, 2014). According to the NCCP, irrigation activities can be considered as climate change relevant actions, however the main financial source for these activities is under the control of the central government. Keta is not part of the national Irrigation Programme, and irrigation is funded mainly by financial contributions made by local farmers.

All infrastructure construction, maintenance and operation is administered and executed by the Works Department, under Schedule 1. For example, the maintenance and operation of the Keta sea defence is under the management of this department. Thus far, this department has not applied any retrofitting due to climate change considerations. In Atiwa, the major issues under this department have to do with the relatively poor drainage system that contributes to erosion which threatens housing structures. Some footbridges have been recently constructed over small rivers to enable the movement of people during flooding.

6.5.3 Schedule 2 departments

Within local perceptions, one of the main offices related to climate change at the Municipal level is the Wildlife Office. This office is part of the Schedule 2 Departments and depends directly on the Forestry Commission (under the Ministry of Lands and Natural Resources). It therefore works with support from a central government office, rather than the Administration of the Municipal Assembly.

NADMO is also a Schedule 2 Department, and it works as a representative section of the National Disaster Management Organization. The main activities of the NADMO office in Keta and Atiwa are around flood preparedness and response to emergencies. It was observed that the NADMO office in both districts works mainly with financial support from the Assembly and the DACF, with the national office helping out in some, albeit limited, cases. The office in Keta had also been involved in the Emergency Preparedness Plan of the Volta River Authority, which had included some climate change-related information. In Atiwa, the committee that was set up to take charge of planning and the drawing up of a District Disaster Preparedness Plan had met only once since its inauguration.

Health is also a Schedule 2 Department. The only climate change relevant project in Keta Municipal Assembly as of January 2015 is the Health Adaptation Programme (also known as the Climate Change and Health project). This is a project funded by the GEF through UNDP with the Ministry of Health being the main executive entity. This project has established the Keta Climate and Health Committee.

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mainstreaming CCA and DRR in 2011 for all 170 districts, and through high level interactive workshops. Keta District was also one of the pilot districts for implementing adaptation projects at community level, including the Construction of 2 footbridges in Suipe and Agorvinu communities, for improve access to farms, markets and schools. Training with MDAs was done in collaboration with NDPC.

[90] The District Chief Executive was not interviewed due to his unavailability during the field visit.

[91] The Planning Officer indicated having a soft copy of the NCCP.

The only climate change activity in Atiwa in the area of health is the water harvesting and conservation system provided for by the assembly to the two health centres (the main district hospital and one other health centre).

6.5.4 Non State organisations

There is a limited interaction between non State actors and the local government departments in Keta and Atiwa. Most of the interviewed departments in Keta work only with funding received through the Assembly or by direct transfers from central government. Some departments receive funding for specific projects through international cooperation, such as UNDP (working with the Planning Department and the Health Department) or GIZ (working with the Agriculture department). In Atiwa there is much less interaction with NGOs on climate change relevant activities, with only two projects that have any element related to climate change (Table 6.4).

Table 6.4: Non State organisations working with climate-related departments in Keta Municipal and Atiwa District Assemblies

MMDA	Department	Non State Organisation	Projects / activities
Keta	Wildlife	The Development Institute	Wetland governance and tree planting
		A Rocha	IUCN project in the Eastern Coast
		ATIDEV Initiatives	Mangrove planting with communities (AFD funded)
		SNV	Mangrove planting and improved cookstoves
	Agriculture	GIZ	Energizing Agriculture for Development
	Health	UNDP	Climate change and health issues
	Planning	UNDP	Africa adaptation programme
Atiwa	Planning	World Bank	Ghana Social Opportunities Project, which includes the planting of citrus trees
	Agriculture	West Africa Agricultural Productivity Project	Improved planting material and tree planting

6.6 Climate Finance Expenditures at sub-national level

6.6.1 Income sources at local level

For municipal and district assemblies, funding sources include the District Assemblies Common Fund (DACF), the District Development Facility (DDF), budgetary allocations or transfers from central government (these are the budgets from decentralized departments and salaries transfers for DA staff) and Internally Generated Funds (IGF) (MLGRD, 2010). Table 6.5 and 6.6 provide the assembly budgets for the year 2011 - 2014. It can be seen that funding received each year is generally less than that budgeted for, there being a larger divergence in Atiwa.

Table 6.5: Keta municipal assembly annual budget

Year	Estimated expenditure (GH₵)	Incurred expenditure (GH₵)	Percent incurred
2011	3,189,340	4,112,925	129
2012	7,081,681	2,600,229	37
2013	5,994,889	4,587,902	77
2014	7,834,809	5,994,889	77

Source: *Keta MPCU, 2015*

Table 6.6: Atiwa district assembly annual budget

Year	Estimated expenditure (GH₵)	Incurred expenditure (GH₵)	Percent incurred
2011	5,524,860	1,569,438	28
2012	7,432,814	2,712,280	36
2013	6,330,207	3,845,241	61
2014	6,370,054	4,265,985	67

Source: *Atiwa DPCU, 2015*

6.6.2 Keta Budget and expenditures for climate change activities

A classification of the budget activities to see what corresponded with activities suggested by the NCCP as climate change relevant was carried out for the Composite Budgets in Keta Municipal Assembly for the years 2011 to 2014. From the total budget for Keta Municipal Assembly, climate change relevant activities accounted for 29 percent in 2012, 10 percent in 2013 and 9 percent in 2014. The main expected source for climate change relevant activities is the DACF for all years. In 2012, a significant share of the budget (42% of the total budget for the Municipal Assembly) was allocated for contingency and disasters management. However, how much of this budget was actually received from central government is unknown.

According to the budget information, the transfers from the Central Government and the DACF are the main sources for 'soft' climate change relevant activities, including capacity building at the community level to encourage behavioural change on environmental sanitation processes, and general awareness raising workshops on climate change. The other sources in the budget support investments in infrastructure only.

Monitoring of the expenditures at activity level is carried out by the planning office, rather than by the Finance Department (which only deals with aggregated spending). In Keta, data on expenditure was incomplete, with information available accounting for 20 percent for 2012, 40 percent for 2013 and approximately 48 percent of the total DA budget for 2014[92]. Expenditure data accessed account only for 'hard' measures (e.g. infrastructure) and there is no evidence on expenses for 'soft' measures (e.g. capacity building). The Assistant Planning Officer declared that if it is not recorded it is possible that the activities had not taken place, but given the gaps in the expenditure data it is not possible to be certain if these activities were not executed or were just not registered.

[92] We estimated the budget information up to December, as information was only available as of June.

In relation to the activities identified by the NCCP as climate change relevant (Table 6.7), there is regular activity on sanitation (capacity building) and water supply, funded by the DACF. However, irrigation practices and latrines are mainly done with farmers' own resources, with only technical assistance support from the MOFA or the DACF, respectively. There is not a conscious link between the implementation of these activities and the issue of climate change.

Improved transport services to rural areas focus mainly on small scale roads, footbridges, and general road improvements. These have been supported by the DACF, the DDF and the Urban Development Grant (UDG) in Keta. Investments in water supply are mainly extensions for water supply, also supported by the DACF, DDF and UDG.

Table 6.7: Keta – Climate change relevant expenditure by NCCP activity for sub-national levels

Climate Change Relevant Activity	2011 (GH₵)	2012 (GH₵)	2013 (GH₵)	2014 (GH₵)	Total (GH₵)
Improve transport services to rural areas	164,824		160,068	221,437	546,329
Plan for investments in minor repairs as well as major renewal, replacement, and expansions of water supply service to peri-urban settlements and small towns		55,916	37,308	32,366	125,590
Promote/scale up community-led total sanitation	33,941	172,372	373,295	239,514	819,121
Total	198,765	228,288	570,671	493,317	1,491,041

Sources: *Expenditures collected for 2011, 2012, 2013 and 2014*

6.6.3 Atiwa Budget and expenditures for climate change activities

A classification of the budgeted activities within the annual audit reports in Atiwa District Assembly was carried out for the years 2011, 2012 and 2013[93]. Activities that could be related to climate change according to the NCCP Master Plan accounted for 7 percent, 6 percent and 3 percent of the district's budget in 2011, 2012 and 2013 respectively.

In Atiwa, expenditures identified as climate change relevant according to the NCCP Master Plan (Table 6.8) include (a) improve transport services to rural areas, (b) investment in water supply services to peri-urban settlements and small towns, and (c) promotion of community-led sanitation (including the construction of public latrines and toilets). In addition, there is also information on how much was spent on general disaster management, which mainly had to do with flooding, deforestation and fires.

Improved transport services to rural areas focus mainly on the improvement of feeder roads and the maintenance of smaller roads. A specific activity on construction of drainage on Kwabeng town roads has also been identified. All these activities have been funded only by the DACF. This has led to challenges for implementation due to delays in transferring resources[94].

[93] The Annual Audit Report for the financial year 2014 was not officially out by January 2015 and hence it was unavailable to the research team

[94] The DACF for 2014 was not released until January 2015 when the first quarter amount for 2014 was paid.

Table 6.8: Atiwa – Climate change relevant expenditure by NCCP activity for sub-national levels

Climate Change Relevant Activity	2011 (GH₵)	2012 (GH₵)	2013 (GH₵)	Total (GH₵)
Improve transport services to rural areas	152,349	35,408	111,494	299,251
Plan for investments in minor repairs as well as major renewal, replacement, and expansions of water supply service to peri-urban settlements and small towns	180,733	-	-	180,733
Promote/scale up community-led total sanitation	19,170	4,989	-	24,159
Disaster Preparedness and Response	18,537	2,060	-	20,597
Total	370,790	42,457	111,494	524,741

Sources: *Expenditures collected for 2011, 2012 and 2013*

6.7 Conclusions

For the two local governments reviewed by this study it was found that the District Planning Office was the only department explicitly mainstreaming climate change into their work programmes. In this regard no difference could be discerned between Schedule 1 and Schedule 2 departments. National programmes remain under the control of the central government, requiring coordination between the central and local levels to ensure that climate change is being mainstreamed through such programmes.

There is a clear need for capacity building on the NCCP and what it means for MMDA departments. The NCCP is the instrument that provides direction on the national response to climate change, but without specific guidance reaching the MMDAs there is a high risk that the implementation of public programmes will continue with 'business as usual'. The need for mainstreaming climate change issues goes beyond just the incorporation in the composite budget, to include changes in project design, particularly for those activities that link to the NCCP.

The role of the Ministry of Local Government and Rural Development appears not to be well understood. All the Department personnel interviewed said that they do not receive support from the MLGRD.

Chapter 7. Climate finance in Ghana: conclusions

7.1 Measuring climate change relevant expenditures

Ghana is in a strong position with a well-developed national climate change policy and associated master plan that has identified focus areas and supporting actions. This comprehensive planning effort provided a framework for the study team to identify climate change relevant actions that had been nationally determined. This list is more comprehensive than that encountered in previous national studies on climate finance delivery[95]. It therefore allowed the study team to make a rapid determination of climate change relevant actions even where these were not explicitly labelled as such in the national budget documentation (Annex 2). This listing of relevant actions also provides a sound foundation on which to build any financial tracking system of spending on climate change.

However, the present analysis is limited to those resources that are recorded in the national budget. Additional funding channels are difficult to review and assess. This applies not only to domestic extra-budgetary funds, but also to international sources of climate change finance. As a result, a summary of all development partner funded climate change relevant expenditure is not possible at the present time**.** This constraint particularly applies where project implementation takes place outside the national public finance management system, with such projects effectively running in parallel with government systems.

7.2 The present scale of climate change relevant expenditure

The level of expenditure on climate change depends on the priority given to this policy area by government. Our analysis indicates that climate change relevant spending through the national budget is at a very low level, something which is not consistent with the trajectory required by the NCCP. The estimated level of spending assumes that the credibility of the budgeted expenditure is high, something which could not be assessed in the present study as the relevant outturn expenditures were unavailable. Should this prove not to be the case, then the actual financial resources available for climate change actions will have been even less than that reported.

Almost all climate change funding is being directed at policy objectives that are consistent with the goals of the NCCP, but are not explicitly labelled as climate change actions.

For several of the ministries highlighted in the NCCP master plan, the projected spend associated with the NCCP would transform the ministry. The MLNR projected climate change spending is more than double its 2015 budget allocation; the biggest proposed increase would be for the Ministry of Gender, Children and Social Protection, where the ministry's annual budget would need to increase almost ten-fold over the present budget allocation. This represents the very significant ambition of the NCCP, but also poses a challenge to timely implementation.

[95] See References

7.3 Recommendations to help guide the effective allocation of resources for climate change

One of the strengths of the NCCP has been a clear identification of policy areas, focus areas and actions. However, what is less clear is the prioritization of the many proposed actions, their timing and sequencing. In addition, how to mobilize the necessary funding to support these actions has not been stated. There is therefore a need to develop a coherent funding strategy for the NCCP. The development of such a strategy should be led by the Ministry of Finance whose leadership role on climate finance would be strengthened as a result.

The NCCP supports existing national development plans (and vice versa) as a result of having been developed in a consultative and inclusive manner. However, the NCCP did not identify measures that would ensure the delivery of climate change finance happens in an open and transparent manner. This should be a component of the national climate change funding strategy.

In addition to the challenges facing the implementation of the NCCP, a second major task concerns the coordination of the many national efforts underway to address climate change. With the dormancy of the National Climate Change Committee there is a pressing need for a national forum that would promote the interchange of information across line ministries so as to minimize the danger of duplication of effort and wasted resources. Additional oversight of national actions could come about with the establishment of a parliamentary select committee on climate change. Such a committee would need to draw on expertise from beyond the natural resources sectors to ensure that climate change was framed in the first instance as an economic development issue that threatens the growth of the whole economy.

A final strategic challenge lies in the tracking of actual climate change related expenditures. The Ministry of Finance should see to the implementation of climate sensitive budgeting in the medium term, as captured in paragraph 449 of the 2015 budget statement and economic policy, and develop frameworks on reporting actual spending as per the national budget and composite budget (GOG funds, DP funds, IGF, etc.) for MDAs and MMDAs respectively and ensure compliance. Further, the NRECC Unit at the Ministry of Finance should oversee a national tracking tool for climate change finance that captures relevant end-of-year outturn expenditures, since climate change relevant expenditure is currently not recognized through any specific tagging of expenditure within the national budget. This mandate may need to be backed by a legislative instrument to ensure compliance from all MDAs. The MoF also needs to set out guidelines or policies for the mobilization of external resources for climate change and green economy related programmes and projects. Such measures should promote transparency and accountability in the mobilization, allocation and utilization of such resources.

Lastly, capacity on climate change financing should be built among all stakeholders including, the NRECC Unit at MOF, parliamentarians, planners, budget officers, finance officers, accountants at the MMDAs and MDAs as well as private practitioners and CSOs.

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Chapter 1

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Annex 1. Measuring the effectiveness of public climate finance delivery at the national level[96]

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 recognize 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.

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.
- 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 channeled, e.g. the national budget and other funding mechanisms. Such funding supports activities, projects and programmes that are recognized 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

[96] Adapted from http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8303.pdf

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.

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.

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 recognized 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 characterized 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 A1). 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 A1: Policy-related effectiveness principles, criteria and indicators (PCI) for climate finance delivery

Principle	Criteria	Indicators
Climate change policies shall be designed for ease of implementation.	• Policy objectives are clearly expressed.	• 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.
	• Subsidiary instruments for implementation accompany the policies.	• 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.
The legitimacy of climate change policies shall be recognised by stakeholders.	• Key stakeholders' interests are represented in policy-making processes.	• 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.
	• Policy-making is evidence-based.	• 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.
Climate change policies shall be coherent with	• Policy statements on climate change	• Reference is made to national development in the national climate change policy.

national development policies.	acknowledge national development goals.	
	• Climate change actions are consistent with strategies and planning processes for national development.	• Climate change strategy documents and national development goals refer to each other.
Climate change policies shall promote transparency in climate finance delivery.	• Climate change policies provide for the establishment and operationalisation of mechanisms and modalities to promote transparency.	• Mechanisms and modalities exist to promote transparency of climate finance.

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 organization 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 organizations 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 channeled through extra-budgetary funds, donor agency programmes and civil society organizations, 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 A2 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 A2. Institutional effectiveness principles, criteria and indicators (PCI) for climate finance delivery

Principle	Criteria	Indicators
A national mechanism shall exist for coordination between institutions involved in climate finance delivery.	• Leadership of the national response to climate change in terms of climate finance delivery is established within the government administration.	• 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.
	• The roles played by actors in the delivery of climate finance are known by key stakeholders	• All mandated national institutions report their expenditures on climate change activities each financial year.
	• Other actors within the policy making process outside government (e.g. the legislature, party-governing committees) review and challenge policy.	• 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.
	• Institutional arrangements are in place for inter-agency collaboration	• Mechanisms for inter-agency collaboration between climate change institutions and other national institutions can be identified. • Reports on inter-agency collaboration and climate financed activities are available to the public.

Institutions shall demonstrate a strong ability to change and innovate	• The national response to climate change facilitates the adoption of change and promotes innovation.	• 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).
Climate change institutions shall be anchored at the local level	• Institutional arrangements respond and adapt to local needs.	• Funding is directed within the national budgetary system to local climate change institutions.

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 prioritization 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, authorize 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 Asia[97] 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 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.

[97] http://www.aideffectiveness.org/CPEIR

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 A3 details criteria and indicators that are relevant to assessing present day practice against these four principles for public expenditure management.

Table A3. Public expenditure effectiveness principles, criteria and indicators (PCI) for climate finance delivery

Principles	Criteria	Indicators
Climate change expenditure shall be planned and budgeted for in the annual budget formulation process.	• Budget preparation captures the actors involved in climate-related expenditures.	• 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).
	• Budget preparation identifies key climate-related expenditure. •	• 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.
	• Budget preparation captures climate-related expenditure in a medium-term policy framework.	• The government has a medium-term policy and expenditure framework for key areas of spending, including climate-related expenditure.
	• Budget preparation takes into account the findings of the evaluation and monitoring of government programmes.	• The key recommendations of any monitoring and evaluation exercises for climate-related programmes are considered.

Climate change expenditure shall be executed through government systems during the budget year.	• The Ministry of Finance manages cash flow to ensure that resources are available to spending agencies in line with the approved budget.	• Cash is available to agencies to fulfil their climate-related commitments in line with the approved budget.
	• In-year adjustments to the budget are done only when unavoidable and aim to maintain delivery on the government's budget priorities.	• Spending agencies maintain oversight of their climate-related operations to manage any unexpected financial shocks.
	• Climate funds are spent in line with the planned budget.	• Expenditure tracking reports against the budget for climate-funds are available to fund management committees to meet in-year reporting requirements.
Climate change-related expenditure shall be subject to reporting and accounting.	• Government accounts for all expenditure, including climate-related expenditure, are undertaken.	• 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.
Climate change-related expenditure shall be subject to external oversight and scrutiny.	• Government accounts are audited.	• 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.
	• The legislature reviews government accounts and audit findings and provides challenge and scrutiny.	• 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.

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, emphasizes 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 relevant policy objectives and budget codes, 2011 – 2014

Years in which budget code appears				Budget Code	Policy Objective	Climate Change Relevance	Ministries with recorded expenditure			
2011	2012	2013	2014				2011	2012	2013	2014
	*	*	*	30101	Improve agricultural productivity	Medium		MoFA, MESTI	MoFA, MESTI, MoFAD	MoFA
	*	*	*	30103	Reduce production and distribution risks	Medium		MoFA	MoFA	MoFA
	*	*	*	30104	Promote crop development for food security	Medium		MoFA	MoFA	MoFA
0032	*	*	*	30105	Promote livestock development for food security	Medium	MoFA	MoFA	MoFA	MoFA
0036	*	*	*	30201	Restoration of degraded natural resources	Medium	MLNR	MLNR, MESTI, MoFA	MLNR, MESTI	MLNR, MESTI
0037					Promote sustainable natural resource management	Medium	MLNR, MESTI, MoFA, MWRWH			
0038	*	*	*	30203	Institutional framework for sustainable use	Medium	MESTI	MLNR	MLNR	MLNR
	*	*	*	30301	Reduce the loss of biodiversity	Medium		MLNR, MESTI	MLNR	MLNR
	*	*	*	30401	Maintain and enhance protected area system	Medium		MLNR	MLNR	MLNR
		*	*	30402	Strengthen the legal framework on protected areas	Medium		MLNR	MLNR	MLNR
	*	*	*	30501	Reverse forest and land degradation	Medium		MLNR	MLNR	MLNR
	*	*	*	30502	Encourage appropriate land use and management	Medium		MLNR	MLNR	MLNR
	*	*		30601	Improve investments in control structures and technologies	Medium			MLNR	
		*		30603	Improve knowledge on appropriate coastal resources management	Medium			MESTI	
	*	*	*	30701	Ensure sustainable use of wetlands and water resources	Medium			MLNR	MLNR
		*	*	30901	Enhance community participation in NR management	Medium			MLNR, MESTI, MoI	MLNR, MESTI, MoI
	*			30902	Enhance community participation in NR governance	Medium		MLNR		
	*	*	*	30903	Strengthen and develop local capacity	Medium		MLNR, MESTI	MLNR, MESTI	MLNR, MESTI
	*	*	*	31001	Enhance capacity to adapt to climate change impacts	High		MLNR, MGCSP	MLNR, MoLGRD	MLNR
	*	*		31002	Mitigate the impacts of climate variability and change	High		MESTI	MLNR,	

									MESTI	
	*	*		31003	Use low carbon growth as a specific approach to development	High		MESTI	MLNR	
	*		*	31101	Enhance capacity to mitigate and reduce risk	High		MLNR, MGCSP		MLNR
	*	*		50102	Create and sustain an efficient transport system	Medium		MoLGRD	MoLGRD	
	*	*	*	50106	Ensure sustainable development in transport sector	Medium		MoRH, MoT	MoRH, MoT	MoRH, MoT
0082	*	*	*	50304	Provision of quality met data	Medium	MoC	MESTI, MoC	MESTI, MoC	MESTI, MoC
0097	*	*	*	50502	Increase the proportion of renewable energy	Medium	MoEP	MoEP	MoEP	MoEP
	*	*	*	50504	Options for renewable energy	High		MESTI	MESTI	MESTI
	*	*	*	50607	Promote new mixed commercial/ residential housing units	Medium		MoWRWH	MoWRWH	MoWRWH
	*	*	*	50608	Promote resilient urban infrastructure development	Medium		MoWRWH	MoWRWH	MoWRWH
0047	*	*	*	50609	Promote private sector participation in disaster management	Medium	MInt	MoWRWH, MInt	MoWRWH, MInt	MoWRWH, Mint
	*			50611	Facilitate the sustainable use and management of key natural resources	Medium		MoWRWH		
0053	*			50801	Minimise the impact and develop adequate response strategies to disasters	Medium	MoTI, Mint	MInt		
	*	*	*	51101	Ensure efficient management of water resources	Medium		MoWRWH	MoWRWH	MoWRWH
0060	*	*	*	51102	Accelerate provision of adequate, safe and affordable water	Medium	MoWRWH	MoWRWH	MoWRWH	MoWRWH
	*	*	*	51103	Accelerate provision of adequate, safe and affordable water	Medium		MoLGRD	MoLGRD	MoLGRD
		*	*	51105	Water and environmental sanitation delivery	Medium			MoWRWH, MGCSP	MoWRWH, MGCSP
0065					Ensure sustainable financing of environmental sanitation services	Medium	MoTI			
	*	*	*	51107	Ensure sustainable financing of the sector	Medium		MLNR	MLNR	MLNR
	*	*	*	70408	Enhance regulatory framework and coordination	Medium		MESTI	MESTI	MESTI
0229	*	*	*	71109	Improve government commitment to international protocols	Medium	MESTI	MESTI	MESTI	MESTI
	*		*	00000	Unspecified (Program 013003 - Forest and Wildlife Development & Management)	Medium				MLNR
			*	00000	Unspecified (Program 012002 - Food Security & Emergency Preparedness)	Medium				MoFA
			*	00000	Unspecified (Program 010002 - Economic Policy Management)	Medium				MoF
			*	00000	Unspecified (Program 037002 - Conflict and Disaster Management)	Medium				MInt

Source: Ministries' Medium Term Expenditure Framework reports for 2011-13, 2012-14, 2013-15 and 2014-2016

Endnotes

Chapter 2

[i] According to the Head of Climate Change and Sustainable Development at MESTI 'Every group of people were involved in the NCCP formulation and that led to the delay in coming out with the final version. In fact, in my opinion we over-did the consultation. Due to the extensive consultation, the NCCP is fully accepted as nobody disputes anything in it. For instance, before it was launched people were fully aware of its content' (Key informant interview: 01/03/2015).

[ii] According to the assistant to the Head of Climate Change and Sustainable Development at MESTI 'The consultants who worked on each of these specific focus areas are people who have done a number of projects and a number works on those areas. So they already knew the projections of budget spending in these kinds of activities' (Key informant interview: 04/3/2015).

[iii] 'These budgets run for a 6-year period, 2014 to 2020. Now let's take the population of Ghana (25 million) and assuming you want to implement a project on gender issues, it means that each person may get 65 pesewas in a day. So if you look at this budget it is on the low side. But then if you consider the financial implications, you know it is not easy to get money…so there was a compromise in the process. In actual fact, those budgets that are there are on the low side' (Key informant interview with assistant to the Head of Climate Change and Sustainable Development at MESTI, 04/3/2015).

[iv] According to one personnel at the Climate Change Unit at MoF 'In the last validation workshop that I attended, it was an issue that I myself raised as to how they arrived at those estimates' (Key informant interview: 05/3/2015).

[v] 'During the last validation of the NCCP and NCCS, the issue of how to fund climate change came up and we have developed two pages write-up on financing, that is, how to finance CC activities. Even though the final copy is ready because validation has been carried out, it has not been printed yet. In principle therefore, I can say that strategies have been outlined to finance CC in Ghana' (Key informant interview with the Head of Climate Change and Sustainable Development at MESTI, 04/3/2015).

[vi] 'To be honest, our consultation had been very extensive. In fact, I have not seen any policy that has gone through that level of consultation. Every group of people were involved and that led to the delay in coming out with the final version of this current NCCP' (Key informant interview with the Head of Climate Change and Sustainable Development at MESTI, 04/3/2015).

[vii] According to the scientific lead on the formulation of the NCCP 'Climate change has been mainstreamed into all sectors and government level actors' (written response to key informant interview questions: 07/3/2015).

[viii] 'Oh, yes, there is a great coherence of the national response to climate change across all the sectors. Climate change issues have become cross-cutting and sectors are supposed to carry out their development activities in ways that are compatible to climate change' (Key informant interview with a deputy director within the Planning and Coordination Unit at the National Development Planning Commission (NDPC): 08/3/2015).

Chapter 3

[ix] According to the Head of Climate Change and Sustainable Development at MESTI "Ghana as a country has been participating seriously in the international climate change negotiations for a very long time" (Key informant interview: 01/03/2015).

[x] "With the FOAT system...we realized that there are a number of indicators and all the districts were quite enthused about the FOAT because it was performance based. If an MMDA did well it had more money...or the amount of money an MMDA received was tied to performance. So the better the performance the higher the amount an MMDA got. So all of them took it seriously and we said to ourselves look, let's get climate change as an indicator into the FOAT system. And as I speak now, we managed to get an indicator into the FOAT

system" (Key informant interview with a Deputy Director within the Planning and Coordination Unit at NDPC: 8/3/2015).

[xi] "In recognition of the important role that civil society plays in natural resource and environmental governance in Ghana, the Government of Ghana and development partners, under the Natural Resources and Environmental Governance (NREG) framework (initially funded by the Embassy of the Kingdom of the Netherlands, the UK Department for International Development (DFID), the European Union, the French Development Agency, and the World Bank) supported the establishment of a Natural Resources and Environment (NRE) sector-specific support mechanism for civil society organisations, to enhance their role and participation for effective natural resources and environmental governance in Ghana. This NRE CSO support mechanism is known as 'Kasa', literally meaning 'speak out' in Twi. The Kasa framework supports capacity-building of CSOs, coalitions/networks for coordinated engagement and evidence-based advocacy for transparency, accountability and policy responsiveness in natural resources and environmental governance"(MESTI, 2013:53).

[xii] According to personnel at the Climate Change Unit at MoF "Various ministries and agencies are unwilling to share important information on climate change projects that are being handled by them. Generally, it is very difficult when it comes to disclosing funds received; expenditures and so on, in this country. Many institutions shroud these things in secrecy and it is unclear why they do that" (Key informant interview: 05/3/2015).

[xiii] "Whatever coordination I am doing with other sectors is informal, just because I want things to progress. Otherwise, the formal coordination body of climate change in the country is the NCCC, which is non-functional" (Key informant interview the Head of Climate Change and Sustainable Development at MESTI: 01/03/2015).

[xiv] "You know we have the National Climate Change Committee, which has actually not been biting as they will say. It has actually not been functioning. I used to be a member but when I left in 2010… since then I haven't heard anything like meetings" (Key informant interview with a Deputy Director within the Planning and Coordination Unit at NDPC: 8/3/2015).

[xv] According to the Head of Climate Change and Sustainable Development at MESTI "The minister of MESTI has agreed that there is a need for a Climate Change Centre (CCC) to be set up because the NCCC is too weak while the CCC will be a bit stronger to play the functions of the former" (Key informant interview: 01/03/2015).

[xvi] "We have trained MMDAS…there are some MMDAs we've trained including, for example Atiwa and Keta that are functioning very well as pilot districts. When you go there you see things for yourself. However, there are challenges. For instance, personnel are not stable due to frequency of transfers...you have new personnel coming in, while others are going out. Also remember there are over 216 MMDAs making it impossible to train all of them. Moreover some already trained personnel are retiring…I think the person we trained in Keta is retiring soon; however, the question is who has he trained to take over? Thus, sometimes the human beings are not even there, worsened by lack of knowledge transfer. Additionally, resources are scarce to enable comprehensive trainings…you will have good plans, but the money to use to run the training is lacking" (Key informant interview with a Deputy Director within the Plan and Coordination Unit at NDPC: 8/3/2015).

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ISSN (online): 1759-2917
ISSN (print): 1759-2909

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Cover image: Although hydro-electricity is a clean form of energy generation, its supply is threatened by climate change on account of changing rainfall patterns and higher temperatures. Such changes will impact on public expenditure'.

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This material has been funded by UK aid from the UK Government, however the views expressed do not necessarily reflect the UK Government's official policies.