

Inclusive Budgeting and Financing for Climate Change in Africa



The integration of climate change into budgeting and finance

KEYNOTE PAPER

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Acronyms and abbreviations

ARC	African Risk Capacity
BUNEE	National Bureau of Environmental Evaluation (Burkina Faso)
CABRI	Collaborative Africa Budget Reform Initiative
CC	climate change
CCIA	Climate Change Impact Appraisal
COFOG	Classification of the Functions of Government
CSO	civil society organisation
Covid-19	Coronavirus disease 2019
CPEIR	Climate Public Expenditure and Institutional Review
CRGE	Climate Resilient and Green Economy (Ethiopia)
EUR	euro
FNEC	National Fund for Environment and Climate
GCF	Green Climate Fund
GDP	gross domestic product
GHG	greenhouse gas
IBFCCA	Inclusive Budgeting and Financing for Climate Change in Africa
IFMIS	Integrated Financial Management Information System
IIED	International Institute for Environment and Development
INDC	Intended Nationally Determined Contributions
MEEVCC	Ministry of Environment, Green Economy and Climate Change (Burkina Faso)
MEF	Ministry of Economy and Finance (Mozambique, Cambodia)
MFA	Ministry of Foreign Affairs
MINECOFIN	Ministry of Finance and Economic Planning (Rwanda)
MoF	Ministry of Finance
MOFPED	Ministry of Finance, Planning and Economic Development (Uganda)
MoWE	Ministry of Water and Environment (Uganda)
MTEF	Medium-Term Expenditure Framework
NAP	National Adaptation Plan
NAPA	National Adaptation Plan of Action
NDC	Nationally Determined Contributions
ODI	Overseas Development Institute
PBB	project-based budgeting
PEFA	Public Expenditure and Financial Accountability
PFM	Public financial management
PIM	Public Investment Management
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
US\$	United States dollar

Exchange rates used throughout are drawn from OANDA, as per 01.01.2021

Executive summary

The Inclusive Budgeting and Financing for Climate Change in Africa Programme (IBFCCA) aims to strengthen links between national climate change policy and domestic public finances, with the aim of promoting climate resilience. The first IBFCCA Peer Exchange brings together officials from ministries of finance (MoFs) across Africa. The aim is to facilitate collaboration on how best to integrate climate change into public financial management (PFM) systems. This report serves as its keynote paper.

Climate change is unequivocally impacting the growth and public finances of African economies. Climate-induced disasters and gradual changes in temperature and rainfall are projected to cause an average annual loss of 3.2% of gross domestic product (GDP) for Africa as a whole between now and 2050.¹ Women and the poor are particularly vulnerable. This is due to their higher reliance on agricultural livelihoods and fewer available coping mechanisms to respond to climate-induced shocks.

Addressing climate change means adopting mainstreaming tools and approaches. Nearly all government spending potentially contributes to greenhouse gas (GHG) emissions or is potentially vulnerable to the impacts of climate change. Therefore, mitigation and adaptation are best achieved by integrating climate change into regular public expenditure programmes. This calls for mainstreaming tools and approaches rather than establishing climate change as a separate sector or budget programme with a distinct funding allocation.

The climate budgeting literature suggests that budget processes do not adequately prioritise climate change, for a number of discernible reasons. Firstly, the complexity of climate change science and the paucity of country-specific projections make it challenging for policy-makers to discern salient policy implications. At the same time, fiscally constrained governments may opt to forgo climate-related expenditure in favour of returns perceived to be more immediate and assured. Definitional ambiguity is

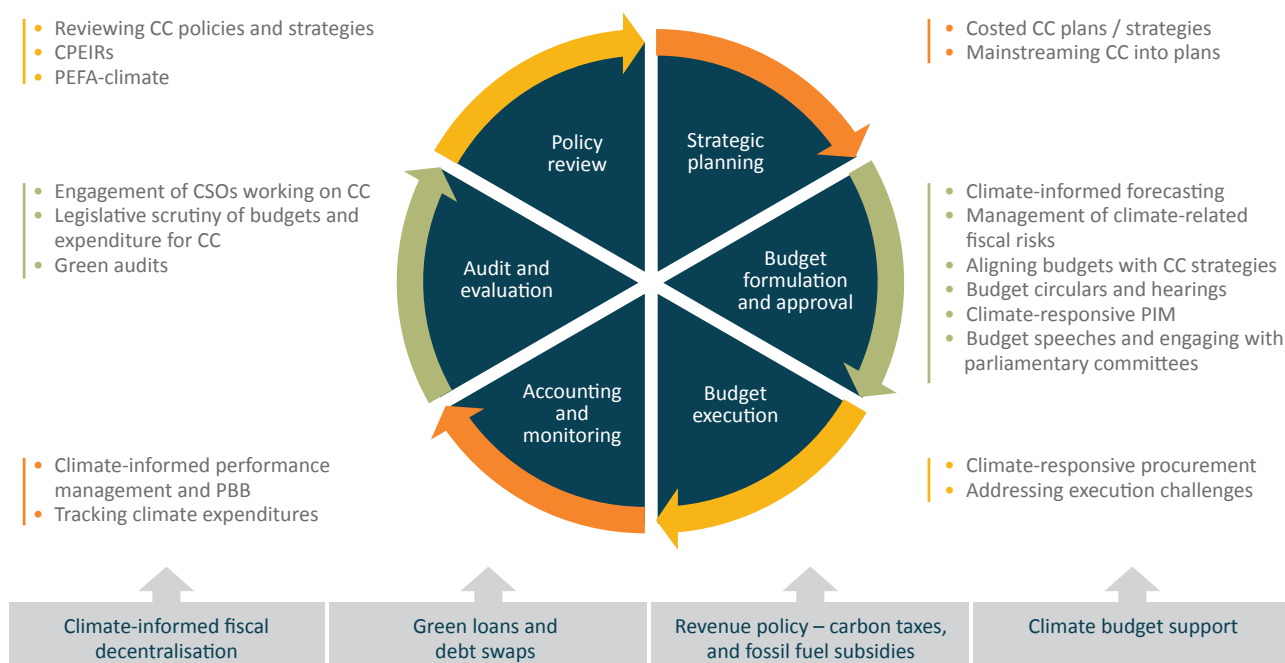
another challenge: if a MoF is to prioritise climate change adaptation/mitigation investments, it needs to know what these investments should be, and there are no hard and fast rules on this. Furthermore, the literature notes that in some countries climate change is still perceived to be a 'Ministry of Environment issue', leading to insufficient engagement from MoFs as the ultimate guardians over public finances. Lastly, the absence of demand-side pressures from accountability actors is a commonly cited reason as to why insufficient fiscal priority is given to climate change.

Despite this, MoFs in Africa and elsewhere have come up with a variety of innovative approaches to integrating climate change into their budget cycles. Potential entry points are presented in Figure (i) below. These span all phases of the budget cycle, while other entry points interface with other aspects of PFM policy (like revenue policy and fiscal decentralisation). These entry points should not be viewed as a checklist or blueprint, since the most appropriate measures in each country will depend on their strategic objectives and the particularities of their PFM systems. Furthermore, these entry points are not only at the service of the climate change agenda; they can be used to promote any priority, in particular those of a cross-sector nature that benefit from a mainstreaming approach. Gender equity is such an example. Indeed, the practice of climate-sensitive PFM builds substantially on gender-responsive budgeting, which has an established history of practice.

For a selection of these entry points, a review of uptake across Africa is presented (in Chapter 3). This suggests that climate change planning is by far the most widely pursued entry point; 40 African governments have produced a strategy or plan which relates specifically to climate change, while another five governments have them in development. The bespoke climate change policy review tool – the Climate Public Expenditure and Institutional Review (CPEIR) – has been employed in ten African countries to date, with a further CPEIR planned in Niger. The majority of CPEIRs have

1 Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*. Based on mid-range IPCC scenarios (i.e. the RCP2.6 scenario from the IPCC AR5 or the B1 scenario in IPCC AR4), which involve an increase in temperature of roughly 2°C and a doubling of the frequency of rainfall variability, including floods, droughts, storms and other extreme events.

Figure (i): Entry points for integrating climate change into the budget cycle



been conducted in East Africa, sometimes as a government-led process and on other occasions initiated by development partners. Where CPEIRs have had the buy-in of the MoF, they have often provided a useful roadmap for future climate integration budget reforms. Other climate integration reforms are less common. For example, South Africa has established a carbon tax, while other countries have reduced fossil fuel subsidies or implemented fuel-specific taxes.

Case studies of nine African countries together provide a snapshot of climate integration budget reforms. They also provide a timeline for how interventions came about to form the current packages. Figure (ii) summarises the entry points each country is undertaking or considering for the future. The case studies demonstrate two issues clearly. Firstly, the governments concerned are already implementing a broad portfolio of measures to integrate climate change into budgeting and finance. Secondly, no two countries have adopted the same set of measures, pointing to the diversity in what is, globally, an emerging area of PFM practice. In the nine countries studied, some areas of reform are more widespread than others. Most of the case studies found that climate change typically featured in budget circulars – a relative ‘quick win’ for encouraging sectors to consider climate change in their budgets. The explicit identification of climate-related fiscal risks is also a growing practice area, often as a result of the rising cost of climate-related disasters. The majority of the countries also have domestic climate change funds operating alongside mainstreaming in the regular budget, in some cases for specific climate-focused investments like research and capacity building. Areas that

do not feature significantly in the countries reviewed include accountability measures such as citizens’ climate-change budgets, climate-informed audits and legislative engagement around climate-related public expenditure.

Perhaps the most significant immediate threat to climate change public expenditure is the coronavirus disease 2019 (Covid-19) pandemic, projected to lead to a loss of 7.2 percentage points of GDP in sub-Saharan Africa over the course of 2020 and 2021. This will result in falling public revenues and shrinking fiscal space, with likely implications for spending on adaptation and mitigation. A review of budgetary shifts since Covid-19 in South Africa, Cabo Verde and Kenya suggests that climate-related expenditure is indeed being scaled back in the short term. The medium-term prospects for climate-related expenditure remain less clear. While green post-Covid-19 recovery strategies have been widely mooted, if and how they will be financed remains to be seen.

Despite this difficult backdrop, governments are continuing to initiate, expand and deepen climate integration reforms. For countries looking to define starting interventions, it can be useful to consider the primary aims of climate integration and to select the reforms best suited to those objectives. Figure (iii) (on page 8) provides some suggestions as to which interventions might be considered critical, mandatory or optional. Four different sets of objectives pertain to i) awareness raising, ii) linking expenditure with climate plans, iii) strengthening budget processes, and iv) improving the effectiveness of climate spending.

Like all PFM reform, the integration of climate change into budgets and finance should be approached in an iterative and gradual manner so that higher standards and more ambitious reforms can be achieved over time as capacity develops and methodologies are refined. The paper closes with suggestions for design options for the integration entry points, with varying levels of complexity (simple, moderate and ambitious). For example, when introducing a climate budget tagging system, a relatively straightforward option might be to adopt a binary classification (yes/no). This would be focused on key climate-related sectors only, and applied via a standalone, occasional analysis (as is done under a CPEIR). A more ambitious option might be to define weights according to differing levels of climate-change relevance, extend the analysis to all sectors and integrate the system into the Integrated Financial Management Information System (IFMIS). Regarding the management of fiscal risks, an introductory approach may be to include a qualitative assessment of climate-related fiscal risks like drought or floods. In time, this could develop into a quantitative assessment of the risks to both expenditure and revenue,

adjusted for differing levels of mitigation and adaptation investment to help determine public expenditure targets.

Governments cannot expect to implement highly complex climate integration reforms immediately. However, this paper gives an overview of measures already introduced in Africa, and indicates a potential path forward. The nature of particular reforms in a country will depend on the country’s specific climate vulnerabilities, the objectives of the government, levels of capacity and the nature of the existing PFM system. Climate-change integration is unlikely to be a driving force behind core PFM reforms – a MoF will not roll out an IFMIS simply to digitise a climate budget tag, for example. It follows that climate integration budget reforms should aim to build on what is already in place. By mapping out existing practices in each country, the objective is not to promote uniformity between countries or the impression that there is a gold standard in this field. Rather, the purpose of this keynote paper – and the peer exchange it informs – is to consolidate knowledge that may be useful to finance ministries in Africa wishing to take forward this agenda.

Figure (ii): Climate change integration entry points identified in the country case studies

	Benin	Burkina Faso	Cape Verde	Ethiopia	Kenya	Mozambique	Rwanda	South Africa	Uganda
Strategic planning									
CC strategies and plans	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented
CC plans with financial implications				Currently implemented		Currently implemented	Currently implemented		
CC integrated in development plans	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented	Currently implemented
Budget preparation and approval									
CC-informed macroeconomic forecasts						Part of future plans	Part of future plans		
CC-related fiscal risks (incl. risk transfer)	Currently implemented		Part of future plans	Currently implemented	Previously implemented	Currently implemented	Currently implemented		Currently implemented
CC in budget circulars	Currently implemented	Currently implemented		Currently implemented	Currently implemented	Currently implemented	Currently implemented	Part of future plans	Currently implemented
CC-responsive public investment management		Currently implemented		Currently implemented	Currently implemented			Part of future plans	Currently implemented
CC in budget hearings (standing consideration)									
CC in the budget speech				Currently implemented	Currently implemented		Currently implemented		Currently implemented
Legislature scrutiny from CC perspective	Currently implemented			Currently implemented	Currently implemented		Currently implemented		Currently implemented
Budget execution									
Removing CC-related execution blockages									
CC-responsive procurement	Currently implemented						Part of future plans	Currently implemented	Part of future plans
Accounting and monitoring									
Climate budget tagging			Part of future plans	Part of future plans	Currently implemented		Part of future plans	Part of future plans	Previously implemented
CC-informed performance management							Part of future plans		Currently implemented
Evaluation and audit									
Green audits									
Accountability actors influence CC budget									Currently implemented
Citizens CC budgets									
Policy review									
CPEIR	Currently implemented			Currently implemented	Currently implemented	Currently implemented	Currently implemented		Currently implemented
CC PEFA			Part of future plans	Part of future plans					
Other policy interfaces									
Revenue (carbon taxes, ETS, fossil fuel taxes)		Currently implemented					Part of future plans	Currently implemented	Currently implemented
Green bonds					Part of future plans			Currently implemented	
CC-responsive fiscal decentralisation					Currently implemented			Currently implemented	
Climate budget support			Part of future plans	Currently implemented		Currently implemented			
Domestic climate fund	Currently implemented	Currently implemented	Part of future plans	Part of future plans	Currently implemented	Currently implemented	Currently implemented		

Currently implemented

Part of future plans

Previously implemented

Figure (iii): Packages of integration reforms aligned with various strategic objectives

Possible actions	Options for priority focus of strategic approach to integration																																																			
	Year	Awareness (Political/Public)									Strategy led CC expenditure									Budget processes									Effectiveness																							
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9												
Strategic planning																																																				
CC strategies and plans		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█																															
CC plans with financial implications																																																				
CC integrated in development plans																																																				
Budget preparation and approval																																																				
CC-informed macroeconomic forecasts																																																				
CC-related fiscal risks (incl. risk transfer)																																																				
CC in budget circulars																																																				
CC-responsive public investment prep./appraisal																																																				
CC in budget submissions																																																				
CC in budget hearings																																																				
CC in the budget speech																																																				
Legislature scrutiny from CC perspective																																																				
Budget execution																																																				
Removing CC-related execution blockages																																																				
CC-responsive procurement																																																				
Accounting and monitoring																																																				
Using tags to report CC expenditure																																																				
CC-informed performance management																																																				
Evaluation and audit																																																				
Green audits																																																				
Accountability actors influence CC budget																																																				
Citizens CC budgets																																																				
Policy review																																																				
CPEIR																																																				
CC PEFA																																																				
Other policy interfaces																																																				
Revenue (carbon taxes, ETS)																																																				
Green bonds																																																				
CC-responsive fiscal decentralisation																																																				
Pilot and optional operational																																																				
Mandatory operational																																																				
Critical operational																																																				



The case for integrating climate change into budgeting and finance

The IBFCCA supports stronger links between national climate change policy and domestic public finances, with the aim of promoting climate resilience. MoFs, as key interlocutors between policy and budgets, are being brought together by the Collaborative Africa Budget Reform Initiative (CABRI) in the first IBFCCA Peer Exchange. The Peer Exchange is an opportunity for finance ministries across the continent to share their findings on effective ways to integrate climate change into PFM systems. This report serves as the keynote paper. It discusses an array of ways in which climate change can be integrated into PFM systems (Chapter 2) and provides a snapshot of progress across Africa (Chapter 3) through a synthesis of nine country case studies (Chapter 4). The paper ends by setting out some of the directions in which this agenda can be taken forward.

Climate change is unequivocally impacting the growth and public finances of economies in Africa. This is through a combination of climate-induced disasters and more gradual trends toward higher temperatures, increased frequency of floods and droughts, and rising sea levels. Extreme climate-induced shocks (like floods, drought and storms) reduce economic output and slow GDP growth because of the short-term costs of disaster relief, longer-term costs of reconstruction, as well as forgone returns to damaged capital and dampened economic activity. In the last ten years, there have been over 600 such shocks recorded in Africa, affecting over 188 million people.² At the same time, the more gradual changes brought about by climate change – temperature increases, rising sea levels and more variable rainfall – are lowering agricultural output, reducing capital assets and depressing labour productivity. Through a combination of these factors, climate change is expected to cause an average annual loss of 3.2% of GDP for Africa as a whole, between now and 2050.³ The severity of the impact on individual countries depends on the rate and extent of global temperature increase, as well as varying levels of

country exposure and vulnerability (in large part determined by the sectoral composition of their economies). Figure 1 below presents potential average annual losses by country, between now and 2050. For 18 countries in Africa, the potential average annual losses are over 4% of GDP.

Women and the poor are at the frontline of climate risks in Africa. Livelihoods dependent on natural resources are particularly sensitive to climate variability. The poor and other marginalised social groups are especially vulnerable to climate change, since they are most dependent on natural resources. Agriculture provides over 52% of female employment and 53% of male employment in sub-Saharan Africa, and contributes about 14% of GDP.⁴ Climate change impacts men and women differently, with women on the whole more exposed and vulnerable to climate change because they are often poorer, less educated, and lack agency to make political or household decisions. Other cultural norms related to gender also sometimes limit the ability of women to avoid climate-related disaster impacts.⁵

Addressing climate change means adopting mainstreaming tools and approaches, rather than treating the problem as a standalone concern. Climate-related expenditure falls into two broad categories: spending aimed at limiting the extent of climate change by curbing GHG emissions (**mitigation**); and spending that involves adjusting to actual or expected climate change in order to moderate harm done (**adaptation**). Because nearly all government spending potentially contributes to GHG emissions, or is potentially vulnerable to the impacts of climate change, mitigation and adaptation aims are best served by integrating climate change into regular public expenditure programmes. This calls for mainstreaming tools and approaches rather than establishing climate change as a separate sector or budget programme with distinct funding allocations. How adaptation and mitigation relate to wider spending in the budget is discussed in Box 1.

2 Em Dat database, link. Data for flood, drought, extreme temperature, landslide, storm, wildfire landslides and insect infestation. Downloaded 11/01/2021.

3 See footnote 1.

4 World Bank World Development Indicators.

5 UNDP, 2012. *Overview of Linkages between Gender and Climate Change*.

Box 1: The interconnectedness of climate change and 'routine' budget spending

There are very few budget projects or programmes which are wholly and specifically for climate change purposes. Some examples might be climate information systems, research on mitigation/adaptation, or focused capacity development and awareness raising.

Rather, it is much more common for climate change to be part and parcel of routine public expenditure investments. Deriving climate-change-related benefits from these investments need not necessarily require incurring additional costs or changes in design. Take, for example, a reforestation project. Forests are often an important part of a government's climate-change effort because they sequester carbon dioxide from the atmosphere (mitigation) and reduce flooding and soil erosion in the wake of increased rainfall brought about by climate change (adaptation). However, they are often first and foremost economic investments which generate income from sustainable logging, or environmental investments that promote biodiversity.

In other cases, ensuring a budget programme is also delivering climate-change benefits may require some incremental investment. An example of this would be building a manufacturing facility which runs off renewable energy as opposed to fossil fuels, or investment in climate-resilient infrastructure, such as a road which is built to withstand cyclones. Some additional cost may be required, for example to install the factory with solar panels, or to ensure that the road can withstand a cyclone by using different materials or choosing an alternate route. However, that does not negate the fact that the main returns from these investments are economic.

In the budget, these investments would be more likely to feature in the appropriations for the Ministry of Forestry or the Ministry of Infrastructure, as opposed to the Ministry of Climate Change, which underscores the need to approach climate change as a government-wide agenda, that is mainstreamed across all sectors of the budget.

Mainstreaming climate change into public expenditure has the potential to deliver economic returns, as well as improved climate outcomes. Economic modelling by the World Bank has shown that preventative spending on **adaptation** leads to higher GDP growth rates than either taking no action or waiting until remedial action is necessary.⁶ It does so by lowering the rate at which capital stock depreciates in the face of climate change, in turn leading to a higher longer-term growth trajectory (see Figure 2). This is true even if a government takes on more debt to finance additional adaptation: while ratios of public debt to GDP initially rise, they eventually fall below baseline levels because of higher growth rates. The potential returns to investment in **mitigation** in Africa are limited by the fact that the continent as a whole is responsible for only 2–3% of the world's GHG emissions.⁷ However, even for countries that are not big polluters, adaptation becomes less effective at higher temperatures; so much so that in the face of a rapid rise in global temperatures, no amount of investment in adaptation or technological know-how would enable countries to substantially reduce the economic losses incurred.⁸ Furthermore, through the pursuit of green growth trajectories, there are substantial economic gains to be had, as well as risks to be offset. (At a global level, it is estimated that a decisive shift towards a low-carbon economy could generate US\$26 trillion in benefits by 2030, compared to business as usual.)⁹

Backed by this evidence, climate change needs to be a macrofiscal priority for African governments and is integral to (as opposed to competing with) development and poverty reduction ambitions. Increasingly, governments on the continent are recognising this and devising national climate-change strategies or action plans, which set out their commitment towards climate objectives. In sum, 40 African governments have produced a strategy or plan relating specifically to climate change, while another five have them in development, as discussed in Chapter 3. Furthermore, there has been widespread ratification of the Paris Agreement, and specific financial commitments made to invest in mitigation and adaptation. These take the form of Intended Nationally Determined Contributions (INDCs), or Nationally Determined Contributions (NDCs) from almost all African countries.¹⁰ As explored in the accompanying peer-exchange paper on Covid-19, there are credible concerns that the growth shock from the pandemic has left many countries in Africa facing severe fiscal constraints, which could potentially undermine NDC commitments. However, in a recent pan-African statement, the 54 governments have expressed a

6 Forni et al., 2019. Increasing resilience: Fiscal policy for climate adaptation, in *Fiscal Policies for Development and Climate Action*, 115–131.

7 This masks wide variation between countries in Africa. South Africa, for instance, is the 14th highest GHG emitter in the world, and is making considerable mitigation investments, as summarised in Chapter 4.

8 Burke, Hsiang and Miguel, 2015. Global non-linear effect of temperature on economic production. *Nature* 527(12): 235–39.

9 Global Commission on the Economy and Climate, 2018. *Unlocking the Inclusive Growth Story of the 21st Century: Accelerating Climate Action in Urgent Times*.

10 As of December 2020, 53 African countries had submitted first (I)NDCs, with only South Sudan outstanding.

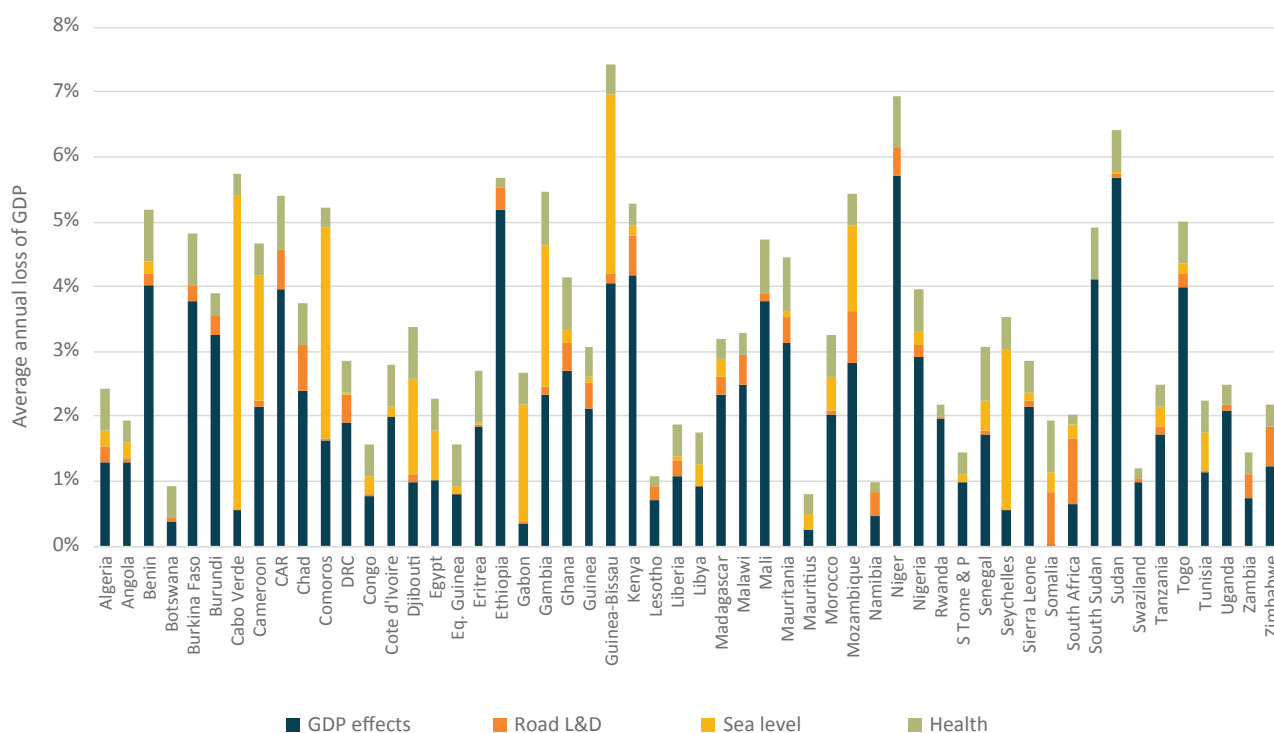
commitment to pursuing comprehensive green recovery plans aimed at building back better from the Covid-19 pandemic.¹¹ South Africa and Nigeria are among the few countries to have published concrete detail on post-Covid, climate-sensitive recovery strategies. This is discussed in the companion paper on the impact of the Covid-19 pandemic on climate integration budget reforms. Across the continent, ensuring these recovery strategies benefit those most at risk from climate change – including women and the poor – will be critical to their sustainability.

While there is some evidence of governments spending significant amounts on climate change, widespread underinvestment prevails. CPEIRs have been conducted in ten African countries (see Chapter 3) and offer an insight into how much governments have been spending on mitigation and adaptation. While the results vary significantly – with the countries reviewed allocating between 1% and 15% of government expenditure on climate change – there is nonetheless a significant financing gap. A study on adaptation spending in Africa (from public and private

sources) estimated the continent-wide adaptation gap (that is, the share of climate-change impact not avoided in planned levels of adaptation spending) to be in the region of 80%.¹² This means that the current level of adaptation expenditure will reduce the potential economic impact of climate change by about 20%. The adaptation gap varies by country; and in some countries exceeds 90%. The latter refers largely to those countries facing major exposure and sensitivity to climate risks, as well as fiscal challenges (see Figure 3). While it won't be possible to close this gap entirely, it is clear that making progress will require more financing from all sources, including domestic public expenditure.

The climate finance literature suggests that budget processes should prioritise climate change and, where they do not, they do not operate optimally. The central objective of a budget process is to allocate scarce resources in a way that optimises the achievement of policy goals. As climate change is increasingly a policy goal in its own right, and also critical to the achievement of broader development goals, it has been argued that widespread underinvestment

Figure 1: Annual average loss of GDP to climate change (by 2050)



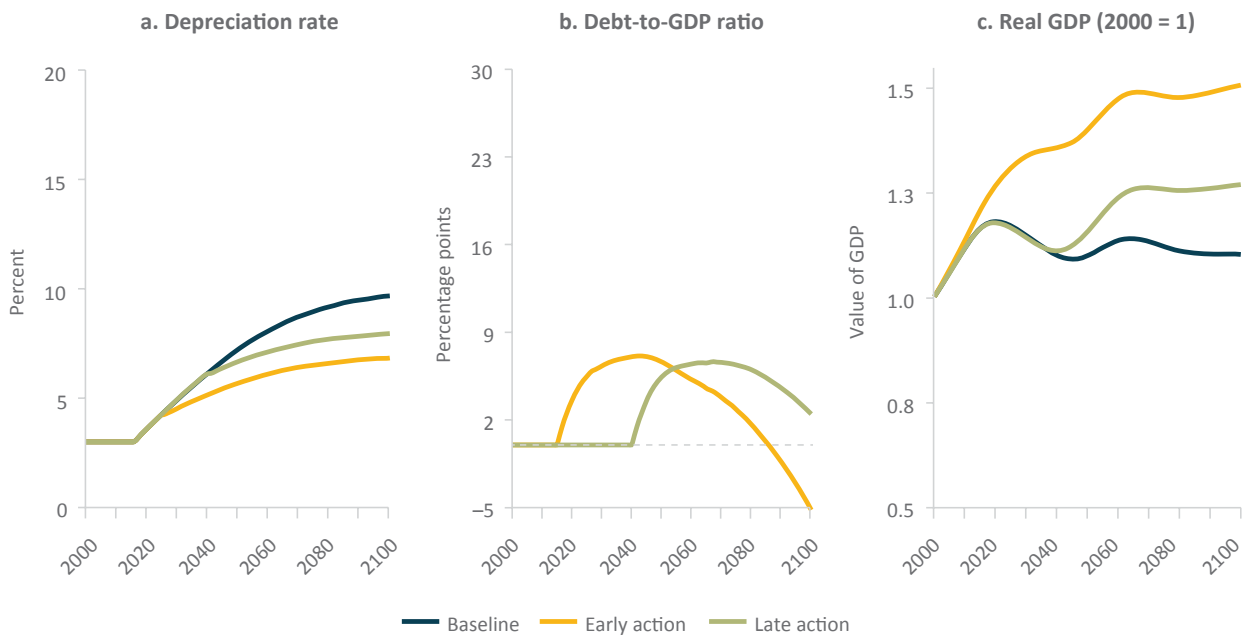
Note: Depreciation rate ceiling = 10%; GDP = gross domestic product.

Source: Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*

11 <https://www.unenvironment.org/news-and-stories/press-release/african-ministers-environment-commit-support-green-covid-19-recovery>

12 Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*.

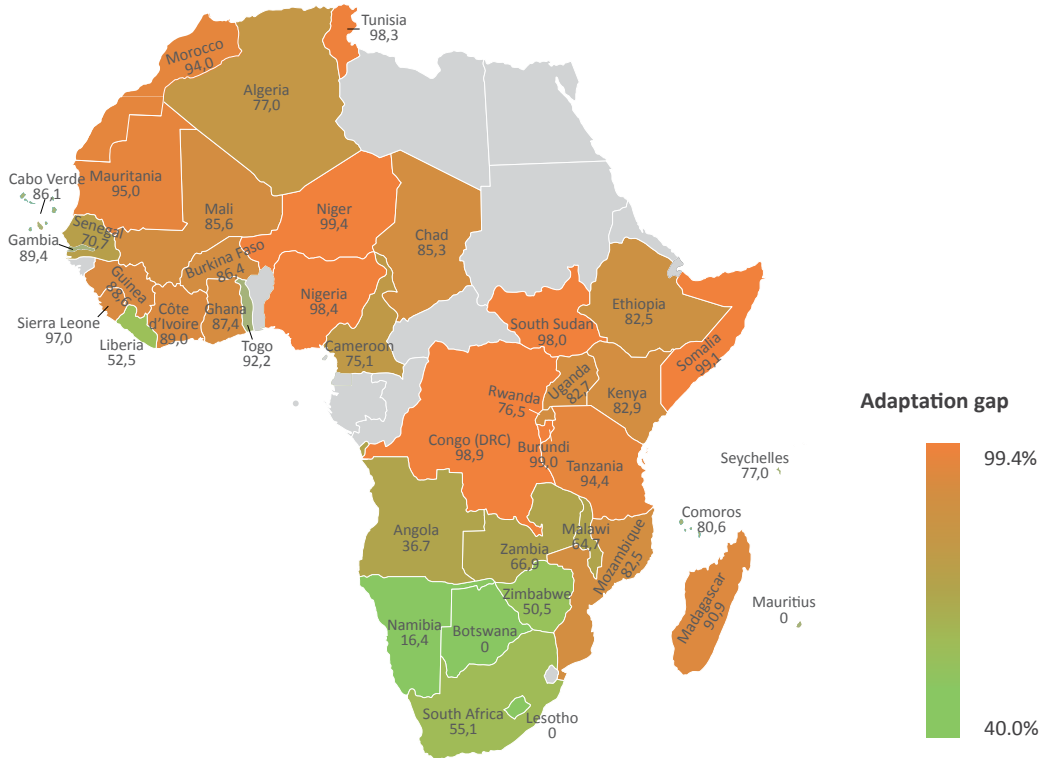
Figure 2: The effects of early and late investment in adaptation or capital depreciation, debt dynamics and GDP



Note: Depreciation rate ceiling = 10%; GDP = gross domestic product.

Source: Forni et al., 2019. Increasing Resilience: Fiscal Policy for Climate Adaptation, in *Fiscal Policies for Development and Climate Action*, 115–131

Figure 3: The adaptation gap in Africa



Note: Grey indicates absence of a country estimate.

Source: Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*

can be considered a deficiency of the budget process.¹³ The argument provided is that, despite being consistent with broader development objectives over the medium to long term, in the short term climate change competes with other development objectives. Therefore decisions on how public funds are allocated, managed and expended, do not consistently or adequately prioritise adaptation.¹⁴

There are numerous reasons why budgeting processes may under-prioritise climate-change concerns. These are well discussed in the literature and evidenced in some of the country case studies prepared for this paper (see Chapter 4). Some of the reasons presented in the literature include:¹⁵

- The **complexity of climate-change science**, and the **lack of country-specific projections** make it difficult for policy-makers to discern salient policy implications. At the same time, there are similar levels of complexity related to the measurement and communication of the economic returns to investment in adaptation. Taken together, this makes it hard to make the case for allocating scarce budget resources to climate change.
- At the same time, fiscally constrained governments may opt to **forgo climate-related expenditures in favour of returns that are more immediate and assured**. While the evidence may tell us that pre-emptive adaptation costs less in the long run, governments may prefer to wait until damage is incurred before committing scarce resources (on the basis that if the damage is not incurred, resources may be wasted). In general, because risk metrics are not advanced enough in budgeting in general, and in relation to climate change even more so, pre-emptive climate expenditure is often foregone in favour of remedial responses.
- **Definitional ambiguity** is another challenge. If a MoF is going to prioritise climate-change adaptation/mitigation investments, it needs to know what these investments should be, and on this there is no hard and fast rule. This is particularly true for adaptation spending which, rather than being a standalone project or budget programme, is part and parcel of routine development spending across multiple sectors. Teasing out to what degree a

public expenditure programme is adaptation-related (for allocation decisions, but also for reporting purposes) can be an exercise in conjecture, and requires insights from a wide range of sector and climate-change experts.

- Similarly, it's not always clear **which institution should take the lead** on climate-change budget integration. In some countries, climate change is still perceived to be a 'Ministry of Environment issue', leading to insufficient engagement from MoFs as the ultimate guardians over public finances. In others, climate-change councils or inter-ministerial committees for climate change have been established; however, these often have little to no 'budgeting teeth'. The solution often proposed is for it to be a cross-ministerial effort, but PFM systems are often not set up to manage cross-ministerial priorities very well. Consider for example, the administrative structure of budgets, or the sectoralised set-up of the Classification of the Functions of Government (COFOG), which make it hard to track financing for cross-sectoral concerns.
- Lastly, governments may not be prioritising climate change because **accountability actors aren't always asking them to**. This includes legislatures and supreme audit institutions, as well as non-state actors (such as civil society organisations (CSOs) and the media). Reasons for the absence of demand-side pressures include a lack of awareness and technical understanding, minimal opportunities to engage in the budgeting processes, and fiscal transparency challenges.

The rest of this paper sets out practical ways MoFs in Africa could better integrate climate change into budget and finance systems by drawing on real-life reform examples from Africa and elsewhere. The focus is on mobilising domestic public resources for climate change, although international climate finance that uses country systems (such as climate budget support) is also discussed. It is intended to be a useful contribution to the realisation of Helsinki Principle 4,¹⁶ wherein the Coalition of Finance Ministers for Climate committed to 'take climate change into account in macroeconomic policy, fiscal planning, budgeting, public investment management, and procurement practices.'

13 See for example, Bird and Granhoff, 2016. *National Monitoring Approaches for Climate Change Public Finance*. Also Bird et al., 2013. *Measuring the Effectiveness of Public Climate Finance Delivery at the National Level*.

14 Forni et al., 2019. Increasing resilience: Fiscal policy for climate adaptation, in *Fiscal Policies for Development and Climate Action*, 115–131; Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*.

15 See, for example, Bird, 2017. *Budgeting for NDC Action: Initial Lessons from Four Climate-Vulnerable Countries*; Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*; and IBP, 2018. *Budgeting for a Greener Planet: An Assessment of Climate Change Finance Accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.

16 The Coalition of Finance Ministers for Climate Action brings together fiscal and economic policymakers from over 50 countries in leading the global climate response and in securing a just transition towards low-carbon resilient development. The Helsinki Principles are a set of six principles that promote national climate action, especially through fiscal policy and the use of public finance. See <https://www.financeministersforclimate.org/>





Integration approaches

MoFs in Africa and elsewhere have come up with a variety of innovative approaches to integrating climate change into their budget cycles. This is to optimise public investment in adaptation and mitigation, while also ensuring that public expenditure overall is more resilient. In some cases, this builds directly on the experience of other mainstreaming efforts – such as gender or pro-poor budgeting, as demonstrated in the case of Rwanda below.

It can be useful to consider these entry points in the framework of the generic budget cycle. Budget cycles vary country-to-country, but they all tend to include core facets of the six stages presented below. There are potential entry points for integrating climate change in all stages, while some integration initiatives by design span multiple stages. Figure 4 provides a summary of the most common ones, which can provide a guide to MoFs looking to expand efforts around climate budgeting. It should not be viewed as a checklist or blueprint, as the most appropriate measures in each country will depend on their strategic objectives and the particularities of their PFM system. Furthermore, these entry points are not only at the service of the climate-change agenda, but rather can be used to promote any overarching priority in the core budget process, particularly those of a cross-sectoral nature that benefit from a mainstreaming approach. The rest of this chapter looks in more detail at each of these entry points, before Chapters 3 and 4 consider the different ways that African governments are pursuing them.

Rwanda has made considerable progress in integrating climate change into its budget and finance systems, as described in the country case study summarised under Chapter 4. The government's approach builds on experience from gender responsive budgeting, which dates back to 2008. During the budget preparation process, sectors and districts are required to prepare annual gender budget statements. Ministry of Finance and Economic Planning (MINECOFIN) compiles these into a gender budget statement, presented to Parliament at the same time as the core budget. MINECOFIN, with support from the Ministry of Women, produces guidance for the line ministries,

and implementation progress is tracked by the Gender Monitoring Office, which facilitates a series of five-day participatory gender audits in the districts. This practice has influenced the approach to climate budgeting, which is another cross cutting priority of the Government of Rwanda.

Source: Steele et al., 2016. *Budgeting for Sustainability in Africa*

2.1 Strategic planning

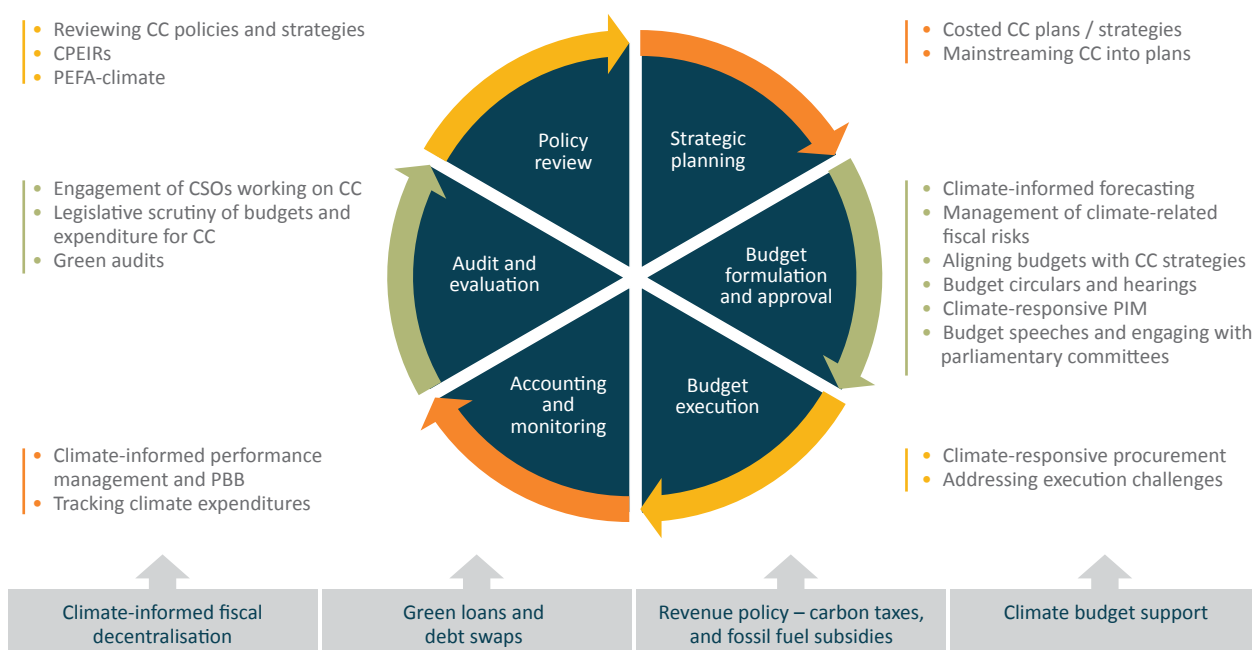
As discussed previously, **climate-change strategies** and plans are increasingly commonplace in Africa. These strategies are more readily implemented when accompanied by a costing that can be reflected in a medium-term expenditure framework, and taken into account when setting sector and ministry budget ceilings. Similarly, in the case of NDCs, experience from the first round indicates these are more achievable when underpinned by a reliable costing and assessment of feasibility with regard to domestic macroeconomic constraints. This underscores the importance of the MoF being front and centre in the NDC preparation process, as was the case in Uganda (discussed below).¹⁷

The Government of Uganda is currently revising its NDCs, in a process led by Ministry of Finance, Planning and Economic Development, National Planning Authority, and the Climate Change Department of the Ministry of Water and Environment. With this tripartite structure at its helm, the revision is being done in an inter-sectoral and multi-stakeholder manner, spanning national and sub-national government, and including non-state actors. A multi-donor Climate Action Enhancement Package is supporting the process.

Source: Coalition of Finance Ministers for Climate Action, 2020. *Ministries of Finance and Nationally Determined Contributions: Stepping Up for Climate Action*

17 Coalition of Finance Ministers for Climate Action, 2020. *Ministries of Finance and Nationally Determined Contributions: Stepping Up for Climate Action*.

Figure 4: Entry points for integrating climate change into the budget cycle



Source: Budget cycle from Allen et al., 2013. *International Handbook of PFM*

Beyond climate-specific plans, some governments are opting to **mainstream climate change into the wider planning architecture**. This means inclusion of climate-change considerations in medium-term development plans as well as sector-specific plans, and – where key spending decisions are decentralised – in local government plans, as the experience of Ethiopia demonstrates below. As climate-change impacts will be felt most severely in the longer term, there is a case for considering it in longer-term vision documents, while at the same time the benefits from preventative investment mean climate change warrants consideration in annual and medium-term plans too.

checklist for sectors, to ensure key facets of the CRGE were adequately reflected in their contributions to the ten-year plan. Additionally, a consultant undertook a review of draft submissions and proposed indicators, and advised how they could be strengthened from a climate perspective. As a result, climate features centrally in the finished plan, and is in fact one of its overarching pillars. Looking forward, efforts are underway to ensure climate change also features in subsequent three-year plans, and that local-level planning at *woreda* (district) level is climate smart.

In response to the growing risks of climate change and humanitarian disasters, Ethiopia adopted a Climate Resilient Green Economy (CRGE) Strategy in 2011 to transform the economy from low-income country status to a climate-resilient and carbon-neutral lower middle-income status through reducing greenhouse emissions, rapid economic growth, and improving resilience. Since then, the government has undertaken a series of measures to ensure this strategy is reflected in the various operational plans of government. Most recently, a Ten-Year Development Plan has been prepared. When compiling the plan, the Planning and Development Commission prepared a

For effective integration of climate in the planning process, it can be useful to demonstrate the **economic rationale** for better climate-change investments. Approaches include estimating the annual costs of climate losses and damages, and quantifying the benefits (direct, and co-benefits) of investing in adaptation and mitigation. This can be technically demanding and data-intensive, particularly when looking to focus on a specific country or sector. However, commissioning national research bodies or universities to do this, potentially with external technical guidance as needed, can help build capacity for this type of analysis.¹⁸

18 Steele et al., 2016. *Budgeting for Sustainability in Africa: Integration of Pro-Poor Environment, Natural Resources and Climate Change to Achieve the Sustainable Development Goals*.

In Uganda, the MOFPED and the National Planning Authority worked with the World Bank to produce a Natural Capital Accounting Issues paper, which considers the contribution of natural assets to the economy, providing a solid basis for the new National Development Plan to incorporate risks to natural resources from climate change.

Source: Coalition of Finance Ministers for Climate Action, 2020. *Ministries of Finance and Nationally Determined Contributions: Stepping Up for Climate Action*

2.2 Budget preparation and approval

As discussed, unfettered climate change can act as a significant dampener on a country's economic growth projections; at the same time countries need to balance their climate investment ambitions with fiscal and debt-sustainability objectives. To this end, in some countries there has been an effort to incorporate climate-change considerations into **macroeconomic forecasts and fiscal sustainability analysis**, which detail how climate change is likely to impact on growth outlook, with attendant policy recommendations.

In Cambodia, the Ministry of Economy and Finance (MEF) built a Climate Economic Growth Impact Model which discerns the economic impact of climate change on the country's growth. It captures loss and damage from climate change through four channels: i) annual losses of income; ii) heat stress and health effects that reduce labour productivity; iii) damage to assets from extreme events, which reduces capital stocks; and iv) reduced GDP and, therefore, investment.

Without climate change, the Climate Economic Growth Impact Model projects that real GDP will grow at an average of 6.9% per year from 2017 to 2050, achieving upper middle-income country status in 2035. With climate change, average GDP growth falls to 6.6% and absolute GDP by 9.8% in 2050. Upper middle-income status is delayed by one year. In terms of policy implications, the model revealed that the adaptation activities prioritised in the climate policy frameworks currently neglect the importance of heat stress on labour productivity, and that more attention should be paid to mechanisation and better working conditions. It also indicated that the adaptation effort could be doubled through a combination of increases in spending (including more international finance), new policies to encourage private sector adaptation (especially on labour productivity), and measures to incentivise improved cost-effectiveness.

Source: National Council for Sustainable Development (NCS), 2019. *Addressing Climate Change Impacts on Economic Growth in Cambodia (CEGIM)*

Climatic shocks have significant macrofiscal consequences for Ethiopia, due to the costs of humanitarian and economic relief operations in the

short term, support for recovery and reconstruction efforts in the medium and longer term, and the associated adverse implications for external and fiscal balances. For example, the 2015/16 El Niño-induced drought resulted in real GDP growth declining to 8% from 10.4% in 2014/15. Over the same period, food inflation rose sharply, from 7.4% to 11.2%, while additional fiscal support associated with drought amounted to 18 billion Birr. Enhanced understanding and management of these impacts is particularly important in the context of the fiscal pressure the government has faced since embarking on a plan of fiscal consolidation in 2019.

Managing any kind of contingent liability effectively requires that the risk has been identified and quantified, and an appropriate risk owner assigned (who is responsible for reducing it or responding, should it materialise). This not only promotes fiscal stability, but can also reduce risk exposure. Accordingly, in 2019 the MoF in Ethiopia prepared its first fiscal risk statement. This included a qualitative discussion of how floods and drought impact on growth and revenues. Currently, the Foreign, Commonwealth & Development Office is supporting the government to build a model which quantifies this risk, in terms of its impact on key fiscal health indicators (such as debt: GDP and gross external financing requirements). Results from the model will feed into the annual fiscal risk statement and the macroeconomic fiscal framework.

Source: MoF, 2019. Fiscal Risk Statement, and discussions with FCDO's Building Resilience in Ethiopia programme

Macroeconomic forecasting is beset by substantial uncertainty, which can have direct implications for the fiscal resources at a government's disposal. For this reason, many governments choose to quantify **fiscal risks** that, if realised, could amount to liabilities on the government's balance sheet. This can include fiscal risks associated with climate change. As fiscal risk statements tend to cover only the period of the budget outlook (three to five years), they tend to focus on those risks posed by catastrophic events like floods and droughts, as opposed to liabilities associated with slower-onset impacts of climate change. Identifying the fiscal risks associated with climate-induced emergencies should provide the necessary impetus for clarifying who is responsible for managing that fiscal risk and how it will be paid for should it materialise. It should also provide additional incentives for pre-emptive adaptation and disaster-risk reduction investment.

Some governments have opted to transfer risks associated with climate-related disasters, by purchasing **sovereign insurance policies**. The chief example of this is the African Risk Capacity (ARC), a specialised agency of the African Union established to help African governments improve their capacities to respond to extreme weather events and natural disasters. ARC provides governments with insurance policies for severe droughts, and by capitalising on natural diversification of weather risk across the continent, enables pooling of risk between countries, so the average cost to any

one government is lowered. Furthermore, by defining trigger-based mechanisms (e.g. rainfall deviation past a certain threshold), pay-outs can be made quickly and decisively, before the emergency fully takes hold. This improves the overall efficacy of the response and pre-empts the need to raid the treasury or take on additional costly debt. Since 2014, ARC has paid out US\$64 million to countries, including Mauritania, as detailed below.¹⁹

In response to a very poor rainy season, ARC disbursed US\$6.3 million to the Government of Mauritania in January 2015 (which paid an annual premium of US\$1.4 million for drought coverage). The ARC payment was the first international funding the Government of Mauritania received in response to a progressively severe drought, and the funds subsidised livestock feed for pastoralists in the most affected areas. An independent evaluation concluded that 'ARC appears to have made a crucial difference in the lives of highly vulnerable households in Mauritania. The combination of early warning, contingency planning, and risk transfer allowed the country to orchestrate a more timely and comprehensive response than ever before.'

Source: OPM and Itad, 2017. *Independent Evaluation of the African Risk Capacity, Annex C: Case Studies*

Fiscal risks can be minimised with investments in adaptation and prioritisation of green-growth opportunities. To ensure budget proposals move in this direction, MoFs can adjust the regular **budget circular** or prepare an additional circular. This would offer guidance on how to factor climate-change mitigation and adaptation into budget proposals, and how to limit expenditures that counter green growth. The circular can call for agencies to include relevant priority interventions identified in the climate strategy/plan, and suggest target levels for each ministry with respect to climate spending. Guidance would be required on how to classify and weigh climate expenditure. (This is discussed later in this chapter.) Once the circular has instructed line ministries to consider climate change in their budget proposals, it is incumbent upon the MoF to ensure compliance, which they can do through the mechanism of **budget hearings**. This can be formally achieved by adding climate change to the official budget appraisal criteria (e.g. checking whether relevant initiatives from the climate strategy or the NDC are reflected) or by having climate change as a standard agenda item for discussion. What is important is that the issue is discussed more widely than in hearings of the Ministry of Environment/Climate Change only. In practice, it relies on those engaged in the negotiations across all ministries being adequately sensitised.²⁰

MoFs may opt to provide financial incentives to ensure compliance with these directives, for example by providing budgetary top-ups on a ring-fenced, competitive basis for implementation of climate priorities. This is something the Philippines does extensively, as a means of promoting cross-sectoral collaboration on shared priority programmes which span more than one ministry (with Climate Change Adaptation and Risk Resilience being one such programme). No examples of this top-up approach were identified in the African countries considered in this research. Dedicated climate-change funds are relatively widespread. However, these tend to work outside the normal budget process, with parallel application and reporting processes, in contrast to the mainstreaming agenda. While there are sometimes compelling arguments for such climate-change funds (for instance to finance investments wholly and specifically dedicated to climate change such as research or capacity building, or to attract donor financing), they are nonetheless not, strictly-speaking, an example of an integration initiative. Specific-issue funds often lack capacity for implementation, leading to high volumes of unutilised funding. If mainstreamed, implementation makes full use of a government's capacity to implement, and mainstreamed funding is more likely to be scrutinised as part of routine oversight and audit.²¹

In Kenya, the 2020 budget circular highlights climate and disaster risk reduction as key priorities for the budget and outlines a series of priority mitigation and adaptation investments that should be reflected in submissions. The mitigation measures include renewable energy generation, energy efficiency in industry and building, GHG reductions and sustainable transport, while adaptation measures include water and wastewater, disaster risk management and climate-resilient infrastructure. The budget circular also gives guidance on how line ministries should report on budget allocation expenditures related to climate change as well as disaster preparedness and response.

Source: Kenya Country Case Study

Climate change can be incorporated into **public investment management** (PIM) processes at various stages, beginning with the appraisal process. Here the MoF/Planning can use it for project selection (reviewing potential climate benefits, as well as any impact on mitigation targets and exposure to climate risks), or to improve the design of spending programmes to maximise their net climate benefits. Termed 'CCIA', the methodologies adopted have varied depending on levels of capacity and time available. However, in its most robust form, quantitative climate-sensitive cost benefit analysis can be demanding, particularly in contexts where underlying appraisal capacity is already weak. For this reason,

19 <https://www.africanriskcapacity.org/>

20 Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*.

21 Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*; and IBP, 2018. *Budgeting for a Greener Planet: An Assessment of Climate Change Finance Accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.

it is usually targeted only at programmes where it is expected to make the largest material difference.²²

While striving to mainstream climate change throughout the regular budget, Rwanda also has a domestic fund for climate change: the Rwanda Green Fund. It was set up with US\$44 million in 2013, but this has now risen to about US\$100 million, financed entirely by the Government of Rwanda and managed by MINECOFIN. The fund operates harmoniously alongside mainstreaming in the regular budget, because it focuses on financing investments that are not included in budgets, for example in relation to unexpected climate-related emergencies like floods and drought.

Source: Rwanda Country Case Study

Tanzania's first Public Investment Manual was prepared in 2015 by the Planning Commission. It required environmental assessments to be carried out at the project planning phase, starting with the pre-feasibility study, which determines if the project is environmentally viable according to the Environmental Management Act 2004. The cost benefit analysis is required to be comprehensive, taking into account the whole life cycle of the project, including residual and post-completion impact. Cost estimates should take into account the cost of mitigation measures.

Source: Steele et al., 2016. *Budgeting for Sustainability in Africa: Integration of Pro-Poor Environment, Natural Resources and Climate Change to Achieve the Sustainable Development Goals*

In the Ugandan 2020/21 budget speech, climate change was mentioned alongside the Covid-19 pandemic as having an adverse impact on national development programmes and presenting a downside risk to the growth outlook. The Minister of Finance also used the opportunity to call upon the private sector to adopt climate-smart technologies, and for the Government of Uganda spending agencies to include climate mitigation and adaptation measures in all programmes and projects.

Source: Uganda Country Case Study

Once the draft budget has been prepared and presented to parliament for approval, some countries have succeeded in including climate change in the **budget speech** made by the MoF. This is one of the key annual policy statements of the government and a communication of resource-allocation priorities, and is frequently reported live by media and subsequently analysed by commentators and journalists. It is therefore an important opportunity to put climate change high on the public agenda.

Once the budget is handed over to the legislative to review and approve, it is important to ensure the parliament has the information and capacity to **scrutinise the government budget from a climate-change perspective**. This is an important means of increasing awareness, helping lawmakers to hold government to account with regard to meeting its climate-change financial commitments. This can be facilitated by sensitising budget committees to climate issues (as per the examples from Nepal and Philippines), or giving climate/environment committees some influence over budgetary decisions (as in Uganda).

Box 2: Climate-change impact appraisal

Climate-change impact appraisal (CCIA) is an approach to systematically assessing the implications of climate change for the performance of programmes, or the extent to which a particular programme addresses climate change through adaptation or mitigation.

CCIA follows some key basic principles. Firstly, it involves an estimate of the full array of benefits and costs of a (prospective) programme. This means building up a comprehensive picture of all the benefits, be they economic, social, or environmental, as well as any adaptation or mitigation benefits. This involves estimating a 'counterfactual' – that is, the situation without the specific programme or expenditure – and comparing it to the situation with it. Secondly, the sensitivity of those benefits to climate change is assessed. This can be done by assessing benefits under two scenarios: one where climate change is not taken into consideration, and one where it is. Any difference between the net benefits under these scenarios will be due to adaptation or mitigation.

CCIA can be done more or less robustly, with different levels of complexity varying from i) screening: by reference to a few key questions and criteria; ii) classification: by reference to a table providing international norms for climate relevance; iii) rapid qualitative CCIA: carefully structured to retain some objectivity, iv) hybrid CCIA: incorporating the best features of qualitative and cost benefit analysis, and v) CC-sensitive cost benefit analysis: with full valuation and covering economy, society and environment.

Source: Based on Climate Scrutiny, 2019. *Climate Change Impact Appraisal Manual*

22 Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*.

In Nepal, a Climate Budget Review Toolkit has been developed for the Finance Committee and the Environmental Protection Committee to use in fulfilling their oversight responsibility. In the Philippines Senate, the chair of the Senate budget committee is also the chair of the Climate Change Committee, which ensures that climate-change issues are systematically taken up in legislature budget discussions.

In Uganda, the Parliamentary Natural Resources Committee had an active role in budget review, for example by making recommendations on funding for water and sanitation and advising on monitoring and management of private sector contracts for borehole construction.

Source: IBP, 2018; Global Commission for Adaptation, 2019; and Steele et al., 2016

2.3 Budget execution

The allocation of resources to climate mitigation and adaptation will do little to improve a country's vulnerability to climate change if the budget is marred by execution challenges. In some countries, this relates to weak revenue forecasting; in others, it reflects poor planning or weak cash management; and sometimes it relates to limited absorptive capacity in line ministries. Lower execution rates are more typically associated with the capital side of the budget, or maintenance funding in the recurrent budget. As this is where much adaptation and mitigation spending is likely to be found (e.g. building and maintaining climate-resilient infrastructure, or renewable energy development) **addressing execution challenges in climate-affected and climate-critical sectors** is important. This may require reforms to core PFM systems, or to sector delivery systems – depending on the root cause of the under-spending. The challenges affecting climate change may similarly affect other services, and so the remedial measures should be designed and implemented in a holistic manner, integrated as part of a wider PFM reform programme.

An analysis of the Government of Tanzania's climate-change spending found that the credibility of budget execution, both at an aggregate level and for major budget heads, is low due to cash shortfalls, shifting priorities during the year, uneven implementation capacity in ministries, and unrealistic budgeting. Often, funds are neither released in equal tranches throughout the year, nor in line with the cash flow forecasts of ministries, departments and agencies. This suggests that executing expenditure – including climate-change related expenditure – will be

problematic, given uncertainty as to whether planned budgets will be adhered to in the year. Ministries struggle to maintain oversight of their climate-change related expenditure and therefore struggle to anticipate and manage unexpected financial shocks.

Source: Yanda et al., 2013. *Tanzania National Climate Change Finance Analysis*

Governments can also take climate-change impacts into account when planning and executing **procurement decisions**. They can make an important contribution towards GHG emission reduction targets by using their purchasing power to choose goods and services with a reduced environmental impact. Building this into the tender specification or award criteria can ensure system-wide change. Additionally, governments can ensure resilience and responsiveness of the procurement system to climate-induced disasters, for example through simplified and expedited procedures in response to drought or floods.²³

South Africa suffers from regular power blackouts and over-reliance on a single state-owned electricity provider, Eskom. To address this, the Renewable Independent Power Producer Energy Procurement Programme was introduced in 2010 as part of the 2010 Integrated Resource Plan. It gave independent renewable energy providers preferential access to government energy contracts. Since then, a total of 18,000 megawatt of new generation capacity has been committed, of which 6,422 megawatt was renewable energy produced by independent power producers, and 1,332 megawatt from water-pumped storage. In more recent years, the renewable energy programme has slowed down, with some inside and outside of government raising concerns about the relative cost of renewables. Other commentators, however, have linked the reluctance to sign a next set of independent renewable energy producers' contracts with a desire to keep Eskom's monopoly with coal as the dominant source of energy. In 2020, the Minister of Energy gave municipalities the green light to procure directly through independent power producers.

Source: South Africa Country Case Study

23 PEFA, 2020. *Climate Responsive Public Financial Management Framework (PEFA Climate)*.

2.4 Accounting and monitoring

Climate expenditure tracking is a widely deployed tool used by governments to assess whether past expenditures were in line with climate policy objectives, to monitor trends and to report to citizens and the international community. In the climate field, these have ranged from one-off, in-depth analytical diagnostics (as form part of the Climate Public Expenditure and Institutional Reviews discussed later), to more regular budget analyses. In recent years, a number of governments across Africa have moved to institutionalise climate expenditure analysis through the introduction of **climate budget tagging**. This recognises that climate change spending, on account of its cross-sectoral nature, cannot readily be measured through standard expenditure reports or identified in a government's chart of accounts. It therefore aims to tag budget lines related to climate change adaptation/mitigation, and record allocations and expenditures made against them. There are various design options to consider when introducing climate budget tagging systems, including:

- How relevant spending is delineated, i.e. what 'counts' as climate change. Linking this definition to a national policy or strategy can help in linking that strategy to fiscal decision-making.
- Whether spending is focused on adaptation, mitigation, or both; and whether detrimental spending is identified.
- Whether a simple binary typology is adopted (i.e. a budget line either is, or isn't, classed relevant to climate change) or if a weighting system is introduced to distinguish between varying degrees of relevance (for which, there are different methodological approaches. See Box 3).
- Whether budget tagging systems cover budget allocations, expenditures, or revenues.
- Whether the system focuses only on those sectors/institutions deemed most relevant to climate goals, or covers all of government (including, potentially, state-owned enterprises and sub-national government).
- How far down the exercise extends, e.g. whether it tracks down to household level and includes a benefit incidence analysis to identify who benefits from the climate spending (including, potentially, disaggregated by gender).
- Which institutions are involved, e.g. whether the assessment of relevance is carried out centrally by the MoF/Ministry of Environment, or a combination of the two, or by line ministries themselves.
- Whether it is a manual exercise or integrated into the government's IFMIS.²⁴

24 World Bank, 2020. *Climate Change Expenditure Tagging: An Overview of Current Practices*; Bird, 2017. *Budgeting for NDC Action: Initial Lessons from Four Climate-Vulnerable Countries*; UNDP, 2015. *Climate Budget Tagging: Country-Driven Initiative in Tracking Climate Expenditure*; Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*.

25 UNDP, 2019. *Climate Change Knowing What You Spend: A Guidance Note for Governments to Track Climate Finance in Their Budgets*.

Box 3: Weighting in climate budget tagging

Most climate budget tagging systems differentiate between varying degrees of climate relevance among their spending programmes or budget lines. Some employ the Organisation for Economic Co-operation and Development (OECD) Rio Marker System, which uses three categories of climate-change expenditure (2=principal, 1=significant and 0=insignificant), but others expand this to distinguish between high, medium and low relevance.

Furthermore, most tagging systems use a scoring system that assesses the degree of climate-change relevance by applying a weight to climate-related budget lines. This not only offers a more reliable way of monitoring the trends in climate spending (otherwise, unweighted trends can be dominated by large low-relevance programmes), but also provides an opportunity to consider how the redesign of programmes could generate greater climate benefits. There are two main approaches to defining climate relevance weights:

- The objectives-based system, in which expenditure with high climate-change relevance scores 75% to 100%, mid-relevance expenditure scores 25% to 75% and low CC relevance scores 10% to 25%.
- The benefits-based approach, in which the climate-change relevance refers to the share of benefits associated with adaptation or mitigation, and which employs the CCIA techniques described in Box 2.

The lack of consensus or standardisation around climate-change relevance weighting can be a cause of confusion, and prevents cross-country comparison. However, as a rule of thumb, the weights applied under the objectives-based approach are roughly three times those of the benefits-based approach, with some exceptions.

Source: Nicholson and Bird, 2020. *Climate Budget Tagging: International Review*

Incorporating gender into the analysis of public climate expenditure can reveal the extent to which climate spending reflects policies to address particular climate risks related to gender inequality.²⁵ It also makes sense from a procedural standpoint: the design questions and challenges facing climate expenditure analysis are also faced in gender expenditure analysis, and the cross-sectoral screen process required is of a similar nature. One potential basis for such

an analysis is to review priority sectors for climate change to identify whether key programmes are also gender-sensitive (e.g. asking whether consideration is given to which groups are benefitting from climate-resilient infrastructure). A more integrated approach would be to integrate climate- and gender-responsive budget tagging systems, so that all expenditures would be routinely screened for both, with high priority given to spending which has high relevance to gender and climate change goals. Along these lines, Organisation for Economic Co-operation and Development donor countries tag their bilateral official development assistance for various thematic concerns, climate and gender among them. An example of dual-themed gender/climate budget tagging in Africa has yet to emerge.

In most countries in Africa, climate tagging has been introduced relatively recently, and in some cases is still not fully rolled out. It is therefore too early to comment on its ultimate impact. Nonetheless, literature that covers the experience of climate budget tagging in other parts of the world (particularly in South Asia and South East Asia, where it is comparatively widespread) highlights some useful findings. These include the point that tagging is not an end in itself and should be used to inform planning and budgeting. Despite this, to date, awareness raising and improvements in transparency have been the main benefits of budget tagging in Africa, while it has had limited impact on budget allocations and decision-making. (This is in large part because the tags are typically applied after budgets have been allocated.)²⁶ Progress on this front would be expected if accountability actors (CSOs, legislatures) were to make use of the tagging results, but there is little evidence of this across Africa (discussed under 2.5). There is also limited evidence of climate tagging supporting resource mobilisation, be it domestic or international.

Budget tracking should be viewed as a first step in a **performance management system**, which also requires an accompanying assessment of the outputs, outcomes and impacts of relevant programmes.²⁷ With the spread of performance-based budgeting in Africa, some countries are seeking to ensure indicators (for outputs and outcomes) are defined, so as to capture the adaptive and mitigation performance of relevant programmes.²⁸ There are challenges associated with defining meaningful performance indicators for adaptation, and typically the ones that are used focus on outputs rather than outcomes. Indicators should be consistent with those established in the national climate change strategy/plan, and ideally should be reviewed at the time of the budget being prepared, and by the legislature.

In Ethiopia, a consolidated budget tagging system is currently being designed by the MoF, which will capture spending related to climate change adaptation/mitigation and disaster risk reduction, response and recovery. The government is pursuing the reforms so as to provide a clear picture of how much is actually being invested in climate- and disaster-related activities across the country; to improve transparency of climate- and disaster-related financing in Ethiopia, to allow the government to optimise the cost-effectiveness of its investments; and to make more effective budget allocations in the future. The system is currently in its design stages, with piloting expected in late 2021.

In Uganda, a climate budget was introduced in 2018, when the World Bank provided technical assistance to develop a climate budget tagging manual. Following an initial pilot in four ministries and four local governments, its rollout was delayed – partly due to the Covid-19 crisis and partly due to limited ownership.

Source: Uganda And Ethiopia Country Case Studies

2.5 Audit and evaluation

Climate change can be considered in government audits, most commonly through the application of **green or environmental audits**, which are ‘financial, compliance and performance audits (as well as priori audits in some countries) that evaluate and give opinions on environment-related matters’.²⁹ In practice, this is most frequently done via performance audits. A recent survey conducted by the International Organisation of Supreme Audit Institutions found that while most environmental audits over the past five years had focused on compliance with domestic environmental legislation, and government programmes around waste and water management, climate change was expected to be top of the agenda over the coming two years, with the Paris Agreement on climate change being the most commonly audited international agreement.³⁰

In 2016, the General Auditing Commission of Liberia undertook a compliance audit on Coastal and Marine Management. It found that the Liberian Maritime Authority did not have the required technology to prevent pollution by ships or illegal fishing. It also found evidence of illegal sand mining, makeshift constructions along the coast, and the cutting of mangroves, leaving the shoreline exposed to hurricanes and undermining biodiversity. On the policy side, the audit concluded that there were no effective

26 World Bank, 2020. *Climate Change Expenditure Tagging: An Overview of Current Practices*; Bird, 2017. *Budgeting for NDC Action: Initial Lessons from Four Climate-Vulnerable Countries*.

27 Bird and Granoff, 2016. *National Monitoring Approaches for Climate Change Public Finance*.

28 Global Commission for Adaptation, 2019. *The Role of Domestic Budgets in Financing Climate Change Adaptation*.

29 INTOSAI, 2019. *9th Survey on Environmental Auditing*.

30 Ibid.

legislation or regulatory requirements to ensure that climate-change targets are achieved, and noted that the Climate Change Policy and Response Strategy drafted by the environmental sector working group has not been approved by the Liberia government.

Source: General Auditing Commission of Liberia, 2018. *Auditor General's Report on the Coastal and Marine Management Collaborative Audit*

Uganda's Civil Society Budget Advocacy Group, with support from the World Resources Institute, undertook a review of the Government of Uganda's management of public financial resources for climate action in 2020. It found national climate change expenditure to be very low, and raised concerns around poor allocation efficiency, which hampered the climate-change action response from all stakeholders, including the private sector. The review also noted that global inflows for climate-change actions outweigh the national expenditure, which is unsustainable.

In 2015, the Zambia Climate Change Network and Caritas Zambia, with support from Oxfam, undertook an exercise to track international and domestic flows of climate finance to the project, filling a gap left by the absence of a climate budget tagging system. It documented the massive scale-up of international climate finance (from US\$15 million in 2010 to US\$100 million in 2012), while the mainstreaming of climate change into the domestic budget had been severely hindered by the then absence of a ratified climate-change policy. The exercise also served to underscore challenges around transparency, which affected both government and CSO spending alike.

Source: Civil Society Budget Advocacy Group, 2020. *Policy Brief on Climate Financing in Uganda*; Zambia Climate Change Network and Caritas Zambia, 2015. *Climate Change Adaptation Finance in Zambia: A Call to Transparency and Accountability*

Accountability actors – such as parliament, media and CSOs – can play an important role in **scrutinising the performance of government** to determine whether climate-related targets and pledges are being met. The potential roles of these accountability actors include both direct engagement (e.g. participating in budget processes by engaging the finance ministry on the incorporation of climate change in budgets, or scrutinising green audits and expenditure) or indirect participation (e.g. raising awareness on climate change finance issues through media articles).³¹ Accountability actors' engagement in climate budget issues is most advanced in South Asia (as per the Nepal example of a legislator's toolkit described previously). However, there are a few examples emerging from Africa.

31 IBP, 2018. *Budgeting for a Greener Planet: An Assessment of Climate Change Finance Accountability in Bangladesh, India, Nepal, and the Philippines – Summary report.*

32 Some depictions of the budget process begin with policy review; however the purpose and objectives remain the same.

2.6 Policy review

The depiction of the generic budget process culminates in a review and update of existing policies, developing new ones where necessary, leading to the restart of the budget cycle.³² This involves governments reviewing the results of their public spending relative to the stated climate policy goals and updating the policies as deemed necessary. In practice, this may not be a formally demarcated stage in the budget process. However, most governments will review policies to reflect changing priorities and developments in understanding, if only in an ad hoc manner.

In Benin, a CPEIR was conducted in 2017, covering the 2010–2014 period. It indicated that budgetary expenditure linked to climate change recorded a downward trend. Climate spending was primarily located in the sectors of agriculture, health and environment, energy, security and disaster, and water. It was, to a lesser extent, for the infrastructure sector. The ratio of investments related to climate change in these sectors fell from 29.40% in 2010 to 11.33% in 2014. Apart from the environmental-coastal erosion and health sector, the execution of CC-related expenditures also showed a downward trend throughout the period under review. The CPEIR concluded that commitments to climate change are generally below the displayed level of political will, as the budgetary allocations for climate change represent approximately double the level of execution (except in 2013). This reflects the fact that, during the fiscal year, arbitration rarely focuses on climate change. Issues related to climate change are not given priority and therefore not reflected in outturn data.

Source: Benin Country Case Study

At its most basic level, integrating climate change into policy review processes can mean ensuring that **climate-change policies and strategies are regularly reviewed and updated**. While this process is typically led by a Ministry for Environment/Climate Change, parliamentary committees can be important in ensuring this review process happens: setting its scope, providing inputs, and approving any revisions made. This has been the experience in Uganda, where the Parliamentary Forum on Climate Change directed the Ministry of Water and Environment (MoWE) to initiate a Climate Change Bill to address what it observed as weak compliance with the National Climate Change Policy. Additionally, the United Nations Framework Convention on Climate Change (UNFCCC) has been an important forum for prompting these reviews among signatory countries, because of their own reporting requirements. Non-Annex 1 countries are required

under the UNFCCC to submit NDCs every five years, national communications every four years, and Biennial Update Reports every two years.

There are two available policy review tools that can be used by governments to assess the degree to which climate change is integrated into PFM systems, and thereby provide a roadmap for future areas of reform. The first of these is the **CPEIR**. First piloted in 2010, CPEIRs have now been conducted in upward of 20 countries (including numerous ones in Africa – see Chapter 3). They comprise a systematic qualitative and quantitative analysis of a country's public expenditure and how it relates to climate change. Following the established methodology of public expenditure reviews, and using a definition of climate change and adaptation tailored according to each country policy context, CPEIRs have four core pillars:

- i. Policy analysis, which looks at national climate change policies in the context of national development plans and other sectoral policies, as well as national vulnerability assessment and existing gender- and poverty-related impact analyses.
- ii. Institutional analysis, which provides an overview of the existing decision-making process for translating climate policies into budget allocations and expenditures.
- iii. An analysis of climate-relevant expenditures from public domestic and international sources (through a budget tracking exercise).
- iii. Recommendations, which are country specific, but commonly include the recommendation to introduce climate budget tagging.³³

A second, more nascent, climate budget integration diagnostic is the **Public Expenditure and Financial Accountability (PEFA) Climate module**. It considers whether laws and regulations, institutions, systems, procedures and processes contribute to the implementation of climate change activities throughout the budget cycle. This includes the planning and design of budgetary policies considering climate, the budget allocations needed to implement them, the tracking of these allocations to ensure that policies are implemented as intended, and the monitoring and evaluation of the efficiency and effectiveness of these policies and investments. Launched in mid-2020, PEFA Climate is a set of supplementary indicators that build on the standard PEFA framework to collect information on the extent to which a country's PFM system is ready to support and foster the implementation of government climate change policies, i.e. is 'climate responsive'. It is currently at piloting stage, with the first pilot – Samoa – recently complete, and with plans for further pilots, including in Ethiopia, in early 2021.³⁴ The PEFA Climate indicators are presented in Annex A.

In 2021, Ethiopia is set to become the first country to pilot the PEFA Climate assessment in Africa. It follows on the heels of a regular PEFA assessment conducted there in 2019 at the federal level, along with six assessments of selected regional states (Oromia, Amhara, Tigray, SNNP, Somali) and the City of Addis Ababa. The PEFA Climate assessment will cover federal government budgetary units and extra-budgetary units, with some consideration given also to public corporations and sub-national governments. The assessment's main counterpart in government is the Climate Resilient Green Economy unit within the MoF. The MoF volunteered to be part of the pilot process, and intends to use the findings of the assessment to inform the design of new climate PFM reforms and as a baseline against which to measure future progress.

Source: Ethiopia Country Case Study

2.7 Interfaces with other public finance domains

The entry points noted above focus on public expenditure management processes, as dictated by the scope of the budget process. However, there are wider PFM policy concerns which also interface with the climate change agenda. This section considers some of these, namely, i) climate-responsive revenue policy, ii) green bonds and debt swaps for climate change, iii) climate-responsive fiscal decentralisation, and iv) climate budget support.

Climate-responsive revenue measures include emissions trading systems, carbon taxes and fossil fuel subsidy reform. The emissions trading systems caps the total level of GHG emissions and allows industries with low emissions to sell their extra allowances to larger emitters. There are currently around 20 governments operating such systems. However, there are presently none in Africa, in part due to their administrative complexity. Carbon taxes, by comparison, do not set a cap on emissions, but instead put a price on carbon by defining a tax rate, either on emissions (the Direct Emissions Approach, as adopted in South Africa – see below) or on the carbon content of specific fossil fuels (the Fuel Approach – see the Mauritius example). The primary purpose of carbon taxes is to change the behaviour of households and firms by incentivising the reduction of carbon emissions, and has been advocated as one of the most efficient mitigation policies. Revenue-raising objectives tend to be secondary. However, revenues from a carbon tax can be used to finance adaptation investments.³⁵

The removal of fossil fuel subsidies is an indirect way of trying to more accurately price carbon. Fossil fuel subsidies have historically been introduced in sub-Saharan Africa as

33 UNDP, 2015. *A Methodological Guidebook: Climate Public Expenditure and Institutional Review (CPEIR)*.

34 PEFA. 2020. *Climate Responsive Public Financial Management Framework (PEFA Climate)*.

35 Price, 2020. *Lessons Learned from Carbon Pricing in Developing Countries*; and ActionAid, 2020. *Progressive Taxation Policy Brief: Carbon Taxes*.

a means of supporting energy security, domestic energy production and access to energy. However, they create a significant burden on government budgets and inhibit sustainable economic development. Estimates of the fiscal cost of fossil fuel subsidies in 30 sub-Saharan Africa countries were US\$26 billion in 2015, while the International Monetary Fund estimated total fossil fuel mispricing in the region to be US\$49 billion, meaning the full cost of the subsidies, when including externalities, is around US\$75 billion (2015).³⁶ While there are some significant barriers to fossil fuel subsidy reform (such as lack of information, and special interests), some African countries have successfully removed or reduced these subsidies. This was the case in Ghana, as discussed below, and in Kenya, with electricity subsidies.

A significant drawback of carbon taxes is that they tend to be regressive, increasing the prices of basic goods and services, and therefore potentially aggravating poverty.³⁷ Measures such as redistributive policies can be introduced to offset this. They are also found to impact women more than men, who tend to spend a higher proportion of their income on the taxed items.³⁸ Moreover, political acceptability tends to be the greatest obstacle to these sorts of measures, particularly where there is a lack of trust in the government or perceived weakness in the administration systems. There tends to be greater acceptance where revenues raised/savings incurred are used for environmental investments, or redistributed to support vulnerable groups (e.g. in the form of cash transfers).³⁹

Another aspect where fiscal policy can be used to leverage climate impact is through **debt restructuring**. As debt levels in Africa increase, more countries are embarking on restructuring as a means of maintaining fiscal sustainability. As the case of the Seychelles demonstrates, partial debt forgiveness can be made contingent on domestic investments in climate change. It is yet to be seen if this approach would work at scale, or in other countries in Africa. However, the impact of Covid-19 on the continent's debt levels has led to some researchers calling for large-scale debt swaps to be made available in return for climate budget support programmes.⁴⁰

Sovereign green bonds can also be used to augment public finances for climate change. Green bonds are government-issued bonds, where the proceeds are earmarked for projects that address climate-change mitigation and adaptation.

They can be a useful tool for governments to raise capital to implement climate plans or to finance their NDCs, while providing a strong signal of the country's commitment to a low-carbon economy. They potentially help reduce the cost of capital for green projects by attracting new investors and mobilising private capital towards sustainable development.⁴¹ While green bonds are more common in Europe and North America, Nigeria is one of the most recent developing countries to issue a green bond.

Mauritius' fossil fuel tax regime was designed primarily as a revenue-raising initiative, and so set rates for diesel, gasoline and coal commensurate with their revenue-raising, rather than carbon-generation, potential. As a result, diesel and gasoline were subject to higher taxes and excise duties than coal, leading to a shift among some consumers from gasoline and diesel, to the more carbon-intensive coal. The overall outcome was a general increase in coal use in the country, leading to greater release of carbon emissions.

South Africa's carbon tax came into force in June 2019 and applies to GHG emissions from the industrial, power, building and transport sectors, irrespective of the fossil fuel used, and covering 80% of the country's GHG emissions. The tax took nearly six years of negotiation and consultation prior to implementation, and was initially unpopular with businesses due to their reliance on coal. However, the carbon tax has since led to a shift towards wind and solar power.

Following initial failures to reform fuel subsidies in 2001 and 2003 (which led to widespread protests), in 2005 the Government of Ghana introduced an adjusted price formula for gasoline and diesel, which led to a price increase of 22%. The success of the reforms can be attributed to: a joint scientific survey undertaken by the government and the International Monetary Fund on the impact of changes in fuel prices on different social sectors; extensive dialogue with stakeholders and civil society; complementary measures introduced to cushion the effects of price increases, such as elimination of fees for state-run schools; increased public transport; and increased funding for health services in poor areas.

Source: ActionAid, 2020, Price, 2020, and Whitley and van der Burg, 2015

36 Whitley and van der Burg, 2015. *Fossil Fuel Subsidy Reform in Sub-Saharan Africa: From Rhetoric to Reality*.

37 Vogt-Schilb et al., 2019. Cash transfers for pro-poor carbon taxes in Latin America and the Caribbean. *Nature Sustainability*, 2(10): 941–948.

38 Cottrell & Falcão, 2018. *Climate of Fairness: Environmental Taxation and Tax Justice in Developing Countries*.

39 Klenert et al., 2018. Making carbon pricing work for citizens. *Nature Climate Change*, 8(8): 669–677; Maestre-Andrés et al., 2019. Perceived fairness and public acceptability of carbon pricing: a review of the literature. *Climate Policy*, 19(9): 1186–1204.

40 Steele and Patel, 2020. *Tackling the Triple Crisis. Using Debt Swaps to Address Debt, Climate and Nature Loss Post-COVID-19*.

41 Climate Bonds Initiative, 2017. *Sovereign Green Bond Briefing*.

In December 2017, the Federal Government of Nigeria issued a five-year bond worth NGN10.69 billion (US\$30 million), where the proceeds would go to solar energy and afforestation projects. It was intended to help the government diversify the economy away from oil revenues, while also meeting its climate commitments. It is managed by the Green Bond Advisory Group, which includes the Ministry of Environment and the MoF, with reporting led by the Central Bank of Nigeria. Following its success, a second bond offer was issued in 2019 for NGN15 billion.

Source: Climate Bonds Initiative, 2017. *Sovereign Green Bond Briefing*

It is similarly possible to build climate-change considerations into **fiscal decentralisation policy**. In cases where the allocation of functions to sub-national governments includes functions related to climate change (e.g. building local roads, or disaster risk-reduction or relief), measures can be introduced to ensure that local government have sufficient funds available to deliver those services (e.g. mandatory earmarking). The case described below, of local level climate adaptation funds in Kenya, Tanzania, Mali and Senegal, is an example of this. Another approach is to ensure the climate-responsive PFM standards introduced by national government also apply at sub-national level. This could, for example, include expanding climate budget tagging to sub-national level, or ensuring climate-responsive PIM or procurement standards also apply to sub-national entities. In general, PFM capacity at local level tends to be weaker, and so the extension of these reforms may require additional training and human resources from the federal government. Lastly, it is also possible for governments to build climate or environmental incentives into fiscal transfer formulas (as is the case in India, where forest coverage is a factor in the grant formula), or to design conditional transfers that are explicitly for adaptation/mitigation purposes.

The focus of this paper has been on the ways governments are managing their own resources for climate change. However, in many African countries international climate finance is presently, or could potentially become, an important source of finance. This expectation is derived, in large part, from the commitment made by developed country parties to the UNFCCC (Annex II countries) to provide at least US\$100 billion annually for climate action in developing countries by 2020. Notably, this commitment does not specify what portion of the US\$100bn would be for Africa. At the time of the last assessment (in 2018, covering flows in 2015/16), the target was not on track to be met, with a total of US\$49.4 billion reported by Annex II countries in 2016 (compared to US\$45.4

billion in 2015). Some of this financing is being channelled through international climate funds, including the Green Climate Fund (GCF), the Adaptation Fund and the Least Developed Countries Fund. The vast majority of international climate finance continues to be delivered through bilateral, regional and multilateral channels. Overall, Asia remains the principal recipient region, with sub-Saharan Africa receiving 22% of funding from climate funds, 30% of bilateral climate finance, and 9% of multilateral development bank climate finance between 2015 and 2016.⁴²

Governments in Kenya, Mali, Senegal and Tanzania are using the architecture of decentralisation to establish sub-national climate-change funds that invest global and national climate finance in support of community-prioritised investments in public goods that build local resilience to climate change. In the case of Kenya, the devolved funds are managed by county authorities, capitalised by funds from the government budget as well as donors and international climate funds, and informed by enhanced climate information services and community prioritisation. The approach requires local governments to consider climate change and put funds aside for climate-related investments, and it also sets up a mechanism to access climate finance (from global, national and private sources). Furthermore, local communities are central to the project development and selection process in a way that ensures women, as well as men, have a voice in decision-making.

Source: IIED, 2016. *Decentralising Climate Finance to Reach the Most Vulnerable*

Where external finance is channelled through domestic PFM systems, it too can benefit from the climate-response PFM reforms discussed in this paper. For example, if an external fund gives resources for an adaptation investment project where inputs are to be procured through the recipient government's public procurement system, it would benefit from the climate-sensitive requirements and criteria of that system. The extent to which financing makes use of domestic PFM systems varies, as different funders offer different modalities under various conditions. For example, the GCF implements its projects through accredited entities which can be government or non-government institutions, as long as they meet the standards of the Fund. Rwanda's Ministry of Environment, Uganda's MoWE, Benin's National Fund for Environment and Climate, Kenya's National Environment Management Authority and Ethiopia's MoF, are among the only GCF-accredited government agencies in Africa.

42 UNFCCC Standing Committee on Finance, 2018. *Biennial Assessment and Overview of Climate Finance Flows Technical Report*.



The most aligned climate finance modality is **climate-related budget support** which, while relatively uncommon in Africa, is offered by some multilaterals (predominantly, the European Union and World Bank) in certain circumstances. Through these, the provision of general or sector budget support is provided, contingent on the government meeting a number of pre-agreed disbursement criteria, typically related to climate change as well as broader governance concerns. (See discussion of the World Bank’s climate-related development policy operation in Mozambique, and the European Union’s climate budget support to Ethiopia, below.) As unearmarked finance, the funds can be used for any public expenditure purpose, climate-related or otherwise, with the sorts of climate budgeting reforms set out above increasing the likelihood of budget support resources being spent on climate change.

Mozambique signed a World Bank Climate Development Policy Operation in 2019, in which tranches of budget support are received, provided that progress is made on disbursement-linked indicators related to disaster management. These include the operationalisation of a Disaster Management Fund; sovereign catastrophic insurance; flood/cyclone early warning systems; and investment in climate resilient infrastructure.

Ethiopia, meanwhile, receives climate budget support from the European Union: of a total of EUR33 million, EUR24 million has been disbursed so far. Disbursements are linked to the government meeting key reform criteria, including introduction of new standards for the cement industry, as well as reforestation programmes. Other government programmes related to climate change also receive on-budget external assistance, including the Productive Safety Net Programme, which scales up social protection in response to droughts.

Source: Mozambique and Ethiopia Country Case Studies

“ In many African countries, international climate finance is presently, or could potentially become, an important source of finance ”



Snapshot of progress across the continent

3.1 Snapshot of interventions across Africa

Figure 5 overleaf presents summary maps showing how extensively – or otherwise – a selection of these climate budgeting interventions have been taken up across Africa. The assessment is hindered by data availability constraints and focuses on those interventions for which there is an existing central repository (such as UNFCCC’s NDC registry, or budget circulars on CABRI’s Budget Enquirer platform). Going forward, if more African governments undertake climate PFM diagnostics (like PEFA Climate), continent-wide analysis can be more comprehensive.

Plans and NDCs: Of all the interventions mapped in this snapshot, climate change planning is by far the most widespread. In sum, 40 African governments have produced a strategy or plan that relates specifically to climate change, while another five have them in development. (See Panel A of Figure 5.) Beyond this, all countries have some sectoral plans or policies with direct relevance to climate change, such as those focusing on disaster risk management, or renewable energy. All countries bar South Sudan have provided financial adaptation/mitigation commitments in the form of first round NDC (Panel B). Most of these (43 countries) are ‘INDC’, while ten have been updated in the form of ‘NDC’. No countries in Africa have yet submitted second round NDCs.

CPEIR: Since 2012, CPEIRs have been conducted in ten countries in Africa, with a further one planned in Niger. (See Panel C.)⁴³ The majority to date have been conducted in East Africa. They vary in scope; for example, Morocco’s CPEIR covers investment spending, while Kenya’s focuses on three sectors, and Rwanda’s looks at climate and environment expenditure. Nonetheless, between the countries whose studies are broadly comparable, climate-change expenditure as a share of total government expenditure varied between less than 1% (Uganda, 2013 assessment) and 15% (Ethiopia, 2014 assessment).

Budget circulars: The review of budget circulars was limited to those countries for which a relatively recent circular has been uploaded to CABRI’s Budget Enquirer portal, in addition to information collated through the country case studies (29 countries in total).⁴⁴ Of these, seven were found to make explicit reference to climate change, and a further three to reference environment or green growth. (See Panel D.) Gender/Inclusion was also considered as a comparable cross-sectoral theme and found to feature in 16 circulars reviewed. This underscores that gender is a more established theme in budget circulars than climate change. However, the circulars themselves serve varying functions across countries. In some cases they specify strategic/cross-cutting priorities, but in others focus more narrowly on procedural issues of the budget preparation process, like timelines (where a reference to climate change might not be appropriate). Furthermore, in some cases the budget circular makes reference to priorities indirectly – for example by directing spending agencies to review priorities of the development plan – without reiterating them in the circular itself. These are not captured in Panel D.

The manner in which climate change features in the circulars of the noted countries varies. In some instances it is identified as a downside risk to the growth outlook, as is the case in Burkina Faso’s circular. In others, it is flagged as an overall strategic priority; the reference to climate action in Lesotho’s circular or green growth in the circulars of Kenya and Mauritius are cases in point. In some circulars, it is identified as a priority for certain climate-vulnerable sectors (e.g. the agricultural sector in Burkina Faso or the water sector in Central African Republic), and elsewhere as a cross-cutting issue needing consideration, as in Uganda, Rwanda and Mozambique. In South Africa, the mention of climate change in the 2020/21 Medium-Term Expenditure Framework (MTEF) guidelines was related to the launch of the climate budget tagging system.

43 This includes CPEIR-like studies employing a similar methodology, as have been conducted by the Overseas Development Institute (ODI).

44 The circulars reviewed span the period 2013–2021, with the most recent available being reviewed for each country.

Budget tagging: While climate budget tagging is relatively widespread in Asia, and increasingly common in Organisation for Economic Co-operation and Development countries, only four countries in Africa are noted to have routinised climate budget tagging systems in place (Uganda, Ghana, Kenya and Rwanda). A further two (Ethiopia and South Africa) are currently under design. (See Panel E.) Design variations in some of the existing systems are noted in the table below. In all these cases, a CPEIR preceded the initiation of the tagging system, recommending it as a way of more routinely tracking climate spending in the manner initiated under the CPEIR.

Carbon taxes and green bonds: Compared to expenditure management, African governments have done less to date in terms of integrating climate change into revenue management. South Africa is the only country on the continent with a carbon tax currently under implementation, although both Côte d'Ivoire and Senegal are apparently considering carbon taxes as part of their NDCs.⁴⁵ Two countries in Africa, Nigeria and Seychelles, have issued green bonds (in Seychelles as a 'blue bond' for ocean protection measures), while preparatory measures have also been made in Morocco and Kenya.⁴⁶ In South Africa, green bonds have been issued at city level (by the administrations of Johannesburg and Cape Town), but not by the national government.

Table 1: Climate budget tagging approaches: experience in three African countries

	Ghana	Kenya	Uganda
Date introduced	2018	2016	2018
Approach	Relevant spending informed by National Climate Policy. Distinguishes between adaptation and mitigation/both. Four levels of relevance (none, low, medium, high) with varying weights determined through an objectives-based approach.	Relevant spending informed by National Climate Policy. Distinguishes between adaptation, mitigation, and enabling environment, determined through an objectives-based approach. Three levels of relevance (principal, significant, or none), but no weighting applied.	Relevant spending informed by National Climate Policy. Distinguishes between adaptation-relevant and mitigation-relevant, determined through an objectives-based approach. No varying levels of relevance, or weighting.
Sectors covered	All	All	All
Flows covered	Budget and expenditures	Budget	Budget
Integrated into IFMIS	Yes	Yes	Yes
Level of government	National and sub-national	National and sub-national	National and sub-national
Publication	None	None	None
Government lead	MoF	National Treasury	MOFPED
Technical assistance partner	None	UNDP	World Bank

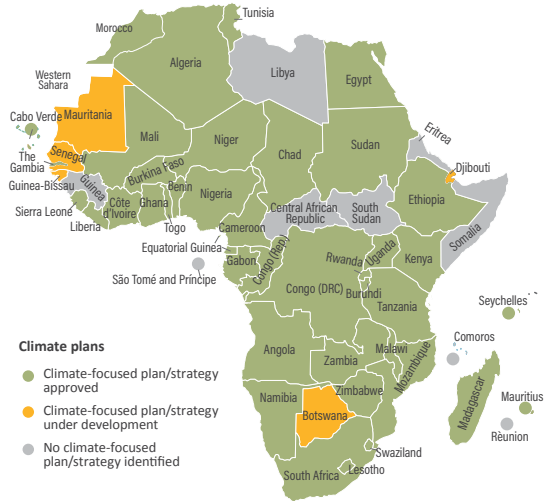
Source: World Bank, 2020. *Climate Change Expenditure Tagging: An Overview of Current Practices*; and Country Case Studies for Kenya and Uganda

45 World Bank Carbon Pricing Dashboard https://carbonpricingdashboard.worldbank.org/map_data

46 Climate Bonds Initiative, 2017. *Green Bond Policy Database*.

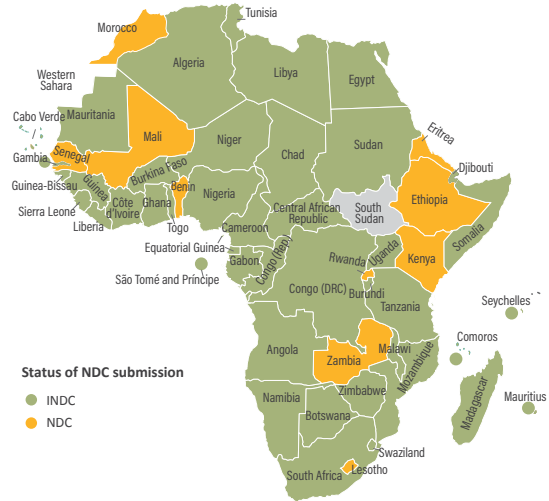
Figure 5: Snapshot of select climate budgeting reforms across Africa

A. Climate change plans, policies or strategies



Source: Climate Change Laws of the World database, Grantham Research Institute on Climate Change and the Environment and Sabin Center for Climate Change Law. Also Africa Adaptation Initiative. N.B. NAPs are included, whereas NAPAs are not.

B. Status of (I)NDC submission



Source: UNFCCC NDC registry

C. CPEIRs



Source: UNDP, 2017. What is the CPEIR?; Steele et al., 2016. *Budgeting for Sustainability in Africa*. Plus individual CPEIR reports.

D. Climate references in budget circulars



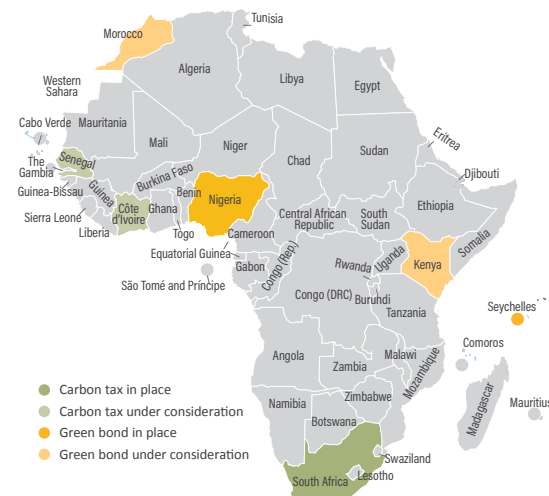
Source: Based on latest year circular available from CABRI Budget Enquirer

E. Climate budget tagging



Source: World Bank, 2020. *Climate Change Expenditure Tagging: An Overview of Current Practices, and Country Case Studies*

F. Carbon tax and green bonds



Source: World Bank Carbon Pricing Dashboard, and Climate Bonds Initiative, 2017. Green Bond Policy Database

3.2 Potential implications of Covid-19

The Covid-19 pandemic infiltrated every aspect of life through 2020 and will continue to affect budgeting decisions in 2021, and potentially beyond. There will be inevitable implications for the climate-change agenda across Africa. While only time will tell what those longer-term implications might be, the companion paper on *Potential Implications of Covid-19 for Climate Change Expenditure* provides some early insight into how climate-relevant expenditure has been – and may continue to be – affected by the pandemic.

Box 4: Macroeconomic context in a post-Covid-19 world

The pandemic is projected to severely damage the economies of sub-Saharan Africa, with forecasters predicting that regional growth will suffer a cumulative loss of 7.2 percentage points (pp) relative to pre-crisis forecasts across 2020–2021. As a result, per capita income levels in the region are forecast to return to those seen in 2012.

Across sub-Saharan Africa, it is expected that 90% of countries will experience increased poverty levels in 2020; estimates suggest that an additional 25 to 40 million people will be pushed into extreme poverty in 2020. Evidence is mounting that the economic impacts of Covid-19 are hitting women harder than men, with mitigation measures impacting the sectors where women work more.

Sub-Saharan Africa entered the Covid-19 pandemic more fiscally constrained than most other regions in the world, leaving these countries little ammunition to protect their economies and vulnerable populations. The average Covid-19 fiscal package across African countries amounted to only 2.3% of GDP.

Fiscal space is shrinking substantially as revenues across sub-Saharan Africa tumble; these are now forecast to be 22% lower than pre-crisis estimates. As a result, many countries across sub-Saharan Africa are taking on substantial increases in debt; across the medium term, the high fraction of tax revenue absorbed by debt service will necessarily mean that there is less revenue left over for priority areas, including investment in climate-change adaptation and mitigation.

While the world continues to fight the pandemic, the climate-change crisis rages on, in many cases compounding the impact of Covid-19. At the same time, desert locust invasions in East Africa have led to acute food insecurity in the region, while southern Africa has faced its worst drought in 25 years.⁴⁷ Yet financing gaps on climate-change adaptation and mitigation, evident before the pandemic, remain stark. With the pandemic eating up the small fiscal space of many African countries, governments have to look very seriously at how to finance key priorities and prevent the reversal of hard-won developmental gains. Countries will face very tough decisions across the medium term, with high debt burdens likely to limit the ability of many to fund much-needed development and climate spending.

A glimpse into the budgetary decisions of three countries suggests that climate-relevant expenditure is indeed being impacted in the short term. In **South Africa**, Covid-19 has resulted in large-scale budget reallocations, limiting the availability of public finances for climate action and other key priorities. Climate-change programmes under the Department of Environment, Forestry and Fisheries, for example, had their budget cut by a third this year. In **Cabo Verde**, while some areas of climate-relevant expenditure – water and sanitation, and drought mitigation measures – have been protected during this year’s cuts, other projects – including the government’s commitment to renewable energy – have been pushed back. Donor funding in the small island state appears to have played a key role in ensuring the continuity of climate-relevant projects. A similar trend has been seen in **Kenya**, facilitated by need (e.g. to prevent the infestation and spread of desert locusts) and by donor financing (e.g. for climate-smart agricultural projects). Yet Kenya’s weak fiscal position going into the crisis has ultimately led to reductions elsewhere – for example, in the environmental protection, water and natural resource sector, and in the alternative energy technology sector.

Source: CABRI, 2021. *Potential Implications of Covid-19 for Climate Change Expenditure*

47 ActionAid, 2020. *Food Crisis in East Africa 2017–2020*. link.

The medium-term prospects for climate-relevant expenditure remain less clear, as government efforts remain focused on life-saving response measures. Yet given the fiscal space constraints predicted for the years ahead, it is likely that African countries will face extremely constrained policy environments. All three case-study countries have committed to a path of fiscal consolidation in the coming years. Medium-term forecasts for **Kenya** and **Cabo Verde** remain in the early stages. While not always the most reliable metrics for medium-term priorities, they demonstrate that some areas of climate-relevant expenditure will remain a priority (water and sanitation in Cabo Verde, for example, and environmental protection, water and natural resource sectors in Kenya). Others may not fare so well, although some of these gaps are likely the result of donor forecasts not yet stretching out to 2024. In **South Africa**, post-Covid-19 medium-term forecasts will not be available until February 2021. However, South Africa's post-Covid-19 economic recovery strategy is one example of a commitment within the region to various green stimulus measures, including re-committing to planned investments in renewable energy.

Medium-term prospects for fiscal space across the region are not looking promising. Countries face the huge challenge of mobilising resources at scale in order to fund medium-term plans that can drive countries towards net-zero emissions and accelerate climate resilience. Countries will likely need to explore alternative options, or scale-up financing efforts if they are to plug some of the financing gaps. Efforts could test the appetite for domestic revenue reforms, seeking out further sources of official development assistance, as well as green or blue bonds, or debt swaps.

While green post-Covid-19 recovery strategies have been widely mooted, if and how they will be financed remains to be seen. The jury is still out on whether countries will move forward with commitments to – and find fiscal space for – greener recoveries. What is clear is that while many countries struggle to get their finances back on track, the Covid-19 pandemic is likely to have lasting effects on both the size and composition of budgets.

“ While many countries struggle to get their finances back on track, the Covid-19 pandemic is likely to have lasting effects on both the size and composition of budgets ”

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Bringing it together at country level

In preparing this keynote paper, nine country case studies were prepared, following a semi-structured questionnaire format. They were completed on the basis of a document review, accompanied by interviews with government stakeholders. Summaries of the main findings are provided below, with the longer case studies presented in a second volume. The case studies interrogate the extent and nature of climate-change integration initiatives in the country, providing a snapshot of current progress in each country, as well as a plotted timeline for how interventions came about to form the current packages. They depict how different countries in Africa have chosen to focus on different climate integration initiatives, depending on their climate risks and vulnerabilities, as well as underlying PFM systems and capacities.

4.1 Benin



Context: Benin is vulnerable to all the main risks associated with climate change in tropical countries. It is especially vulnerable to: increased desertification in the north of the country; reduced yields and incomes for farmers, many of whom are among the poorest people; and coastal disasters. There has been some modelling of economic impact, but the conclusions are still unclear and the impact of reduced GDP growth on revenue has not been estimated. The impact of single natural disasters is illustrated by the fact that major floods in 2010 reduced GDP by 0.8%. However, there was only a small impact on public finance, because of the informal rural nature of most of the production lost and the provision of some international assistance.

A large range of plans and policies related to climate have been prepared, in most cases driven by development on the international climate-change agenda. These include: Agenda 21 (2009); Benin 2025 (2000), an Agreement on Sustainable Development, Initial (2001); Second (2011) and Third (2017) National Communications on Climate Change; a National Strategy for Implementation of the UNFCCC (2003); a National Adaptation Plan of Action (NAPA) (2008); the Nationally Determined Contributions/NDC (2015); a Low Carbon Intensity and Climate Resilient Development Strategy (2016); and ratification of international agreements relating to biodiversity and climate. In addition, climate change is

integrated into the Action Programme of the Government (2017) and into sector strategies in agriculture, forestry, water and urban planning. However, this integration is still partial, and often not supported by budgetary allocations or a monitoring framework. There have been several estimates of the needs and likely allocations of funds for mitigation and adaptation, but these are widely varying and there is limited clear prioritisation.

The Ministry of the Living Environment and Sustainable Development has a clear lead role and supports the cross-sectoral National Council on Climate Change, created in 2003. This is complemented by a National Platform for Disaster Risk Reduction and Climate Change Adaptation (established in 2011) and the Commission for Economic Modelling of Impacts of Integration of Climate Change into the General State Budget (established in 2014). The latter is based in the Ministry of Planning and Development and supported by the Centre for Partnership and Expertise for Sustainable Development. Although these institutions have an overlapping mandate impacting their efficiency, their existence is underlined by a fairly well-developed institutional framework.

Interventions to integrate climate change into budgets and finance:

Benin started producing a 'development programme analytical note' in 2017, in line with West African Economic and Monetary Union directives. Each annual version of these notes has made strong reference to climate change. Several other budget documents also refer to climate change. In practice, strategic guidance of climate change expenditure occurs mainly through sectoral plans and policies. **Budget guidelines** require an environmental impact assessment of each project, but do not yet require climate change to be taken into account. There is no mechanism for climate change to be taken into account in budget hearings, where climate change is mainly kept as an issue related to the Ministry of the Living Environment and Sustainable Development.

A **programme budgeting system** is gradually being introduced, with varying degrees of success across different ministries. The environment and agriculture sectors have programmes that are clearly related to climate change (and also contribute to development), but other related sectors mention climate change only as a transversal theme (e.g. transport, energy

and water). There is no coordinated approach to including mitigation or adaptation in key performance indicators.

A **CPEIR** was produced in 2017 which suggested a strong downward trend in climate change expenditure between 2010 and 2014, although this pattern appears to be the result of the initiation and conclusion of a few large projects, rather than any strategic consideration. There is no system for identifying and classifying climate-change expenditure in the public investment programme.

The Budget Office is leading a drive to improve budget transparency, building on its high score in the Open Budget Survey. This has included a recent initiative with the International Monetary Fund to study a strategic approach to managing **fiscal risk**, including climate-change related risks. This will lead in turn to a budget sensitivity analysis that will ultimately be a standard feature of the macrofiscal framework.

Public **procurement** requires suppliers to comply with environmental provisions. Benin is not a member of the Africa Risk Capacity (ARC) but may join in 2021. The budget includes a line item devoted to disaster response, which acts as a contingency reserve.

Benin has a **National Fund for the Environment and Climate** (FNEC). FNEC was created in 2003, building on previous funds related to the environment and disaster management. FNEC is accredited to the GCF and funds projects related to the environment and climate change, along with monitoring and evaluation and capacity building. It has been engaged primarily in managing small-scale projects relating to reforestation, waste management and reducing GHG emissions. Funding is mainly from environmental taxes, the national budget and external finance.

On the **accountability** side, a recent law on the environment requires government to report to the National Assembly on the resources devoted to climate change adaptation. This law is one of the first in West Africa and has large potential implications for the integration of climate change into development. However, it has not yet been implemented and the National Assembly has not yet taken climate change into account when reviewing the budget.

Enablers and challenges: Benin has been attempting to improve the coordination of the response to climate change and to establish cross-cutting institutions. In common with many developing countries, much of the focus has been on funding new projects that contribute to mitigation or adaptation. The initiatives to code expenditure should help to focus attention on the contribution of the large number of development programmes that make a secondary contribution to mitigation or adaptation.

The pandemic is having fiscal consequences that may have knock-on consequences for climate spending. The revised budget for 2020 projected a reduction in revenue

of nearly 7%. This was due to Covid-19-related growth effects and required an increase in public expenditure of nearly 10% for a range of programmes, including support for enterprises, basic services and health programmes. The 2021 budget shows similarly reduced revenue and increased expenditure. Several policies have been stalled as a result of Covid-19, including revenue reforms.

Future plans: The Centre for Partnership and Expertise for Sustainable Development has plans to develop a system of three-year rolling plans that identify spending relating to the National Policy on Climate Change, and a matrix that will monitor spending on climate change across all sectors, using a climate budget tracking system. This plan includes the creation of a pool of experts to support the integration of climate change into programming and budgeting. The approach to integration of climate change into programmes in the budget is evolving, but the approach is not yet clear. A number of capacity-building activities are planned to enable access to external funding, as well as raise the profile of climate-change related issues domestically.

4.2 Burkina Faso



Context: Burkina Faso is vulnerable to climate change, which has a significant impact on food security. Risks include: increasingly intense rainfall, leading to flooding and erosion; more variable rainfall and longer periods of drought; increased temperatures and associated issues of evapotranspiration and laterisation; increased storms and windspeeds, associated with desertification and health hazards; and increases in disease threats. The combined effect of these risks is expected to lower GDP by between 3% and 12% in 2040, depending on which climate-change scenario is experienced. Much bigger impacts are expected to occur in the longer term.

Burkina Faso has a National Strategy for the Implementation of the Climate Change Convention (2001), as well as a NAPA (2007) and Nationally Appropriate Mitigation Actions (2008). Funding for the NAPA and Nationally Appropriate Mitigation Actions were limited, and a NAP (National Adaptation Plan) was introduced in 2014 to concentrate on the integration of climate change into development policies. The country produced an INDC in 2015. In addition, there is a National Climate Change Adaptation Plan (2015) and a National Climate Change Learning Strategy (2016). There are climate-change related sectoral plans covering water, agriculture and forestry, and health. Overall development is guided by the National Sustainable Development Policy (2013) and the Rural Development Strategy (revised in 2015), which deal with food security and poverty reduction, but have limited reference to climate change. The Ministry of Environment, Green Economy and Climate Change (MEEVCC) takes the technical lead on climate change. There are also Designated National Authorities for the GCF.



Interventions to integrate climate change into budgets and finance: The **budget guidelines** for both 2019 and 2020 require all ministries to take into account the risks from climate change. There does not appear to be any formal mechanism for ensuring that these guidelines have any influence on budget submissions or hearings, except for the submission of the MEEVCC.

The budget uses a **programme budgeting** system, following a directive from the West African Economic and Monetary Union. This includes the requirement to specify performance indicators. However, there are no indicators related to climate change outside of the climate-change programme included as part of the MEEVCC budget.

Related to **PIM**, the National Bureau of Environmental Evaluation (BUNEE) is a member of the National Committee for Validating Feasibility Studies. The committee was set up in 2018, but the practice had started earlier with support from international partners. In theory, BUNEE could include an assessment of the – positive or negative – contribution to mitigation or adaptation. In practice, their activities have so far been limited to environmental impact assessment. This could include issues that concern environment and climate change (e.g. desertification), but the immediate interest is in avoiding pollution risks. The standard approach takes into account the type of investment. Several projects have already been rejected, largely on the basis of environmental impact.

A **domestic fund** related to climate change, the Intervention Fund for the Environment, was formed in 2013 and is managed by the MEEVCC. (Earlier versions of this fund also existed.) Four of its five domains of activity relate to climate change (forestry, disasters, soil and water, and energy) and support has been provided to combat desertification. Some funding is provided in the national budget, but this is mainly for administrative expenses and the fund is dependent on external funding. Operations are mainly organised through a call for projects that may come from a wide variety of organisations, including community organisations and the private sector.

There are some carbon-related **taxes** on fuel and vehicles, which contribute to mitigation. Burkina Faso had a facility with the ARC, but this has lapsed. The MEEVCC has a budget line for drought insurance for farmers, which is expected to be piloted between 2020 and 2022 as a public-private partnership.

There are standards for sustainable **procurement** in government, although these are used mainly to control pollution risks rather than climate-change related concerns.

On the **accountability** side, the National Assembly has a Commission for Rural Development, Economy and Climate Change, which should review the budget from the perspective of climate change. However, at present climate change is still treated as the exclusive responsibility of the MEEVCC and is not treated as a cross-cutting concern. The Commission for Rural Development, Economy and Climate Change conducted

a workshop in 2020 to improve the understanding and effectiveness of the Commission.

Enablers and challenges: There is a range of PFM reforms underway related to programme budgeting in Burkina Faso, providing an opportunity for the integration of climate change. The existence of a public investment review process provides the foundation for the integration of climate change into programme design, but the BUNEE will need to expand the scope of its work.

The Intervention Fund for the Environment is playing a role and is partly funded by the budget. However, it has no impact on the much larger development programmes that contribute to mitigation or adaptation, and which are funded by the budget or approved by government for funding by international partners.

The Covid-19 crisis has happened at a time of acute food insecurity in some regions. Furthermore, in response to the pandemic, a supplementary budget was passed in July 2020, which shifts funds to the institutions implementing emergency programmes (defence, women and national solidarity, and a flexible inter-ministerial pot) and away from health, education, agriculture, water, sanitation and hygiene, and infrastructure. This may impact negatively on climate spending.

Future plans: The integration of climate change into public finance is still at an early stage in Burkina Faso and there are no concrete plans in place.

4.3 Cabo Verde



Context: According to the Global Risk Report 2020, Cabo Verde is the African country most exposed to risks including sea-level rise, rainfall variability and drought. The government responds to this with substantial programmes to support agroforestry, water supply and drought resilience, as well as a programme for managing disasters. Over the last five years, at least 20 climate-change related strategies and plan documents have been prepared, of which eight are sectoral and the remainder cross-sectoral, applying either primarily to climate change or to disaster management and sustainable development. Most of the strategies relating primarily to climate change have not – to date – included a clear and comprehensive assessment of their public finance implications. Implementation and finance of climate-change related actions is managed mainly through the sectoral budgets of the ministries of Agriculture and Environment (for natural resources), Interior (energy) and Foreign Affairs (MFA, for international agreements). The MoF recently created the Strategic National Agenda for Climate Resilience, which aims to integrate climate change into all strategies across government and will support the National Directorate of Planning in ensuring that climate change is taken into account when budget submissions are assessed against the National Development Strategy. The MoF created an Inter-ministerial Commission for Climate Finance in 2019.

Interventions to integrate climate change into budgets and finance: The National Directorate of Planning is planning to conduct an exercise to identify, evaluate and quantify all **fiscal risks**, including those associated with climate change, with support from the World Bank. A Directorate of Risk Management in the National Treasury already considers fiscal risks, and discussions are ongoing about how to strengthen the consideration of climate-change related risks.

A **programme budgeting** system was introduced in 2017, using the Strategic Plan for Sustainable Development as the basis for defining programmes. Three programmes are most obviously related to climate change (energy sustainability, agricultural transformation, and water and sanitation) and these all have associated outcome targets. There were challenges in implementing transversal programmes, and the programmes and indicators are currently being revised.

There has been no CPEIR and no work has yet been done on climate budget tagging. However, there are some early discussions about the possibility of introducing **climate budget tagging**. There are plans to introduce the use of **climate-change PEFA** during 2021.

The current systems for **PIM** do not take climate change into account when considering investment priorities. However, a study in 2017 proposed reforms to strengthen the preparation of climate-change related projects, including the use of a set of criteria. There is ongoing debate about how best to implement these recommendations.

Tax reforms have been introduced to exempt solar panels related to water for agriculture, and electric vehicles and their batteries, from all taxes and duties. A grant has been introduced to cover 50% of loans for investment in micro-scale renewable energy equipment.

Audit functions do not currently take climate change into account, although they are committed to evaluating progress under the Sustainable Development Goals and could report on progress in mitigation and adaptation as part of reporting on Sustainable Development Goal 13, which relates specifically to climate change.

There is no domestic **climate-change fund**, but there are ongoing discussions about the possibility of creating such a fund, possibly within the scope of the new Strategic Plan for Sustainable Development, which will start in 2022. A Sovereign Disaster Fund was established in 2019. There is no current **budget support** relating to climate change, but there are discussions about the possibility of receiving budget support linked to the implementation of the climate-change Disaster Risk Management Development Policy.

Enablers and challenges: Cabo Verde is at an early stage in its engagement with climate-change integration. There is considerable interest and several key initiatives are under

discussion. As a small country capacity is limited, but there is also potential to make substantial reforms quickly, once the reforms have been designed.

The government has responded to Covid-19 by introducing a range of measures that will increase public spending by 2.6%, mainly involving economic and social support measures. Some delays in budget execution have been experienced. Some of the budget allocated for PFM reform has been switched to the Covid-19 response. It is expected that there will be large reductions in domestic revenue, partly offset by an increase in international support. In response to Covid-19, the government is currently working on a new National Plan for Response, Recovery and Economic Promotion, and this plan is expected to refer to the importance of ensuring the recovery is climate-change resilient.

Future plans: There are some preliminary discussions in the MoF and MFA about the possibility of introducing climate budget tagging. However, these are not yet a formal part of the PFM Reform Plan or the NDC. Preliminary discussions about the development of a vision for climate finance were started in 2019 within the MoF and MFA, but these have been stalled as a result of Covid-19. Discussions have also been taking place within the ministries of Agriculture and Environment, with support from United Nations Development Programme (UNDP), on a strategy for mobilising foreign climate finance to help implement the NDC.

4.4 Ethiopia



Context: Ethiopia is one of the countries most vulnerable to climate change owing to its high dependence on rain-fed agriculture and natural resources, and relatively low adaptive capacity to deal with these expected changes. Challenges include the under-development of water resources; low health-service coverage; high population growth rate; low economic development; inadequate road infrastructure in drought-prone areas; weak institutional structures; and lack of awareness. Ethiopia has frequently experienced extreme events like droughts and floods, in addition to rainfall variability and increasing temperatures, which contribute to adverse impacts on livelihoods. For example, the 2015/16 drought resulted in lower Tax:GDP, while additional fiscal support associated with drought amounted to 18 billion Birr (US\$455 million). It has been estimated that climate change could reduce the country's GDP by up to 10% by 2045.⁴⁸ The 2011 CRGE strategy is the main document in relation to climate change and sets climate investment of US\$150 billion for the 20-year period from 2010 to 2030. There are also sectoral strategies issued by concerned sectors, while the ten-year perspective development plan includes climate change and disaster risk as an overarching pillar. Ethiopia submitted its first (updated) NDC to the UNFCCC in 2020.

48 Environment, Forest and Climate Change Commission, Climate Change Planning, Implementation, and Coordination Directorate, November 2019. *National Adaptation Plan (NAP) Implementation Roadmap for Federal Democratic Republic of Ethiopia (final draft)*.

Interventions to integrate climate change into budgets and finance: Ethiopia's efforts in this area are fairly nascent, but a number of important initiatives have been started recently. In terms of analysing domestic climate-related spending, a **CPEIR**-like exercise was conducted by the Overseas Development Institute (ODI) in 2014. However, it had limited scope and was not owned by the government. Later, some one-off exercises to tag climate expenditures were conducted in a few key sectors. Presently, a consolidated **budget tagging** and tracking system is under development with support from the United Kingdom's Foreign, Commonwealth & Development Office. This system is expected to give the CRGE Facility and sectoral ministries a clearer picture of how much is being invested in climate- and disaster-related activities across the country. It should also dramatically improve transparency of climate- and disaster-related financing in Ethiopia and allow the government to both optimise the cost-effectiveness of its investments, and make more effective budget allocations in the future. The system is currently in its design stages, with piloting expected in late 2021.

In 2019, the MoF introduced a **Fiscal Risk Statement** with support from the International Monetary Fund. This includes an account of disaster-related fiscal risks, albeit currently in qualitative form. Work is ongoing to quantify risks associated with droughts and floods, key climate-related hazards.

Efforts are also underway to strengthen **PIM** from a climate and environment perspective. Previously, public bodies that implement climate-related projects conducted their own appraisals; however, this has now become centralised at the Environment, Forest and Climate Change Commission and the Commission's approval is required. Capacity to implement full environmental impact analysis varies, however. At the same time, the CRGE Facility in the MoF has its own project appraisal and evaluation templates that it is applying to investments being considered under the NDC update.

In terms of **legislative scrutiny**, this is done primarily through the dedicated parliamentary standing committee for climate change, which oversees policies and performance of agencies in the climate, agriculture and natural resource sectors, and issues reports to parliament and international bodies like the UNFCCC. The budgets of the agencies are also reviewed by this committee.

The Office of the Federal Auditor General conducts **performance audits** that sometimes address climate-change issues, but only where these are of central relevance to the mandate of the body being audited. For example, in 2016 a performance audit on the Rift Valley Lakes Administration identified several concerns around soil and water conservation. Efforts are underway to establish a dedicated environmental audit department in the Office of the Federal Auditor General.

Ethiopia receives **climate budget support** from the European Union: a total of EUR33 million (US\$40 million) of which

EUR24 million (US\$29 million) has been disbursed so far. Disbursements are linked to the government meeting key reform criteria, including cement industrial reform, afforestation and reforestation as well as GHG reduction activities. Other government programmes related to climate change also receive on-budget external assistance, including the Productive Safety Net Programme, which scales up social protection in response to droughts.

In terms of **revenue** reforms, Ethiopia does not have a carbon tax, but an excise tax on used vehicles was introduced in 2020 in light of the higher emissions they generate, and the Tax Policy Department in the MoF is currently designing a vehicle emission tax.

Enablers and challenges: Progress on climate budget integration in Ethiopia has been facilitated by a robust policy framework set by the CRGE strategy. Additionally, the efforts have been driven by a strong institutional framework. A dedicated CRGE unit established within the MoF in 2013 drives the climate-change integration agenda, with technical guidance from the Environment, Forest and Climate Change Commission. Challenges include fairly weak PFM capacity, particularly at regional and *woreda* (district) levels. In addition, the government has very limited fiscal space, limiting its ability to finance climate investments and rendering it reliant on external assistance. This situation has been worsened by the Covid-19 pandemic, which is expected to force further fiscal consolidation in the medium term as the government faces a decline in economic growth and lower revenues.

Future plans: Ethiopia is going to be the first country in Africa to pilot the **PEFA Climate** module, with the assessment planned for early 2021. Discussions are also underway to establish a **domestically financed climate fund**, which would be awarded 0.5% of the annual budget for degraded land restoration and afforestation and reforestation. The proposal, which emanated from the MoF, is currently under consideration at the Council of Ministers and then Parliament. Furthermore, over the course of 2021, the climate budget tagging system described above will be designed, before being piloted and rolled out – first at national level, and later to sub-national governments.

4.5 Kenya



Context: Kenya experiences climate-related risks including droughts, floods, rising sea levels, land and mudslides as well as declining glaciers. The drought cycles have become shorter and the droughts more intense, owing to global climate change and environmental degradation. Extreme flood and drought events are estimated to reduce long-term growth in Kenya by about 2.4% of GDP per annum.⁴⁹ Coastal flooding from sea-level rise is projected to affect up to 86,000 people a year and lead to an annual cost of about Kshs6 billion by 2030. These costs, along with its engagement

49 Stockholm Environment Institute, 2009. *The Economics of Climate Change in Kenya: Final Report*.

in international fora, have led Kenya to recognise climate change in many of its guiding plans and policies. This includes the National Development Framework Kenya Vision 2030 (2008) which acknowledges climate change as a risk that could slow the country's development. The NAP (2015–2030) and the National Climate Change Action Plan: 2018–2022 further detail the government's climate-change ambitions, and the National Climate Change Framework Policy (2018) provides an explicit commitment to ensure the integration of climate-change considerations into planning, budgeting, implementation and decision-making at the national and county levels, and across all sectors. Finally, the National Climate Finance Policy (2018) promotes the establishment of legal, institutional and reporting frameworks to access and manage climate finance.

Interventions to integrate climate change into budgets and finance: Over the years, the Kenyan government has introduced various plans, policies and interventions to integrate climate change in the public budget system. For example, the 2020 **budget circular** outlines priority mitigation and adaptation interventions, including renewable energy generation; energy efficiency in construction, water and wastewater; and disaster risk management. It also details Kenya's system of **climate budget tagging**, which tracks climate finance flows and climate-change related expenditures, with the intention of supporting resource mobilisation. The system demonstrates that Kenya has been increasing its budget for climate change in the 2020/2021 budget. In the financial year 2020/21, it amounted to Kshs.105.22 billion (US\$957 million), representing 3% of the gross national budget – an increase from Kshs85.3 billion (US\$776 million) allocated in the financial year 2019/20.⁵⁰ Kenya also has a separate system for reporting disaster-related expenditures by Ministries, Departments and Agencies, including drought, floods, epidemics and pandemics, earthquakes, heat waves, severe storms, landslides, volcanic eruptions, etc.

Kenya's equivalent of a **budget speech**, the budget policy statement, recognises that the Government of Kenya needs to take deliberate measures to reduce exposure to climate-related risks and disasters, as these would cause budget disturbances and lead to economic shocks in the country. This has led to establishment of the **Disaster Risk Financing Strategy**, which sets out the primary disaster risks the country faces and proposes financing options for them. Further, the budget policy statement recognises that climate-change related fiscal risks to the economy are unavoidable due to the country's high dependence on rain-fed agriculture (budget policy statement, 2020).

Kenya has in the past had **sovereign insurance** for drought, but no longer holds a policy due to affordability concerns. Kenya joined the ARC risk pool in 2014–15. This provides parametric weather insurance coverage to African governments for agricultural seasons in case of drought. Kenya faced the

steepest premiums across the continent at around US\$9 million (US\$4.5 million per season) per year, buying them the most comprehensive coverage of US\$30 million per season, equating to a maximum potential payout of US\$60 million per year. In 2016, the Government of Kenya opted not to purchase a policy for the 2016/17 season and has not re-joined since. The reasons for Kenya's withdrawal from the third risk pool are multi-fold. Firstly, many officials felt that the model utilised by the ARC was unreliable, meaning payouts did not happen when they possibly should have. This led to questions being asked around the programme's value for money. Secondly, there was mixed understanding on how the policy worked. Some did not fully understand that ARC is designed to provide a response of last resort only in cases of severe drought, and expected it to function more like a savings mechanism. These misunderstandings led to unmet expectations. Thirdly, many stakeholders viewed the ARC as too expensive, with the Treasury facing competing priorities. In total, Kenya paid US\$18 million in premiums, with no payout. Fourthly, the 2016/17 drought season coincided with elections, making it a particularly sensitive time to allocate funding to an area considered ineffective by some.⁵¹

When scrutinising the budget or public accounts, the **legislative** partly considers climate change issues. This is done primarily by the Parliamentary Budget Office, who prepare analytical briefs on key priorities like food security, and **execution performance** of relevant budget programmes.

Climate change is considered by the government in **PIM**. Following the 2015 Paris Conference, ministries, departments and agencies are required by law to incorporate climate change in all programmes and activities undertaken, to evaluate the effect, impacts and challenges posed by climate change.

Kenya also has a **domestic climate fund**, first introduced in 2018/19 and financed by the government, partners and international climate funds. The objective of the fund is to provide financing mechanisms to priority climate-change actions and interventions. More specifically, it was set up to provide loans, grants or equity for climate-change research, as well as for development of innovative actions benefiting climate-change responses; technical assistance to county governments; and training and capacity-building on climate change.

Enablers and challenges: In Kenya, progress on climate budget integration has been driven by the growing fiscal costs associated with climate change. Additionally, the country has a strong supportive legal and policy framework, in particular with the National Climate Finance Policy (2018) and the National Climate Change Framework Policy. Ongoing challenges include institutional coordination, as climate change management is coordinated by various ministries and state departments across government. Another challenge is the lack of a viable financing plan for different climate-

50 Budget Implementation Review Report, 2021.

51 OPM, 2017. *Independent Evaluation of the African Risk Capacity, Annex C: Case Studies.*



change outcomes. Meanwhile, insufficient attention to social inclusion in climate-change policies has led to ineffective adaptation and resilience to climate-change impacts. Kenya needs to involve all social groups in the mainstream process, and to make their needs integral. Lastly, a significant amount of funding for climate-change interventions in Kenya is donor-driven, and therefore not sustainable to implement all climate-change adaptation goals. This is put into the spotlight with the impact of the Covid-19 crisis and economic slowdown, which is causing real falls in revenue and cuts to public expenditure.

4.6 Mozambique



Context: Mozambique is highly vulnerable to increases in flooding, drought and rainfall variability. It has participated in most of the usual international initiatives related to climate-change policy, including a NAPA (2007), an INDC (2015) and NDC (2018), a Climate-Change Strategy (2012) and a Disaster Risk Management Master Plan (2014). It also has a Climate Change and Gender Action Plan (2014). Some of these include financial implications, but there is no coordinating climate-change financing framework.

The Climate-Change Strategy defined a large number of interventions across all sectors, some pre-existing and some new. The strategy was to last 12 years and a costed Action Plan was prepared for the first two years. There was provision for further action plans after two years, but these have not been produced. Finance comes from a wide variety of sources, including integration of climate change into development programmes and new sources of finance. The environment fund is to play a coordinating role, monitoring the full range of financing managed across government.

Interventions to integrate climate change into budgets and finance: Mozambique conducted an environment Public Expenditure Review in 2012, with support from the UNDP, and a **CPEIR** in 2016, with support from the World Bank. The CPEIR should create a baseline for continued monitoring of climate-change expenditure across government, but this work has not been continued. However, these have led to the creation of climate-change capacity in the MEF, with some staff dedicated to work on climate change and the environment.

The Planning and Budgeting National Directorate in the MEF takes a lead role on climate-change integration issues and has officials dedicated to this task. The country has produced an Annual **Fiscal Risk Report** since 2015 which includes risks from natural disasters, and which is used to inform the size of the contingency item in the MTEF and the budget. In 2018, the MEF created a Directorate devoted to fiscal risk and the production of the Fiscal Risk Report. This initiative was led by government and obtained donor support.

Funding for dedicated climate-change projects was initially provided by the **Environment Fund**, but this role has

now been taken over by the National Fund for Sustainable Development. Cross-sectoral coordination is provided by the National Council for Sustainable Development, which includes a unit dedicated to climate change, as well as by the bodies that coordinate disaster response. MEF is involved in all these bodies.

Mozambique signed a World Bank **Development Policy Operation** in 2019, in which tranches of budget support are received provided progress is made on disbursement-linked indicators related to disaster management. These include: the operationalisation of a Disaster Management Fund; sovereign catastrophic insurance in line with a Disaster Risk Finance Strategy; local Disaster Risk Management committees; flood/cyclone early warning systems; diplomas in climate-resilient education infrastructure; and retrofitting of schools to climate-resilient norms. This is one of the few examples of climate-change related budget support.

The **budget guidelines** refer to climate change as a cross-cutting area, setting how units can plan and budget cross-cutting interventions. There have not yet been any major reforms to integrate climate change into the budget system. Mozambique uses the standard COFOG functional classification, but this is of little relevance to the integration of climate change into the budget. The reason for this is that there is only one COFOG category related to climate change and the environment, and the large majority of climate-change related expenditure happens as a secondary objective of other COFOG categories. Public procurement, the legislative assembly and audit institutions make little reference to climate change, although some projects require bidders to demonstrate commitment to standards of construction (e.g. on dams and dykes) that take climate change into account.

Enablers and challenges: The institutional structures are in place to enable the cross-sectoral coordination of the integration of climate change into public finance, and there are plans for improving the capacity of these institutions. The climate-change strategies describe the broad principles of climate-change financing and the options for new sources, but have limited information on the implications of climate change for domestic public finance or the methods to be used for achieving this integration. Without these methods, prioritisation of climate-change related expenditure is therefore a substantial challenge. Mozambique has made progress with fiscal risk analysis, and this should provide a foundation for integrating the consideration of climate-change risks in public finance management.

Future plans: The work of the National Fund for Sustainable Development will continue. The new development policy operation will provide substantial resources and generate lessons for the methods to be used for future budget support related to climate change. The environment Public Expenditure Review raised the possibility of introducing some form of climate-change expenditure tagging in 2012.

There have been ongoing discussions about this, but there are not yet any specific plans. The Fiscal Risk Report will become further consolidated as a key strategic document in government. As part of the international NDC Partnership Plan, Mozambique's NAP process initiative (started in 2016) defined 19 priority activities for Mozambique across a range of issues involving climate-change integration, of which 14 have at least some source of funding.

4.7 Rwanda



Context: Rwanda is faced with several climate risks, including low rainfall leading to prolonged droughts (particularly in the eastern province) and flooding in the north and north-west. Temperatures have also been rising. These have an impact on agricultural output, water availability, energy production, and susceptibility to waterborne disease. Models suggest that the additional net economic costs (on top of existing climate variability) could be equivalent to a loss of almost 1% of GDP each year by 2030, and more when taking into account the effects of floods and other extreme events.⁵² The country launched a Green Growth and Climate Resilience Strategy in 2011, which is currently under revision, and includes a target for Rwanda to be a carbon-neutral economy by 2050. Meanwhile, a policy on environment and climate change was finalised in 2019, and in May 2020 the country submitted its NDC to the UNFCCC. This sets a target to reduce GHG emissions by 38% by 2030 (compared to business as usual) and identifies 24 priority adaptation investments. The commitments are costed at US\$11 billion, with the government pledging to 'continue to commit significant resources' while also calling for international financial assistance.⁵³

Interventions to integrate climate change into budgets and finance: Most of Rwanda's interventions in the sphere of climate budgeting and finance have focused on budget preparation processes. For instance, Rwanda's budget process starts with a review of its **fiscal risks**, as is required under the East African Community Monetary Union. This is a new process, launched in 2020/21, led by the Macroeconomic Department of the MINECOFIN. They distinguish between macroeconomic and specific risks, and under specific risks, the risk of natural disasters is considered.⁵⁴ From there, macrofiscal projections can be made, and are appropriately modified to reflect the projected impact of climate change and environmental degradation.

Climate change has featured in Rwanda's **budget guidelines** since 2011, championed by the Ministry of Environment. The guidelines were produced after a study⁵⁵ on the impact of climate change on ecosystems recommended integrating climate change into budget preparation. Budget entities

are now required to attach a climate change annex to their budget submission, which details how the entity will handle environment and climate change as cross-cutting areas.

Climate budget tagging was also introduced in 2011, with the objective of tracking how funds for climate change have been spent. It continues to this day. The tagging process is not integrated into the IFMIS system, but is a standalone exercise conducted annually by the MINECOFIN and the Ministry of Environment. The analysis reveals that budget expenditure on the environment and climate change has risen steadily from 0.4% in 2009 to 2.6% in 2018/19.⁵⁶

When the Minister for Finance presents the annual budget to parliament, climate change usually features in the **budget speech**, for example as a potential downside risk to fiscal projections as per the 2019/20 speech. The government is also in the process of introducing an Environment and Climate-Change Budget Statement that provides a summary of all planned spending on climate-related activities in the year, as collected through the tagging exercise. The Ministry of Environment has approved the document and officially communicated with the MoF, with a target launch for 2022/23.

While striving to mainstream climate change throughout the regular budget, Rwanda also has a **domestic fund** for climate change: the Rwanda Green Fund. The fund was established to cater for emergencies arising out of unexpected environmental shocks and climate change, as well as to fund resilience investments. It was set up with US\$44 million in 2013 but this has now risen to about US\$100 million, and is financed entirely from the government, managed by the MINECOFIN. The fund operates harmoniously alongside mainstreaming in the regular budget because it focuses on financing initiatives related to emergencies (which are unforeseen in the budget), as well as climate-change friendly initiatives to be implemented using the annual budget mechanisms.

Less has been achieved, to date, on the **accountability** side of climate budgeting in Rwanda. Legislative budget hearings are made to inform parliamentarians of the background and content of the proposed budget. Sometimes these include deliberations concerning climate change, but only on a case-by-case basis and primarily when discussing the Ministry of Environment's budget. Rwanda has not introduced any climate-specific **revenue** measures like green bonds or carbon taxes. However, a tax has been mooted on single-use plastics.

Enablers and challenges: The primary enabler, which provides the rationale for the climate integration initiatives noted above, has been awareness in the government of the

52 Economics of Climate Change in Rwanda, 2009.

53 Republic of Rwanda, 2020. Updated Nationally Determined Contribution.

54 Rwanda Fiscal Risk Statement 2020, Ministry of Finance and Economic Planning, June 2020.

55 Stockholm Environment Institute, 2009. *Economics of Climate Change in Rwanda*.

56 REMA (Rwanda), August 2020. *Assessment of Implementation of Environment and Climate Change Activities by Sectors, Ministries and Districts (2018–2019)*. EEC Implementation Assessment Report.

impact of environment and climate change on Rwanda's economy. Formative studies, such as the 2009 assessment of the Economics of Climate Change in Rwanda have also helped in building an irrefutable economic case. Other enabling factors have included a supportive legal and policy framework, as well as clear assignment of institutional roles and responsibilities. Progress in Rwanda on this agenda has been gradual, taking the best part of a decade to get to where things presently stand; while an iterative reform programme that is willing to address challenges and change direction, as well as pilot interventions prior to rollout, has been critical for sustainability.

While addressing climate change is increasingly viewed as critical to Rwanda's development goals, it nonetheless – from a resource allocation perspective – ends up competing with other priorities for scarce resources. This is the primary impediment to progress and has been made more difficult since the Covid-19 pandemic hampered growth outlook and domestic revenues. Covid-19 will have repercussions for medium-term spending, including potentially on funding for climate programmes and Rwanda Green Fund budget figures are not presently available. However, Rwanda is also looking for opportunities arising from this challenge; a post-Covid-19 recovery strategy has been developed (the Economic Recovery Plan), and a consultant has been recruited to assist in the greening of the Plan.

Future plans: Regarding future plans in the area of climate budgeting and finance, the Government of Rwanda is in the process of developing Green Procurement Guidelines, which will then be piloted and rolled out. Efforts are also underway to introduce environmental standards into PIM, starting with mapping of flood-prone areas and wetlands. Revenue measures are also under consideration, with a raft of tax reforms being considered as part of the recovery by the Rwanda Revenue Authority. Finally, a Climate Change Budget Statement will be introduced from 2021/22.

4.8 South Africa



Context: South Africa is highly vulnerable to increases in temperatures, rainfall variability and is also a major GHG emitter (the 14th highest in the world).⁵⁷ Climate change is an increasingly important cross-cutting priority for the government and features in the development plan and several national policy documents, while a climate change bill is presently pending. The government has not yet submitted an NDC to the UNFCCC, but its 2016 INDC and the Low Emissions Development Strategy submitted in 2020, made commitments to contain emissions and invest in green energy. Furthermore, under the 2019 Integrated Resource

Plan, coal's contribution to the nation's energy needs is targeted to fall to 58.8% in 2030 (from 88% in 2017), with renewables set to rise from 3.4 to 24.7% in the same period.

Many of the climate integration reforms pursued in South Africa were initiated or recommended by the 2011 National Climate Change Response Policy White Paper. Here the government commits to 'mainstream climate change response into the fiscal budgetary process and so integrate the climate change response programmes at national, provincial and local government levels'.⁵⁸ In 2016, an environmental public expenditure review was conducted and, while it was not climate-change specific, it did look at expenditure on environment and climate-change relevant programmes.⁵⁹

Interventions to integrate climate change into budgets and finance: The first climate-change integration initiative of the Government of South Africa was a **carbon tax**, which forms a key component of the government's climate-change mitigation commitments. After over a decade of research, design deliberations, consultation and preparation, the Carbon Tax Act⁶⁰ was signed into law in May 2019, making South Africa the first (and only) country in the continent with such a tax. The tax is on all fuel combustion, industrial-process emissions and fugitive emissions above a prescribed threshold and is to be introduced over 12 years. In its second year of implementation (2020/21), the carbon tax is expected to generate 0.12% of the main budget revenue, but this will increase as the rollout progresses. Meanwhile, an **electricity levy** introduced in 2009 (for electricity generated from non-renewable sources) is set to generate 0.6% of budget revenue in 2020. An **energy efficiency tax incentive** (equal to up to 0.1% of revenue) was also introduced in 2013 and will remain in place until end 2022. **Green Bonds** have been issued at city level (by the administrations of Johannesburg and Cape Town), but not by the national government.

On the expenditure side, in 2010 the government introduced a **renewable independent power producer energy procurement programme**, with a target of 17.8 thousand megawatt of newly generated power produced from renewable energy sources by 2030. While this target is on track to be met, in the last five years the programme has slowed down, in part due to concerns about the relative cost of renewables, as well as fraught debate concerning the dominance and management of state-owned energy company, Eskom. Other energy-related budget measures include a national grant programme to make local government buildings more energy-efficient.

At the local government level, the **standard planning and budgeting formats** for municipal governments include Built Environment Performance Plans, which require local governments to consider climate risks in investment planning.

57 Carbon Brief, 2020. *The Carbon Brief Profile, South Africa*.

58 Republic of South Africa, 2011. *The National Climate Change Response Policy (NCCRP) White Paper*.

59 Government Technical Assistance Centre (South Africa), 2016. *High Level Environmental Public Expenditure Review*.

60 Republic of South Africa, 2019, *Carbon Tax Act (no. 15 of 2019)*.

Furthermore, in September 2020 the National Treasury initiated a project – with World Bank support – to develop a **climate budget tagging** system. While still in discussion, early documentation sets out the three-fold objectives of the system: i) influencing budget and policy decisions in the direction of climate relevance; ii) improving the effectiveness of climate-relevant budget and policy decisions; and iii) enabling accountability for climate-change responsibilities and reporting on climate-change strategies, plans and commitments. Design is ongoing, but it will most likely be implemented in all three spheres of government, and may extend to include selected public entities, with piloting scheduled for 2021. In 2020, the **MTEF submission guidelines** (the budget guidelines) mentioned climate change for the first time, primarily in relation to the budget tagging exercise, but also requiring provinces to consider climate risks in their budgets.

The cost of climate change disasters has also triggered budget policy responses in South Africa. The Public Finance Management Act (1999) provides for up to 2% of the national and provincial budget to be spent on unforeseen emergency expenditures, and since 2012/13 government has budgeted for **conditional disaster relief grants for national, provincial and municipal governments**.

Enablers and challenges: A key driver behind these reforms has been successive climate emergencies, including drought, water shortages, floods and wildfires, the cumulative cost of which has highlighted the need to accelerate adaptation spending. This has spurred action on climate budget tagging, climate-resilient infrastructure choices and other interventions. At the same time, power shortages since 2008 have resulted in growing support for diversified energy production, including use of renewables. South Africa’s commitments in terms of the Paris Agreement have also driven government’s response. Other enablers have been the high levels of capacity within the private sector, National Treasury and the South African Revenue Service, which has made complex reforms like the introduction of the carbon tax possible.

At the same time, key challenges for implementing adaptation and mitigation actions in South Africa include a) capacity – particularly of sub-national governments – and b) shrinking fiscal space, which has been worsened by the Covid-19 pandemic. Many departments and programmes funded by the main South African budget are now facing expenditure cuts, limiting the availability of public finances for climate action. This is already evident in the immediate wake of the Covid-19 crisis. For instance, climate change programmes under the Department of Environment, Forestry and Fisheries had their budget cut by a third in 2020/21. However, the immediate budget prioritisations were driven not so much by policy priorities, as by what expenditures could not be avoided (e.g. staff payments) and what would not proceed

(given lockdowns). Of greater concern are even deeper cuts projected over the medium to long term.

On the positive side, South Africa’s post-Covid economic recovery strategy tabled in Parliament in October 2020 commits to various green stimulus measures, including re-prioritising planned investments in renewable energy, stepping up investments to improve energy and water efficiency of buildings, and forestry development. The pandemic has also not, as of yet, caused any disruption to climate-related PFM reforms (e.g. budget tagging, which is continuing as scheduled).

Future plans: The government has various plans to extend the climate-related PFM reforms noted here, including scaling back concessions around the carbon tax, and continuing to expand renewable energy production through the renewable independent power producer programme. Further climate-relevant fiscal instruments are expected to be announced in an upcoming Environmental Fiscal Policy Paper. Plans are in place to encourage climate-resilient infrastructure through adjusting project proposal instruments, while the government also hopes to sharpen planning, monitoring and evaluation instruments at local level by introducing required climate indicators into frameworks.

In addition, government will be tabling a climate-change bill in the national legislature later this year. This will provide the legal framework for implementing various measures proposed in the White Paper and the National Development Plan, as well as the emissions targets set out in the Low Emissions Development Strategy.

4.9 Uganda



Context: Uganda is prone to numerous climate-change related shocks, including unseasonal and heavy rains, floods, droughts and landslides. These have an impact on GDP and fiscal indicators through a reduction in agricultural produce, lower power production, reduced farm incomes, and unplanned emergency expenditure. In the fiscal year 2007/08 climate-related damages were worth about 4.4% of the national budget. The country published a national climate-change policy in 2015 and a costed implementation strategy, estimating that around 1.6% of GDP needs to be spent on climate-change relevant activities.⁶¹ A climate-change bill is in draft form. The government has yet to submit its NDC to the UNFCCC, although it did submit its INDC in 2015. This set out priorities for investments in adaptation (including forestry, sustainable land management and climate-smart agriculture, and disaster management) in addition to mitigation targets to reduce GHG emissions by 22% by 2030 (against a business as usual scenario).⁶²

Interventions to integrate climate change into budgets and finance: Uganda has undertaken different initiatives

61 Tumushabe et al., 2013. *Uganda National Climate Change Finance Analysis*.

62 Ministry of Water and Environment, 2015. *Uganda’s Intended Nationally Determined Contribution (INDC)*.



to integrate environment and climate change at each stage of the budget processes. This starts with the **fiscal risk statement**. The MOFPED prepared its first fiscal risk statement for 2019/20, and climate change features as a noted driver of extreme weather events that pose risks to economic growth and social welfare, with potentially significant consequences for the national budget in the form of unplanned or emergency spending.⁶³ It has continued to feature in fiscal risk statements each year, albeit only in a qualitative manner.

Climate change has been mentioned in **budget call circulars** as a key cross-cutting issue since the financial year 2017/18. This has been a cross-ministerial effort, with the MOFPED responsible for the coordination of the budget preparation process and issuing the circular, and the Ministry of Water and Environment (MoWE) taking the technical lead on climate change mainstreaming, and producing climate-change budget guidelines.⁶⁴ The guidelines have led to the inclusion in the annual budget of significant funds devoted to adaptation, mitigation, and reducing the impact of climate disasters. This is given prominence in the Finance Minister's **Budget Speech**, which this year emphasised the negative impact of climate change on national development programmes, which it said have been compounded by the pandemic.

Climate budget tagging was introduced in 2018, with the support of the World Bank. A manual was prepared defining a system that relates expenditure programmes to the national climate-change policy (although no different categories or weights for climate-change relevance are applied). This was piloted in four ministries and four local governments. However, it is yet to be rolled out, and at the time of writing was not operational.

Uganda has a well-established **performance-based budgeting** system, which has integrated climate change concerns. Budget entities define their own key performance indicators. However, in the case of climate change, guidance on relevant indicators is provided by the Office of the Prime Minister and the MoWE, and the Uganda Bureau of Statistics coordinates collection of climate-change related data. This process has reportedly helped increase awareness of the role of development programmes in addressing climate change, while also improving their design and resourcing.

PIM has become a key focal point of PFM reform in Uganda in the last three years, with a draft National PIM Policy being developed. This requires feasibility assessments to be carried out when new projects are being formulated, and the potential impacts on climate change and environmental

degradation are among the factors required to be considered. The policy is too nascent to have registered a discernible impact, however.

On the **accountability** side, the legislature scrutinises climate-change policy and performance through parliament's Natural Resources Committee. The chairman of the Natural Resources Committee is also member of parliament's Budget Committee, which reviews the budget from inception up to approval. This helps ensure climate change is also considered in the budget. The active role of parliament in climate change in Uganda has made the topic more visible to the public.

Uganda has not introduced any climate-specific revenue measures like green bonds or carbon taxes. However, some **environmental taxes** are applied to used cars, refrigerators, computers and cookers to mitigate the impact of carbon gas emissions, while solar products are exempt from import tax.

Enablers and challenges: Uganda has made significant progress in integrating climate change into its PFM systems, which has been made possible by a strong legal and policy framework, and relatively robust PFM capacity and systems. The main challenge is in sustaining this momentum and ensuring there is broad government ownership of initiatives. Fiscal space constraints also limit the pace at which Uganda is realising its climate-change ambitions; these have been tightened further in the wake of the Covid-19 crisis and related economic fallout. While Uganda was able, with external support, to avoid cutting expenditures in the immediate wake of the Covid-19 pandemic, for the financial year 2020/21, revenues are projected to fall on account of the economic slowdown, with expenditure cuts being projected for most areas of the budget. It is not yet known whether climate-relevant sectors will enjoy any degree of protection from this. Thankfully, Covid-19 has not resulted in any long-term delay to the pace of PFM reform, including climate integration aspects.

Future plans: The Government of Uganda appreciates the impact that climate change can have on its economy and development. It has therefore laid down commendable groundwork for the integration of climate change in its budgeting and financing activities. This includes the following: drafting a National Climate-Change Bill to support the implementation of the climate-change policy; implementing procurement standards that include climate-change factors; and rolling out the budget tagging methodology in the near future. A National Public Sector Procurement Policy was passed in 2019, and the associated procurement standards are currently being formulated. These are expected to include climate-change provisions.

63 Fiscal Risks Statement, MOFPED (Uganda), November 2018.

64 MoWE (Uganda), June 2014. *Guidelines for the Integration of Climate Change in Sector Plans and Budgets*.

4.10 Concluding reflections

The country case studies presented demonstrate two things clearly: firstly, the governments concerned are already implementing a broad portfolio of measures to integrate climate change into budgeting and finance. Secondly, no two countries have adopted the same set of measures, pointing to the diversity in what is, globally, an emerging area of PFM practice. Some areas of reform are more widespread, including the existence of climate-change strategies, and the integration of climate change into development plans. It is less common, however, for these plans to have explicit financial implications, or to be costed. Climate change is a commonplace feature in budget circulars, a relative ‘quick win’ strategy for encouraging sectors to consider climate change in their budgets. Climate change was not, however, a standing consideration in the budget hearings that followed the issuance of circulars. The explicit identification of climate-related fiscal risks is also widespread in the countries considered, often as a result of the rising cost of climate-related disasters. The majority of countries reviewed also have domestic climate-change funds that operate alongside the mainstreaming in the regular budget, in some cases for specific climate-focused investments like research and capacity building. Areas which have not had as much attention include accountability measures such as citizens’ climate-change budgets, climate-informed audits, and legislative engagement around climate-related public expenditure.

“ No two countries have adopted the same set of measures, pointing to the diversity in what is, globally, an emerging area of PFM practice ”

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The future direction of climate integration reforms

The case studies highlighted in Chapter 4 demonstrate that the pace and direction of reforms to integrate climate change into domestic PFM systems in Africa vary substantially. For countries looking to define key interventions to start with, it can be a useful exercise to consider the primary aims of climate integration, and to select reforms best suited to those objectives. Figure 6 below provides some suggestions as to which interventions might be considered critical, mandatory or optional. These are enumerated under four different objectives pertaining to i) awareness raising; ii) linking expenditure with climate plans; iii) strengthening budget processes; and iv) improving the effectiveness of climate spending.

None of the case studies introduced all the climate integration reform measures seen today in one go. Rather, it is helpful to approach climate PFM reforms in an iterative and gradual manner, where higher standards and more ambitious reforms are achieved over time as capacity develops and approaches are refined. Table 2 below suggests how the different versions of the integration reforms might look for differing levels of complexity (simple, moderate and ambitious). This is based on a review of global practice and the performance standards established in the PEFA Climate module.

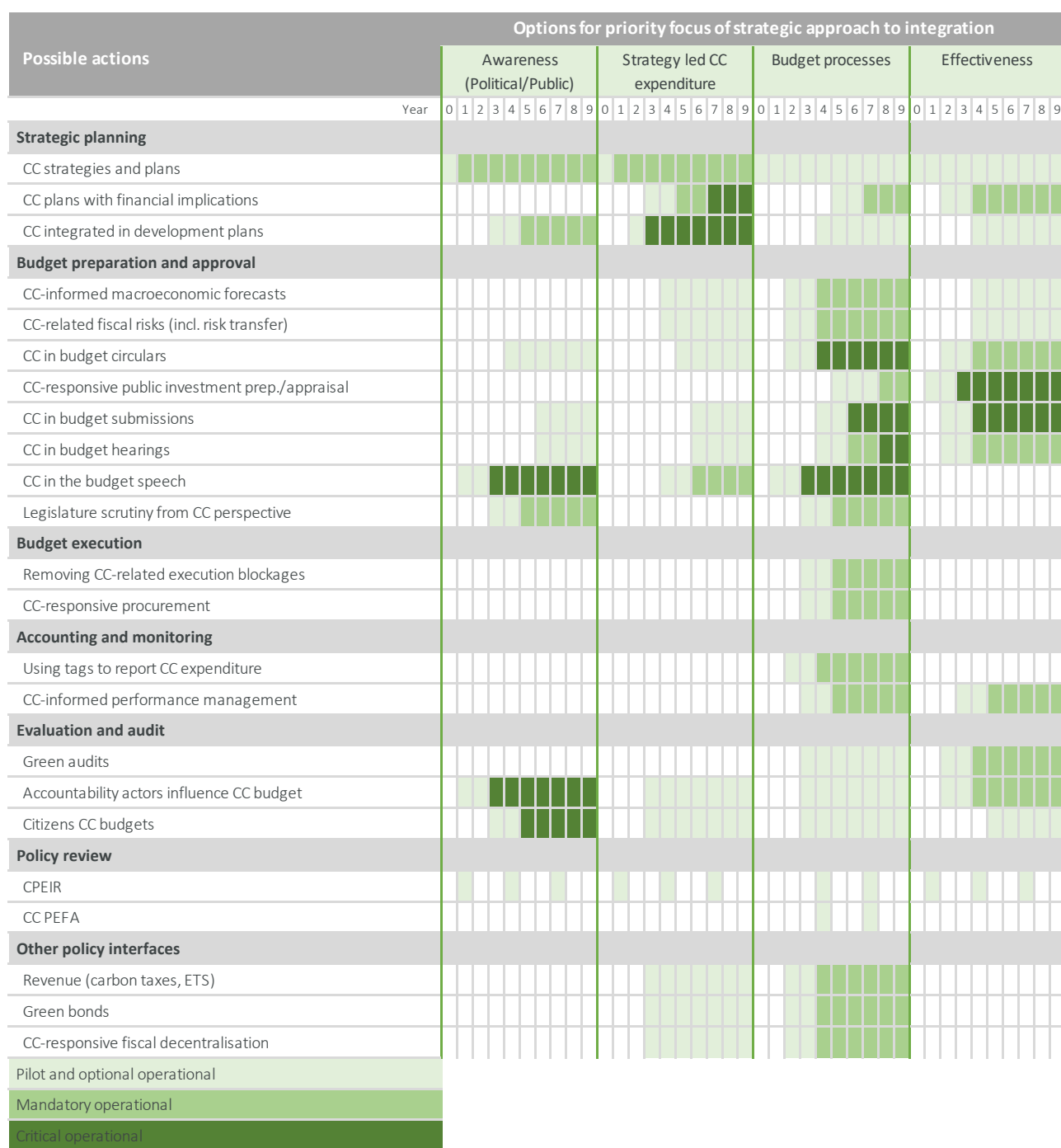
As with normal PEFA assessments, countries cannot expect to achieve A-scores or implement highly complex climate integration reforms immediately. However, this table gives a sense of a potentially desirable direction of travel. Beyond duration of experience and implementation capacity, the form particular reforms take in any country will also depend on factors not considered in this table. These include the country's specific climate vulnerabilities, which determine whether adaptation, mitigation or both should take priority, and the underlying PFM system. For example, there may be a practice of performance-based budgeting that can have climate indicators formulated within it, or an IFMIS in which to programme a climate budget tagging code. Climate-change integration is unlikely to be a driving force behind core PFM reforms – a MoF will not roll out an IFMIS simply to digitise a climate budget tag, for example. It follows that climate integration budget reforms should build on what is already in place. Lastly, by proposing these levels of complexity, the objective is not to promote uniformity between countries or the impression that there is a gold standard against which all countries should be judged. Rather the objective is to present ideas that might encourage or inspire governments to deepen or expand particular climate integration budget reforms. Table 2 will benefit from broader consultation with African finance ministries, and refinement once the pilots for PEFA climate are complete.

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It is helpful to approach climate PFM reforms in an iterative and gradual manner, where higher standards and more ambitious reforms are achieved over time as capacity develops and approaches are refined

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Figure 6: Packages of integration reforms aligned with various strategic objectives



Source: Authors

Table 2: Design options for different climate integration budget reforms with varying levels of complexity

Interventions		Design options		
		Simple	Mid-level	Ambitious
i. Strategic planning	Costed climate change strategies/ plans (see CC-PEFA 1.1)	A national climate change policy and strategy is prepared, with the climate initiatives presented being costed, but without any direct comparison with existing budget allocations or likely funding sources and strategies for meeting funding gaps.	As for simple, but with costings reflected in medium-term budget estimates. Funding gaps are identified, and alternative external funding sources flagged. There is an operational body, unit or team in charge of fostering coordination on climate- change activities in line with climate-change policies.	As for mid-level, but with realistic financial targets matched with clearly identified potential sources of funding, including from the budget, external funding and other sources. Climate-change policies cover sub-national governments, public corporations and other operators in charge of implementation.
	Mainstreaming Climate change into development and sector plans	Sectoral medium-term strategic plans are prepared, which reflect priorities from national climate-change policy or strategy or, in its absence, NDC targets. No financial implications are provided.	As for simple, but climate elements in sector plans are costed, and aligned with medium-term budget estimates. There is a central body, unit or team (MoF, planning, climate or the like) responsible for ensuring mainstreaming in sector plans and tracking implementation. Sector key performance indicators include climate-related indicators, with performance regularly reported against.	As for mid-level, but climate-responsive sector plans are reflected in sector budgets. A CC-PEFA is conducted to monitor progress with reforms to strengthen the integration of climate change into planning and finance.
ii. Budget preparation and approval	Climate-informed macroeconomic forecasts	The impact of climate change on macrofiscal forecasts is described, but without quantification.	As for simple, but with quantification of forecasts for key macroeconomic variables.	As for mid-level, but various macroeconomic forecasts are presented, adjusted for different climate scenarios.
	Climate-change related fiscal risks (including risk transfer) (CC-PEFA 7.1)	A qualitative assessment of select climate-related fiscal risks is conducted.	The government produces a report on fiscal risks that includes a qualitative and quantitative assessment of climate-related fiscal risks. It considers impacts of such fiscal risks on expenditure and revenue.	As for mid-level, with the addition that government includes in the budget specific measures for managing the risks.
	CC in budget circulars (CC-PEFA 3.1)	The budget circular contains guidance on how to factor climate-change mitigation or adaptation planned expenditure into budget proposals and to relate to climate-change strategies.	As for simple, but the budget circular also provides a methodology to track climate-change related expenditure.	As for mid-level, but the budget circular also provides guidance on how to deal with expenditures that are counter to climate policy, including how to limit expenditures that are counter to climate.

Interventions		Design options		
		Simple	Mid-level	Ambitious
ii. Budget preparation and approval	Climate change in budget hearings	In budget hearings, climate-change discussions are held, for those sectors where it is most directly relevant (e.g. when discussing the Ministry of Environment's budget).	Climate change is a standard agenda item, with the MoF asking questions pertaining to the climate impact of proposed budgets in all budget hearings.	Climate change is a standard agenda item in all budget hearings, and line ministries are required to prepare in advance an account of how their submissions respond to climate change.
	Climate-responsive PIM (CC-PEFA 5.1/5.2)	The legal or regulatory framework requires submissions for funding investment through the budget to include a qualitative assessment of the degree to which they contribute to adaptation or mitigation.	As for simple, but the assessment of contribution to adaptation or mitigation is used to influence the selection of new investment projects.	As for mid-level, but the assessment of contribution to adaptation or mitigation includes quantitative analysis for investments that make the biggest contribution, with guidance on which projects require different levels of analysis. The assessment of contribution to adaptation or mitigation is published. The scope of climate-related objectives and requirements covers central government and public corporations.
	Climate in the budget speech	Climate change is mentioned in the budget speech, for example as an expenditure priority or a downside risk of macrofiscal projections.	As for simple, but the budget speech includes a summary of key budget and finance measures that address it.	As for mid-level, but aggregate planned climate spending as documented through a budget tagging exercise is presented.
	Legislature scrutiny from a climate-change perspective (CC-PEFA 4.1/4.2)	A climate-change or environment committee of the legislature reviews the climate sector policy, plans and performance of climate-related programmes (including audits), and makes recommendations on climate sector budgets to the budget committee.	As for simple, but with the leadership of the process coming from the budget committee and the technical committee responding to that leadership. The review considers climate-related details of expenditure and revenue (including climate budget tagging reports, where available).	As for mid-level, but the review includes technical and scientific support from expert advice from climate advocacy groups, independent climate councils, or others. The review also covers climate-related fiscal risks. Public consultations are held.
iii. Budget execution	Addressing execution challenges in climate-change sectors	An analysis of execution performance in key climate-related sectors is conducted (using the climate budget tagging system, if available), and for areas of under-execution, a review of causes leads to recommendations for corrective measures. These could relate to reforms to core PFM systems, or to sector delivery systems.	As for simple, but the review leads to recommendations for corrective measures which are built into the overarching PFM reform agenda or sector delivery systems reform agenda as appropriate.	As for mid-level, but the legislature or supreme audit commission are involved in overseeing their implementation.

Interventions		Design options		
		Simple	Mid-level	Ambitious
iii. Budget execution	Climate-responsive procurement (CC-PEFA 8.1/8.2)	The procurement framework establishes clear criteria to determine what products or services count as climate-responsive and the scope of procurement operations subject to climate-responsive procurement principles. Climate-responsive standards are used to help determine tender requirements and specifications, or award criteria. There are simplified procedures and templates to expedite procurement for response to climate-induced disasters.	As for simple, but quantitative targets, priorities and timeframes are set; climate-responsive criteria are included in contracts. Performance clauses; climate responsive procurement examples or templates are included into framework agreements for commonly procured goods; and the circumstances for activation of procurement related to disaster response are clearly defined.	As for mid-level, but there is an operational body, unit or team in charge of the development of the framework, and support to the users. Life-cycle costing is included as a cost element at the award stage of a procurement procedure.
	Climate budget tagging	Binary (y/n) classification focused on key sectors only. Standalone, occasional analysis (e.g. CPEIR) not integrated into IFMIS. Prepared by Ministry of Environment/Climate Change or by external consultants.	Multiple levels of climate-change relevance, extended to all sectors in climate-change policy. MoF-led, with technical assistance from Ministry of Environment/Climate Change. Potentially published as part of annual budget. Annual exercise, aligned with IFMIS/Chart of Accounts.	As for mid-level, but extended to sub-national government. Informing allocations in climate-change policy and budget allocations. Integrated into IFMIS (reports generated at different stages in the annual budget cycle). Results published as part of budget documentation or standalone report, which is scrutinised by parliament and CSOs.
	Climate-informed performance management (CC-PEFA 12.1/12.2)	Performance targets of all programmes claiming climate-change relevance include reduction in GHG emissions and output level indicators for activities contributing to adaptation. Performance information is available in the budget or supporting documentation submitted to the legislature.	As for simple, but outcome targets include some indicators relating to increased resilience. Performance information is available in the budget or supporting documentation submitted to the legislature.	As for mid-level, but all indicators are consistent with those established in the national climate change strategy/plan.
v. Audit and evaluation	Green audits/evaluation (CC-PEFA 13.1/13.2)	Rapid evaluation and audits of climate-related programmes have been carried out at least once in the last three years.	As for simple, but extending to taxes as well as expenditure programmes. A specific methodology for the evaluation and audit work is defined.	As for mid-level, but also with independent evaluation carried out every five years, referring to the performance audits. Evaluation or audits extend to programmes and activities indirectly contributing to climate-change adaptation and mitigation, including programmes and activities that undermine climate policy. Audit or evaluation reports are published and scrutinised by the legislature.

Interventions		Design options		
		Simple	Mid-level	Ambitious
v. Audit and evaluation	Engagement from accountability actors on climate budget	Civil society organisations (CSOs) conduct an analysis of climate spending based on budget documents. A climate-change committee or public accounts committee in the legislature reviews the audits and evaluations concerning key climate-related programmes.	As for simple, but CSOs are also consulted in the green audits and evaluations. A citizens' climate budget is produced by the MoF. A climate-change committee or public accounts committee in the legislature reviews the audits and evaluations concerning key climate-related programmes.	As for mid-level, but CSOs are engaged in the review of performance of budgets and programmes related to climate change, for example through citizen audits. Legislature reviews audit reports of spending in key climate-related sectors or programmes, as well as outputs from climate budget tagging systems. They issue recommendations to be implemented by the executive. They review the results of the CC-PEFA.
	Revenue (carbon taxes, emissions trading system) (CC-PEFA 9.1)	Existing tax measures, such as fossil fuel subsidies, are reviewed with the objective of reducing emissions. The adaptation benefits from environmental taxes and fees (e.g. on deforestation) are identified and presented discretely from benefits related to biodiversity and health.	Climate tax exists (e.g. carbon tax, emissions trading system, forestry-related taxes and fees) with a partly structured and systematic approach for assessing and prioritising compliance risk. GHG emitters and payers of other taxes are registered in a database. Part of the planned audit and investigations have been completed.	As for mid-level, but with the database accurate and comprehensive, and linked to the taxpayer database. A documented compliance improvement plan exists comprising mitigation activities in respect of identified high risks covering climate-related taxes. Planned audit and investigations have been fully completed as intended. Penalties for non-compliance exist and are effective. At least some of the revenues are used to finance adaptation investments.
vi. Policy review	Climate-responsive fiscal decentralisation (CC-PEFA 11.1-11.2)	The legal and regulatory framework clearly states the competencies and mandates of sub-national bodies related to climate-change mitigation and adaptation.	As for simple, but evaluation of the implementation of these mandates and competencies has been conducted at least once during the last three completed fiscal years. Climate-change related conditional transfers are associated with objectives aligned with the national climate-change strategy. Sub-national bodies report annually to central government on the use of climate-related transfers from central government.	As for mid-level but resources allocated to sub-national bodies allow them to implement their competencies and mandates related to climate change, including climate-change related conditional transfers aligned with the national climate change strategy, or unconditional transfers partly based on climate-related criteria or in case of performance-based transfers, climate change is considered as part of the performance indicators.

Source: Authors, drawing on PEFA 2020 where indicated

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Annex A: PEFA climate indicators

PEFA's climate-responsive PFM (CRPFM) indicators are aligned with the existing PEFA framework and mirror the mapping of PFM practices and assessment of PFM institutions, processes, and systems typically carried out during a standard PEFA assessment process. Most of the aspects they cover are discussed in this report.

Indicator	Dimension
CRPFM–1 Budget alignment with climate-change strategies	CRPFM–1.1 Budget alignment with climate change strategies
CRPFM–2 Tracking climate-related expenditure	CRPFM–2.1 Tracking climate-related expenditure
CRPFM–3 Budget circular	CRPFM–3.1 Budget circular
CRPFM–4 Legislative scrutiny	CRPFM–4.1 Legislative scrutiny of budget
	CRPFM–4.2 Legislative scrutiny of audit and evaluation reports
CRPFM–5 Climate-responsive PIM	CRPFM–5.1 Climate-related provisions in regulatory framework for PIM
	CRPFM–5.2 Climate-related project selection
	CRPFM–5.3 Climate-related provisions for project appraisal
	CRPFM–5.4 Reporting from entities in charge of implementation
CRPFM–6 Climate-responsive non-financial asset management	CRPFM–6.1 Climate-responsive non-financial asset management
CRPFM–7 Climate-related liabilities	CRPFM–7.1 Climate-related fiscal risks
	CRPFM–7.2 Climate-related debt and guarantees
CRPFM–8 Climate-responsive procurement	CRPFM–8.1 Climate-responsive procurement framework
	CRPFM–8.2 Climate-responsive public procurement
	CRPFM–8.3 Climate-responsive public procurement monitoring
	CRPFM–8.4 Climate-responsive public procurement reporting
CRPFM–9 Climate-responsive revenue administration	CRPFM–9.1 Climate-related tax management, audit and investigation
	CRPFM–9.2 Climate-related tax arrears
CRPFM–10 Compliance of climate-related expenditure	CRPFM–10.1 Effectiveness of the systems of controls
	CRPFM–10.2 Compliance of transactions
CRPFM–11 Climate-responsive decentralisation framework	CRPFM–11.1 Climate-responsive fiscal decentralisation arrangements
	CRPFM–11.2 Climate-responsive fiscal transfers
	CRPFM–11.3 Climate-responsive PFM arrangements applied by sub-national governments
CRPFM–12 Climate-related performance information	CRPFM–12.1 Climate-related information in performance plans
	CRPFM–12.2 Climate-related information in performance reports
CRPFM–13 Climate-related evaluation	CRPFM–13.1 Climate-related evaluation of expenditure
	CRPFM–13.2 Climate-related evaluation of taxes
CRPFM–14 Expenditure outturn for climate activities	CRPFM–14.1 Aggregate climate-related expenditure outturn
	CRPFM–14.2 Climate-related expenditure composition outturn

Source: PEFA, 2020. *Climate Responsive Public Financial Management Framework (PEFA Climate)*

