

THE ROLE OF DOMESTIC BUDGETS IN FINANCING CLIMATE CHANGE ADAPTATION

A BACKGROUND PAPER FOR THE GLOBAL COMMISSION ON ADAPTATION

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Executive summary

With climate-induced shocks and stresses threatening fiscal stability and undermining the achievement of broader development goals, governments across the world are recognising the need to mobilise more and smarter investment in climate adaptation. Preventative investments in adaptation lead to higher GDP growth rates than either taking no action, or waiting until remedial action is necessary¹. However, diagnostics and research into volumes and flows of climate finance consistently point to a substantial shortfall compared to growing needs, which is particularly pronounced in the case of adaptation finance². In this context, it is likely that no single source of adaptation finance – be it domestic or international, public or private – will be able to provide all the adaptation finance needed. This paper considers the role of domestic budgets as an under-examined but vitally important and sustainable source of adaptation finance at scale. It does so based on the premise that in many developing countries, domestic budgets are already the largest source of funds for adaptation (despite global attention being focused more on international sources), and is likely to remain so for the foreseeable future.

About this paper

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A government's own budget, financed through domestic taxes, levies, and other own-source revenues, is a particularly well-suited mechanism for financing adaptation.

Firstly, it befits the integrated nature of development and adaptation, by which we mean the fact that most adaptation occurs by making routine development investments more resilient to climate change, as opposed to standalone targeted investments solely for adaptation purposes.

From a government perspective, this leads to a compelling case for integrating adaptation spending into development spending, as it ensures that public expenditure overall is more resilient to climate change. Furthermore, many adaptation investments can be considered public goods, and so if left to the market would be undersupplied. It has also been argued that the budget is more effective than official development assistance (ODA) in delivering adaptation benefits, principally because it can leverage existing institutional structures, such as social protection systems, thereby improving impact and value for money³.

The call to optimise public investment in adaptation is entirely consistent with the primary purpose of the budget process, however widespread underinvestment in adaptation prevails because climate change adaptation is seen instead to compete with other demands.

Government budget processes are a means of weighing competing demands against each other and allocating scarce resources in a way which optimises welfare and the achievement of policy goals. Given that adaptation investment is consistent with, and often integral to, development goals, a budget process should in theory optimise adaptation investment. However, widespread underinvestment in adaptation prevails because decisions on how public funds are allocated, managed, expended, and reported against do not consistently or adequately prioritise climate adaptation. There are a multitude of reasons for this, including definitional ambiguity surrounding what adaptation entails, as well as the complexity associated with quantifying the negative economic consequences of climate change and the positive economic returns to investment in adaptation, which together make it hard to 'make the case and win the argument' for financing adaptation in a government budget process. Furthermore, too often political classes tend to prioritise more expedient, short-term issues than climate change adaptation (as such investments are likely to generate returns predominantly in future election cycles). Where climate change is on the government's agenda, it is

sometimes still perceived to be a 'ministry of environment issue', leading to insufficient engagement from ministries of finance and planning, which have greater influence over how resources are spent. It is also argued that public financial management (PFM) systems do not comfortably accommodate cross-sectoral concerns, such as climate change adaptation, as demonstrated through the classification systems for government budgets and accounts, which tend to mirror traditional sectoral lines, where responsibility for policy implementation (and associated spending) falls under the remit of single agency.

Despite these challenges, some governments have pursued varied and innovative means of augmenting budgetary resources for adaptation, through allocating more resources to it, or ensuring existing programmes deliver more adaptation benefits.

Entry points span all stages of the typical budget cycle, and serve to address the shortcomings in prevailing domestic budget processes that result in systematic underinvestment in adaptation. We use the phrase 'climate budgeting' as a catch-all term to refer to a set of interventions designed to make PFM processes more responsive to adaptation needs, with the ultimate objective of leading to better adaptation outcomes from public expenditure. Prominent examples of climate budgeting initiatives are summarised in the table below, which builds on previous research on this topic⁴.

Budget cycle phase	Climate change adaptation entry points
Budget preparation	<p>Public investment appraisal: Climate change considerations can be incorporated into a variety of different public investment appraisal techniques, from relatively simple multi-criteria checklists to more robust cost–benefit analyses, with the intention that the incremental risks, costs, and benefits associated with climate change are factored into the decision-making process alongside the economic, social, and environmental costs and benefits that are more routinely considered. This is often termed ‘climate change impact appraisal’ (CCIA).</p>
	<p>Macroeconomic forecasting and fiscal sustainability analysis: Unfettered climate change acts as a significant dampener on economic growth projections, but at the same time countries need to balance their adaptation financing 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.</p>
	<p>Annual budgeting frameworks: Ministries, in their budget submissions to the ministry of finance, will often be required to prepare an annual budgeting framework which sets out the key ministerial programmes, and often key performance indicators (KPIs) for each ministry. In relevant ministries, adaptation needs can be reflected in these documents and climate-related KPIs can be included.</p>
	<p>Medium-term expenditure frameworks: These involve laying out allocations to spending agencies over a three- to five-year period, as opposed to just a single year. Climate change can be introduced into this framework, giving certainty and predictability to agencies in regard to their climate expenditure planning, while allowing for alignments with other priorities along the way.</p>
	<p>Budgeting guidelines: The government’s budget circular can be adjusted, or an additional circular prepared, to require line ministries to prioritise climate adaptation programming and/or to explain how their submitted programmes contribute to adaptation and how they are linked to the national strategies around adaptation.</p>
Budget approval	<p>Budget hearings: Ensuring adaptation is an agenda item or consideration in budget hearings conducted by the ministry of finance can be achieved by adding it to the official budget appraisal criteria and by ensuring that those engaged in the negotiations are adequately sensitised.</p>
	<p>Budget statements / speeches: Some countries have succeeded in including climate adaptation in the budget speech made by the Minister of finance, where they present the resource allocation priorities of the government with their overall rationale and political context.</p>
	<p>Parliamentary scrutiny of the budget: Ensuring the parliament has the information and capacity to scrutinise the government budget from a climate change perspective can be an important means of ensuring lawmakers hold the government to account in regard to meeting its financial commitments related to climate change.</p>

Budget cycle phase	Climate change adaptation entry points
Budget execution, monitoring, and reporting	Cross-committee engagement: Some legislatures have climate change committees, while the core of budget examination is typically done by finance or budget committees. Cross-committee engagement can strengthen scrutiny of climate-related budgets.
	Expenditure tracking, including through the use of a budget tagging system: A major trend in recent years has been the introduction of a climate budget tagging or scoring system, as a tool for the monitoring and tracking of climate-related expenditures in the national budget system.
	Performance indicators: With the spread of performance-based budgeting, whereby budget allocations are linked to performance against agreed indicators, some countries are seeking to ensure indicators are defined which capture the adaptive performance of relevant programmes.
	Processes for cash management, and managing budget revisions: It is not uncommon for implemented budgets to vary considerably from planned budgets, and a key entry point for impacting on adaptation spending is to ensure that in the face of funding shortfalls adaptation programmes enjoy some degree of prioritisation or protection from cuts. Such measures include ring-fencing particular spending programmes.
Accountability and ex-post oversight	Parliamentary scrutiny: Parliamentary climate change committees and sector committees in key adaptation-related sectors can play a role in scrutinising government reports to determine whether adaptation-related targets have been met.
	Performance audits: Creating an increased role for supreme audit institutions, both in terms of quality assuring the climate budget reports and conducting performance audits which consider performance from an adaptation perspective, are emerging entry points.
	Role of non-state accountability actors, including civil society organisations (CSOs) and the media: The potential roles of these accountability actors include both direct engagement (for example, engaging the finance ministry/planning ministry and delivery ministries on the incorporation of climate change in budgets) or indirect participation (for example, raising awareness on climate change finance issues through media articles or conducting analysis).

While it remains a nascent field, there is emerging global experience on how these sorts of climate budgeting reforms can be done well.

The selection of case studies presented in this paper provides varied examples of where domestic budget processes have been adapted or capitalised upon to be more responsive to adaptation needs, with the ultimate objective of improving adaptation outcomes. This includes **the Philippines**, where the government has established a cross-sectoral budget programme specifically focused on adaptation and risk resilience as a means of coordinating different implementing agencies and their budgets to deliver a harmonised programme of investment. The Government of the Philippines also ensures budget hearings routinely consider climate change, and it operates a climate budget tagging system, which results in a

series of climate budget reports being issued throughout the fiscal year. A second case study on the Indian states of **Odisha and Chhattisgarh** demonstrates how climate budgeting can be applied at the sub-national level from a sector perspective. It documents how CCIA was adopted in Odisha to facilitate mainstreaming, before spreading to Chhattisgarh as a means of demonstrating the value obtained (from a climate change perspective) for a few key adaptation investments. The case of **Afghanistan** demonstrates how climate change adaptation can be integrated into national budget guidelines. This modest tweak to budgeting processes has furnished the Ministry of Finance there with a clear view of the investments that support climate resilience or mitigation, while also giving line ministries an indication of which investments are vul-

nerable, to enable pre-emptive adaptive actions. This case points to the value of leadership from an institution with the mandate to change budgets, while simultaneously focusing on the few line ministries that are likely to expend the majority of funds. Lastly, the **Bangladesh** case study looks primarily at the accountability side of climate budgeting, and discusses how a group of civil society actors there have coalesced around the publication of the annual Climate Budget Report to engage in a policy discussion with government about the adequacy and effectiveness of financing for adaptation. It also documents nascent efforts to integrate climate change into the Performance Audit Standards used by the Office of the Comptroller and Auditor General, and demonstrates how local accountability actors, when working together and provided with funding and capacity-building support, can bring about demand-side pressures for more and better public financing for climate adaptation.

What emerges from these case studies and a review of the wider research on this subject is a set of clear enabling factors for the prioritisation of adaptation in domestic budgeting processes. These include the following:

- *Anchoring climate budgeting reforms in prevailing PFM processes* (i.e. avoid creating duplicate or parallel systems), as this makes it more likely that the changes will be sustained year after year.
- *Using commonplace PFM reforms as a vehicle and entry point to promote adaptation-relevant interests.* For example, using the medium-term expenditure framework (MTEF) to forecast the fiscal implications of climate for revenue and expenditures over the next three to five years, or integrating aspects of CCIA into public investment management processes.
- *Providing technical advice and peer-to-peer learning* on topics such as climate budget tagging, citizens' climate budgets, and climate change relevance / impact appraisal can help spread good practice, while *knowledge brokers* play an important role in interpreting, sorting, and translating the wealth of information available and tailoring it to government needs.
- *Designating a central body with strong convening and/or decision-making powers* to lead government-wide climate budgeting reforms, such as ministries of finance or planning, or the office of the president or

prime minister, to overcome institutional coordination challenges, while also *focusing on reforms in a few of the most adaptation-relevant ministries*, can be a cost-effective climate budgeting strategy.

- Working with accountability actors is a new but growing area of interest, but emerging lessons point to *the need to build local coalitions, to build the capacity of diverse stakeholders around public finance and climate change topics, and to support CSOs with funding for climate budget advocacy work.*
- *The capacity of institutions to innovate and change* is an important institutional characteristic that is needed to secure the effective delivery of climate finance, and a *period of adaptive learning* is often required to embed new analysis into government systems. The initial reform effort is often only the first step in a process which continues to be refined over successive budget cycles.
- *Being 'problem-driven' and aligning the climate budgeting agenda with the prevailing priorities of the political leadership* can help build political support for the climate budgeting agenda, as can *emphasising financial leveraging opportunities*, where domestic climate budgeting reforms are used to demonstrate that a government has made significant financial commitments on their own side, thereby meeting co-financing requirements for external support.

The overarching vision for the climate budgeting agenda described in this paper is that domestic budgets processes will optimise public investment in adaptation, ensuring that public expenditure overall is more resilient to climate change. Making this a reality will require a whole-of-society approach that relies not just on developing country governments, but also development partners that support them, international climate intuitions, civil society, and others. The Global Commission on Adaptation, with its mandate, convening power, and its global reach, is well placed to help drive this agenda. To this end, the background paper proposes a number of recommendations:

1. *(For those governments which have already initiated climate budgeting reforms):* Continue to pursue the deepening and widening of climate budgeting reforms, including through the integration of climate change into downstream budget processes

(looking at budget execution arrangements and performance monitoring) and expansion to lower levels of government.

2. *(For governments which are starting out in climate budgeting)*: Make use of climate-oriented public finance diagnostics, such as Climate Public Expenditure and Institutional Reviews (CPEIRs), to define a reform agenda around mainstreaming climate into budgeting processes. The application of a climate budget tagging mechanism is a common first step, for which there is a lot of documented guidance available and experience to build on.
3. *(For the Global Commission on Adaptation and its partners)*: Support climate budgeting reforms in partner countries through sustained technical assistance, promulgation of tools and standards, and supporting existing peer learning forums. The Global Commission on Adaptation is well placed to call for greater attention towards climate budgeting reforms in developing countries, and in particular to those more neglected areas, for example around the monitoring of efficiency and effectiveness of adaptation spend. It should also endorse and collaborate with existing peer learning networks, including the Climate Action Peer Exchange and the soon-to-be-launched Asia and Pacific Climate Finance Network. The Commission should consider its role in promulgating tools and standards related to climate budgeting, and it should continue to provide technical assistance to governments looking to make progress on this front, through a phased approach sustained over the medium term.
4. *(For accountability actors, the Global Commission on Adaptation and its partners)*: Strengthen oversight and engagement by accountability actors in the climate budgeting agenda. This means CSOs and the media engaging more actively around how governments are allocating and managing public budgets for adaptation; legislatures routinely screening proposed budgets and government accounts for the same; and supreme audit institutions developing climate-related standards for performance audit, and including climate change as

an aspect when building up social audit practices. Donor agencies should finance capacity-building initiatives with the accountability actors, to facilitate the formation of coalitions and to open up avenues for dialogue with governments.

5. *(For the Global Commission and other actors in the international climate finance space)*: Wherever feasible, make more use of domestic budgets as a delivery modality for international climate finance, including through wider use of budget support modalities linked to the existence of a robust climate policy framework and conducive macro-fiscal environment. In an effort to square the need to tie funding to climate-specific interventions, on the one hand, with the reality that most adaptation cannot be separated from development, on the other, international climate-funding institutions should also consider explicitly financing adaptation 'top-ups' to government-financed development expenditure.

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List of Abbreviations

AAI	Africa Adaptation Initiative	ICCCAD	International Centre for Climate Change and Development
ACT	Action on Climate Today		
BCCSAP	Climate Change Strategy and Action Plan	IIED	Institute for Environment and Development
BCCTF	Bangladesh Climate Change Trust Fund	IMF	International Monetary Fund
CC%	Climate Change Relevance	IPCC	Intergovernmental Panel on Climate Change
CCET	Climate Change Expenditure Tagging	KPI	Key Performance Indicator
CCFF	Climate Change Financing Framework	MTEF	Medium-Term Expenditure Framework
CCIA	Climate Change Impact Appraisal	NDC	Nationally Determined Contribution
COFOG	Classification of the Functions of Government	ODA	Official Development Assistance
CPEIR	Climate Change Public Expenditure and Institutional Review	OECD	Organization for Economic Co-operation and Development
CPGD	Climate Proofing Growth and Development	PFM	Public Financial Management
CSO	Civil Society Organisation	PIM	Public investment Management
DBM	Department of Budget and Management (Philippines)	PIMA	Public Investment Management Assessment
DFID	UK Department for International Development	SAPCC	State Action Plan on Climate Change
FY	Financial Year	SDGs	Sustainable Development Goals
GCF	Green Climate Fund	UNDP	United Nations Development Programme
GDP	Gross Domestic Product	UNEP	United Nations Environmental Programme
IBP	International Budget Partnership	UNFCCC	United Nations Framework Convention on Climate Change

1 Introduction

Climate change is having irrefutable financial consequences for many governments. Climate-induced shocks and stresses reduce economic output and slow GDP growth, by virtue of the short-term costs of disaster relief, longer-term costs of reconstruction, as well as foregone returns to damaged capital and the dampened economic activity which comes about because of lower agricultural output, depressed labour productivity, and poorer human health. At the same time, gradual changes in temperature and rainfall can alter the composition of the economy, depressing tax revenues. Together, the cost implications of these impacts can be severe, and in highly vulnerable, developing countries can go so far as to threaten fiscal sustainability, as well as undermining the achievement of broader development goals⁵.

By the same token, the economic case for investing in adaptation is strong. Adaptation involves the process of ‘adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities’⁶. Recent evidence suggests that preventive investment in adaptation leads to higher GDP growth rates than either taking no action, or waiting until remedial action is necessary⁷. It does so primarily by making the capital stock more resilient to climate change (lowering the depreciation rate compared to what it would have otherwise been), thereby accommodating a higher longer-term growth trajectory and greater macroeconomic stability⁸.

Despite this, evidence suggests that current levels of investment are inadequate. Estimating how much adaptation finance is currently available is challenging due to the difficulty of isolating adaptation expenditure from regular development expenditure (addressed in the discussion at Section 2.2 below). However, a growing number of country, regional, and global estimates consistently point to substantial shortfalls. UNEP, for example, routinely publishes its estimates of the ‘Adaptation Financing Gap’, which compares the current level of funding available for adaptation with the level of funding required to deliver a nationally determined target level of adaptation. It warns that the cost of adaptation in developing countries could range between \$280 billion and \$500 billion a year by 2050 (assuming emissions targets are met), and has concluded that to meet current and projected needs, total finance for adaptation in 2050

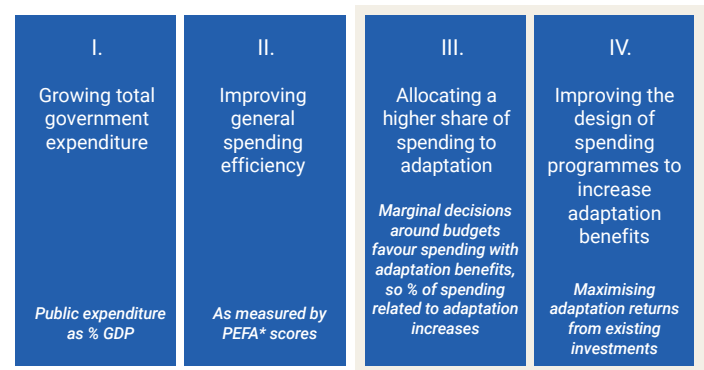
would have to be 12–22 times greater than current levels of international public finance⁹. A complex international financing architecture has emerged over the last two decades to plug some of this gap, with developed country parties to the United Nations Framework Convention on Climate Change (UNFCCC) committing to providing \$100 billion annually by 2020 for climate action in developing countries (a ‘balanced allocation’ of which is intended to finance adaptation investments). However, the prospects of meeting this target are remote: revised estimates for global climate finance flows from developed to developing countries for the 2015–2016 period are just \$45 billion per year, of which the majority is for mitigation¹⁰). Against this sobering backdrop, it is clear that no single source of adaptation finance – be it domestic or international, public or private – will be able to provide all the adaptation finance needed. This paper considers the role of **domestic budgets** as an under-examined but vitally important and sustainable source of adaptation finance at scale. Recognising the importance of domestic budgets does not negate Annex 1 countries’ Paris commitments: rather, in the face of unmet needs, it is likely that all governments will need to look to multiple sources of financing for adaptation, including integrating climate risks into domestic budgets.

Budgets are vital not only because the scale of the challenge demands capitalising all potential funding channels, but also because, compared to other financing sources, a government’s own budget offers a number of **comparative advantages which make it particularly well-suited for financing adaptation**:

- Firstly, **the budget is more suited to managing the integrated nature of development and adaptation**, by which we mean the fact that most adaptation occurs by making routine development investments more resilient to climate change, as opposed to standalone targeted investments solely for adaptation purposes. For a government, this provides a compelling case for integrating adaptation spending into development spending, as failing to do so may undermine the achievement of development objectives when faced with climate impacts. However, for some other potential funders of adaptation – specifically international climate funds – this inseparability is somewhat at odds with the need for funders to tie resources to climate change-specific investments so as to track their contribution towards the UNFCCC financing goals.

- Furthermore, **many adaptation investments, if left to the market, would be undersupplied** (by virtue of the fact that they are public goods – such as climate-resilient infrastructure – or because they relate to new areas, where markets have yet to fully develop). There is a clear role, therefore, for governments to finance their provision, or to incentivise private provision.
- From a government’s perspective the budget is more **predictable** (particularly compared to climate ODA), and is also better suited for financing **long-term adaptation investments, or those which involve recurring expenditures** (which international sources tend to avoid for sustainability reasons). Maintenance expenditures associated with adaptation-oriented infrastructure investments are more likely to be financed from the budget if the original expenditure is ‘on budget’ too.
- Lastly, it has also been argued that the budget is more effective than ODA in delivering adaptation benefits, principally because it can **leverage existing institutional structures**, such as social protection systems, thereby improving impact and value for money¹¹.

Figure 1: Channels by which the Budgetary Contribution to Adaptation Could be Increased¹²



Source: Based on Climate Scrutiny and Mokoro, 2017. *The Public Expenditure and Financial Accountability (PEFA) framework is an assessment of PFM systems and processes against standardised criteria; it is applied in many countries around the world.

We have chosen to focus on these two channels because they have the highest potential in terms of reducing the adaptation finance gap. Recent continent-level analysis for Africa suggested that reforms to allocate a higher share of spending to adaptation (channel III) could result in a 20% increase in the total spending devoted to adaptation, compared to 10% for channels I and II¹³. Evidence on the potential impact of channel IV (improving the design of development programmes to make them more adaptive to climate change) is only emerging, but this could conceivably be even more impactful. Additionally, we note that channels III and IV are more in line with the specific research interests and mandate of the Global Commission (being focused directly on adaptation), whereas channel I is largely determined by economic growth rates, and channel II relates to general PFM performance issues (on which a wide and rich literature already exists¹⁴).

This paper will discuss the challenges, opportunities, and mechanisms for mobilising adaptation financing from the domestic budget through these two channels. We use the phrase ‘climate budgeting’ as a catch-all term to refer to a set interventions designed to make PFM processes more responsive to adaptation needs, with the ultimate objective of leading to better adaptation outcomes from public expenditure. This includes reforms which encourage governments to consider climate risks when preparing spending plans, to prioritise investment in measures to address them in the budget proposals, to track those expenditures, and to assess their effectiveness. The paper

will also discuss the political and institutional factors which enable climate budgeting to happen, including the role of accountability actors like legislatures and civil society. Readers should note that the focus is on domestic budgets in non-Annex I countries, because this tends to be where the greatest adaptation needs are. Most of the country experience cited in the report is drawn from countries in the South Asia region, by virtue of the fact that those countries have progressed the furthest in this field. However, the learning has wider relevance for all other countries which are vulnerable to climate change. In addition, the focus is on how adaptation concerns can be mainstreamed into core, regular budget processes, as opposed to how governments might go about setting up a dedicated climate fund (such funds tend to be managed completely outside the routine budget processes). The reason for this, as is discussed under Section 3.3, is that mainstreaming is better suited to the integrated nature of adaptation and development, and can influence a larger pot of resources. Finally, we also note that there are other domestic sources of adaptation finance beyond the government budget, including national banks and insurance schemes, but these are not the focus here (and are instead dealt with by other Background Papers).

Following this introduction, **Section 2** assesses the current state of play in relation to the mobilisation of adaptation funding from domestic budgets, and sets out the common technical, institutional, and political barriers which countries face. Looking across locations where progress has been made, **Section 3** presents a range of potential entry points for integrating adaptation into budget processes, and looks at some of the design options that are open to government. **Section 4** presents four case studies, in countries or states which have adopted different approaches to mobilising and managing resources for adaptation through their domestic public finance systems, and elucidates some of the obstacles and opportunities faced along the way. **Section 5** explores cross-cutting enablers and opportunities for accelerating action for accessing and managing resources for adaptation from domestic budgets. The paper concludes in **Section 6** by looking ahead to outline future developments in the field. It presents a specific and targeted set of calls to action, directed to different institutions and actors engaged in the field, with the intention of pushing forward a climate-resilient development agenda.

2 State of Play

2.1 Current Levels of Financing Emanating From Domestic Budgets

What role do domestic budgets currently play in the financing of adaptation investments? Our ability to answer this question is hampered by the absence of a comprehensive global-level assessment on how much governments currently spend on adaptation (which is due, in large part, to the technical challenges that are addressed in the next section). However, we can draw some conclusions from the regional- and country-level spending assessments which have been conducted, including the decade's worth of CPEIRs, as well as the more recent Climate Change Financing Frameworks (CCFFs). A selection of this evidence base is summarised in Box 2. While the degree of fiscal priority afforded to adaptation varies between countries, two conclusions stand out:

- I. a significant volume of investment in adaptation is already coming from public domestic sources (often more than comes from international sources); and
- II. this nonetheless falls far short of current and projected needs and domestic policy ambitions.

Given that the central objective of a budget process is to allocate scarce resources in a way which optimises welfare and the achievement of policy goals, coupled with the fact that over the long term, climate change adaptation has been shown to be consistent with, and in many cases integral to the achievement of, broader development goals, the **widespread underinvestment in adaptation can be considered a deficiency of the budget process.**

From a PFM perspective, the basic reason for this is that, in the short term, **climate change adaptation competes with other development objectives, and decisions on how public funds are allocated, managed, expended, and reported against do not consistently or adequately prioritise adaptation.** The rest of this section looks at some of the common technical, institutional, and political reasons why this is the case. It should be noted that some of these challenges are unique to climate budgeting, but others are not, and in fact are familiar from the experience in other sorts of 'thematic budgeting', of which gender budgeting

is the pre-eminent example. Useful learning can be taken from the example of gender-responsive budgeting, which is summarised in Annex 1.

2.2 Barriers to the Prioritisation of Adaptation in Domestic Budgets

TECHNICAL KNOWLEDGE AND CAPACITY BARRIERS

A prominent challenge which pervades all aspects of governance of adaptation, but is particularly pertinent when discussing financing, is the **definitional ambiguity** in terms of 'what counts' as adaptation. This is due to the fact that adaptation investments tend to be part and parcel of development investments – as elucidated in the examples presented in Box 1. Because of this, trying to determine exactly what investments to finance as part of an adaptation response, or teasing out what portion of the public expenditure programme is adaptation-related, say for reporting purposes, can be an onerous exercise in conjecture. It also makes deciding what to do as part of an adaptation response a challenge, requiring planners to work in a manner which is somewhat antithetical to the way in which governments prefer to plan and implement – along sectoral lines with clear and differentiated institutional responsibilities. The definitional ambiguity is of course a challenge for international climate finance too¹⁵, and in both international and domestic spheres undermines the credibility of reporting, and means cross-country comparison is rarely feasible.

BOX 1

The interconnectedness of adaptation and development investments

There are very few standalone investments which it can be argued are wholly and specifically for adaptation purposes. Some examples might be climate information systems, research on adaptation, or focused capacity development and awareness raising.

Rather, it is much more common for adaptation to be part and parcel of routine development investments. Deriving adaptation benefits from development 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 adaptation effort because they reduce flooding and soil erosion in the wake of increased rainfall brought about by climate change. However, they are often first and foremost economic investments which generate income from sustainable logging, or environmental investments due to the promotion of biodiversity.

In other cases, ensuring a development programme is also delivering adaptation benefits may require some incremental investment. An example of this would be climate-resilient infrastructure, such as a road which is built to withstand cyclones. Some additional cost may be required to ensure that the road is more likely to withstand a cyclone – by using different materials or choosing an alternate route. However, that does not negate the fact that the main return from these infrastructure investments are economic, for example by improving interconnectivity and access to markets. It is not even so simple as to attribute the value of the incremental investment as being wholly and specifically for adaptation purposes, as cyclones would happen even without climate change, it is just that the evidence suggests that climate change is impacting their frequency and severity.

In addition, the **complexity of climate change science makes it challenging to derive salient and directed policy implications**. Since the mid-1990s economists and climate scientists have been trying to project the impact of climate change on GDP, arriving at widely varying estimates based on the approach taken and assumptions used. While some of the more conservative estimates have now been debunked, the more sophisticated modelling approaches still face challenges around estimating future expected sensitivity of temperatures to greenhouse gas emissions and the link between temperature changes and economic damages¹⁶. While there is now a relatively strong consensus that climate change is leading to lower per capita output in most low-income countries, due to lower agricultural output, depressed labour productivity, reduced capital accumulation, and poorer human health¹⁷, in most instances the reporting of such research is rarely in a format and language which can be easily understood by policymakers, or downscaled to a level of relevance for domestic budgets.

At the same time, there are similar levels of **uncertainty and complexity related to the measurement and communication of the economic benefits of adaptation**. As noted previously, there is a growing volume of research on this issue by the GCF Independent Evaluation Unit and others, to quantify the value of specific investments. However, these efforts also face the same challenges around estimating the value of climate change impacts (which will/will not be negated through adaptation), and do not yet amount to a comprehensive peer-reviewed evidence base which can be applied by governments at large to inform spending decisions. At the country level, some governments are beginning to use CCIA approaches (essentially, cost-benefit analysis which seeks to quantify the adaptation and mitigation benefits of an investment, in addition to the more routine consideration of economic, social, and environmental costs and benefits). However, the technical capacity for these sorts of analytics is often lacking in developing countries, in part related to the complexity of modelling climate change impacts, but also because of broader weaknesses in public investment appraisal capacity¹⁸. Taken together, **challenges in quantifying the negative economic consequences of climate change and the positive economic returns to investment in adaptation make it hard to 'make the case and win the argument' for financing adaptation**.

A CPEIR is a systematic qualitative and quantitative analysis of a country's public expenditures and how they relate to climate change. Using a definition of climate change and adaptation which is tailored according to each country policy context, a core pillar of the CPEIR process involves tracking climate-relevant expenditures from various sources. Since they were first piloted in 2010/11, CPEIRs have been conducted in over 20 countries.

A common finding of CPEIR assessments conducted to date is that a significant proportion of government spending seeks to address climate-related issues, particularly through adaptation, as captured in the summary results table below. Furthermore, many CPEIRs have found that domestic public finance for climate change exceeds that from international sources (with the exception of some small island states and highly aid-dependent countries).

Spending on adaptation: evidence from select CPEIRs

Location	Climate-relevant expenditure as a % of government budget	Adaptation expenditure* as a % of government budget	Share of climate expenditure from domestic / external sources	Years of analysis
Bangladesh	6.35%	3.87%	77% / 23%	2010–2014
Nepal	6.70%	5.09%	45% / 55%	2008–2012
Samoa	15.00%	10.80%	49% / 51%	2007–2012
Tanzania	5.48%	2.63%	61% / 39%	2009–2012
Thailand	2.70%	1.84%	~	2009–2011
Uganda	0.93%	0.56%	91% / 9%	2008–2011
Vanuatu	13.00%	12.74%	91% / 9%	2008–2012

*CPEIRs tend to divide expenditures into those which are for adaptation, mitigation, and both; this only captures those flagged as adaptation (and so may be missing additional adaptation expenditures flagged as 'both'). Note: The values in these tables cannot be compared to those under the CCFF analysis due to variation in climate change relevance (CC%) weighting employed, as discussed later in the report.

CCFFs can be considered as a second generation of climate finance diagnostics, and in some countries (like Bangladesh) they have been conducted in response to a recommendation in a preceding CPEIR. In its fullest form, a CCFF can be understood as a process of structuring a more strategic approach towards the mobilisation, management, and targeting of climate change finance, resulting in workflows that serve to align a country's climate policy framework with its budget process and to integrate climate finance into its existing public economic and financial management systems.

Like CPEIRs, a CCFF includes an assessment of current and projected levels of spending on climate change in a country. The findings are consistent with CPEIRs in terms of identifying government budgets as a key source of climate change financing. For example, a pan-African CCFF found that total weighted adaptation expenditure amounted to between 0.1% and 0.5% of GDP, and furthermore that an average of 62% of this came from domestic government budgets.

CCFFs take this analysis further by estimating the adequacy of total funding (something which CPEIRs stop short of doing), as indicated by reference to the adaptation financing gap. This is calculated as the percentage of economic losses and damages caused by climate change which will not be addressed with current and projected levels of adaptation finance (up to the year 2050). The table below summarises some estimates of adaptation finance gaps from the CCFFs.

Adaptation finance gaps: evidence from selected CCFFs

Location	Adaptation finance gap (by 2050)
Pan-Africa	80.00%
Afghanistan	68.90%
Assam, India	68.20%
Bihar, India	85.40%
Kerala, India	89.70%
Chhattisgarh, India	65.30%

The fact that current spending is estimated to avoid in the region of 10–35% of climate-induced economic losses and damages reaffirms the point that a lot is already being done. However, much more remains to do, and in proposing financing scenarios for how the shortfall can be met, CCFFs typically highlight the primacy of domestic budgets. The pan-African CCFF, for example, concluded that increasing budgetary expenditure on adaptation was ‘the most obvious strategic response to closing the adaptation gap’, and that improving the design of public investments to improve their adaptation relevance will ‘often be the way in which most countries can make the biggest impact’

The fact that climate change risks are not well communicated or widely understood compounds an existing challenge around weak **capacity for integrating risk into budgeting**. When budget decision makers in resource-scarce environments face a choice between an additional investment to alleviate a cost that could occur (knowing that if it does not the incremental investment would effectively be wasted), versus investing in something that will have a definite benefit, they are likely to choose the second option. Therefore, because risk metrics are not advanced enough

in budgeting in general, and in relation to climate change even more so, pre-emptive adaptation expenditure is often foregone in favour of remedial response.

Lastly, it should be noted that there continues to be a **deficit in awareness among developing country governments** (and central finance agencies in particular) **that adaptation is an issue which should be mainstreamed across the domestic budget process**, as part of the pursuit of broader development goals. Testament to this is the fact

that this research has identified no evidence or examples of developing country governments which have pursued climate budgeting reforms endogenously: rather, it tends to come about as a result of some external institution which has sought to sensitise partner governments regarding the need for reform, and to provide the relevant technical assistance. Peer-to-peer learning on this topic has helped generate more awareness and internal demand, but this has yet to reach a tipping point whereby climate budgeting is considered as a core pillar of sound PFM and climate change management alike.

INSTITUTIONAL BARRIERS

A lack of appropriate institutional leadership is also something which has hampered the mobilisation of domestic finance for adaptation. In some countries, climate change is still perceived to be a ‘ministry of environment issue’, even though CPEIRs have demonstrated that the bulk of domestic public adaptation expenditure comes not from ministries of environment (which have relatively small budgets) but other ministries, such as agriculture, local government, and infrastructure. This environment perception can lead to insufficient engagement from ministries of finance and ministries of planning, who, as the guardians of planning and budgeting processes, have influence over how resources are allocated, expended, and accounted for. In general, when a sector ministry is put in charge of a multi-sector issue, it rarely has the convening power to ensure coordination and prioritisation. As demonstrated in a number of the case studies (including the Philippines and Afghanistan), leadership from the finance ministry can be key to driving this agenda. In other cases, ministries of finance are setting up dedicated units for climate change, but these remain limited and often focus on international climate finance. However, this is not to say that the ministry of finance is the only relevant institution to the climate budgeting; in reality finance ministries have strong control only over high-level allocations in the budget, but beyond this operational responsibility for using funds lies with the line ministries (and in particular in the case of adaptation, ministries of agriculture, land, water, energy, infrastructure, and health)²⁰. In some countries, climate change councils or inter-ministerial committees for climate change have been established; however, often these have little to no ‘budgeting teeth’ and so relying on these to lead can substantially undermine efforts to mainstream adaptation into the budget.

Institutional coordination is also a challenge. The governance of adaptation is a diverse responsibility which should fall across multiple institutions; however, ministries have different (and sometimes competing) priorities, mandates, jurisdictions, and constituencies, which complicate the manner in which institutions should work together to achieve adaptation objectives²¹. This comes to the fore in PFM systems, which tend to mirror the institutional setup of government (i.e. by sector and agency, with differentiated areas of responsibility and clear lines of accountability), and so **do not to comfortably accommodate cross-sectoral concerns such as climate change adaptation**. The structure of the government budget is a case in point: appropriations are usually structured by vote (i.e. administrative institution), enabling each agency to be held accountable for the resources allocated to them, but providing little incentive for inter-agency collaboration. Take, for example, programme budgeting, which is now practised in many PFM systems across the world. When programme budgeting was first devised it was intended to be a way of clustering spending activities of government around a common overarching policy priority (such as ‘poverty reduction’ or ‘gender equality’), and as such was intended as a means of strengthening the linkages between funding and policy implementation. However, over time these programmes have migrated to mirror administrative setups, with each programme falling under the auspices of a single agency, like ‘primary education’ or ‘basic healthcare’ – so as not to blur lines of accountability for results. As a result, today examples of cross-ministerial budget programmes are relatively uncommon (albeit not impossible – the case of the Philippines’ Risk Resilience and Adaptation budget programme, discussed in the next section, being one such example). Government accounting systems are also not normally designed to track cross-sectoral issues: they tend to comply with the IMF’s Classification of the Functions of Government (COFOG), and there is no classification related to climate change adaptation. This is because COFOG categories are mutually exclusive, so an expenditure line can only be coded to a single function²². Under this classification system, then, adaptation expenditures are coded against the function to which they primarily relate, such as forestry in the example in Box 1. In summary, **mainstreaming adaptation means working in opposition to these basic governing principles of PFM systems**.

POLITICAL AND GOVERNANCE BARRIERS

As detailed in Figure 1, the primary channels by which domestic budgets can narrow the adaptation gap are through improving the design of existing programmes to increase the adaptation benefits (which would normally, but not always, have an incremental cost implication), and allocating a higher share of funds towards sectors and programmes which bring adaptation benefits. In both of these cases, climate change adaptation would be competing with other development objectives for scarce fiscal resources, and it is not uncommon for **political classes to prioritise more expedient, short-term issues**. This relates to the uncertainty and complexity of climate change discussed above, as well as the divergent timeframes between adaptation returns and a typical election cycle. Compounding this is the well-documented reality that there are higher political gains to be had from disaster response compared to investment in prevention, as voters tend to hold politicians accountable for the latter but not the former²³. Add to this the fact that in some countries the presumed availability of donor assistance also undermines incentives for governments to take preventive adaptation investment and what emerges is a complex web of counterincentives for domestic investment in adaptation.²⁴

An active and well-informed accountability ecosystem, in which states (legislatures and supreme audit institution), and non-state accountability actors (CSOs, media, academia, and citizens) engage with one another and the executive can help overcome some of these political counterincentives, to ultimately improve climate change-related budget policies, monitor execution, and contribute to oversight²⁵. However, recent research led by International Budget Partnership (IBP) in four countries (India, Bangladesh, Philippines, and Nepal) found that there were considerable **barriers which prevent these accountability actors from fulfilling their functions in relation to climate finance**. These include the following:

- Lack of awareness among accountability actors on how the impacts of climate change threaten development priorities.
- Technical capacity gaps – among CSOs and journalists there tend to be groups that work on climate change and groups that work on budget issues, with minimal interaction between them.

- Lack of meaningful and detailed information on the government's adaptation spending, related to challenges around fiscal transparency as a whole. Where the government does issue publications on the public expenditure, the information is often highly aggregated and not in a format which these actors can interrogate. It is also common for governments to make public information on approved budgets but not on end-of-year outturns, which offer a more meaningful picture of where public resources are going.
- Relatedly, a lack of a clear, agreed definition of what constitutes climate-related expenditures. As the experience in Nepal, summarised in Box 3 below, indicates, even in countries where the government is reporting on its climate expenditures, if the methodology used to determine what 'counts' as climate change is not well-understood or accepted, the results may not be deemed credible.
- Minimal opportunities for CSOs to engage in the budget process in general, and therefore to influence how funds are allocated for adaptation and other purposes.
- Minimal engagement of supreme audit institutions on climate finance issues.
- Extensive use of earmarked funds for financing climate action – such funds lie outside of core formal accountability systems, and lack adequate compensating transparency²⁶.

In Nepal, the Ministry of Finance has developed climate change tagging systems which enables it to report on climate-relevant budget expenditures in the Annual Economic Survey. The code is added in the budgeting software, which provides the opportunity to add policy tags. The climate change code was added to an existing code on alignment with strategic pillars for government, a pro-poor spending tracking code, and a gender code. The code is flat, i.e. it does not provide information on whether expenditure is for adaptation or for mitigation, or which National Adaptation Plan pillar it contributes to. It does, however, allow for signifying the degree of alignment between the budget allocation and climate change purposes. Ministries are given guidance on when to consider an allocation climate change expenditure, through 11 expenditure purpose criteria. If expenditure ticks any one of the criteria, (which includes purposes such as sustainable management of natural resource and greenery production, land use planning and climate-resilient infrastructure, plans/programmes supporting food safety and security, promotion of renewable energy, preparedness for climate-induced disaster risk reduction, prevention and control of climate-induced health hazards, and endangerment of biodiversity), it is flagged. A system is in place for the National Planning Commission to review spending agencies' proposed coding, before the budget is sent to the Finance Ministry for assessment. However, this system has not resolved issues around accountability for climate finance. The Commission, in its early review, noted that problems persisted in regard to identifying and demarcating climate change actions, as ministries had some scope to interpret the criteria. Over the first three years of implementation, the amount of resources tagged grew significantly, but it was not clear whether this is because new funding was being provided for adaptation expenditure, or whether it was just that more of existing funding for environmental, health etc expenditure was being tagged as spending agencies learnt how the system worked and responded to the incentives in place for heads of ministries, departments, and agencies to show higher climate change expenditures. Initially, too, the system only applied to budgeted and not actual expenditure. It also only covered national and not sub-national expenditure, where much of localised climate adaptation expenditure would occur. The information was also not machine-readable, making it difficult for non-state actors to take up and assess expenditure growth and distribution across government functions. Given their doubts as to the reliability of the data, and these factors, there has been a lack of up take in CSOs using the information in Nepal. Non-state actors also feel that there should have been a greater effort to reach consensus between actors on what would count as climate change expenditure.

3 Climate Adaptation and the Budget Cycle

3.1 Entry Points for Integrating Adaptation Across the Budget Cycle

Despite the challenges laid out in the previous section, some governments have managed to pursue varied and innovative means of augmenting the volumes of budgetary resources for adaptation. The experience of a number of countries – including those discussed as case studies in the next section – combined with the experience of other ‘thematic budgeting’ efforts (including gender, pro-poor, and equity budgeting, see Annex 1), point to a wide range of potential entry points for integrating adaptation into budgets and PFM processes. These entry points span all stages of the typical budget cycle and serve a single overarching purpose, which is to **address the shortcomings in prevailing domestic budget processes that results in systematic underinvestment in adaptation**. By doing this, domestic budget processes could better optimise public investment in adaptation, ensuring that public expenditure overall is more resilient to climate change. These budget cycle entry points are presented as a single diagram in Figure 2, which is a synthesis of previous research²⁸.

BUDGET PREPARATION

This stage in the budget cycle usually begins with the forecast of revenue and expenditure projections, in view of macroeconomic and fiscal sustainability targets. This determines overall resource availability and defines the aggregate expenditure ceiling. In consultation with the cabinet and the president or prime minister, the ministry of finance will then define the expenditure ceiling for line ministries. Budget preparation guidelines, often known as the ‘budget circular’, are issued, which contain instructions on how to prepare the annual budget. Line ministries then prepare their draft budgets, in some cases undertaking a series of internal and external consultations as part of this, before submitting them to the ministry of finance. After this, the ministry of finance will normally hold bilateral budget hearings with line ministries to discuss the submission and agree on any changes required.

The entry points at this stage of the cycle are numerous, and, to date, this has been where most of the effort has taken place. Prominent examples include the following:

- **Public investment appraisal processes:** Most governments have certain guidelines on project appraisal which must be followed in order for a project to be included in the budget²⁹. The objective of such appraisal is to ensure that only those proposals which are of the highest priority for public resources are taken forward. This particularly applies to capital investments, where appraisal is usually a key pillar of a country’s public investment management (PIM) system. Climate change can be incorporated into a variety of different appraisal techniques, from relatively simple multi-criteria checklists (as has been done in Bangladesh) to more robust cost–benefit analyses (as are used in certain Indian states), with the intention that the incremental risks, costs, and benefits associated with climate change are factored into the appraisal (alongside the economic, social, and environmental costs and benefits, which are more routinely considered). This process can be used to decide between different spending options, or to improve the design of spending programmes to maximise their adaptation benefits. Often termed ‘**climate change impact appraisal**’ (CCIA), the methodologies adopted have varied depending on levels of capacity, time available, and the volume of schemes to be analysed, as well as variation in how adaptation is conceptualised in different locations (see Box 4). However, in its most robust form, quantitative climate-sensitive cost–benefit analysis can be demanding in regard to capacity, particularly in contexts where underlying appraisal capacity is already weak, and so it is usually only targeted to those programmes where it is expected to make the largest material difference. *The case study of Chhattisgarh State, India, demonstrates how this process led to a redesign of significant adaptation-relevant investments in the Department of Water.*

CCIA is an approach to systematically assessing the implications of climate change for the performance of programmes. At the same time, it can be used to assess the extent to which a particular programme addresses climate change, be it through adaptation or mitigation.

CCIA, using a benefits-based approach to estimating climate change relevance (explained later under Box 7), follows some key basic principles. Firstly, assessors need to assess 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, assessors try to tell the climate change story – by which we mean they estimate the sensitivity of those benefits to climate change. 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.

There are a variety of methodologies which can be used for CCIA, and the most appropriate one depends on the purpose of the appraisal, and the amount of data and time available. In most cases, a rapid appraisal is sufficient, and will draw on a variety of sources of evidence, some quantitative and some qualitative, drawn from case studies, existing surveys, and other research, adjusted as necessary to reflect local circumstances. Any remaining gaps can usually be reasonably filled through the analyst's assessments, and can employ such techniques as multi-criteria analysis, where assessors are required to score various benefits, to give a qualitative assessment of their relative weight. Such an appraisal can be completed relatively quickly (a rapid budget scoring exercise can cover a ministry's budget in a matter of hours) and it can be conducted by anyone familiar with the project and with some understanding of the forecasted impacts of climate change. This makes it amenable to roll-out across a government or agency. While such rapid appraisal methods aim to introduce some structure and objectivity to the appraisal, there is still quite a bit of scope for subjectivity. The real value in the process comes from transparently laying out all the appraisal assumptions, so that they can be debated openly by all stakeholders.

For large programmes, it may be justified to invest in more detailed, quantitative CCIA. This is particularly true of programmes that are seeking significant funding and/or are strongly affected by climate change. Quantitative CCIA draws on established methodologies of cost–benefit analysis to quantify the ratio of costs to benefits of the programme (with and without taking climate change into consideration). It looks over an expanded time horizon (up to 20–25 years) to capture the growing impact of climate-induced losses and damages, and applies a discount rate to reflect a preference for near-term benefits over those in the long term. Such programmes would usually be subject to an impact appraisal, which often requires several person-weeks of expertise, and the climate dimension to the appraisal would add another week or two of expertise. Quantitative CCIA is quite capacity-intensive, as it requires an understanding of cost–benefit analysis techniques, as well as an ability to quantify the impact of climate on these. Therefore, while quantitative CCIA can be undertaken by line departments within government, external technical assistance may also be required.

- **Macroeconomic forecasting and fiscal sustainability analysis:** Unfettered climate change acts as a significant dampener on a country's economic growth projections, but at the same time countries need to balance their adaptation financing 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. This sort of approach has been particularly useful for bringing ministries of finance on board with the adaptation agenda. *For example, the IMF, in partnership with the World Bank, is supporting countries to develop appropriate macroeconomic policy frameworks that take into account climate change impacts and response measures – see the example discussed in the box below.*

BOX 5

Climate Change Policy Assessments³⁰

Climate Change Policy Assessments are an initiative of the IMF and World Bank, to provide a big-picture assessment of a country's policy response to climate change from a macroeconomic and fiscal sustainability perspective, and to suggest macro-relevant reforms which could strengthen the country's likelihood of successfully implementing its Nationally Determined Contributions (NDCs). Using a template of standard questions which mirrors the NDC format, Climate Change Policy Assessments are brief, policy-oriented documents which have so far been prepared for Belize, St Lucia, and Seychelles.

The Seychelles assessment, for example, found that the financing needs for projects identified in the NDC amount to 3% of GDP a year between 2017 and 2030, which implies a substantial but not extreme scale-up of investment, which is likely to be consistent with debt sustainability targets. It also warned that the pace of mobilising climate investment is slower than would be consistent with completing the NDC package by 2030—i.e., faster investment would be called for in future years. To this end, the assessment recommended that 'climate change objectives and activities are systematically identified throughout the budget, and investment projects explicitly linked

to these', and identified the planned introduction of programme performance-based budgeting as an opportunity in this regard. It also provided further recommendations around building capacity for effective public investment appraisal and monitoring, and closer management of off-budget donor funding.

- **Annual budgeting frameworks:** Ministries, in their budget submissions to the ministry of finance, will often be required to prepare an annual budgeting framework which sets out the key ministerial programmes, and often KPIs for each ministry. In relevant ministries, adaptation needs can be reflected in these documents and climate-related KPIs need to be included. *For example, climate change has been integrated into the annual budget frameworks of certain ministries in Bangladesh, including the agriculture ministry.*
- **MTEFs:** The practice of applying MTEFs is now widespread, and involves laying out allocations to spending agencies over a three- to five-year period, as opposed to just a single year. Climate change can be introduced into this framework, giving certainty and predictability to agencies on their climate expenditure planning, while allowing for alignments with other priorities along the way³¹. However, this assumes that the MTEF is credible, i.e. that outer year allocations are based on realistic expectations and for the basis of future appropriations (which is often not the case). *For example, climate change has been integrated into the MTEF of the Ministry of Water Resources, Pakistan, from 2018/19. This means that the Ministry has a budgetary allocation for its investment in climate-resilient water infrastructure which spans three fiscal years, totalling approximately \$370 million. The approach is expected to be replicated next in the Ministry of Food³².*
- **Budgeting guidelines:** The government's budget circular can be adjusted, or an additional circular prepared, to require line ministries to prioritise climate adaptation programming and/or to explain how their submitted programmes contribute to adaptation and how they are linked to the national strategies around adaptation. Suggested target levels for each ministry with respect to climate spending could also be indicated, although guidance would be required on how to classify and

weight climate expenditure. Budget guidelines are followed by all spending agencies and infrequently changed, so integration of climate change in them is seen as a low-effort, high-return investment. *The case study of Afghanistan describes how the Ministry of Finance developed climate budgeting guidelines to ensure the mainstreaming of climate change considerations across agency budgets.*

- **Budget hearings:** Ensuring adaptation is an agenda item or consideration in budget hearings conducted by the ministry of finance is one means of ensuring that decisions on resource allocations promote climate-compatible development. This can be formally done by adding to the official budget appraisal criteria, or by having it as a standard agenda item, but in practice relies on those engaged in the negotiations being adequately sensitised. *The case study of the Philippines gives an account of how the Department of Budget and Management (DBM) ensured climate change was systematically incorporated into budget hearing discussions, using climate budget briefs as an analytical input and engaging with the Climate Change Commission.*

BUDGET APPROVAL

Once agency budgets are finalised and consolidated, they are presented as an appropriation bill to parliament. In some cases a budget committee or similar will scrutinise the budget, and may call different ministers to defend their submission. There may or may not be opportunities for civil society and external actors to participate in this process, depending on the context. The budget may be returned to the government for further revisions. Once parliament approves the budget, it is adopted as legally binding.

The main entry points at this stage are the following:

- **Budget statements / speech:** When the budget is reviewed by parliament, it is initially presented by the minister of finance, in the budget speech. This is one of the key annual policy statements of the government as it presents the resource allocation priorities of the government, with their overall rationale and political context. The budget speech is often televised and reported live by media and analysed carefully by commentators and journalists. While it is an ambitious

objective, some countries have succeeded in including climate adaptation in this budget speech by the minister of finance. *This was the case in Bangladesh, when the Minister of Finance in 2017 used the opportunity of the budget speech to table the Climate Budget Report, which was then praised by the Prime Minister.*

- **Parliamentary scrutiny of the budget:** Ensuring the parliament has the information and capacity to scrutinise the government budget from a climate change perspective, predominantly through trainings and toolkits, can be an important means of increasing awareness among lawmakers, and with time should help them to hold the government to account in regard to meeting its financial commitments related to climate change. The turnover in elected officials requires that sensitisation and training is undertaken often. *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.*
- **Cross-committee engagement:** Some legislatures have climate change committees, although the extent to which these consider financing issues varies. The core of budget examination is typically done by finance or budget committees, but these do not usually consider climate-related spending as a distinct issue. Cross-committee engagement can help close this gap. *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. However, this combination is not institutionalised so there is no guarantee that it will be sustained when the Senate seat turns over³³.*

BUDGET EXECUTION, MONITORING, AND REPORTING

This is the stage when the planned activities are implemented. The budget execution process is initiated when the ministry of finance releases funds to line ministries in line with the approved budget. Agencies can then procure goods and services, and spending is initiated. Deviations from planned budgets are common in developing countries, either because the planned releases from finance do not materialise or because spending agencies do not have the capacity to fully expend the resources received. Budget revisions are commonplace, often in the form of virements (transfers between line items within the budget), the issuing of a supplementary budget (following an exceptional change in circumstances), or through budget cuts (following overspend or a fall in revenue). Accounting and monitoring of revenues and expenditure informs whether the budget is being implemented as agreed, and can include financial and non-financial performance indicators.

The entry points at this stage of the cycle include the following:

- **Expenditure tracking, including through the use of a budget tagging system:** Expenditure tracking is a widely deployed tool used by governments to assess whether past expenditures were in line with policy objectives, to reveal trends in spending (including whether amounts are increasing or not), and to identify inefficiencies in spending. In the climate field, these have ranged from one-off in-depth analytical diagnostics (predominantly in the form of CPEIRs) to more regular budget analyses. A major trend in recent years has been the move to institutionalising climate budget analysis through the introduction of a climate budget tagging or scoring system. Some learning on this experience is summarised in Box 6. *The case studies in the Philippines, Afghanistan, and Odisha and Chhattisgarh in India all include an aspect of climate budget tagging, with each location adopting a different approach.*
- **Performance indicators:** With the spread of performance-based budgeting (whereby budget allocations are linked to performance against agreed indicators) some countries are seeking to ensure indicators are defined which capture the adaptive performance of

relevant programmes. There are challenges associated with defining meaningful performance indicators for adaptation, and typically the ones that are used focus on outputs rather than outcomes. *For example, the Pakistan Ministry of Water Resources' climate-resilient water infrastructure programme has outputs and KPIs relating to climate change adaptation, including the number of flood mitigation initiatives undertaken*³⁴.

- **Processes for cash management, and managing budget revisions:** As noted above, it is not uncommon for implemented budgets to vary considerably from planned budgets, due to shortfalls in revenues or changes in spending plans. A study looking at domestic financing for NDCs in Ethiopia, Ghana, Kenya, and Uganda³⁵ found that the approved budget was a poor predictor of actual spending on climate change actions, with actual expenditures in each of the countries being significantly less than the budgeted amount. This suggests that a key entry point for impacting on adaptation spending may be to ensure that in the face of funding shortfalls, adaptation programmes enjoy some degree of prioritisation or protection from cuts. To date, there is little developing country experience of these sorts of measures to draw upon (at least in relation to adaptation), however there is some experience from OECD countries. *For example, the UK Government's Department for Environment, Food and Rural Affairs manages a ring-fenced budget for flood and coastal risk management in the UK, as well as one for international climate funds. In the UK context, this means that savings in these budgets may not be used to fund pressures on other budgets. Furthermore, within the gender-responsive budgeting field there has been some analytical work to consider how budget cuts disproportionately impact women, and efforts to mitigate this.*

As discussed under Section 2.2, government accounting systems do not typically allow for the tracking of cross-sectoral expenditures, including climate change adaptation, because the chart of accounts coding categories are delineated by traditional sectors, are hierarchical, and are mutually exclusive. Climate budget tagging has emerged as a response to this constraint, as a tool for monitoring and tracking climate-related expenditures in the national budget system. Climate budget tagging works by flagging budget lines that are relevant to climate change adaptation/mitigation, and recording budget allocations and/or expenditures which are made against those lines, to provide an overall picture of climate-related spending. This can either be done through a standalone analysis or budget datasets, or it can be automated by integrating the tag into the government's electronic financial management system. Some countries will publish the results as a standalone 'climate budget report' (like Bangladesh), whereas other countries will report them as part of routine budget outputs (like in Nepal).

Climate budget tagging is intended to serve a number objectives: i) it enables policymakers to plan and allocate resources to better tackle climate change-associated impacts; ii) it is an important means of promoting transparency and accountability; iii) it provides a baseline analysis of the existing level of effort against which progress in scaling up adaptation finance can be tracked over time; iv) it permits governments to demonstrate the degree to which they are supporting adaptation using domestic funding; and v) it can also encourage government agencies to incorporate climate considerations in programme and project design.

The primary challenge in relation to climate budget tagging relates to defining and delineating the functional area of relevance, in this case adaptation (and potentially mitigation). As discussed above, there is no universally accepted definition of adaptation, so countries will tend to refer to their domestic policy context to define the scope. On top of this, as discussed in Box 1, very few government activities are wholly and specifically for adaptation purposes, rather it is much more common for adaptation to be part and parcel of broader development investments. This makes it necessary to apply a weighting as a proxy for the climate change relevance of a particular programme, for which different methodologies have emerged over the last decade (see Box 7 for a detailed discussion on this point).

As a growing number of countries adopt climate budget tagging, with many going into their third or fourth year of reporting, the following lessons are emerging:

- **Tagging is not an end in itself.** Unless the information resulting from the tag, analysis, or review is used to inform climate change policy, planning, or budgeting, or to strengthen accountability around climate change commitments, it will remain an academic exercise of limited operational value. Some countries have used tagging formation to directly inform budget decisions (such as in the Philippines case study) or the design of programmes (such as in the Odisha case study); however, in other locations the value added is less evident.
- **Tagging of budget allocations is more common than tagging of actual expenditures**, but, given that expenditures can depart significantly from allocated amounts, **for a meaningful assessment, both are required.**
- **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.** This is not something that a budget tagging exercise can provide – other financial, economic, and climate analyses should complement the budget tracking tool to evaluate effectiveness of adaptation investments (including CCIAs).
- **The use of tagging results by accountability actors has been minimal to date.** Too often the reports are impenetrable for non-technical audiences (although citizen climate budget reports, which attempt to convey

key messages in an accessible and visually engaging format, can aid in this respect). In other cases the information shared does not give enough detail to support meaningful monitoring by CSOs, or a lack of understanding around the methodology means the results are not deemed credible (see Box 3).

- **No countries are yet accounting negative investments in their assessments** (i.e. spending which is not consistent with climate-compatible economic development, including maladaptation).
- A primary benefit of climate budget tagging has been in **providing an entry point for engaging ministries of finance**, and from a line ministry perspective as a means of **attracting additional budget adaptation activities**.
- In terms of **institutional engagement**, climate budget tagging usually requires the engagement of the ministry of finance, as the overall controller of the budget system; however, it is often spending agencies (as the parties most familiar with the details of budget programmes) that apply the tags. Involving them in this way can ensure that the quality of investments (from a climate change perspective) improves over time. Environment / climate change ministries or commissions can play a key role in quality assurance.
- There is a **trade-off between the degree of accuracy and the level of effort and capacity required**. This relates to the level of expenditure which is tagged (more granular approaches, i.e. tagging at activity or activity component level, might be more accurate but can be highly labour intensive), and the weighting methodology (approaches that draw on cost–benefit analyses / CCIA being more robust but more demanding in terms of capacity and data).
- The **lack of consensus or standardisation around climate change relevance weighting is a cause of confusion and prevents cross-country comparison**. Some experts consulted for this paper felt it would be pertinent to wait for consensus on this issue before countries invest more in budget tagging, others felt the variation in country approaches should be nurtured alongside peer-to-peer learning, and that cross-country comparison matters less than temporal trends within countries.
- **Efforts to expand climate tagging to the local level** are relevant in fiscally decentralised contexts but can be demanding where local government PFM capacity and/or understanding of climate issues is limited.
- To date, climate budget tagging efforts have been **dependant on technical assistance** (usually from UNDP, World Bank, or the UK Department for International Development (DFID)), and the **sustainability of efforts beyond the life-cycle of these engagements remains to be seen**. However, reporting results in routine budget publications and engaging CSOs are probably strategic measures from this perspective.

ACCOUNTABILITY AND EX-POST OVERSIGHT

During this phase, external auditing provides financial and legal probity in regard to the actual use of the budget (versus the intended use). The legislature has a key role in assessing regularity of expenditure, implementation, and performance. Typically, a public accounts committee examines the regularity of accounts and expenditure (from a policy-neutral perspective), while sectoral committees examine the extent to which spending has achieved policy goals. At the same time, civil society can have a key role in ensuring resources are used for their intended purposes, and highlighting instances of misuse or inefficiency.

Key entry points for mainstreaming climate change adaptation in this phase of the budget cycle relate to ensuring that those institutions which make up the 'climate finance accountability ecosystem' (CSOs, journalists, legislative bodies, and supreme audit institutions) have the capacity and resources to enable them to scrutinise public finances from an adaptation perspective. Experience points to a number of different good practices:

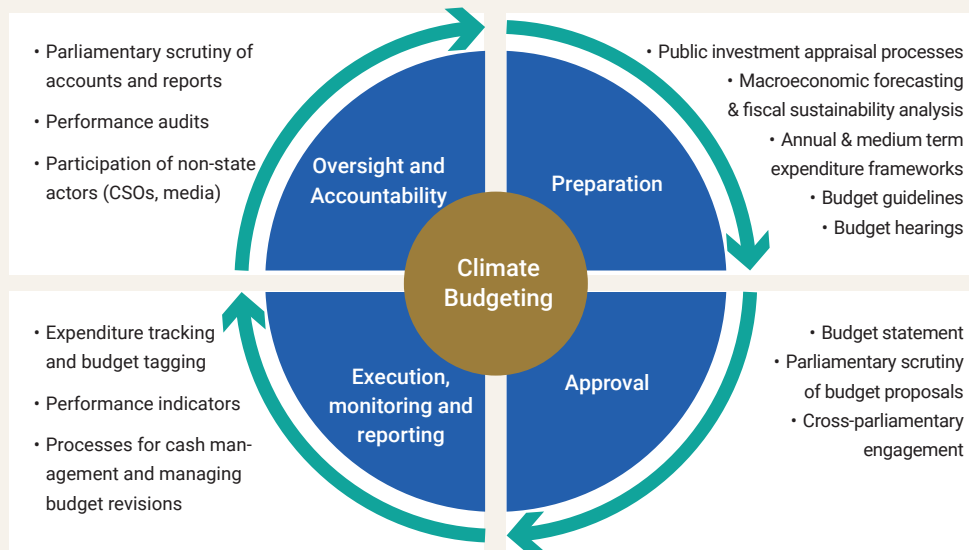
- **Parliamentary scrutiny:** Parliamentary climate change committees and sector committees in key adaptation-related sectors can play a role in scrutinising government reports to determine whether adaptation-related targets have been met. *In Nepal, a Climate Budget*

Review Toolkit is used by members of the Standing Committees on Finance and Environment.

- **Performance audits:** Creating an increased role for supreme audit institutions both in terms of quality assuring the climate budget reports and conducting performance audits which consider performance from an adaptation perspective are emerging entry points. *The Bangladesh case study briefly discusses how the Office for the Comptroller and Auditor General is adopting climate-related dimensions into its performance audit protocols.*
- **Role of non-state accountability actors (including CSOs and the media):** The potential roles of these accountability actors include both direct engagement (for example, where it is allowed, participating in budget processes by engaging the finance ministry/planning ministry and delivery ministries on the incorporation of climate change in budgets) or indirect participation (for example, raising awareness on climate change finance issues through media articles or conducting analysis, including commentary on government budgets)³⁷. *The Bangladesh case study describes how a coalition of civil society actors came together to produce a civil society response to the Government's Climate Budget, including issuing a series of key demands for the Government to improve the quantity and quality of its spending on adaptation.*

Figure 2: Entry Points for Mobilising and Managing Resources for Adaptation Through Domestic Budgets

Figure 2 summarises these key entry points for mobilising and managing resources for adaptation through domestic budget processes. It brings together and builds on other research on this theme³⁸. Entry points for mobilising and managing resources for adaptation through domestic budgets



3.2 Modes of Applying Climate Budgeting

There are various modes of mainstreaming climate change into domestic budget processes. For example, it may involve initiatives which are oriented from within **centre-of-government agencies, as well as sectoral agencies**. In general, reforming PFM processes and systems requires working with ministries of finance and/or planning, for example to amend budget guidelines or investment appraisal processes, or to make changes to fields in the expenditure recording systems. However, working with line ministries in key sectors, for example on integrating adaptation into their budget submissions, can be complementary to this.

Similarly, climate budgeting methodologies are valid at different levels of government (**national and sub-national**). Depending on the degree of fiscal decentralisation in a country, as well as the assignment of expenditure responsibilities to sub-national governments, it may be more impactful to mainstream climate change adaptation into sub-national budget processes. Furthermore, the literature suggests that working with local governments can improve the relevance and ownership of climate budgeting reforms, and may be more appropriate given that adaptation expenditure related to climate impacts like flooding are often localised to particular towns, cities, or regions. However, the challenges working at lower levels are often more pronounced, in particular due to weaker levels of PFM capacity than is usually found at national level.

Although all of the initiatives identified in this research can be situated around the budget cycle, the wide variation in approaches adopted suggests that there is **no 'one size fits all'** approach for how to mainstream adaptation in budgets. This variation is derived from the variation in context, including the prevailing features of the PFM system, baseline levels of capacity, and nuances in how climate change adaptation is understood. This diversity should be welcomed, though not at the expense of the evolution of common approaches and standards, generated through cross-country research and peer-to-peer exchange. Areas where some greater standardisation might be of value include the approach to estimating the climate change relevance of spending programmes (given that adaptation is typically one aspect of a broader development investment), which is discussed in Box 7.

When devising an optimal strategy for mainstreaming climate change adaptation into domestic budget processes, **diagnostics and other decision-making support tools have proven valuable for providing a road map of future areas for reform**. The most common such diagnostics has been CPEIRs, which involve a systematic qualitative and quantitative analysis of a country's public expenditures and how they relate to climate change, as well as a set of recommendations for improvement. CCFFs can serve a similar purpose, with components that typically include an assessment of economic losses and damages from climate change, analysis of current levels of climate finance and the resulting financing gap, ending with recommendations around how to best mobilise additional resources, including those from the domestic budget.

BOX 7

Diverging approaches to assessing climate change relevance³⁹

Interventions which provide adaptation benefits are usually part and parcel of broader programmes that promote sustainable development, with examples of investments that are specifically for adaptation purposes being relatively rare. This means we need a way of assessing the **varying relevance to climate change adaptation of different spending programmes**. This is necessary for informing ex-ante spending decisions and decisions around the design of public expenditure programmes, the logic being that from a climate change perspective, more emphasis should be given to those investments which deliver higher adaptation returns. This is also needed for ex-post expenditure tracking purposes, to enable us to untangle how much of the budget is going to adaptation, and to track trends over time.

Climate change relevance (CC%) is a measure of the percentage of a programme or budget line which is assumed to be related to climate change (adaptation or mitigation). Broadly speaking, two approaches to assessing CC% have emerged: an objectives-based approach and a benefits-based approach (the latter is sometimes referred to as the climate benefits share method).

The **objectives-based approach** originated from the CPEIR exercises and is also used in OECD ODA climate change markers. Under this approach, the assessment focuses on the extent to which climate change is part of the explicit or implicit objectives of the programme, with bands defined which typically look like the following:

- 75–100%, where climate change is a primary objective of the spending programme;
- 25–75%, where it is one of a mix of objectives; and
- 25% or less, where climate change is a secondary or significant implicit objective.

Take an example of a hypothetical forestry project, whose stated objectives include i) generating income from timber sales; ii) improving biodiversity of local area; and iii) reducing flooding in nearby villages. Under this scheme a CC% weight of 25-75% would be assigned as one of the objectives is adaptation-related.

The **benefits-based approach** has emerged more recently, and is commonly applied in climate change financing frameworks. The assessment of CC% is based on analysis of the proportion of total benefits from the programme associated with adaptation and mitigation, as compared with other types of benefits (economic, social, and environmental). This is done by comparing the benefits delivered if there is no climate change (i.e. the development benefits do not change and adaptation/mitigation has no value) with the benefits if it does happen (i.e. the benefits increase—or decrease for maladaptation—and reductions in greenhouse gas emissions have a value). It draws on cost–benefit analysis and CCIA techniques.

The typical values which emerge are much lower than those that come from the objectives-based approach, ranging between 0–33%, where 33% indicates adaptation and/or mitigation make a substantial contribution to benefits and thus climate change is highly relevant to the programme’s results.

Returning to the hypothetical forestry project, assuming CCIA analysis had provided the following estimates of benefits, a CC% weight of 7% would be applied (10/135)

Value of projected impacts	
Income from logging	\$110 million
Biodiversity	\$15 million
Climate losses avoided from reduced flooding	\$10 million
Total	\$135 million

The objectives-based approach has clear advantages, including that it is intuitive and easy to apply by anyone with access to information on project objectives, and so is amenable to relatively low-cost, rapid roll-out across government. However, it is highly subjective, and because objectives can be manipulated, it is vulnerable to ‘greenwashing’, i.e. inflating claims of CC% in order to gain access to climate funds. The benefits-based approach appears to adopt a more data-reliant, rigorous methodology; however, by virtue of this it is more demanding in terms of time, data needs, and capacity requirements, and in governments where existing investment appraisal standards are low, its application can be reliant on technical support.

There are variations within these two broad categories – the case studies in Chhattisgarh and Odisha describe a variant of the benefits-based approach, for example. One challenge associated with this lack of standardisation is that it severely hinders cross-country analysis, and it is for this reason that climate budget tagging systems are not used for international reporting purposes. From a domestic governance perspective this is less of a concern as what matters most are the trends: is more being spent on adaptation over time and are budget processes prioritising programmes which deliver greater adaptation benefits? These questions can be answered adequately using either approach outlined here.

3.3 Additional Modalities for Augmenting Public Expenditure on Adaptation

Climate budgeting focuses on how adaptation can be mainstreamed into the government budget: it stops short of discussing **dedicated climate funds**, even those that are domestically financed, which tend to operate outside of routine budget processes (for example, with separate oversight structures and decision-making processes for how the funds resources are allocated). This focus on mainstreaming climate adaptation into the government budget is deliberate, and reflects a number of strategic advantages that a mainstreaming approach has, compared to standalone funds. First, we note that mainstreaming befits the nature of adaptation (given its interconnectedness to development, as set out in Box 1). Furthermore, as a financing strategy, mainstreaming typically has greater potential impact in terms of the volume of funds that can potentially be mobilised. We note also that specific-issue funds often lack the capacity to implement, leading to high volumes of unutilised funding (if mainstreamed, implementation makes use of all of a government's capacity to implement), and that mainstreamed funding is more likely to be scrutinised as part of routine oversight and audit. While these facets point to considerable advantages to mainstreaming vis-à-vis earmarked funds, we do not suggest that there are no cases where earmarked fund modalities can add value to an adaptation financing strategy; however, such cases are not investigated as part of this research.

Because domestic budgets are so well-suited to delivering adaptation finance, an argument can be made for making use of them to deliver international climate finance too. Indeed, this is the objective of **climate-related budget support modalities**, which have been deployed by a number of donors and multilaterals including the European Union, the Japan International Cooperation Agency, the Asian Development Bank, and the World Bank. Through these modalities, 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 Samoa in Box 8). As budget support, these mechanisms contribute to domestic financing, which may be used for any public expenditure purpose,

including adaptation. As with own-source revenues, the sorts of climate budgeting reforms set out above will increase the likelihood of budget support resources being spent on adaptation.

In 2018, the World Bank approved the Development Policy Operation, aimed at boosting the macroeconomic and financial resilience of Samoa to the effects of climate change and natural hazards, and at reducing the vulnerability of Samoans to non-communicable diseases. The operation provides budget support through a combination of upfront financing of \$5 million, in addition to disaster-contingent financing of \$8.7 million available in the event of a natural catastrophe. In order to access this budget support, the Government of Samoa must meet a set of prior actions related to strengthening macroeconomic and financial resilience, enhancing resilience to climate change, and reducing vulnerability to non-communicable diseases. The prior actions include the following:

- simplification of the capital gains tax regime and facilitation of the collection of capital gains tax;
- enactment of the Money Laundering Prevention Amendment Act 2018;
- approval of Guidelines for the Application of the National Building Code to strengthen new single-storey residential housing against climate-related risks and earthquakes;
- approval of the Samoa Infrastructure Asset Management Strategy;
- approval of Community Integrated Management Plans to strengthen the resilience of all 41 districts to the impacts of climate change and natural disasters; and
- the introduction of an integrated, computerised inventory management system for pharmaceuticals.

Source: World Bank (2018).

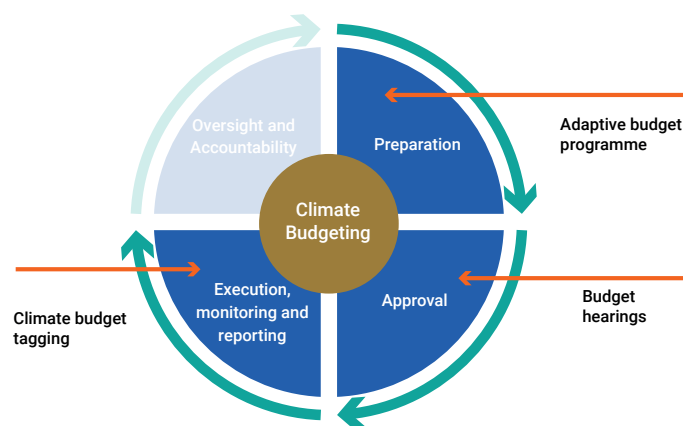
4 Case Studies

In this section we present four case studies of locations where budget processes have been adapted or capitalised upon to be more responsive to adaptation needs, with the ultimate objective of improving adaptation outcomes. The examples are varied, to demonstrate the practical application of different aspects of climate budgeting, and include the following:

- **the Philippines**, where the government has introduced a cross-sectoral budget programme for adaptation, and operates a climate budget tagging system, with reports that directly inform the annual budget negotiations;
- **Afghanistan**, where the Ministry of Finance has rolled out climate budget guidelines to help in the management of domestic spending and to signal commitment to the international community;
- the Indian states of **Chhattisgarh and Odisha**, where CCAs are used to inform tagging at the sector level in these sub-national contexts; and
- **Bangladesh**, where the case study focuses on the engagement of accountability actors in the climate budgeting agenda, including civil society and the Office of the Auditor General.

4.1 The Philippines: Using Climate Change Expenditure Tagging to Inform Spending Decisions, and Making Programme Budgeting Work for Adaptation

The Government of the Philippines has pursued a portfolio of climate budgeting reforms which encompasses multiple stages of its domestic budget cycle. This includes budget preparation processes (with the establishment of a budget programme specifically focused on adaptation), budget approval (where budget hearings routinely consider climate change), as well reporting and monitoring processes (thanks to an embedded climate budget tagging process which results in a series of climate budget reports throughout the fiscal year).



By virtue of its location, climate, and topography, the Philippines is exposed to a range of climate-related hazards, including typhoons, floods, landslides, and droughts, which are already adversely affecting livelihoods, food security, and economic development. For this reason, political support for investing in adaptation has not been the stumbling block in the Philippines, as in many other countries, with the Government demonstrating a strong commitment to a comprehensive reform agenda for climate change adaptation since the Climate Change Act was passed in 2009. This law mandates the Philippine DBM to 'undertake the formulation of the annual national budget in a way that ensures the appropriate prioritization and allocation of funds to support climate change-related programs and projects in the annual program of government'.

In 2012, a CPEIR was conducted, which set the direction for the climate change budgeting reforms⁴¹. First among these was the introduction of **Climate Change Expenditure Tagging** (CCET). Jointly managed by the DBM and the Climate Change Commission, the CCET is a comparatively simplistic binary tag – i.e. spending lines are either marked as climate change-related or not, without any weighting to account for varying degrees of relevance. The relative simplicity of this approach has facilitated its rapid roll-out, to all national government agencies in 2013 and then to local government units from 2014 onwards. However, the process has faced challenges, particularly in relation to a lack of awareness of what ‘adaptation’ means (particularly among local authorities), and inconsistencies in classifying and defining the level of funding budgeted for climate change adaptation⁴².

Budget tagging in the Philippines’ case is not an end in itself, rather it is used to ‘guide the formulation of subsequent budgets to mainstream climate change adaptation and mitigation strategies in the national development process’ through a series of reporting outputs and feedback loops⁴³. Based on the climate budget data, climate budget briefs have been developed to identify the scope and scale of sector agencies’ climate budgets, gaps in coverage, and the mix of activity types. The first version of the brief is prepared based on the spending agency’s draft budget request and so sets out the adaptation and mitigation investments the agency would like to make, prior to negotiations with the DBM. A second iteration relates to the President’s proposed budget and therefore encompasses all spending plans which have been approved by the DBM to be tabled for discussion in Parliament. The third report on climate investments relates to the approved budget, according to which spending agencies are then permitted to execute. Finally, since financial year (FY) 2017 climate-related expenditures have been published as part of the Budget of Expenditures and Sources of Financing report. Phasing the climate budget reporting in this way, which mirrors the timing and nature of routine budget reports, helps ensure that climate budget reporting becomes part and parcel of the Government’s publication cycle (the Government is now entering its fifth year of reporting on climate spending). It also means information is available to inform critical decision-making junctures.

Another climate budgeting reform which the Philippines has introduced relates to the **programmatic structure of the national budget**. As is common across a lot of PFM systems, the Philippines operates a programme budget structure, which means that activities financed from the budget are clustered together under the umbrella of a common policy objective. As is also typical, most of these programmes align under a single spending agency, which is held accountable for the financial and non-financial performance of the programme. However, recognising that there are some areas of government business where agencies need to collaborate instead of compete for budgets, the DBM in 2012 introduced ‘Programme Convergence Budgeting’, to facilitate and incentivise inter-agency collaboration. Under this innovative approach, multiple spending agencies working towards a common cross-sectoral policy goal form clusters under the leadership of a lead agency. The cluster agencies then collaborate to identify relevant interventions in their plans, and submit a joint budget proposal to the DBM for funding for converged programme activities, for which an amount is set aside in each fiscal year⁴⁴.

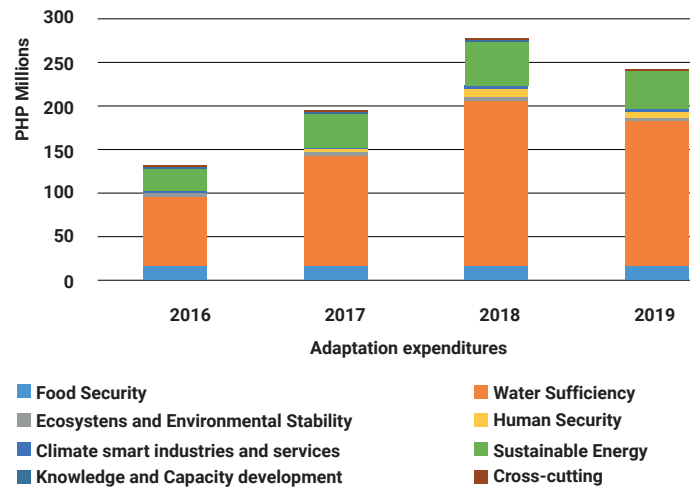
‘Climate Change Adaptation and Risk Resilience Program’ is one of the 11 converged programmes in the FY2019 Philippines budget. It provides an opportunity to bring together under a convergence programme climate change actions by participating agencies, which include the Department Agriculture, Department of Budget Management, Department of Energy, Department of Environment and Natural Resources; the Department of Health; the Department of Interior and Local Government; the Department of Defence; the Department of Public Works; the Department of Science and Technology; and the Department of Social Welfare and Development⁴⁵. The activities under the programme are aligned with the Climate Change Adaptation and Risk Resilience plan, oriented around three outcomes, one of which is ‘improving adaptive capacity of communities’. By ensuring there is a separate pot of additional money available, the programme provides an incentive to scale up adaptation and risk resilience investments in priority sectors (while still allowing mainstreaming across the rest of the budget). Ensuring coordination under what is one of the most institutionally diverse converged budget programmes has reportedly been a challenge⁴⁶); however, the DBM reports that the Climate Change Adaptation and Risk Resilience Program is the best-implemented programme convergence bud-

get among the 11, due to the proactive leadership of the Department for Environment and Natural Resources.

These two reforms, alongside a selection of other climate budgeting interventions over the past five to six years, have enhanced government capacity to make informed decisions around budgetary investments for climate change. From a sustainability perspective, it is promising that many of the reforms have been made routine as part of the annual budget process managed by the DBM, and are integrated into official circulars and guidelines, with some outputs appearing as a standing feature of regular budget publications. Meanwhile, the technical assistance in this area provided by the World Bank has tapered off but these processes have been sustained.

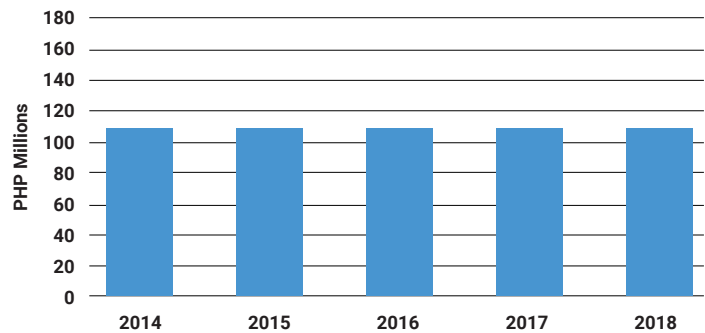
In terms of the ultimate impact on the Government's spending on adaptation, these reforms have been credited with contributing to the increased levels of national budget allocations for adaptation seen in recent years, which has seen a compound annual growth rate of 22% over the last four years (see Figure 3). This suggests progress in mainstreaming adaptation across the government budget. At the same time, the Climate Change Adaptation and Risk Resilience convergence budget programme is a growing and important vehicle for national-level adaptation spending, as it has comprised over half of the national climate expenditure since 2016 (see Figure 4).

Figure 3: National-Level Adaptation Appropriations in the Philippines 2016–2019



Note: The drop in FY2019 is at least partly due to implementation of cash appropriations and is therefore not directly comparable to previous years.

Figure 4: Climate Change Adaptation and Risk Resilience Program Budget 2014–2018



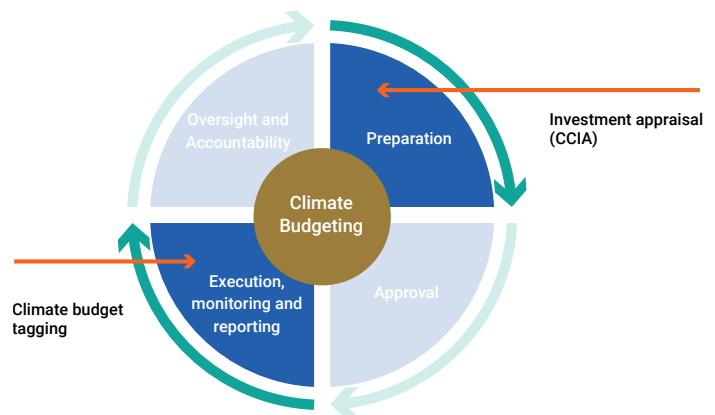
Source: Data provided by DBM.

To summarise, there are a number of identifiable enabling factors which have contributed to the results seen in the Philippines, and which may have wider relevance.

Government leadership at the highest levels was considered a primary factor in catalysing systematic effort which has brought together a range of institutions. The DBM has been implementing the tagging system jointly with the Climate Change Commission, whereas the National Economic and Development Authority leads on the mainstreaming of climate change into planning and the Department for Local Government has responsibility transferring funds for local governments, including for adaptation purposes (not addressed here). The culture of the Government of Philippines, and that of the DBM in particular, mean that it has been able to bring about **changes in the PFM processes relatively quickly**, and **feedback loops** have enabled necessary changes to be identified, providing the cornerstone for rapid progress in establishing a climate budgeting system. In addition, the Climate Change Commission has reflected that **'targeted scientific assessments and amassing evidence of successes'** has played a significant role in building cases for financing and investments for resilience building⁴⁸. Finally, the World Bank **technical assistance** was critical in defining the overall scope and the evolution of the incremental tasks under a flexible design; as capacity has been built, the technical assistance has scaled back but the use of the CCET system has been sustained⁴⁹.

4.2 Mainstreaming Climate Change Into Sub-National Budgets: the Case of Odisha and Chhattisgarh States, India

The Indian states are mandated to invest in climate change adaptation, although their preferred mechanisms for doing so vary. This case study looks at Odisha and Chhattisgarh, where CCIA methodologies have been adopted as part of budget preparation processes: in the case of the former to facilitate mainstreaming and in the case of the latter to demonstrate the value (from a climate change perspective) from a few key investments. The case study also demonstrates how climate budgeting can be applied at the sub-national level from a sector perspective, and it also demonstrates how establishing success and uptake with one sub-national government can encourage peer learning and wider uptake across the country.



All states in India are required to set out a package of adaptation initiatives in their State Action Plans on Climate Change (SAPCCs). However, implementing these plans has proven a challenge for many state governments. Funding is typically the critical stumbling block, as there is no specific budget allocation or national government transfer for SAPCC implementation; rather, the expectation is that the states will finance initiatives primarily through their existing budget activities.

Odisha was among the more proactive states of India with respect to drawing up its SAPCC and identifying financing for the SAPCC projects within existing budgetary schemes (programmes). However, the state government recognised that stopping there would amount to a partial effort to mainstream climate change, as beyond the 12 or so

budget schemes which could explicitly be linked to SAPCC investments there was the rest of the budget to consider. This led the Odisha State government to undertake a climate budgeting exercise across 11 departments, with technical support from the DFID-funded Climate Proofing Growth and Development (CPGD) programme. This entailed a preliminary screening, followed by a detailed analysis of departmental budgets for their inherent relevance to climate change and potential vulnerability to adverse impacts of climate change, a variant of the benefits-based approach drawing on **CCIA** techniques. The process itself was initiated through a consultative brainstorming involving all key departments linked with the SAPCC, through which the CCIA tool was refined to reflect local understanding of climate sensitivity and adaptation. Following this, valuable inputs were provided by the Odisha Climate Change Cell, the state nodal agency for climate change, the departments of Environment and Forests, Water Resources, Finance and Plan & Convergence. Through this process the departments identified which public investments were the most vulnerable to climate change, as well as a set of specific opportunities in relation to how those interventions could be reconfigured to withstand future climate change risks. This was reported in the State Budget showing the climate relevance and sensitivity of all schemes of 11 departments (similar to the Government's annual disclosure of the Gender Budget), which is intended to now be a regular feature of the budget document. This process not only served to enhance Odisha's credibility among its peers as a pioneer in financing climate action, but also helped strengthening decisions around budget allocations from a climate change perspective.

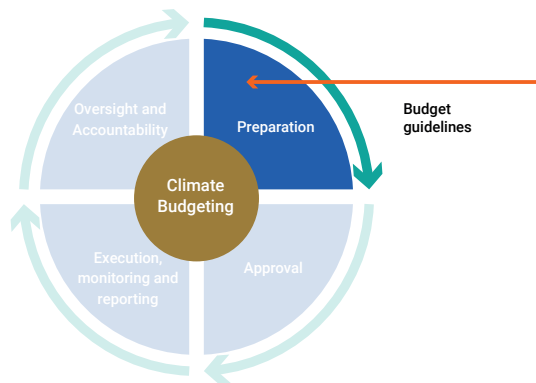
The approach to budget screening which was adopted in Odisha established a tested approach that was subsequently applied by the government of the neighbouring State of Chhattisgarh. However, there the intention behind the approach was instead to demonstrate the value of additional financing to augment the adaptation benefits of public investments in key departments. Given this, the focus of budget screening in Chhattisgarh was intentionally narrow, to permit a deep-dive into planned investments of three climate-relevant departments. The process involved listing the benefits of the programme as comprehensively as possible, before scoring them (0–100%) based on their assessed degree of climate relevance and vulnerability. Based on this stock-taking, which revealed inherent adap-

tation (and/or mitigation) opportunities and gaps, planners were able to identify a list of potential programme design changes which could enhance the climate benefits in subsequent planning/budgeting cycles. This combined exercise of assessing the benefits and listing potential actions to enhance benefits allowed the departments to bid for additional climate resilience funds from the state budget, and to defend its request convincingly. Specifically, it gave the state's Water Resources Department the evidence it needed to request additional funding for a 'building climate resilience' budget head, against which a budget of \$5.7 million was approved, of which \$730,000 is allocated for projects in the year 2019/20.

Modest or low levels of understanding of how to address climate change linkages with departmental activities, and the lack of strong leadership for the climate agenda, is a common challenge at the state level (usually the SAPCC is owned by the Forest & Environment Department as the nodal agency, which may not have much influence over budget processes and financing decisions). However, these two examples demonstrate how **focused advocacy and follow-through with select sectors**, namely those that showed greater understanding of and appreciation for climate budgeting, led to successful adoption and financial gains. It also points to **different reasons why a government might buy in to the climate budgeting agenda**. Being a forerunner among states in this domain, the Odisha Government took up the mainstreaming agenda because it wanted to demonstrate a commitment to financing climate change that went beyond the piecemeal investments in the SAPCC. Chhattisgarh, on the other hand, being a mining-intensive state, used the opportunity to formulate concerted climate change responses and to demonstrate their value to budget decision makers. Finally, the case study points to the **value of peer learning**, as the appraisal methodology developed in Odisha was subsequently adopted in Chhattisgarh.

4.3 Afghanistan's Ministry of Finance Leads a Piloting of Climate Budgeting Guidelines

This case study from Afghanistan looks at how climate change adaptation can be integrated into national budget guidelines. This modest tweak to budgeting processes has furnished the Ministry of Finance with a clear view of the investments that support climate resilience or mitigation, while also giving line ministries an indication of which investments are vulnerable, to enable pre-emptive adaptive actions. It points to the value of leadership by an institution with the mandate to change budgets, while simultaneously focusing on the few line ministries that are likely to expend the majority of funds.



Afghanistan's vulnerability to climate change impacts is posing major challenges to its socio-economic development, through drought and other weather-related shocks. At the same time, over recent years the country has experienced a steady decline in ODA. Recognition of this challenge prompted the Ministry of Finance to make major strides within the domain of climate budget analysis to enhance the state of domestic financing for adaptation.

The Ministry of Finance first worked with international partners to undertake a CPEIR that provided a snapshot of the available adaptation finance across key sectors, and revealed that between 2013 and 2015, the country spent more than \$100 million annually from its own development budget on programmes that directly addressed climate adaptation or mitigation. This was a pivotal insight as it allowed the Government to demonstrate that it was making strides to address climate change from its own resources, as a means to encourage the international community to shoulder its share of the burden.

Once this foundation was laid, the Ministry of Finance set out to develop a systematic and structured approach to determining the climate relevance of its budgets, through the preparation of **National Guidelines on Climate Budgeting**. This entailed undertaking a pilot CCIA analysis of the programmes of three nodal ministries, namely the Ministry of Agriculture, Irrigation and Livestock; the Ministry of Energy and Water; and the Ministry of Rural Rehabilitation and Development. This was done in order to arrive at a granular understanding of the degree to which the planned budget expenditure would contribute to improving climate resilience or mitigation outcomes. It was also intended to reveal the extent to which planned programmes will be affected by climate risks and to provide entry points for mainstreaming adaptation within them.

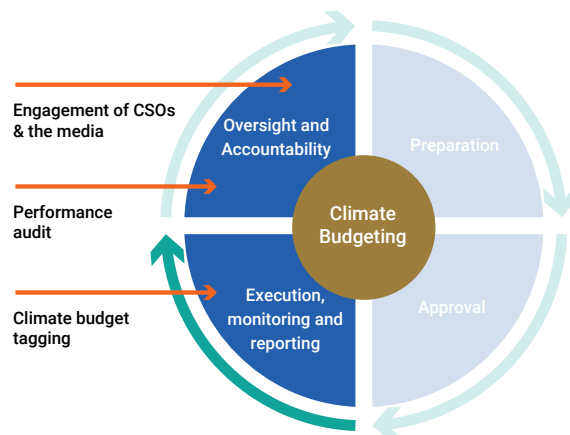
For implementation of the guidelines, a core leadership group was formed composed of staff from the Ministry of Finance and the Climate Finance Unit, supported by DFID-funded technical assistance under the Action on Climate Today programme. This group trained focal groups in each ministry to undertake climate budget analysis, and together analysed approximately 70% of the programmes that constituted the total budgets of these ministries. Taking one set of findings as an example, in 2019/20 57% of the planned budget expenditure analysed for the Ministry of Agriculture, Irrigation and Livestock was found to support adaptation and mitigation.

Reviewing this initiative reveals a set of replicable lessons for those attempting similar initiatives. First, it underscores the point that you can make great strides if you **focus interventions on the few ministries that are likely to expend the majority of climate change funds**. This is cheaper and easier to roll out, and then you can work in much more depth – rather than trying to design a system that treats all ministries as equal in terms of climate change expenditure, which may give you more complete information in terms of coverage but less useful depth. Secondly, it is crucial to ensure that such actions have **the necessary political backing**. In this case, key members within the Ministry of Finance leadership (including the former and current deputy ministers) provided their public endorsement, and climate change was also announced as a national priority in the budget statement of the previous financial year. Third, it is vital **to anchor such initiatives within bodies that have the institutional mandate to drive change**. In this case, however, it was the Ministry of Finance that was driving this

agenda, which led to deep cooperation from line ministries. Fourth, international technical consultants are helpful **but for change to be institutionally sustainable it is vital that permanent government staff drive the process**, even if this causes delays. In this case, this effort was predominantly run by personnel from the Ministry of Finance and the three line ministries, with technical input being provided by only one external consultant. Finally, this agenda is difficult to grasp and operationalise, and therefore **a phased approach is essential**. In Afghanistan, this work was spread out over four years and started first with a relatively light-touch CPEIR, which was instrumental in the Government understanding the value of this work. This then created the right momentum for the Ministry of Finance to begin the process of enforcing National Guidelines on Climate Budgeting.

4.4 Strengthening Accountability for Climate Change in Bangladesh

This case study looks primarily at the accountability side of climate budgeting, as it is emerging in Bangladesh. It describes how a group of civil society actors there have coalesced around the publication of the annual Climate Budget Report and instigated a policy discussion with Government about the adequacy and effectiveness of financing for adaptation. It also discusses nascent efforts to integrate climate change into the Performance Audit Standards used by the Office of the Comptroller and Auditor General. The case study demonstrates how local accountability actors, when working together and when provided with funding and capacity-building support, can bring about demand-side pressures for more and better public financing for climate adaptation.



As Bangladesh is one of the world's most climate-vulnerable countries, the Government of Bangladesh has positioned itself as a global leader in climate budgeting. It was among the first batch of countries to have undertaken a CPEIR, in 2012, and the Government now publishes annual climate budget reports that clearly indicate the level and trends of climate-relevant budget expenditure. This has been made possible with sustained technical support over a seven-year period from UNDP, with SIDA, GIZ, and DFID funding.

At the same time, Bangladesh has a rich and vibrant civil society that has a long history of engaging with the Government on various issues, but not, until recently, on the topic of climate finance. Therefore, there was a recognition of the need to motivate the Government by celebrating its considerable achievements, while also highlighting where it

can do more to improve the quantity and quality of adaptation expenditure.

This imperative drove a group of CSOs, led by ActionAid Bangladesh and the International Centre for Climate Change and Development (ICCCAD), to build a **civil society coalition that would engage in debates on domestic financing of climate change adaptation in the country.**

The process began with workshops and training on climate finance, conducted in collaboration with national and international experts, that included a review of various methodologies being used to understand the climate relevance of budgets, and to determine the adaptation gap. Equipped with a fuller understanding of the Government of Bangladesh's Climate Budget Report, alongside an appreciation of international experience against which it could be critiqued, the group jointly agreed to table a set of demands to the Government to enhance the state of domestic financing for adaptation. They co-produced a 'Civil Society Response to the Bangladesh Climate Budget Report', which aimed not only to demystify the climate budget, but also examined the impact of climate-relevant spending and presented a set of recommendations for the Government. These included a demand for a 5% increase in the share of the budget going towards climate-relevant activities in the next fiscal year (a target which was derived based on past expenditure trends, and international comparisons), and a request to also report on the quality of climate-relevant spending (i.e. the results it delivers), as opposed to only the quantity. The report also underlined the need to consider methodological improvements in determining climate relevance, and suggested the establishment of a joint government–civil society monitoring task force to gauge the effectiveness of climate-relevant expenditure.

The Civil Society Response Report was published by the civil society coalition and then circulated widely within the Ministry of Finance. Following this, there was a public discussion of it, hosted jointly by the Secretary of Finance and the Secretary of Environment, involving over 70 senior officials. This provided a unique opportunity to discuss all facets of the report and to go over the recommendations in detail with key decision makers. ICCCAD also hosted a training session for journalists in the run up to the event, ensuring the report and the discussion event received national press coverage. Even though policy and advocacy initiatives such as this take time to bear fruit, plans are

now afoot to start operationalising some of the report's recommendations (beginning with the design of the monitoring task force) that are likely to enhance the state of domestic financing for adaptation.

At the same time, other complementary interventions are seeking to strengthen other aspects of the climate finance accountability ecosystem. UNDP has been supporting the Office of the Comptroller and Auditor General to **integrate climate dimensions into its performance audit criteria.**

To date, two such audits using the criteria have been conducted. However, the ability of the Office to continue this process after cessation of financial and technical support has been questioned by some, underlining the need for domestic prioritisation complemented by long-term external assistance.

Reviewing these initiatives reveals a set of replicable lessons for accountability actors attempting to enhance the state of domestic financing for adaptation. First, even though international technical experts add value, it is crucial that **credible local actors lead an initiative** such as this. In this case, ICCCAD and ActionAid were both influential and respected organisations that were able to mobilise a group of actors that were representative of wider civil society. Similarly, UNDP supported the Office of the Comptroller and Auditor to conduct climate-sensitive audits, building on its mandate as Bangladesh's supreme audit institution. Second, the involvement of **intermediary organisations that can broker trust between government and non-governmental stakeholders** is vital. In this case, UNDP ensured that the Government understood the aims and objectives of the CSO initiative, and therefore welcomed this engagement at the highest level. In a country where aspects of budgeting are tightly controlled by the Government and the perceived interference of CSOs in this domain carried the real threat of a negative backlash, this careful management was essential. Third, a certain amount of **funding and donor support** is crucial. Even though many organisations engaged in this initiative contributed their time pro-bono, support from DFID through the CPGD programme contributed to organising meetings and workshops, publishing the report, and soliciting the input of select international experts to guide the process. Fourth, **capacity building is essential.** In Bangladesh, as in other countries, CSOs and journalists tend to fall into one of two camps: those that work on climate change and environmental issues, and those that work on economic

and public finance issues. Climate finance tends to fall between these, and bridging these capacity gaps was an essential first step. Lastly, the combination of initiatives working with different accountability actors, including CSOs, journalists, and the supreme audit institution, created an environment where **different initiatives could be tested**, and complementarities between them helped generate additional momentum (as in the case of the journalist training, timed to coincide with the launch of the CSO response report).

Example Press coverage of Civil Society's Review of the Bangladesh Climate Budget²⁵

The Daily Star
Wednesday, October 23, 2019
YOUR RIGHT TO KNOW

Home » Opinion » POLITICS OF CLIMATE CHANGE
12:00 AM, November 28, 2018 / LAST MODIFIED: 12:03 PM, November 28, 2018

Making climate budgeting transparent



PHOTO: BRET HARTMAN/REUTERS

Saleemul Huq

Bangladesh is among the world's most at-risk countries in relation to climate change and the Government of Bangladesh has recognised climate change as one of the most serious threats to poverty reduction and development, and as such has made a number of ambitious commitments to tackle it.

5 Enabling Factors for the Prioritisation of Adaptation in Domestic Budget Processes

Based on the experiences summarised in the case studies and the broader literature, this section presents a summary discussion of the enabling factors which support the prioritisation of adaptation in domestic PFM systems. As with the discussion of barriers, it is structured around technical, institutional, and political enablers.

TECHNICAL ENABLERS

Integrating adaptation considerations into routine budget processes is a promising means of mobilising sustainable adaptation finance. By making sure marginal decisions about how resources are allocated and spent go in favour of adaptation-related programmes, as well as redesigning programmes to optimise their adaptation benefits, there is significant potential to see growth in adaptation finance. For such an approach to work, however, it is necessary to **align climate budgeting reforms with domestic budget cycles**, and, wherever possible, **to anchor the changes in the prevailing PFM processes** (i.e. to avoid creating duplicate or parallel systems). PFM systems are notoriously difficult to change, but once climate change adaptation is integrated as a consideration in the budget process, it is similarly difficult to remove it in subsequent years. This approach is reflected in the Philippines and Afghanistan case studies, where budget guidelines and processes have been amended to include routine considerations of climate change, with positive sustainability prospects.

Relatedly, there is an opportunity for countries to **capitalise on a number of common PFM reforms**, which are increasingly widespread among developing countries, using them as a vehicle and entry point to promote adaptation-relevant interests. These include, for example, the following:

- Using an **MTEF** to forecast the fiscal implications of climate change for revenue and expenditures, over the next three to five years (along similar lines to the analysis underlying the IMF's climate change policy assessments, described in Box 5).

- Integrating aspects of climate change impact appraisal into **PIM processes**, including appraisals.
- Embedding climate budget tags into **budget preparation systems and integrated financial management systems** to automate the process of tracking budget allocations and expenditures for climate change.
- Defining adaptation-related KPIs under the **performance-based budgeting** system.
- Where **programme budgeting** is practised, ensuring programme mandates encourage adaptation-sensitive investments (wherever relevant). Or, alternatively, defining a **cross-sectoral programme** for adaptation, learning from the experience of countries like the Philippines which have sought to overcome the accountability challenges related with this.

Typically, initial **entry points for governments starting out in this area tend to be around the budget formulation stage**, such as using elements of CCIA approaches as part of the investment appraisal process, using the budget circular to direct agencies to include adaptation in their proposed budgets, or using budget tagging / scoring systems to track budget allocations for adaptation. This is a logical place to start, but should be viewed as a first step in a performance management system which optimises adaptation outcomes, the ultimate effectiveness of which relies also on conducive approval, execution, and accountability processes⁵⁰.

A key enabler is **technical advice and peer-to-peer learning**, particularly around climate budget tagging, citizens' climate budgets, and climate change relevance / impact appraisal. The role of knowledge brokers (e.g. the CPGD programme, the Asia and Pacific Climate Finance Network, AAI, and the Climate Action Peer Exchange) is valuable in interpreting, sorting, and translating the wealth of information available and tailoring it to government needs. That said, there is an opportunity for further technical clarity and peer-to-peer learning around elements of climate budgeting which remain technically challenging, including around elucidating and downscaling climate change impacts to country and sub-national level, and the demarcation of adaptation (to determine climate relevance); as well as how to integrate adaptation into downstream PFM processes, including cash management operations, performance monitoring systems, and audit.

INSTITUTIONAL ENABLERS

Institutional coordination for effective adaptation delivery is made more complex by the fact that the governance of adaptation is highly dispersed and fragmented across multiple institutions operating at multiple levels⁵¹. For this reason, the case studies (particularly those of the Philippines and Afghanistan), as well as the experience of other thematic budgeting efforts, including gender-responsive budgeting, point to the **value of designating a central body with strong convening and/or decision-making powers to lead government-wide climate budgeting reforms**, such as ministries of finance or planning, or the office of the president or prime minister. This experience has been echoed in other parts of the world too, including Ethiopia, where the Ministry of Finance leads the oversight of the Climate-Resilient Green Economic Plan. It is possible that in some locations, climate change councils or equivalent may have adequate convening power, but this would need to be underpinned with strong linkages to the ministry of finance for budgeting purposes. This has meant a shift in who drives the process of climate finance mobilisation, from ministries of environment or climate (which would commonly lead engagement around external climate finance and extra-budgetary climate funds) to ministries of finance and planning, which manage the public finance architecture. As the Indian case studies demonstrate, it may be possible to bring about some changes by working instead with **motivated line ministries**, but in doing so the scope of the impact is limited to inter-sectoral budget reallocations, and sector-specific programme design changes. That considered, as the Afghanistan case study demonstrates, **focusing on reforms in a few of the most adaptation-relevant ministries can be a cost-effective strategy**, as these tend to be responsible for the vast majority of climate change actions.

While government necessarily needs to lead the climate budgeting reform, it can be advantageous to also engage **local technical partners with the right relationships with government**, to open doors and act as trusted advisers. The case studies point to the importance of these partners being national or local, to ensure contextual relevance and continued presence. ICCCAD fulfilled this role in Bangladesh, as did the Institute for Financial Management and Research in India, and UNDP country offices elsewhere. Beyond this, the benefits of engaging accountability actors in public finance processes extend to

climate budgeting too, including civil society, legislatures, and journalists. The experience of engaging supreme audit institutions is less advanced but is also promising. In all, demand-side engagement is a new but growing area of interest, with emerging lessons pointing to the need to **build local coalitions, to capacitate stakeholders around public finance and climate change topics, and to support CSOs with funding for climate budget advocacy work**⁵².

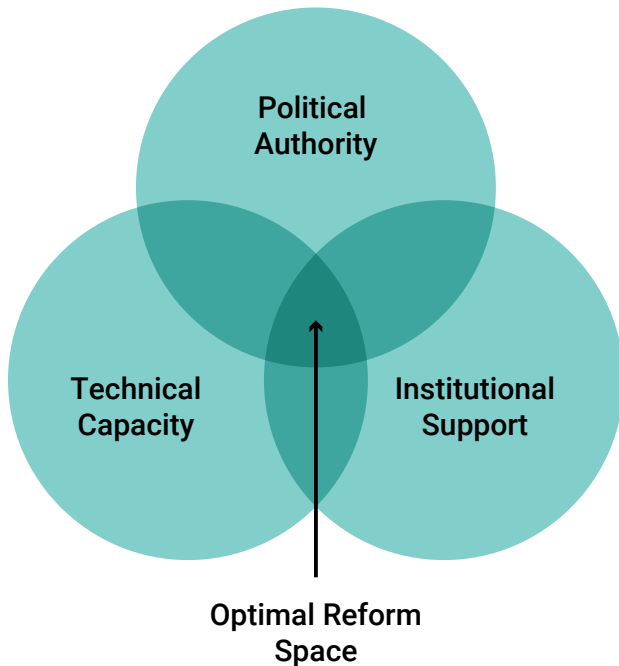
Beyond technical capacity, the **capacity of institutions to innovate and change** is critical for the mobilisation and management of adaptation finance. Adaptation financing is a relatively new concern and, given the dynamic nature of climate vulnerability, the ability to demonstrate innovation is an important institutional characteristic to secure the effective delivery of climate finance⁵³. The varied and iterative reform paths set out in the case studies are testament to this.

Lastly, we note that a **long period of adaptive learning** is required to embed new analysis into government systems. The initial reform effort is often only the first step in a process which continues to be refined over successive budget cycles and (hopefully) successive terms of government. The most advanced cases cited in this report – including the Philippines, Nepal, and Bangladesh – are among the early movers in respect to climate budgeting, and their initiatives in this field have in each case evolved over five-plus years. In this respect, long-term engagement and capacity support from technical partners is a key enabling factor.

POLITICAL ENABLERS

As with other aspects of governance reforms, the experience of climate budgeting reforms suggest that traction occurs where there is identifiable 'reform space', which is contingent on contextual factors commonly found to influence policy and reform success, shaping what and how much can be achieved in any policy or reform initiative at any time. These factors have been well discussed in the literature on politically-informed, locally-led development⁵⁴, and include not only technical capacity to implement reform, and broad-based acceptance of the need to change from relevant institutions (discussed in the preceding sections), but also political authorisation to effect reform or policy change. It is when these factors converge that we are most likely to find reform space, as depicted in the Venn diagram.

Figure 5: Optimising Reform Space



Adapted from Andrews et al 2018

Building political support for climate budgeting can be one of the most challenging vectors to influence. Nonetheless, the following have been identified as potential enabling factors:

- Being 'problem-driven' by **aligning the climate budgeting agenda with the prevailing priorities of the political leadership**. This means shifting the narrative from one where climate change adaptation is competing with development for resources, to one where adaptation ensures development objectives happen in the face of climate change threats. For example, in Cambodia there has been some success in winning political support for adaptation by modelling how unfettered climate change will delay the realisation of the key political priority of reaching high-income country status. In Assam the high-profile nature of the Sustainable Development Goals (SDGs) has enabled climate budgeting initiatives to be successfully attached to the requirements around SDG reporting:
- **Identifying and emphasising financial leveraging opportunities**. As demonstrated in Box 10 below, there are some examples of cases where governments have used domestic climate budgeting reforms as a means of leveraging additional external climate finance, by virtue of being able to demonstrate that they have made significant financial commitments on their own

BOX 9

Linking climate budget tagging with the SDGs in Assam, India

One of the major challenges in furthering the climate mainstreaming discourse with governments is the perceived burden of additional analysis/scrutiny and reporting of public expenditure. However, a strong and growing political value is being observed in restructuring domestic planning and reporting frameworks to reflect consonance with globally accepted milestones, such as the SDGs. This means that governments must work to capture linkages between their attainments in key development indicators, and the SDGs, by suitably modifying their existing reporting templates.

One such example of early identification of this 'twin opportunity' is the initiative to develop a digital SDG–climate change joint reporting interface by the Government of Assam in India. The sub-national government has defined its SDG roadmap for 2030, based on the national mapping of ministerial budgets across the SDGs. It is developing an interface that provides SDG-wise physical and financial attainments for development programmes budgeted at the department level. Incorporating inputs from the CClA tool, the corresponding climate benefits from the respective budgets are also reflected in the interface. This empowers the planners at the sub-national level to project the climate relevance of the development budget, classified by SDG attainment. This also leads to the identification of budget allocations that can have a transformative impact by delivering greater climate benefits, while furthering specific SDG targets and without creating another tier of reporting.

side, therefore meeting the co-financing requirements required by a number of funders. Identifying and emphasising such leveraging opportunities can help build political support for investment in adaptation, and can go some way towards counterbalancing the fact that in some countries the presumed availability of donor assistance undermines incentives for governments to take preventive adaptation investment⁵⁵.

- **Exploiting opportunistic policy windows**. It is not uncommon for exogenous events to provide oppor-

tunities through which political support for adaptation investment can be built. Take, for example, the case of the Philippines, in the wake of Typhoon Yolanda, which ripped through the country in 2013. The national non-governmental organisation Social Watch Philippines investigated how public funds were used in the reconstruction and rehabilitation effort and revealed that three years later only 1% of the planned resettlement units had been built and were occupied. This hit the headlines and created external pressures on the Government to address financial leakages, and created a space for discussion around the management of these resources⁵⁶. Given that these windows of opportunity can be quite brief, regular political economy context assessments can be useful in ascertaining any positive shifts in the political or governance contexts which could be exploited.

- **Identifying climate change champions.** Identifying the right stakeholders within government and the political class can catalyse efforts to mainstream climate change within public sector plans and budgets. For example, in Pakistan, the former Prime Minister's special adviser on climate change was critical in helping build political leadership and coordinating as a climate champion between the Ministry of Finance, the Ministry of Climate Change, and the Prime Minister's Office. The DFID-financed CPGD programme reported that the programme teams regularly mapped 'key influencers' across each governance context in which the programme operates, to determine who would be crucial in helping it achieve its goals in relation to accessing and mainstreaming climate finance. Thereafter, bespoke and contextually tailored engagement strategies are deployed to secure the support of these key influencers⁵⁷.

BOX 10

Leveraging external climate funds through domestic financing

A number of external funders of climate change adaptation look favourably on countries which are seen to be also investing their own resources in adaptation. This is most apparent in the co-financing requirements of international climate funds. Take for example, the GCF. Among the various criteria for the approval of proposals, the GCF looks for adequate institutional capacity to execute and sustain these interventions, such that the recipient (in the form of a national government, sectoral ministries, and/or technical partners) holds a stake in the actual mandate to address climate issues even after the funding arrangement concludes. This is mostly achieved by entering into a 'co-financing' arrangement with the recipient wherein the latter shows strong linkage with ongoing activities that it funds, which can be used as a platform to integrate proposed climate actions. This becomes a basis for estimating the recipient's financial contribution to the proposal, such that niche climate actions are jointly supported with dedicated climate funds. This provides a strong rationale for several national and sub-national government and quasi-government entities to undertake public expenditure reviews or climate change budget coding to identify co-financing opportunities that can serve as entry points for accessing more climate finance.

Among a few recent examples is the GCF grant to the State of Odisha in India for the project 'Ground Water Recharge and Solar Micro Irrigation to Ensure Food Security and Enhance Resilience in Vulnerable Tribal Areas of Odisha', which was approved in 2017 with a value of \$166.3 million. While the state government's convergence fund and the community contribute about 75% of the programme's value, and a loan from the International Bank for Reconstruction and Development about 4%, the GCF grant is to fund 21% of the total investment. Similarly, another GCF grant contributes to about one-third of a \$30.3 million project on 'Enhancing climate resilience of India's coastal communities', co-financed by India's national government (15%) and the three state governments of Andhra Pradesh, Maharashtra, and Odisha (totalling 51%). There are several other examples from other African and Asian countries, including Kenya, Senegal, Zambia, Bangladesh, Cambodia, Indonesia, and so on, where the national government also makes a financial contribution in climate actions primed with external support.

6 Vision and Recommendations

The overarching vision for the initiatives described in this paper is that **domestic budgets processes will optimise public investment in adaptation, ensuring that public expenditure overall is more resilient to climate change.**

This vision is entirely consistent with the primary function of the budget process: namely, to weigh the competing benefits from public spending against their costs, and to expand programmes for which, at the margin, the net benefits are positive and have a higher return than other competing priorities. However, for reasons documented in this background paper (see Section 2.2), too often the processes by which public funds are allocated, managed, expended, and reported against, do not consistently or adequately prioritise climate change adaptation, leading to systematic underinvestment. For this reason, targeted climate budgeting reforms which seek to mainstream adaptation consideration in PFM processes in climate-vulnerable countries can add value.

To this end, the following recommendations are made:

Recommendation 1 (for those governments which have already initiated climate budgeting reforms): Continue to pursue the deepening and widening of climate budgeting reforms, including through the integration of climate change in downstream budget processes and expansion to lower levels of government.

In most countries, the next phase of climate budgeting reforms will need to include an increasing focus on downstream processes, in particular looking at budget execution arrangements (to ensure that budgeted amounts for adaptation are fully spent), as well as performance monitoring (i.e. regular measurement of observable impacts related to adaptation investments (losses foregone, capacity built etc)). Wherever possible, country-level reforms should be integrated into ongoing PFM reform, for example as an aspect of programme performance-based budgeting.

While the overarching objective may be more and better spending on climate adaptation, the government's macroeconomic and fiscal setting should define the context for public spending on climate change adaptation, including through the integration of climate change into macro-fiscal projections and MTEFs. The IMF/World Bank Climate

Change Policy Assessment is a useful diagnostic in this regard, which should be considered for wider roll-out.

Given the pace of fiscal decentralisation and the local nature of adaptation solutions, in some countries it will make sense to extend climate budgeting reforms to the sub-national level. Doing so is likely to require significant expansion of capacity building and awareness raising efforts.

Recommendation 2 (for governments which are just starting out in climate budgeting): Make use of climate-oriented public finance diagnostics to define a reform agenda around mainstreaming climate into budgeting processes.

As the case studies demonstrate, diagnostic studies (such as CPEIRs or CCFFs) can help in forging a reform path. Wherever possible, this research (as with all research on climate change finance) should be tailored to the audience and policy context, including through brief presentation of the most salient points.

Dedicated domestic adaptation funds should not be considered as an optimal financing strategy, except under specific circumstances (i.e. potentially as a temporary measure while PFM systems are strengthening, or to finance adaptation-specific investments, like research and training, or as a modality for disbursing international financing). In most cases, mainstreaming adaptation into routine budget processes will be a preferable strategy.

In terms of implementation, the application of a climate budget tagging mechanism is a common first step, for which there is a lot of documented guidance available and experience to build on. Key learnings include the need to adopt a robust weighting methodology (and to communicate it clearly), to track actual expenditures as well as budget allocations, to capture maladaptation as well as positive investments (including a mechanism in the prioritisation system to ensure tagged spending is prioritised), and to ensure that the information is used to inform budgeting decisions and is made available to the public and accountability actors.

Recommendation 3 (for the Global Commission on Adaptation and its partners): Support climate budgeting reforms in partner countries through sustained technical assistance, promulgation of tools and standards, and supporting peer learning forums.

The Global Commission on Adaptation, with its high-profile mandate, is well placed to call for greater attention towards climate budgeting reforms in developing countries, and in particular to those more neglected areas (for example, around the monitoring of the efficiency and effectiveness of adaptation spend). The Commission's partner organisations should continue to provide technical assistance to governments looking to make progress on this front, while bearing in mind the learning presented in this report around the value of a phased approach sustained over the medium term, the need to anchor reform in appropriate institutions, and the criticality of government leadership.

Recognising that peer-to-peer learning can be very useful in disseminating good practice, fostering government engagement, and sustaining momentum, the Commission and its partners should endorse and collaborate with existing networks serving this purpose, including the Climate Action Peer Exchange and the Asia and Pacific Climate Learning Network, which bring together government officials (including ministries of finance) to discuss climate budgeting issues.

Lastly, there is potentially a role for the Commission in the promulgation of emerging tools and standards related to climate budgeting: for example, by housing a repository of evidence and guidelines related to commonplace aspects of climate budgeting reform (such as CCAs and budget tagging).

Recommendation 4 (for accountability actors (including CSOs, supreme audit institutions, legislatures, and media organisations) and the Global Commission on Adaptation and its partners): Strengthen oversight and engagement by accountability actors in the climate budgeting agenda.

PFM process are notoriously hard to change, and making climate budgeting a core facet of good domestic PFM will require a whole-of-society approach, including active engagement of accountability actors. This is an area where more attention and investment is called for. Ultimately, the onus of action lies with the accountability actors themselves: CSOs and the media should engage more actively around how governments are allocating and managing public budgets for adaptation, legislatures should routinely screen proposed budgets and government accounts for the same, and there is a role for supreme audit institutions in developing climate-related standards for performance

audit, and in including climate change as an aspect when building up social audit practices. This is an area where investment from donor countries may be required, to finance capacity-building initiatives with the actors, to facilitate the formation of coalitions, and to open up avenues for dialogue with governments. Moreover, there is a need to add to the scant body of research on what works in the area of climate finance accountability, which the IBP is well placed to lead on.

Recommendation 5 (for the Global Commission on Adaptation and other actors in the international climate finance space): Wherever feasible, make more use of domestic budgets as a delivery modality for international climate finance.

Underpinning the findings in this report is the recognition that budgets are an inherently appropriate financing vehicle for adaptation investment (see the discussion in the introduction). The international climate finance architecture (including the UNFCCC, and international climate funds and their donors) should better reflect this understanding of effective adaptation instruments by making more use of budget support modalities. These should be linked to the existence of a robust climate policy framework and a conducive macro-fiscal environment.

In an effort to square the need to tie funding to climate-specific interventions, on the one hand, with the reality that most adaptation cannot be separated from development, on the other, international climate-funding institutions should also consider explicitly financing adaptation 'top-ups' to government-financed development expenditure. The value of these top-ups could be ascertained through the derivative climate relevance / CCA techniques discussed in this paper.

It is feasible that these measures could also help address the ongoing challenges around slow disbursement which a number of climate funds are currently experiencing. The Global Commission on Adaptation, as a key part of the international climate finance architecture, has a key role to play in advocating for such reforms and monitoring their impact.

ANNEX 1 RELEVANT LEARNING FROM THE EXPERIENCE OF OTHER THEMATIC BUDGETING INITIATIVES

The desire to reflect and manage budgetary funding for thematic concerns which transcend traditional sector boundaries is not new. For decades, governments have been tweaking their budget processes to better serve these concerns, usually linked to specific international agendas and targets. Gender-responsive budgeting, pro-poor budgeting, equity budgeting, nutrition budgeting, and child-focused budgeting are just a few examples, and are a reflection of the fact that many critical human development dimensions are collectively achieved by a combination of publicly funded programmes over a period of time. When done well, these thematic budgeting initiatives improve government budgeting, by ensuring that sound budgeting principles and practices are promoted. In some countries they have registered considerable impact: for example, in some locations gender budgeting has led to changes in fiscal policies in such key areas as education, health, and infrastructure, and has contributed to the achievement of gender-oriented goals⁵⁸.

Some of these thematic budgeting initiatives – in particular, gender-responsive and pro-poor budgeting – have a much longer history than climate budgeting, and, by virtue of this, they have experienced much wider uptake than climate budgeting has (to date at least). Nonetheless, in many countries even these early starters have still not managed to achieve impact (in terms of a progressive change in fiscal incidence public expenditure outcomes), and have failed to secure the level of integration and institutionalisation whereby core PFM processes are operating more optimally (without the need for additional interventions).

A wide cross-section of cases in thematic budgeting suggest some common challenges and opportunities which could provide useful learning for climate budgeting, not only so it can achieve some of the successes of these other initiatives, but also to avoid similar pitfalls. A summary of these key lessons are presented below. They are based on a review of key literature related to these other thematic budgeting initiatives⁵⁹.

- There must be a strong mandate and stake within the institutions involved to support such budget tracking, to ensure both sustained finances for the cause, as well as the incentive to report on them. Donor-driven initiatives will not outlive the provision of donor support/ technical assistance. However, international, bilateral, and non-governmental organisations can play a catalytic role in influencing the adoption of thematic budgeting reforms.
- Defining ‘what counts’ as relevant spending is a necessary early step. This question is best determined through a consultative process including line ministries, legislators, researchers, and community. Where it exists, a relevant policy framework can offer a guiding framework.
- It is important to expand the definitional scope to include those activities that may contribute to relevant outcomes, even in the absence of an explicit mandate in their programme objectives. While narrow and focused definitions may be easier to work with, they may run the risk of being arbitrary, and ignorant of several other kinds of public expenditure that are relevant to the concerned theme.
- Where possible, a tracking exercise should consider whether and how to accommodate expenditure of a ‘negative’ nature, rather than looking only at spending that could have a favourable linkage to the cause.
- It may help to identify ministries that can be early starters (typically, ‘pilot’ ministries where the thematic budgeting approach could be tested for robust scale-up) – this would also reduce compliance issues in the future.
- If applying in a country with a history of thematic budgeting, it may be useful to draw on a template that has already been accepted within the regular process (such as gender-responsive budgeting) – to reduce additional effort and burden on staff, as well as to improve the quality of reporting on a new theme.

- Tracking relevant expenditure becomes more onerous if a considerable portion of public spending is not routed through the national fiscal frameworks (like donor-supported programmes directly implemented by line ministries/departments).
- Information on actual expenditures/disbursements is not as easily available as estimates of allocation, but is more relevant. At the same time, tracking outlays and expenditures does not extend to assessing the intended outcomes and impacts of policy, and so should be considered only as part of a more comprehensive approach which also assesses whether the spending achieves desirable outcomes.
- It is important to embed such reform within the institutional purview of overall budget management. For this reason, where ministries of finance (and ministers of finance, in particular) have led these efforts, they have tended to have more influence on budget policies, rather than as standalone reports or internal systems within select line ministries. This ensures consistency in coverage and may aid sustainability. At the same time, line ministries are responsible for developing and administering key spending programmes of the government and play an important role in incorporating the thematic goals into their programmes and policies, and reporting on the spending to government accounting and audit offices. Parliamentarians and parliamentary committees are important supports to the executive branch and have sometimes been catalytic.
- Programme budgeting tends to lend itself better than traditional input-based budgeting to incorporating cross-cutting themes, but there are exceptions (Ukraine and Rwanda, for example, provide good examples, where governments are integrating gender budgeting into a programme-based budgeting approach).
- Revenue issues have generally received less attention in cross-sectoral budgeting initiatives, but we do note a couple of cases where governments sought to achieve gender-oriented goals through tax policy reforms.
- Many of the reform efforts have focused on national governments; however, it is equally important that gender budgeting efforts extend at least to any levels of government with responsibilities for the provision of key public services.

ENDNOTES

1. World Bank, 2019. *Fiscal Policies for Development and Climate Action*. Washington DC: World Bank. <http://documents.worldbank.org/curated/en/340601545406276579/Fiscal-Policies-for-Development-and-Climate-Action> Accessed November 19, 2019.
2. United Nations Environmental Programme, 2018. *Adaptation Gap Report*. Nairobi, Kenya: UNEP. <https://www.unenvironment.org/resources/adaptation-gap-report> Accessed November 19, 2019.
3. African Adaptation Initiative, 2018. *Enhancing Action on Adaptation in Africa: Discussion Paper*. Libreville, Gabon: AAI. [https://www.africaadaptationinitiative.org/assets/SoAR%20-%20Discussion%20Paper%20Sep%202018%20\(Eng-a\).pdf](https://www.africaadaptationinitiative.org/assets/SoAR%20-%20Discussion%20Paper%20Sep%202018%20(Eng-a).pdf) Accessed November 19, 2019.
4. Including: International Institute for Environment and Development, forthcoming. *Transformative Climate Finance through climate budgeting reforms*. IIED London. World Bank, 2014. *Moving Toward Climate Budgeting: Policy Note*. Washington DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/21036> Accessed November 19, 2019. UNDP, 2017a. *Hard Choices, Integrated Approaches – A Guidance Note on Climate Change Financing Frameworks*. Bangkok, Thailand: UNDP <https://www.climatefinance-developmenteffectiveness.org/sites/default/files/publication/attach/Hard%20Choices%20-%20Integrated%20Approaches.pdf> Accessed November 19, 2019. Bird, N. 2017. *Budgeting for NDC action: initial lessons from four climate-vulnerable countries*. London: Climate and Development Knowledge Network. https://cdkn.org/wp-content/uploads/2017/09/National-budgeting-for-NDCs_web.pdf Accessed November 19, 2019.
5. ACT and Vivid Economics, 2017. *Calculating the impact of climate change on economic growth*. New Delhi, India: ACT. <https://www.vivideconomics.com/casestudy/the-impact-of-climate-change-on-economic-growth/> Accessed November 19, 2019. World Bank, 2019. *Fiscal Policies for Development and Climate Action*. IMF, 2017a. *World Economic Outlook: Seeking Sustainable Growth – Short-term Recovery, Long-term Challenges*. Washington DC: IMF. <https://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017> Accessed November 19, 2019.
6. IPCC, 2014. *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva, Switzerland: IPCC. https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf Accessed November 19, 2019.
7. World Bank, 2019. *Fiscal Policies for Development and Climate Action*.
8. World Bank, 2019. *Fiscal Policies for Development and Climate Action*.
9. United Nations Environmental Programme, 2018. *Adaptation Gap Report*.
10. Climate Policy Initiative, 2018. *Global Climate Finance: An Updated View 2018*. San Francisco CA: Climate Policy Initiative. <https://climatepolicyinitiative.org/wp-content/uploads/2018/11/Global-Climate-Finance-An-Updated-View-2018.pdf> Accessed November 19, 2019.
11. African Adaptation Initiative, 2018. *Enhancing Action on Adaptation in Africa: Discussion Paper*.
12. Based on: Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*. Oxford, UK: Mokoro Ltd.
13. Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*.
14. See, for example, Organization for Economic Co-operation and Development, 2013. *The International Handbook of Public Financial Management*. London, UK: Palgrave Macmillan.
15. See Weikmans, R. and J. Roberts, 2017. 'The international climate finance accounting muddle: is there hope on the horizon?' *Climate and Development*, 11(2) 97-111. Taylor and Francis. <https://www.tandfonline.com/doi/full/10.1080/17565529.2017.1410087> Accessed November 19, 2019.
16. ACT and Vivid Economics, 2017. *Calculating the impact of climate change on economic growth*.
17. IMF, 2017a. *World Economic Outlook: Seeking Sustainable Growth – Short-term Recovery, Long-term Challenges*.
18. The IMF routinely assesses countries' public investment management systems through its Public Investment Management Assessment (PIMA) framework. Of the 30 PIMAs conducted between 2015 and 2018, 86% recommended strengthening guidelines for project appraisal (including cost-benefit and risk analysis). See IMF, 2018. *Public Investment Management Assessment – Review and update*. Washington DC: IMF. <https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/05/10/pp042518public-investment-management-assessment-review-and-update> Accessed November 19, 2019.
19. Sources for data in this box include: UNDP, 2015a. *Budgeting for climate change; how governments have used national budgets to articulate a response to climate change: Lessons Learned from over twenty Climate Public Expenditure and Institutional Reviews*. Bangkok, Thailand: UNDP. https://www.climatefinance-developmenteffectiveness.org/sites/default/files/documents/27_08_15/1%20Budgeting%20for%20Climate%20Change_August%202015.pdf Accessed November 19, 2019. UNDP, 2015b. *A Methodological Guidebook: Climate Public Expenditure and Institutional Review (CPEIR)*. Bangkok, Thailand: UNDP. https://www.undp.org/content/dam/rbap/docs/Research%20%20Publications/democratic_governance/RBAP-DG-2015-CPEIR-Methodological-Guidebook.pdf Accessed November 19, 2019. Bird, N., et al., 2016. *Public spending on climate change in Africa: Experiences from Ethiopia, Ghana, Tanzania and Uganda*. London, UK: Overseas Development Institute, London, UK. <https://www.odi.org/publications/10419-public-spending-climate-change-africa-experiences-ethiopia-ghana-tanzania-and-uganda> Accessed November 19, 2019. UNDP, 2017a. *Hard Choices, Integrated Approaches – A Guidance Note on Climate Change Financing Frameworks*. Bangkok, Thailand: UNDP. <https://www.climatefinance-developmenteffectiveness.org/sites/default/files/publication/attach/Hard%20Choices%20-%20Integrated%20Approaches.pdf> Accessed November 19, 2019. Climate Scrutiny and Mokoro, 2017. *Africa's Public Expenditure on Adaptation*. ACT, 2016. *Progress with Climate Change Financing Frameworks in selected South Asian countries*. Allan, S., R. Resch, L. Giles Alvarez, and K. Nicholson, New Delhi, India: ACT.
20. Bird, N., et al., 2016. *Public spending on climate change in Africa: Experiences from Ethiopia, Ghana, Tanzania and Uganda*.
21. Mogelgaard, K., A. et al. 2018. *Integrating Adaptation into Social and Economic Development: Insights from Some "Early Movers"*. Rotterdam and Washington, DC: Global Commission on Adaptation. <https://www.preventionweb.net/>

- files/66773_18wpgcmainstreamingadaptation1001f.pdf Accessed November 19, 2019.
22. Bird, N. 2017. *Budgeting for NDC action: initial lessons from four climate-vulnerable countries*.
 23. See, for example, Cole, S., A. Healy, and E. Werker, 2012. 'Do Voters Demand Responsive Governments? Evidence from Indian Disaster Relief'. *Journal of Development Economics* 97(2),p.167-181. Elsevier. <https://doi.org/10.1016/j.jdeveco.2011.05.005> Accessed November 19, 2019.
 24. World Bank, 2018. *Program Document for Samoa Second Resilience Development Policy Operation with a Catastrophe-Deferred Drawdown Option*. Washington DC: World Bank. <http://documents.worldbank.org/curated/en/496091536132238435/Samoa-Second-Resilience-Development-Policy-Operation-with-a-Catastrophe-Deferred-Drawdown-Option-Project> Accessed November 19, 2019.
 25. IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*. Washington DC:IBP. <https://www.internationalbudget.org/publications/budgeting-greener-planet/> Accessed November 19, 2019.
 26. Ibid.
 27. Ibid.
 28. Including: International Institute for Environment and Development, forthcoming. *Transformative Climate Finance through climate budgeting reforms*. World Bank, 2014. *Moving Toward Climate Budgeting: Policy Note*. UNDP, 2017a. *Hard Choices, Integrated Approaches – A Guidance Note on Climate Change Financing Frameworks*. Bird, N. 2017. *Budgeting for NDC action: initial lessons from four climate-vulnerable countries*.
 29. Miller, M., and S. Mustapha, 2016. *Public Investment Management: a public financial management introductory guide*. London, UK: Overseas Development Institute. <https://www.odi.org/publications/10625-pfm-public-financial-management-public-investment-management> Accessed November 19, 2019.
 30. IMF, 2017b. *Seychelles: Climate Change Policy Assessment*. Washington DC: IMF. <https://www.imf.org/en/Publications/CR/Issues/2017/06/20/Seychelles-Climate-Change-Policy-Assessment-44997> Accessed November 19, 2019.
 31. World Bank, 2014. *Moving Toward Climate Budgeting: Policy Note*.
 32. Government of Pakistan, 2019. 'Integrating climate change in budgeting Ministry of Water Resources Experience', Presentation, Regional Dialogue on the role of climate proofing growth and development, Bangkok, Thailand, 4th – 6th March 2019.
 33. IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.
 34. Government of Pakistan, 2019. 'Integrating climate change in budgeting Ministry of Water Resources Experience'
 35. Bird, N. 2017. *Budgeting for NDC action: initial lessons from four climate-vulnerable countries*.
 36. Sources: IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*. Bird, N. 2017. *Budgeting for NDC action: initial lessons from four climate-vulnerable countries*. UNDP, 2015c. *Climate Budget Tagging: Country-driven initiative in tracking climate expenditure*. Bangkok, Thailand: UNDP. https://www.climatefinance-developmenteffectiveness.org/sites/default/files/event/CFSDforum2015/climate/Climate%20Budget%20Tagging%20_July%202015_DRAFT.pdf Accessed November 19, 2019.
 37. IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.
 38. Including: International Institute for Environment and Development, forthcoming. *Transformative Climate Finance through climate budgeting reforms*. World Bank, 2014. *Moving Toward Climate Budgeting: Policy Note*. UNDP, 2017a. *Hard Choices, Integrated Approaches – A Guidance Note on Climate Change Financing Frameworks*. Bird, N. 2017. *Budgeting for NDC action: initial lessons from four climate-vulnerable countries*.
 39. ACT, 2017. *Mainstreaming, accessing and institutionalising finance for climate change adaptation*.
 40. Source: World Bank, 2018. *Program Document for Samoa Second Resilience Development Policy Operation with a Catastrophe-Deferred Drawdown Option*.
 41. World Bank, 2013. *Getting a grip on Climate Change in the Philippines: Executive Report*. Washington DC: World Bank. <http://documents.worldbank.org/curated/en/473371468332663224/Getting-a-grip-on-climate-change-in-the-Philippines-executive-report> Accessed November 19, 2019.
 42. Department of Budget Management, 2017. *Mainstreaming Climate Change in Budget and Investment Programming*. Manila: Government of the Philippines. IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.
 43. Climate Change Commission, 2019. *Memorandum for Senator Loren Legarda, Chairperson, Senate Committees on Finance, Climate Change and Foreign Relations, from the Climate Change Commission, on the subject of "Report to the Global Commission on Adaptation"*. 07 March 2019. Manila: Government of the Philippines.
 44. Department of Budget Management, 2016. *Kuwento Sa Bawat Kuwenta: A Story of Budget and Management Reforms 2010–2016*. Manila: Government of the Philippines. <https://www.dbm.gov.ph/wp-content/uploads/Executive%20Summary/2016/Reform%20Documentation%20Full%20Book.pdf> Accessed November 19, 2019.
 45. Department of Budget Management, 2018. *National Expenditure Program for Fiscal Year 2019*. Manila: Government of the Philippines. <https://www.dbm.gov.ph/index.php/budget-documents/2019/national-expenditure-program-fy-2019> Accessed November 19, 2019.
 46. World Bank, 2017. *Investing in Climate Resilience: Risk Resilience and Sustainability Program*. Washington DC: World Bank.
 47. Source: Department of Budget Management, 2017. *Mainstreaming Climate Change in Budget and Investment Programming*.

48. Climate Change Commission, 2019. *Memorandum for Senator Loren Legarda, Chairperson, Senate Committees on Finance, Climate Change and Foreign Relations, from the Climate Change Commission, on the subject of "Report to the Global Commission on Adaptation"*.
49. Department of Budget Management, 2017. *Mainstreaming Climate Change in Budget and Investment Programming*. Manila: Government of the Philippines.
50. Bird, N., and I. Granoff, 2016. *National monitoring approaches for climate change public finance*.
51. Bird, N., H. Tilley, N. Trujillo, G. Tumushabe, B. Welham, and P. Yanda, 2013. *Measuring the effectiveness of public climate finance delivery at the national level*. London, UK: Overseas Development Institute. <https://www.odi.org/publications/7342-measuring-effectiveness-public-climate-finance-delivery-national-level> Accessed November 19, 2019.
52. IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.
53. Bird, N., et al, 2013. *Measuring the effectiveness of public climate finance delivery at the national level*.
54. See, for instance, Andrews, M., L. Pritchett, and M. Woolcock, 2017. *Building State Capability: Evidence, Analysis, Action*. Oxford: Oxford University Press.
55. World Bank, 2018. *Program Document for Samoa Second Resilience Development Policy Operation with a Catastrophe-Deferred Drawdown Option*.
56. IBP, 2018. *Budgeting for a greener planet: An assessment of climate change finance accountability in Bangladesh, India, Nepal, and the Philippines – Summary report*.
57. ACT, 2017. *Mainstreaming, accessing and institutionalising finance for climate change adaptation*.
58. IMF, 2016. *Gender Budgeting: Fiscal Context and Current Outcomes*. Washington DC: IMF. <https://www.imf.org/external/pubs/ft/wp/2016/wp16149.pdf> Accessed November 19, 2019.
59. Including: Budlender, D., 2014. *Tracking Climate Change Funding: Learning from Gender-Responsive Budgeting*. Washington DB: IBP. Bird, N., et al., 2016. *Public spending on climate change in Africa: Experiences from Ethiopia, Ghana, Tanzania and Uganda*. IMF, 2016. *Gender Budgeting: Fiscal Context and Current Outcomes*. Washington DC: IMF. Pijuan, A. and S. Allan, 2016. *Integrating Equity into PFM Systems in East Asia and the Pacific. Synthesis Report*. Oxford Policy Management, Oxford.

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