Green Finance Under the Microscope: Analysing South Africa's Climate Finance Tracking Capabilities at the Sub-national Level.

A minor dissertation submitted to the School of Economics, Faculty of Commerce, University of Cape Town, in partial fulfilment of the requirements for the degree of Master of Commerce specialising in Economic Development (MCom Economic Development)

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"In the name of Allah, The Most Gracious and The Most Merciful"

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ٱلْحَمْدُ لِلَّهِ

Abstract

Analysing South Africa's Climate Finance Tracking Capabilities at the Sub-national Level.

The increasing global commitment to climate finance, particularly in the context of various international agreements, underscores the growing importance of greater transparency in tracking its allocation and impact. However, challenges persist in accurately assessing the allocation and impact of climate finance, particularly at the local and provincial ("Subnational") levels in South Africa. Tools such as climate budget tagging have been developed to measure and mainstream the tracking of climate related expenditure into government systems and processes. However, challenges persist in accurately assessing the allocation and impact of climate finance, particularly at the local and provincial ("Subnational"). This thesis explores the feasibility of implementing Climate Budget Tagging (CBT) to track climate finance in South Africa's local government structures. The country's subnational governments have a particularly important role to play in tracking climate finance due to the ability they have to direct strategy, enhance transparency and boost accountability to their constituents. However, implementing this tool at the subnational level is not straightforward, due to systemic challenges that exist such as municipal governance, climate awareness and capacity constraints.

Climate budget tagging is a relatively new concept in literature, with very little information on the impact of its implementation globally and in South Africa. Even though standardised structures have been created by major development partners such as the World Bank and UNDP, the idea is still being tested in several countries with different political and financial structures. Through a pragmatic research approach, combining desk reviews, interviews, and empirical data from the South African CBT pilot project led by OneWorld Sustainable Investments and Mokoro Consulting, this study identifies the pathways and challenges for successfully integrating CBT in local government systems.

The research provides an analysis of South Africa's policy landscape and the institutional structures influencing climate finance, alongside international experiences with CBT. Using mixed methods, including data from the South African CBT pilot project, this study uncovers key challenges, such as capacity deficits, siloed governance, and resource constraints. It further identifies opportunities for integrating CBT into municipal systems, with a focus on strengthening accountability, building local expertise, and leveraging existing structures like the District Development Model. The findings emphasise the importance of long-term commitment, investment in education, and coordination across all government levels to ensure sustainable CBT implementation.

The insights outlined by this research have key implications for policymakers and practitioners involved in climate finance and budgeting, offering practical guidance for integrating climate considerations into government budgets and enhancing transparency around the management of climate finance at the local level. This study contributes to a growing body of knowledge on tracking climate finance and offers practical guidance to developing CBT models in other regions.

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

ACT	Action for Climate Today
AU	African Union
CABRI	Collaborative African Budget Reform Initiative
CBT	Climate Budget Tagging
CCBII	Climate Change Budget Integration Index
CCFF	Climate Change Financing Framework
CPEIR	Climate Public Expenditure and Institutional Review
COP	Conference of Parties
COGTA	Department of Co-operative Governance and Traditional Affairs
CPI	Climate Policy Initiative
DDM	District Development Model
DFFE	Department of Forestry, Fisheries and the Environment
DMRE	Department of Mineral Resources and Energy
DPME	Department of Planning, Monitoring and Evaluation
DFI	Development Finance Institution
EU	European Union
ESG	Environmental, Social and Governance
GCF	Green Climate Fund
GEF	Global Environmental Facility
GHG	Greenhouse Gas
IBFCCA	Inclusive Budgeting and Financing for Climate Change in Africa
IPCC	Intergovernmental Panel on Climate Change
LDC	Less Developed Country
LESS	Low Emission Budget Tagging and Scoring System
MDB	Multilateral Development Bank

MFMA	Municipal Finance Management Act
MoF	Ministry of Finance
mSCOA	Municipal Standard Chart of Accounts
NDC	Nationally Determined Contribution
NDP	National Development Plan
NPC	National Planning Commission
NT	National Treasury
OECD	Organisation for Economic Co-operation and Development
OPM	Oxford Policy Management
PCC	Presidential Climate Commission
PFM	Public Finance Management
PFMA	Public Financial Management Act
SA	South Africa
SALGA	South African Local Governance Association
SSA	Sub-Saharan Africa
TTT	Technical Task Team
UN	United Nations
UNFCCC	United Nations Framework Convention for Climate Change
UNDP	United Nations Development Programme
WB	World Bank

GLOSSARY OF TERMS

Adaptation	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. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects (IPCC, 2022).
Adaptive Capacity	The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (IPCC, 2022).
Climate Budget Tag	A tool to systematically track and monitor climate change relevant decisions in public budgets (Mokoro and OneWorld, 2022).
Climate Change	A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use (IPCC, 2012).
Climate Finance	Financial flows for mitigation and adaptation activities that reduce emissions and enhance sinks of greenhouse gases and support resilience and the ability of vulnerable countries to adapt to the adverse effects of climate change (UNFCCC, 2014).
Decentralisation	The transfer of power, responsibilities, capacities, and resources from national to all subnational levels of government with the aim of strengthening the ability of the latter to both foster people's participation and delivery of quality services (AU, 2014).
Mitigation	A human intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC, 2012).

1. INTRODUCTION

1.1 BACKGROUND

The direct impact of climate change on livelihoods means that it is no longer viewed as a radical concept, but rather as a pressing reality that requires measures to safeguard communities. Even though the earth's climate has been in a constant state of motion, human activities have accelerated these changes to an extent that can make it uninhabitable for both us and other living organisms. We are not able to adapt fast enough to keep up with the technologies we create that aid our rising consumption needs. The rapid increase of greenhouse gas emissions not only impacts the earths' physical attributes but has a cascading effect on the lives of its population. With rising sea levels, comes frequent flooding; with rising temperatures, comes longer droughts; and with declining land space comes higher risk of natural hazards affecting communities.

The carbon intensive path of development chosen by most developed countries has played a major role in the current state of the global environment, leaving many developing countries in a state of uncertainty as to their own development paths (Stern, 2006). The global issue of climate change has therefore become a critical challenge for governments and organisations worldwide. The evolving environmental landscape has heightened the demand for funding initiatives focused on mitigating the root causes of escalating greenhouse gas emissions and enabling communities to adapt to their consequences. The substantial financial commitments outlined in various countries' Nationally Determined Contributions (NDCs) highlights this increasing necessity. Various global funding strategies have, thus, been developed to tackle climate change. As noted by several climate finance reports, this has led to countries starting to question the direction of funds and their level of effectiveness in achieving the necessary climate outcomes, which has increased the need for clear data and definitions (OECD, 2020).

1.1.1 Overview of Climate Finance and its flows

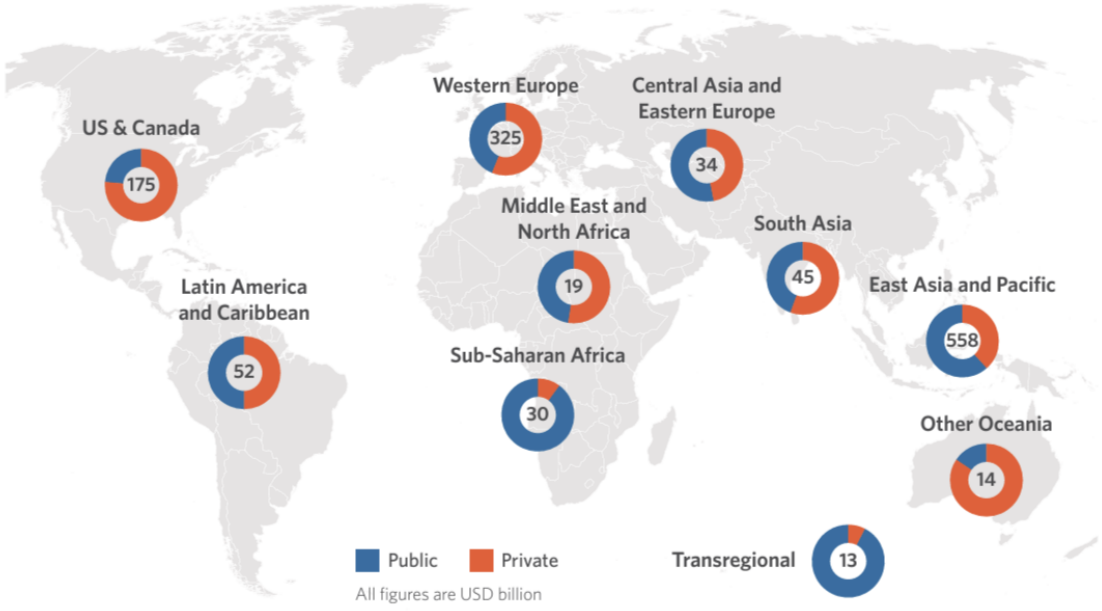
The notion of 'Climate Finance' was first conceived at the Rio Earth Summit in 1992 where the United Nations Framework Convention on Climate Change (UNFCCC) was adopted. In this framework, it was used to describe the role of developed countries in providing finance to support the efforts of developing countries in combatting climate change (Climate Action Network, 2016). This led to the development of the Kyoto Protocol in 1997, which was an international agreement that set binding emissions targets for industrialised countries. In 2001, at COP 7, the Marrakesh Accords were adopted to provide further guidance on the implementation of the Kyoto Protocol and build the capacity of developing countries in combatting climate change. The word finance in relation to adaptation was first mentioned here and is where the Adaptation Fund was first established to support developing countries in building resilience to climate change (Boyd and Schipper, 2002). This magnified the importance of providing finance to developing countries for climate adaptation related activities and, thus, increased the need for monitoring the finance provided in relation to these activities.

The inability to derive a formal global definition for climate finance created difficulties with tracking finance that was directed to climate activities. In 2014 one was adopted by the UNFCCC as, "financial flows for mitigation and adaptation activities that reduce emissions and enhance sinks of greenhouse gases and support resilience and the ability of vulnerable countries to adapt to the adverse effects of climate change." The clarity provided by this definition allowed countries to discuss and develop clearer action plans, which resulted in the decisions agreed

upon at the 2015 Conference of Parties (COP) by the Paris Agreement. The Paris Agreement requires signatories to submit reports referred to as Nationally Determined Contributions (NDCs) to the UNFCCC. The NDCs outline and quantify their national climate plans and in 2016 the OECD estimated the amount countries required as USD 6.3 trillion. The agreement further expects countries to mobilise USD 100 billion annually to support adaptation and mitigation, and requires developed countries to regularly report on their climate finance flows (Oxford Policy Management [OPM], 2017).

A 2023 study conducted by the Climate Policy Initiative (CPI) on the global landscape of climate finance found that total climate finance has been steadily increasing since the Paris agreement, reaching USD 1.3 trillion in 2021/22 – up from USD 653 billion in 2019/20. Majority of this finance has been directed towards mitigation over adaptation projects due to their commercial viability (Climate Policy Initiative [CPI], 2023). The need for adaptation financing, however, is rising as countries fail to adequately guard themselves from multiple, multi-hazard disasters that occur more frequently. With the creation and submission of their nationally determined contribution and national adaptation plans they have begun to identify, monitor and quantify the specific focus areas for climate financing, which allows finance to flow more effectively. Global climate finance is growing, but there is a need for better monitoring of this finance. As the drive for increasing climate finance grows, so does the need to understand where it's being directed and whether it is playing an active role in slowing climate hazards and protecting the population.

Figure 1: Public vs. private climate finance by region (USD billion, 2021/22)



(Climate Policy Initiative [CPI], 2023)

Climate finance is directed through multiple channels with the main multilateral actors being multinational development banks and climate funds established under the various international agreements. Public financing is greater than private financing and relates to the global need for directing finance to climate mitigation and adaptation, even though it is not a profitable form of investment. Funds mainly flow domestically, with national development finance institutions (DFIs) being the largest financiers and is concentrated in wealthier countries

such as Western Europe and North America. Debt financing is the main instrument used, with grants representing a much smaller portion and largely directed at developing countries and LDCs. Sub-Saharan Africa (SSA) receives the largest portion (CPI, 2019). The highest dependency on public finance was also found in this region, showing the importance of public institutions and governments in driving climate actions. It also highlights the need for governments to be held accountable for the actions they are or are not taking in directing finance efficiently, which can be done by tracking financial data.

South Africa is a major recipient of global climate finance, even though the country's public finance lacks transparency (Pillay, 2021) and development institutions lag behind their peers in terms of climate policies (Centre for Environmental Rights, 2020). Financing is mainly provided for mitigation related activities and is directed towards the renewable energy sector – particularly wind and solar. The institutions that climate finance is largely provided to are in the public sector, with most funds for large projects being administered via concessional loans. There is generally a large amount of grants provided, but the size of the funding is significantly smaller (OECD, 2022a). In the National Development Plan 2030 (NDP), drafted by the National Planning Commission in 2012, the government committed to investing 10% of GDP in three climate-related sectors - transport, energy and water (Cassim et al., 2021a). In 2019, the government invested over ZAR 12 billion in climate related projects mainly directed towards two core areas; i) general eco-system support – projects focused on the reduction of GHG's, disaster response and natural resource conservation – and ii) cross-sectoral investments.

1.1.2 Tracking Climate Finance

A major challenge in tracking domestic public finance towards climate activities has been linked to the lack of climate tagged financial data (Cassim et al., 2021b). The growing demand for financing places pressure on national governments and organisations involved in providing adaptation and mitigation support. Global and national funders are increasingly demanding enhanced transparency and accountability for the projects they finance. Consequently, there is a rising demand for public accountability, with governments and private companies facing scrutiny from funders and the general public alike. Governments, in particular, recognise the importance of gaining an in-depth understanding of their climate financing flow. Such clarity not only aids in strategic planning of activities and uncovers new investment opportunities, but also increases transparency in the allocation of funds.

The challenges in tracking climate finance flows have notably impeded progress in enhancing climate support in many emerging economies, predominantly due to transparency issues and institutional arrangements (CPI, 2019). Improving the accuracy and reliability of financial information is crucial, as it holds governments accountable to their citizens, assists in strategic policy planning, and helps gauge the overall financial landscape needed for climate initiatives. However, tracking finance is a complex task that relies on the interplay between governance and budgeting as well as the institutional structures that exist.

In terms of tracking public climate finance, one of the first tools implemented was the *Climate Public Expenditure and Institutional Reviews (CPEIRs)* introduced in 2011, based on the World Bank's Public Expenditure Reviews. The CPEIRs were conducted at the national level of government and examined the linkages between national climate change policy, institutional structures that policies are channelled through, and the resource allocation process for public funding (UNDP & ODI, 2012). This prompted the creation of the *Climate Change Financing Framework (CCFF),* which provided a roadmap for aligning climate goals to national budgets and plans. It assists

countries in identifying key stakeholders, mobilising the necessary funds, and targeting budget resources in the most efficient and equitable manner. Apart from this, it begins the process for countries to translate their adaptation needs into bankable projects that financing can easily be directed to. Once countries have reviewed their current budget environments and created a pathway for integrating the necessary projects, the next step would be measuring the actual expenditure being directed at national projects. This would allow governments to monitor and track the flow of funds and determine whether they are aligned with the goals initially specified. The *Climate Change Budget Integration Index (CCBII)* is a rapid assessment that was introduced to assess whether the public financial management (PFM) system has been an enabling factor in achieving climate related policy outcomes and how climate change has been integrated into the overall system. The scoring system allows countries to compare their levels of integration, set a baseline to measure their progress and increase momentum towards identifying new initiatives (Poghosyan, 2017).

1.1.3 Defining Climate Budget Tagging and its Relevance

Building on these tools, *Climate Budget Tagging (CBT)* was introduced in the early 2010s to systematically track and monitor climate-related expenditure decisions in public budgets (Mokoro and OneWorld, 2022). Its implementation has been primarily led by international development institutions such as the World Bank, UNDP and OECD, who have developed frameworks for country governments' to follow.

According to a study conducted by UNDP (2015), CBT is an operational tool that is integrated into actual budgeting processes to track financial flows as opposed to a one-time review of expenditures or a strategy to use financial flows to support climate goals. It tracks finance by tagging budget line items as climate expenditure and is integrated directly into budgeting processes, which allows for real-time tracking of expenditure.

CBT is an appropriate tool to track climate finance because it allows governments to get a clearer indication of where finance is being directed and enables them to track their progress. However, it should not be seen solely as a tool to report expenditure, but rather as an institutional planning and budgeting instrument. The assumptions made when introducing it to government processes include that entities have the capacity and knowledge to identify and tag climate-related budget items, that there is political will to implement it and that the necessary financial data exists to be tagged. Furthermore, as noted by the UNDP (2019) guidance, CBT should be used to tag both operational and capital expenditure and the tags should attach to the lowest regulated level of budget classification.

1.1.4 Tracking finance at the subnational level

Tracking climate finance at the local level is essential, as local governments are often the primary implementers of climate policies and would need to respond effectively do climate hazards impacting local communities (OECD, 2016). Additionally, local government plays a pivotal role in delivering services that directly impact the environment, making it an ideal arena for monitoring expenditure. Essential services such as water supply, electricity provision, waste disposal, and the management of human settlements and housing, including public works like lighting, all have significant implications for our ability to adapt to climate change (UNFCCC, 2017). The advantage of measuring at the local level lies in the direct and close communication that government can have with communities, ensuring resources are allocated where they are most needed. Apart from the fact that coordinating plans at this level allows for multi-sectoral integration and community participation, it also allows

for the collection of detailed information that can be used to enhance government strategies and direct it more intentionally at the particular needs of urban and rural communities.

As the need for monetary support at the subnational level rises and populations become more aware of the type of information they should have access to and the support they have around accessing this information, the need for transparency and accountability rises. Adopting CBT at the subnational level is important, due its proximity to communities and the climate relevance of services being delivered. However, while the international community has adopted CBT, there is a lack of research on its implementation pathways, challenges and functions at the subnational level.

1.1.5 Aim of the Study

The study will identify the principal challenges related to tracking climate finance at the subnational level, whilst also finding pathways to its successful implementation, given the country's local governance context and climate governance challenges. It will unpack the South African local government policy context to set out the systemic challenges facing the introduction of a new budgeting tool. This will be followed by the analysis of data collected on the international implementation of CBT as well as the analysis of data collected by the scoping and piloting of the country's first CBT tool, developed by Mokoro Consulting and OneWorld Sustainable Investments[1]. It will then synthesise the lessons learned from these activities. Furthermore, it considers how a new finance tracking tool such as CBT can be implemented given the strengths and weaknesses of municipal governance and the novelty of climate governance in the country. This includes unpacking the relationship between the national and local financial systems and the ways in which local governments are held accountable for aligning their projects to national goals.

The research findings will contribute to the understanding of CBT and the impact of local governance structures on its implementation, providing insights into the practical challenges and opportunities faced. The results will also have implications for policymakers and practitioners involved in climate finance and budgeting, as they seek to integrate climate considerations into government budgets at the local level.

1.2. METHODOLOGY

This chapter outlines the research methodology used in this study to explore the implementation of climate budget tagging at the subnational level in South Africa. Tracking climate finance using climate budget tagging as a tool is a relatively new concept, so there is limited literature on the successes of its implementation globally. Even though standardised structures have been created, the tool is still being tested in several countries with different political and financial structures. The study adopts a qualitative, case-based approach to examine the implementation of CBT, and is thus pragmatic[2] in its research design where real-world information is used to identify solutions to the practical problem of implementing tagging at the subnational level. Qualitative research was selected because it allows for an in-depth analysis of complex, context-dependent issues and is well-suited to

[1] OneWorld Sustainable Investments made the data available to the author of the thesis to analyse its applicability for a sub-national governance model.
[2] The pragmatic research philosophy identifies that there are many ways of interpreting the world and that no single view can determine the entire picture (Saunders et al., 2019).

understanding the lived experiences of participants during the pilot implementation of CBT by OneWorld and Mokoro.

By adopting a pragmatic perspective, the research aimed to address the hypothesis that climate finance can be tracked using climate budget tagging at the subnational level in South Africa. The study used literature reviews, case studies and content analysis to gain insights into the challenges encountered and pathways to implementation by providing an overview of the existing South African local context and legislation related to climate finance as well as the structure of the country's national climate strategies. Furthermore, by combining theoretical insights with practical considerations, the research will generate actionable recommendations for the integration of climate budget tagging into subnational government structures in South Africa.

The information was collected using a several methods and includes comprehensive desk research as well as extraction and analysis of empirical data collected by Mokoro Consulting and OneWorld Sustainable Investments (OneWorld). The Mokoro/ OneWorld empirical data was collected in 2021 and 2022 from interviews, focus groups, presentations and workshops during the implementation of the South African CBT project that included the development of a CBT framework, awareness raising and capacity building support for CBT pilots in several government entities. The CBT pilot project was developed by OneWorld (led by Belynda Petrie) and Mokoro Consulting (led by Alta Folscher). The author of the thesis played a junior role for a limited period in the team working on this project at OneWorld and received access to the data collected on the project to further explore the practical implementation of the tool in the South African context. This pilot project was a core component of the research as it provided a real-world context for testing the tool's applicability in the South African local government context.

The data was verified through triangulation, employing various methods to cross-check information gathered from focus group discussions, desk reviews, and interviews. The collection process unfolded as follows:

i) To understand the existing structures that would either support or deter the implementation of CBT, a content analysis of domestic municipal and climate legislation was conducted, which included an assessment on the challenges and pathways associated with implementing new systems at the subnational level. This was supplemented by interviews with experts on municipal structure. The purpose was to evaluate the mandated role of government officials and structures and to identify obstacles that subnational systems face. (Chapter 2)

ii) The implementation of the tool globally was analysed using case studies, that was developed based on secondary data from different countries. Each case was chosen to provide a view of the tool's application across diverse policy, economic and environmental contexts and provided a comparative framework to explore the lessons from systems that were already been created. (Chapter 3)

iii) The pilot programme allowed for a real-world assessment and key insights was extracted from information collected from interviews, focus groups, presentations, and workshops during the implementation of the South African CBT project. The information collected was categorised to identify the real-world context, pathways, challenges, and opportunities/ functions identified by each of the participants in the pilots. This was used to identify the institutional issues with implementing the tool

and additional pathways to its practical implementation. Furthermore, data comparing the initial design of the project to the actual implementation was collated to understand the deviation between literature and reality. (Chapter 4)

This thesis aimed to answer the following research questions.

1. What are the institutional challenges and pathways to mainstreaming climate budget tacking in a South African context?
2. How has climate budget tagging been implemented globally and what were the challenges faced?
3. What are the key challenges to implementing climate budget tagging at the subnational level in South Africa?
4. What pathways exist to practically tracking climate finance across all municipalities in the country?

The analysis drew upon the understanding of the local governance context, international climate budget tagging experiences, and insights from the South African pilot project. The information collected from the content analysis, case studies and the pilot project were analysed using thematic analysis, which involved identifying, assessing and reporting patterns within the data collected.

i) Challenges that hinder the implementation of climate budget tagging
ii) Pathways that enhance the ability to implement climate budget tagging
iii) Opportunities for using climate budget tagging

These themes were used to compare the international case studies and the results of the South African pilot, highlighting similarities and differences in the challenges and opportunities encountered. The data collected assessed the involvement of stakeholders such as National Treasury, line ministries, local government units and development partners to understand the importance of political will, policy coherence and stakeholder participation in its implementation.

The research questions address a critical gap in the literature on tracking climate finance at the subnational level using climate budget tagging. The analysis contributes to a better understanding of how climate budget tagging could be implemented effectively at the subnational level in South Africa and provided insights that can be applied to other countries with similar challenges. This methodology allowed for a nuanced exploration of the research question, facilitating the development of informed recommendations for supporting climate budget tagging within local government structures in South Africa.

2. EXPLORING THE CONTEXT FOR TRACKING CLIMATE FINANCE AT THE LOCAL LEVEL IN SOUTH AFRICA

Tracking climate finance at the subnational level is impacted by the structure, legislation and challenges encountered by local government officials in South Africa. When introducing a new tool such as climate budget tagging to track finance, it is necessary to understand the structure it will be integrated into and the systems that can be employed for its widespread implementation. This section establishes the context for tracking climate finance using the introduction of a new tool at the subnational level in South Africa, considering the institutional arrangements of local government and the strategic direction for climate-related activities in the country.

2.1. THE SOUTH AFRICAN INSTITUTIONAL CONTEXT

Exploring the context for tracking climate finance in South Africa involved unpacking the layout of local government, gaining insights into the functioning of the current system, outlining the mandated role of municipal officials, and exploring the challenges faced. In addition, the country's actions related to establishing its climate change strategy is explored to provide a comprehensive view of the government's willingness to align with the global climate agenda and understand its ability track finance related to climate activities. The chapter thus involved an examination of the structure, functioning and operations of local government entities in South Africa as well as the institutional frameworks, policies, and practices related to climate governance, with a specific focus on understanding how climate budget tagging could be implemented at the local government level based on structures that are already in place.

South Africa transitioned into a constitutional democracy in 1994 when it held its first democratic elections. The country has been actively engaged in restructuring and rebuilding its economy and society after decades of separate development under Apartheid and colonialism (Sparks, 1996). Following the first democratic election, the African National Congress assumed power and has maintained majority support across the nation ever since. The political system is multi-tiered, and the country is run as a unitary but decentralised state with three spheres of government – national, provincial, and local (Constitution of the Republic of South Africa, 1996).

DECENTRALISATION IN SOUTH AFRICA

Decentralisation is the distribution of state powers away from the central government to subnational governments and provides them with variations of decision-making autonomy. Local governments meet the criteria if they are democratically elected and have some autonomy over policy decisions that affect the local issues (De Visser et al., 2020). In South Africa, the decentralisation of power allows for more effective governance by granting local governments a deeper understanding of the specific needs and challenges faced by their communities. Moreover, it fosters a sense of accountability, as local representatives are directly elected by the people they serve, making them more responsive to their constituents' demands and concerns.

According to the Constitution (1996), the three levels of government must co-operate, but each have administrative and legislative powers, as they are 'separate and autonomous.' Municipalities are the lowest level of government that are elected by the populace and are mandated to provide developmental and social services to their constituents. There are nine provinces and over 200 municipalities, separated into eight metropolitan cities,

44 districts[3] and 226 local[4] government units (CoGTA, 2021). Even though there are no formal guidelines determining how intergovernmental agreements should be formed (Makoti and Odeku, 2021), the Inter-governmental Relations Framework Act, passed in 2005, establishes a cooperative framework for intergovernmental relations, promoting collaboration and coordination between national, provincial, and local spheres of government (Government of South Africa, 2005). This framework, and the level of co-ordination is important for CBT, as effective tracking and reporting of climate finance would rely on communication and joint efforts across government levels.

One of the key features of South Africa's political system is the strong presence of local government in the political sphere. This has provided local authorities with the autonomy to build their own structures, use unique tools and has empowered them to define the way services are delivered to their constituents (De Visser, 2005). This autonomy was further imbedded by the constitution indicating that provincial and national governments should not impede municipalities' ability to perform their functions. Local governments are expected to deliver core services to their constituents, which include water, electricity, refuse disposal, public works, housing, and public transportation amongst others (Republic of South Africa, 1998). However, the delivery of these services, many of which are directly affected by climate-related issues, has exposed local authorities to community feedback and accountability when expectations are not met. This increases the need for a tool such as CBT to enhance transparency on the direction of finances,

2.1.1. Local Government Structure

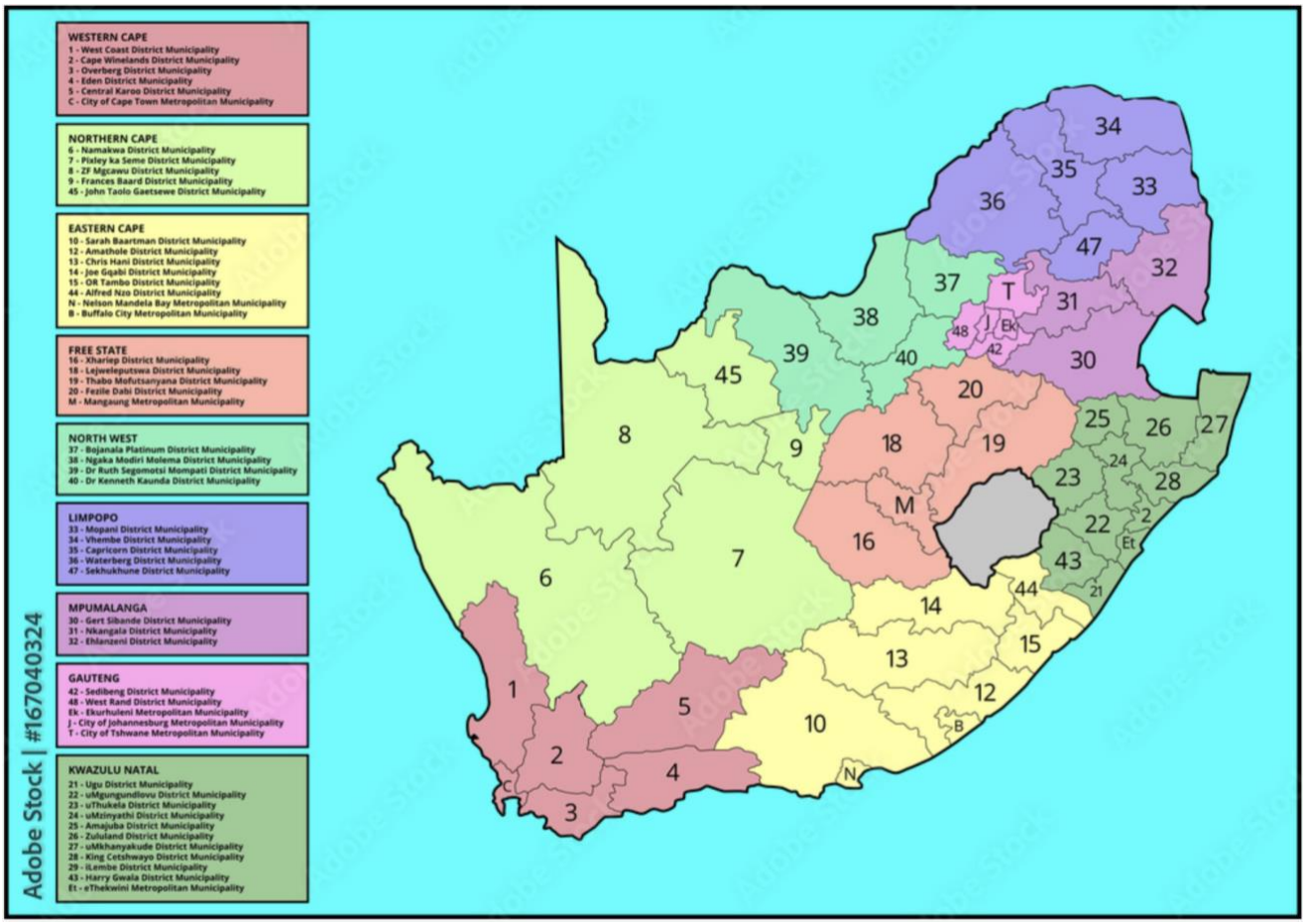
Implementing a new tool at the level of local government, within each municipality requires an understanding of the context and structure of these municipalities. In South Africa, there are three categories of municipalities – Category A, B and C. Category A municipalities have exclusive municipal, executive and legislative authority in their area. Metropolitan municipalities, which are areas with high population density and are centres of economic development, are categorized as "A." They generally possess more resources and capacity to fulfil their daily activities as opposed to categories B and C, who share resources across multiple municipalities. Category B municipalities, commonly referred to as local municipalities, share municipal, executive, and legislative authority in their area with a category C municipality within whose area it falls. Category C municipalities are districts and have municipal, executive and legislative authority in an area that includes more than one municipality (Republic of South Africa, 1996).

The different types of municipalities within each category determines how the area is administered and managed (Republic of South Africa, 1998). Figure 2 below identifies the eight metropolitan municipalities and separates the country according to its districts. There are 52 districts and they each include more than one municipality. Districts are required to develop integrated development plans and support local municipalities with bulk services such as water and electricity whilst also building the capacity of local governments to provide these services. This provision of support to local municipalities includes financial, technical, and administrative services. It is important to note, however, that according to section 88 (2) of the municipal structures act (Republic of South

[3] An entity that has municipal, executive and legislative authority in an area that includes more than one municipality, and which is described in section 155(1) of the Constitution as a category C municipality.
[4] An entity that shares municipal, executive and legislative authority in its area with a district municipality within whose area it falls, and which is described-in section 155(1) of the Constitution as a category B municipality.

Africa, 1998) this support is only provided at the request of local municipalities, rather than imposed by district officials.

Figure 2: Map of South Africa separated into District Municipalities



2.1.2. LOCAL LEGISLATION AND ROLES

The South African municipal legislation relevant to mainstreaming climate finance tracking into the budget is outlined in the section and encompasses several key acts. This includes the municipal structures act, the municipal systems act, the municipal fiscal powers and functions act, the municipal financial management act and the organised local government act.

i) The **Municipal Structures Act (MSTA),** passed in 1998, provides a comprehensive outline of various types of municipalities and their corresponding powers. It governs the establishment, composition, and functioning of various structures within local government such as municipal councils, executive mayors and ward committees (Government of South Africa, 1998).

ii) The **Municipal Systems Act (MSYA)**, passed in 2000, provides a legal framework for the administration, management, and operation of municipalities, addressing matters such as public participation, performance management, and ethical conduct within local government. It lays down the foundations for effective and efficient municipal administration, including principles of good governance and service delivery (Government of South Africa, 2000).

iii) The **Municipal Fiscal Powers and Functions Act (MFPFA)**, passed in 2007, outlines the specific financial powers and responsibilities of municipalities and aims to create predictability in how they operate, allocate funds and provide services to communities (Government of South Africa, 2007).

iv) The **Municipal Financial Management Act (MFMA**), passed in 2003, defines the legally assigned roles and responsibilities within municipal financial management. It sets out the financial management principles and practices that municipalities must adhere to, ensuring transparency, accountability, and sound financial governance.

v) The **Organised Local Government Act 52**, passed in 1997, aims to provide for the recognition of national and provincial organisations representing municipalities, as required by the constitution. It is aimed at determining the procedure that local government should consult with national and provincial government.

Each act outlines specific roles of local government officials who must oversee certain activities within the municipality. Some key roles include the **municipal council**, **executive mayor**, **municipal manager,** and the **accounting officer**. The executive and legislative authority for the municipality lies with the Municipal Council. It consists of elected representatives who make decisions on behalf of the community. Some of the councils' main responsibilities include monitoring and evaluating the municipalities performance and approving budget and development plans. A key point to note is that subsection 2 (d) of the Municipal systems act indicates that one of the responsibilities of the municipal council includes delivering services to communities in an environmentally sustainable manner (Government of South Africa, 2000). This provides a foundational requirement for mainstreaming climate change into the municipalities' strategies and action plans. Accountability is important for carrying out these responsibilities.

The Executive Mayor is appointed by the municipal council and only exists in certain municipalities. They are expected to provide political guidance while collaborating with external stakeholders such as government departments, community organisations and businesses. Such mayors oversee the municipalities delivery of services and develop key performance indicators specific to the municipality (Government of South Africa, 1998).

The role of the Municipal Manager plays an important role in integrating complex tasks. It involves the administration and management of the municipality on a day-to-day basis, overseeing the municipalities finances (including budgeting and financial management), and coordinating/supervising municipal employees and departments.

The Accounting Officer is a role defined in the MFMA and is responsible for financial management within the municipality. The Accounting Officer manages the municipalities financial resources, prepares and submits financial statements and reports to National and Provincial Treasury - who are then required to monitor implementation and enforce legislative compliance. In addition, the MFMA has outlined that the provincial authority must intercede and at times assume the affairs of a local authority if it is failing in one of its core responsibilities (Government of South Africa, 2004).

2.1.3. Cross-Governmental Development

In terms of intergovernmental communication and responsibilities, the South African Local Government Association (SALGA), an entity developed by the Organised Local Government Act, is mandated by the MSA to provide specialised services to strengthen the capacity of local government, disseminate information, and facilitate shared learnings between municipalities. It is required to develop common approaches for local government, enhance cooperation between municipalities, and facilitate compliance with corporate governance principals and intergovernmental relations. In addition, SALGA is expected to represent the interests of local government, build the technical and leadership capacity of councillors and officials, and serve as the knowledge hub of local government information. It also has several working groups that are aimed at promoting local government matters including issues such as intergovernmental relations, and environmental management and climate resilience (Government of South Africa, 1997) and would, thus, play a key role in scaling CBT across municipalities in South Africa.

Furthermore, a relatively new tool that has been introduced by the current government administration and implemented by the Development Bank of South Africa (DBSA) is the District Development Model (DDM). The aim of the model is to facilitate communication between local and national government, capacitate local municipalities through skill-building and combat lack of co-ordination that impacts how government plans, budgets and delivers services across its three levels (Maswime, 2021). The model exists to improve service delivery and create a culture of collaboration for bulk services that can cross municipal boundaries, such as water and electricity. The model was based on a similar project that was introduced in the United Kingdom - the 'District Innovation Models.' As outlined by CoGTA (2020), the model will improve integrated planning across government, enable streamlined capacity building at the district level and ensure municipalities are enabled to perform their mandated functions. Additionally, it was needed to combat the low-capacity levels of municipalities, the lack of skills in key areas such as finance, and the constant flux of skilled officials within municipalities due to their short-term planning. One focus area of the model has been human capital development to support the capacitation of subnational governments. This has been introduced as 'District Hubs', an entity made up of high-level experts and a core team that includes roles such as Capacity Building Co-ordinator and a Financial Management Specialist, amongst others. A key focus area of the DDM is the development of long-term One Plans for each municipality.

The effectiveness of the model, however, is still being tested as it is still in the pilot phase and has not been rolled out to all districts. The first pilot for this model was launched in 2019 in two districts and one metro to determine the efficacy of addressing of cross-level planning. Even though the aim has been to enhance coordination amongst multiple departments, local officials are still apprehensive about integrating this new system. This is particularly the case for municipalities with more resources as they tend to have more technical capacity than the district entities do (Maswime, 2021). The model has been used previously in a project conducted by OneWorld Sustainable Investments to develop a GIZ-funded national climate risk and vulnerability assessment for the health sector. The project conducted capacity building workshops at the provincial level to train officials on how to use the tool and the DDM was used to hold workshops at the district level and collect information to complete the RVAs (Petrie et al., 2021).

In terms of the provincial oversight function, although provincial government is mandated to oversee and ensure that municipalities fulfil their requirements and develop green economic strategies. This makes it difficult to ensure that municipalities falling within their mandate have created them. This is of particular concern in provinces such as the Northern Cape who will be largely impacted by climate change. Another factor impacting the generation and measurement of climate strategies is that local governments are not mandated to enact municipal climate policies or even implement national ones (OneWorld et al., 2018).

Finally, National Treasury can ensure that provinces make provision for climate change by establishing provincial budget subprogrammes under which National Treasury can track spending (Price, 2021). The medium-term expenditure framework guidelines emphasise the importance of budgets that are sensitive to climate issues and they can monitor progress by engaging in regular visits to provinces to conduct standardised benchmarking exercises.

2.1.4. Climate Governance Structure

Over the last decade, the government in South Africa has introduced several policies, strategies, and structures in relation to climate change. The *National Climate Change Response White Paper (NCCRWP)* was one of the earlier documents developed in 2011. The paper identified the importance of using existing institutional structures to enhance the country's climate agenda. These structures included the National Planning Commission (NPC), the National Economic and Development Labour Council (NEDLAC), the Forum of South African Directors-General, the Parliamentary Portfolio Committee on Water and Environmental Affairs (PPCWEA), the Inter-Ministerial Committee on Climate Change (IMCCC), the Intergovernmental Committee on Climate Change (IGCCC) and the multi-stakeholder National Committee on Climate Change (NCCC). The NNCRWP indicated that national government would take the lead in formulating the climate response policy by establishing a regulatory framework, amending legislation, and implementing market-based instruments. It provided the Department of Forestry, Fisheries, and the Environment (DFFE) with the institutional authority to coordinate climate policy and mainstream climate change into fiscal budgetary processes. Furthermore, it highlighted the need to use macro-fiscal and budgetary frameworks to implement policies and change behaviours around climate change. This opened the door for the National Treasury to be incorporated into the process (Government of South Africa, 2011). However, several of the forums identified in the white paper did not materialise and thus could not carry out the responsibilities initially identified.

Just under a decade later, in 2020, the Presidential Climate Commission (PCC) was introduced. In contrast to the IMCCC, whose mandate was to coordinate climate change strategy across government, the PCC has been chaired by the president of the country and consisted of multiple stakeholders from different interest groups across society (i.e. government, civil society, communities, labour, and private sector). A major objective of the PCC has been to act as an advisory body to facilitate the country's Just Transition and to facilitate dialogues between social partners. Through this structure, the needs of people and communities are expected to be integrated into South Africa's response to climate change. The framework has been built upon the principles of distributive, restorative and procedural justice and has used these tools to integrate the aspect of development into the country's climate response (Presidential Climate Commission, 2022).

The National Climate Change Adaptation Strategy was also introduced in 2020 to direct adaptation planning in the country. However, South Africa still does not have a legislative framework to direct climate change policy. It is currently in the process of finalising the Climate Change Bill, which was expected to be completed in 2021. The Bill aims to provide clarity on roles and responsibilities in government, both vertically and horizontally. Furthermore, it will provide DFFE with the authority to drive and coordinate climate actions across national government. Other crucial government departments include National Treasury, Department of Mineral Resources and Energy (DMRE), PCC and Department of Planning, Monitoring and Evaluation (DPME). Treasury is expected to play a lead role in driving fiscal policy to support the country's climate response, whilst also exploring green public financial management strategies. Additionally, the Bill aims to strengthen coordination for climate strategy at the subnational level by developing committees on climate change for each province which will be required to monitor and report on their climate actions. In terms of the Bill, an MEC responsible for the environment or the mayor of a municipality will be expected to undertake a climate change needs and response assessment and implement a climate change implementation plan formulated in terms of the needs and response assessment. It further mandates local and provincial government to develop and implement climate change plans (Department of Forestry, Fisheries and the Environment, 2021).

In 2021, DFFE submitted South Africa's first Nationally Determined Contribution as a successor to the intended NDC in 2015. The NDC does not discuss greening public financial management systems and mainstreaming climate change into the budgeting process. However, one of the goals include implementing adaptation interventions, particularly at the local level. In the NDC, local government has been identified as a key player in achieving the country's adaptation goals and will, thus, need to be sufficiently capacitated to carry it out. Furthermore, it has identified that National Treasury will need to play a coordination role to direct the countries' climate finance strategy and develop actions to enhance the understanding of climate risks and its impact on the economy financially. This includes sufficient quantification of the expenditure directed towards climate change mitigation and adaptation in the country, which provides a platform for the role of climate budget tagging in tracking climate finance.

While these policies provide the necessary foundation for CBT, their effectiveness depends on proper implementation and continuous monitoring because significant political support to maintain the status quo in the fossil fuel industry remains (Swilling et al., 2016). Several of these oversight functions exist, as an example, the MEC for local government in each province has the responsibility to monitor the performance of each municipality and assess the support needed to carry out their functions. However, the MEC has had to rely on information submitted by each municipality on their performance. The 20-year review by the Presidency (2015) revealed that more than 78% of municipalities failed to perform all their mandated functions, while approximately 50% performed less than half of their constitutional functions.

Furthermore, while oversight functions have existed at the provincial level of government, their implementation has often been regarded as 'undue intervention', given the emphasis placed on preserving the autonomy of local government (Makoti and Odeku, 2021). This autonomy is further stressed in the Municipal Systems Act that stipulates that the oversight responsibilities of national and provincial bodies should not impede the executive and legislative authority of local municipalities. This has, in turn, impacted the ability of national and provincial bodies to align the actions of municipalities (Republic of South Africa, 2000).

2.2. IMPLEMENTATION CHALLENGES AT THE SUBNATIONAL LEVEL

Even though comprehensive municipal legislation exists, complexity and ambiguity has arisen from the overlapping powers assigned to each level of government in different legislation. In addition, municipalities have not consistently adhered to the legislative framework, which has introduced challenges and uncertainties in implementation (Laubscher, 2012). These challenges to implementation are highlighted in the pilot project introduced by OneWorld and Mokoro.

Furthermore, despite efforts to merge local government jurisdictions across the country after Apartheid to address unequal access to resources, the institutional structures that contributed to such disparities have remained. According to Imuezerua and Chinomona (2015), local authorities played a pivotal role in entrenching racial segregation, controlling access to services, and restricting community engagement during Apartheid. Jurisdictions were capacitated based on race and resulted in the unequal distribution of resources and a lack of standardised institutional norms. These structures, originally designed to resist democratic needs, proved resistant to change due to the persistence of institutional knowledge and the entrenched cultures sustaining them. In addition, municipalities that became larger in size then began catering to a wider range of constituents at varying levels of wealth.

Deeply rooted inequality in resource access among municipalities has persisted, largely because the collapse of formal Apartheid institutions did not dismantle the embedded organisational culture. Although the constitution provided local governments with the autonomy to administer their own affairs and enact by-laws within their areas of competence (Makoti and Odeku, 2021), the ability to exercise this autonomy has varied significantly across municipalities. This disparity is exacerbated by the lack of communication on key priorities between different levels of government, fostering competition over collaboration when managing scarce resources. As a result, internal processes have become inefficient and resources are misallocated, hindering effective governance.

The increasing independence of local government has further added to the complexity around managing the country's finances and standardising budget systems (De Visser, 2005). Despite the medium-term budgeting framework serving as the foundation for government budgeting, local and provincial governments are still responsible for developing and adopting their own budgets. Additionally, National Treasury does not work directly with municipalities or communities but rather with provincial treasury departments (Mokoro and OneWorld, 2022). However, they are required to provide technical support and budget related training to municipalities, making them a key player when implementing changes to financial management activities at the municipal level.

The challenge around developing standardised budgets is compounded by the lack of necessary financial expertise within all municipal departments to develop budgets and track expenditure. This lack of financial management capacity within the government, particularly in budgeting and reporting, has been a significant issue that mirrored the shortage observed in other skilled roles. A study conducted in several municipalities revealed a trend where a substantial portion of the workforce possessed less than 10 years of experience, and only a small fraction had degrees (Imuezerua and Chinomona, 2015). According to Christmas and De Visser (2009), key officials have often lacked the appropriate competencies in managerial and financial roles because of the regular appointment of staff based on political patronage rather than the necessary qualifications. Moreover, it has resulted in political

interference in daily activities, which has reduced the levels of accountability held by officials carrying out these activities and increased narrow levels of compliance with legislation.

Furthermore, the inequality of resources and the size of the municipality has played a significant role in determining the success of climate action efforts and mainstreaming climate-related tools such as climate budget tagging (Pasquini et al. 2015). Large municipalities, such as metros, have generally had a broader knowledge base on climate change due to having more staff and resources to invest in research and development. They have also had a larger pool of qualified environmental staff, which has allowed them to implement complex climate action plans. Additionally, they have had more financial resources, which has allowed them to invest in expensive climate action measures. However, the size has impacted their level of flexibility towards changing institutional structures, given the amount of red tape they have been required to navigate when introducing new tools and frameworks. In contrast, small municipalities have had the ability to be more flexible and innovative in relation to introducing new climate related tools. This has been particularly true for municipalities with climate champions directing the entities' strategy. However, less resources and expertise has resulted in difficulty with introducing complex climate actions in smaller municipalities (Pasquini et al., 2015). This lack of capacity has often resulted in these municipalities not adhering to standardised methodologies, properly delivering services and having the ability to implement legislation appropriately. It is, therefore, important to note that buy-in from both political actors and technical counterparts are required for the implementation of any new system, process or tool. At the subnational level, political will and level of public support are key drivers behind the desire of municipal officials to implement new climate-related actions and align their budgets and strategies with the climate agenda.

2.3. IMPLEMENTATION PATHWAYS AT THE SUBNATIONAL LEVEL

Apart from the role played by government departments and public organisations in supporting the tracking of climate-related finance at the local level, several systems and frameworks also exist that can make the process more efficient. According to the analysis of key content, including several government policies, workshop reports and CoGTA's State of Local Government Report, it was found that implementation workshops play a crucial role in improving the understanding and execution of budgets. These workshops need to take place periodically due to the high turnover rates among government personnel, which often diminishes the effectiveness of training (CoGTA, 2021). Additionally, the Municipal Systems Act emphasizes that when legislating new actions to be undertaken by municipalities, the national government must ensure adequate funding and capacity building (Government of South Africa, 2000).

An institution that has been aimed at building the capacity and capabilities of government officials is the National School of Government (NSG) (OECD, 2020). It is mandated to provide education, training, and development to public officials at all levels of government, including enhancing their managerial and financial skills. The school has hoped to improve the organisational performance of the public sector by providing training and development courses for government officials. Apart from leadership and professional development, there are also functional and specialist training programmes including some related to municipal financial management, budget courses and MSCOA training (NSG, 2021).

With regards to climate support tools, over the last few years numerous strategies have been developed to assist government with integrating various climate related activities into their processes. The Local Government Climate Change Support Programme is one such strategy that was developed by DEFF, COGTA and SALGA to mainstream climate change into subnational development planning. According to Reddy et al., (2021), it represents the first hands-on demonstration of multi-level co-ordination on climate change. Core elements of the programme involve peer exchange and vertical dialogue as well as capacity building and technical support. The support comes in the form of in-person training, regular reviews and the development of guiding documents that can be used across municipalities. The guiding documents include the 'Lets Respond Toolkit' which was developed under this programme to mainstream the country's climate response into municipal planning, the vulnerability assessment toolkit, climate change response plan templates, the stakeholder engagement toolkit, and the practical systematic guide towards unlocking municipal climate finance. Even though the programme has been running for nearly a decade, it is still being rolled out to every municipality and still faces capacity issues. However, all district municipalities have produced risk and vulnerability assessments, and they are currently in the process of preparing a multi-level climate change governance support framework. This programme was implemented via district municipalities because the cross-cutting nature of their activities means that they can drive climate action forward and support local municipalities (Reddy et al., 2021).

In South Africa, local government has played a pivotal role in delivering services that directly impact the environment, which has made it an ideal arena for monitoring expenditure. Essential services such as water supply, electricity provision, waste disposal, public works and the management of human settlements and housing all have significant implications for our ability to adapt to climate change (Pieterse et al., 2020). The advantage of measuring at the local level lies in the direct and close communication with communities, which has the potential to ensure that resources are allocated where they are most needed (Coger et al., 2021b). Coordinating plans at this level has allowed for multi-sectoral integration and community participation while also enabling the collection of detailed information which could be used to enhance government strategies and direct funding more intentionally towards the particular needs of each community (Pieterse et al., 2020). However, the immediate impact of climate-related hazards felt by communities has meant that funds have often been directed retrospectively, rather than proactively to establish preventative structures. Despite the growing allocation of funds for local climate adaptation and mitigation efforts (Coger et al., 2021b), tracking these finances remains challenging due to a lack of resources, guidance, and appropriate metrics, as previously discussed. Addressing these challenges will be essential to ensure that climate finance is effectively directed and monitored at the local level, ultimately supporting more resilient communities.

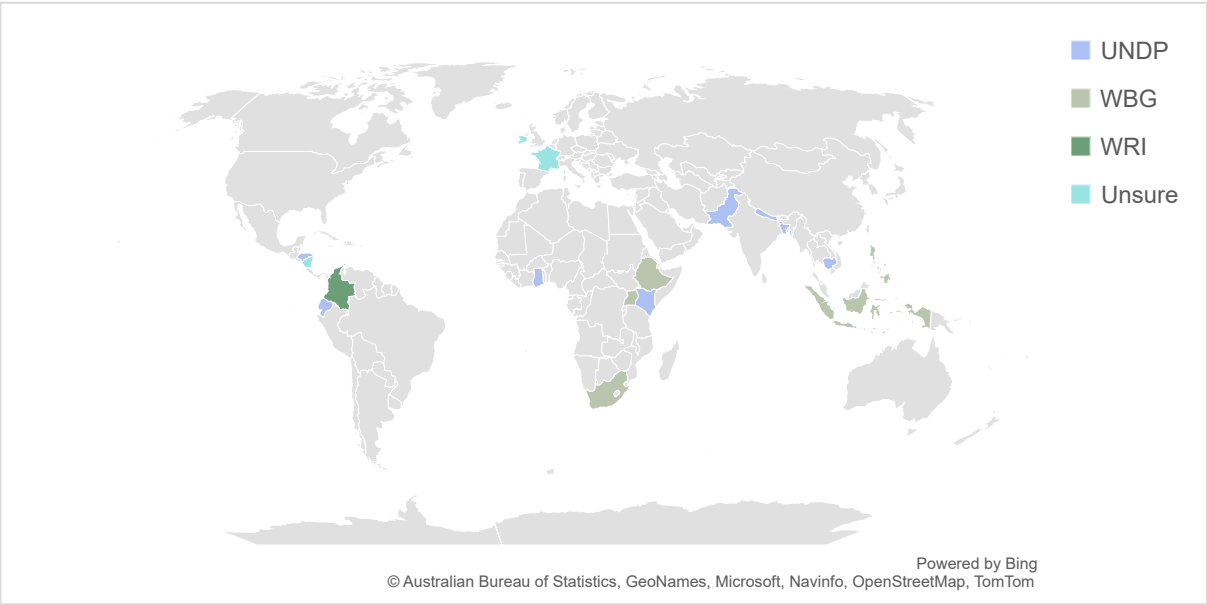
3. UNPACKING INTERNATIONAL EXPERIENCE WITH TRACKING CLIMATE FINANCE USING CLIMATE BUDGET TAGGING

Globally, several countries in Asia, America, Africa, and Europe have already introduced some form of climate budget tagging to track climate finance. This section consolidates international experience to examine the effectiveness of tools that have already been established in several countries. The literature is augmented by the analysis of information collected by OneWorld and Mokoro through interviews and focus group discussions with international counterparts during the development of the pilot programme. The information collected is used to compare diverse approaches, identify best practices, and unpack the lessons learned from countries who have implemented the tool into their public financial management systems.

To provide a comparative framework for countries that have implemented CBT, brief country profiles have been developed based on their environmental context, economic profile, and level of decentralisation as proxies for the decision behind implementation and the ability to implement it at the subnational level. In addition, a more detailed examination has been undertaken for Indonesia, as the country shares similar characteristics with South Africa in terms of its political structure, economic profile, and historical pathway. The overview of each country is followed by a brief analysis of the key lessons learned internationally outlining why some countries have been relatively more successful than others when introducing the tool.

To date, 19 countries have developed methodologies, with most only having done so over the last five years (World Bank [WB], 2021a). Developing countries, particularly in Asia, have led the way, and have integrated CBT with the support of development partners such as the UNDP and World Bank, often after conducting their CPEIRs. Developed countries have been slower to initiate the process annually in their national budgets, with a few European countries being the only developed countries to have created a systematic tracking process. Over the last year, organisations such as the OECD have begun developing frameworks to enhance the inclusion of subnational government in the tagging process. Figure 3 maps out the global response to CBT.

Figure 3: Countries that have implemented CBT and who they were supported by.



Source: Author's analysis

3.1. DEVELOPMENT OF COUNTRY PROFILES

Countries that have introduced climate budget tagging to track climate finance have done so within their unique institutional structures, leading to variations in their progress. Despite these differences, there are common lessons that can provide valuable insights for applying the tool at the sub-national level. The development of these country profiles thus facilitates cross-country comparisons and reveals trends in implementation progress as some countries have advanced further in adopting CBT even though the political and economic contexts differ. Additionally, countries with similar institutional contexts to South Africa may offer valuable lessons on the ability to implement it in the country. Key elements used to develop the country profile includes its context related to climate change, the level of decentralisation and the structures that have been used to introduce CBT. The table in Appendix 1 outlines the pathways and challenges faced by countries with similar contexts to South Africa either based on their economic profile or sub-national structure.

3.1.1. ASIAN IMPLEMENTATION

South Asian countries, many of whom are particularly vulnerable to the impacts of climate change, have dominated the development of financing tracking mechanisms such as climate budget tagging. Short case studies have been developed for Bangladesh, Nepal, Pakistan and the Philippines. Indonesia will be assessed in more detail in the section that follows.

Philippines

The Republic of Philippines is an archipelago in southeast Asia that is in the top five countries most impacted by climate change due to it being recurrently affected by catastrophes such as tropical cyclones (Eckstein et al., 2021). It is a unitary country with a decentralised system of government. However, the level of decentralisation varies across the country. In terms of their subnational structure, there are 81 provinces and over 1000 LGUs, which has made communication between national and local government particularly difficult. Local government is mainly responsible for public service provisions (OECD, 2016), and thus has information related to the actual projects being implemented. However, capacity and support vary as they do not always have the necessary technical expertise or financing options.

In terms of climate change governance, the Philippines was one of the first countries to introduce a national climate change law and set up the Climate Change Commission as the lead policy making body for climate change issues – both horizontally and vertically across government. The work on implementing CBT was introduced in 2014 by the Climate Change Commission and supported by the Department of Budget and Management (DBM), which allowed it to be integrated into the existing budgetary system. All national government ministries have been expected to tag their budgets. In addition, local government units (LGUs) have been expected to tag their annual investment plans – this was mandated by a memorandum released by national government in 2015 (Le and Baboyan, 2015).

However, these government ministries and LGU's generally lack the knowledge and awareness to appropriately tag projects. The Climate Change Commission has, thus, been required to conduct annual training programmes

on the method for tagging budgets, which would be provided for ministerial and local government budget officers. At the local level, it has been integrated into the broader LGU capacity-building programme as a module for budget officials to access and a help desk has been set up to support government entities in the tagging process. The DBM has been expected to support the Commission by including a climate expenditure form in the budget preparation instructions when they release the call for budgets.

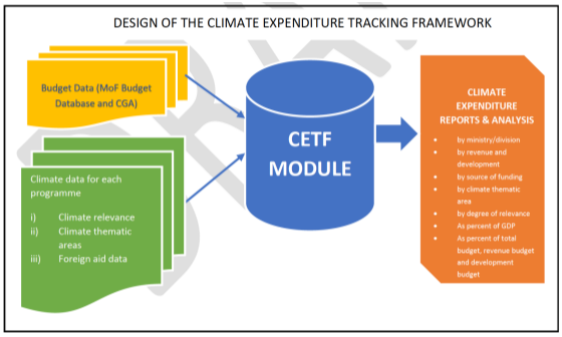
Even though these support structures have been theoretically developed, the Commission lacks the ability to practically implement them as it is not sufficiently capacitated either. This insufficient capacitation has resulted in staff struggling to provide guidance for and validate the submissions of the large number of LGUs (WB, 2021b). The capacity of these LGUs are impacted by short-termism of local political candidates, no overarching coordination function and an overburdened administrative base (Andreas et al., 2018). Therefore, along with the lack of guidance, the absence of financial incentives and administrative support has resulted in low compliance with implementing CBT to track climate finance at the local level in the Philippines.

Bangladesh

The People's Republic of Bangladesh is a coastal south Asian country that is characterised as a low lying delta, with about half of the land less than six meters above sea level and a network of rivers that flow through to the Bay of Bengal (Asian Development Bank, 2021). It is one of the most densely populated countries in the world and has been ranked as the 7th most affected country by extreme weather events (Eckstein et al., 2021). This high population density, low elevation and lack of infrastructural development make it particularly vulnerable to climate induced risks such as extreme temperatures, floods and storm surges. The country has 8 administrative divisions and 64 districts that are headed by elected officials. The political system is largely centralised, and subnational governments do not have much autonomy. There are 45 ministries, with the ministries of finance, environment, and planning, playing the main coordinating roles in the country's climate strategy.

In 2018, the Ministry of Finance introduced the climate public finance tracking methodology to track both operational and development expenditures at the national level. Climate-related projects are entered into the Ministry's budgeting and accounting system by a climate unit. For the development budget, this has allowed budget officials in each ministry to have climate relevance and weights assigned automatically when they add the expense to the system. For the operational budget, climate relevance is determined based on climate relevance of the overall portfolio of projects. Currently, just over 50% of ministries report on their climate expenditure. Local government entities are only included due to the funds transferred to them via the operational budget (World Bank [WB], 2021b). Support is provided to line ministries in their budget circular and budget template to include climate relevant projects in their mid-term budget frameworks. Figure 4 below shows the proposed expenditure tracking framework that has been created in parallel to the current budget system in the country.

Figure 4: Design of the Climate Expenditure Tracking Framework



Source: (Le and Baboyan, 2015)

Nepal

Nepal is a landlocked south Asian country with seven states and has been ranked as the 10th most affected country by climate change on the long-term climate risk index (CRI) (Eckstein et al., 2021). In terms of the country's climate finance governance, the government developed a climate fiscal framework in 2017, but it was the first country to develop a CBT process in 2012. The tool was based on the thematic budget tags that already existed for poverty and gender. These tags were used to measure development program expenditure against SDGs (WB, 2021a).

The development of the tool was led by the National Planning Commission (NPC) and supported by the ministries of finance, environment, federal affairs, local government, and forestry. All central government ministries have been required to tag their proposed expenditures in the development budget. The officials that have been expected to practically tag expenditure have been the ministries' planning officers due to the process being led by the NPC (Patel et al., 2022)..

However, even though there is significant political will for tackling climate change in Nepal, policies and tools are not often fully implemented due to low levels of government capacity. Tagging was found to be a time-intensive process as it was entered manually into the budget information system and in consultation with officials working on each activity. Once the tags were uploaded onto the system, the NPC would review and validate the tags. This would be followed by them updating the general NPC budget sheet that would be reported by the Ministry of Finance in the annual economic survey (WB, 2021b). At the subnational level, there has not been a common mechanism for channelling funds, so tagging has not occurred at this level.

Pakistan

Pakistan is a large, federal republic with four provinces and has attempted to follow a political structure of decentralisation, but subnational governments are still not fully autonomous, fiscally or administratively. The tagging methodology was piloted in 2018 by the Ministry of Climate Change and the Ministry of Finance. The actual tagging of expenditure is conducted by officials within the Ministry of Climate Change. They do, however, only tag national level expenses for cost centres that have climate change related activities. If new climate related activities are identified, the information is consolidated by the relevant line ministry and submitted into the system. To support officials with the practical application of the tool, the methodology has been integrated into the

development planning manual (WB, 2021b). However, even though the process of tagging is fully automated, the fragmentation of the budgeting and accounting systems in Pakistan has posed major challenges for the process.

3.1.2. EUROPEAN IMPLEMENTATION

There are very few developed countries who have implemented a form of CBT to track climate finance. Those who have introduced it are all based in Europe. The countries reviewed in this section are France, Ireland, and Moldova. Other countries that have conducted a process of green finance tagging but have not integrated a CBT system are Belgium, Germany, Norway, and North Macedonia.

France

The Republic of France is a member of the European Union and the largest western European nation by size. In terms of its governance structure, it is a unitary state that is organised on a decentralised basis with 18 regions (including 5 overseas regions) and over 30,000 municipalities that are some of the smallest in both area and population of all OECD member countries. Regions are financially autonomous from the state and exercise their powers through their budgets, as they do not have legislative power. While the central government is responsible for areas such as defence and foreign affairs, regions and municipalities oversee a variety of other areas including the environment and economic development (European Committee of Regions [CoR], 2022).

The country's green budget was developed by the Ministry of Ecological and Inclusive Transition (MEIT) and the Ministry of Economy, Finance and Recovery. It was created to allow central government to report on the effects of climate change in the country's finance bill whilst also identifying fiscal expenditures that have an impact on the environment, both negatively and positively (WB, 2021b).

In 2020, the government introduced the climate budget tagging methodology into its budgeting process. The tagging has been conducted by an inter-ministerial working group within the MEIT and validated by line ministries who have been identified in the central budget (Upadhya, 2021). This group has not used Rio markers to identify expenditure, but instead has tagged expenses from favourable to unfavourable based on six selected environmental factors. The only expenditure that has been tagged, however, was that of the national government. This was based on data from national accounts that were released by national sectoral ministries, as well as the public budget and statistical reports. The approach taken to tag expenditure has been relatively broad and assessed budget line items rather than individual areas of investment for each ministry.

In addition, the Institute for Climate Economics in France (I4CE) has developed a methodology to track domestic financial flows in France that contribute to a low-carbon climate resilient economy at the project level. They have collected data from sources such as the national budget, annual reports of public agencies, interviews, and informed hypotheses. This has been used to measure the amount of climate investment in the country (Hainaut and Cochran, 2018). This analysis is, however, conducted over wider investment by all public and private entities, not only at the government level.

Ireland

Ireland is a western European country and was the first developed country to develop a CBT tool in 2018 that was used for their 2019 national budget. It has one of the most centralised countries in the OECD due to the country's subnational governments having very limited fiscal responsibilities and administrative capacity.

The national Department of Public Expenditure and Reform houses a climate change unit that introduced CBT to the budgeting process. The tagging has only occurred at the national level with government investment budgets. In terms of the process, the climate change unit reviewed all expenditure programmes and identified climate relevant expenditures in the proposed budget – however, actual expenditures have not been tracked. Once the expenditure was tagged, the unit would contact line ministries to validate and elaborate on the projects selected (WB, 2021b).

The method was developed due to the introduction of the country's green bond that has required the government to report on its allocation of funds to investors (Nesbit et al., 2021). Because of the green bond requirements, the direction of funds used needed to be explained. The government has, thus, applied a rigorous method for tagging which would allow them to go into significant detail on climate expenditure for each national department. A major barrier to the implementation of the tool to track climate finance has been cross-cutting projects that cannot be separated simply by each department (Cremins and Kevany, 2018).

Moldova

The Republic of Moldova, a landlocked eastern European country, introduced a CBT method in 2016 with the support of its Ministry of Environment. The Ministry of Finance was not part of the development of the method, which has resulted in a lack of ownership. In addition, the tagging tool has not been integrated into the budget process in practice, even though it has been mandated.

3.1.3. American Implementation

The integration of climate budget tagging into the financial management processes of government entities in North and South American countries has not yet occurred. However, some of the poorest countries in Central America, including Honduras, Nicaragua, and Colombia, have attempted to implement the tool and track finance directed at climate related activities.

Colombia

The Republic of Colombia is a Central American country that has recently joined the OECD. It is one of the largest crude oil and coal producers in Latin America and, thus, relies heavily on its energy and mining exports. The political system is one of the most decentralised on the continent and it has 32 regions with over 1000 municipalities. These subnational governments provide public services, which includes environmental protection, but have relatively low fiscal autonomy over their expenditure. Levels of decentralisation also vary across the country, with unequal access to resources playing a major role in the autonomy of local government (OECD, 2019).

In 2016, the National Planning Department (NPD), which houses the Authority for Climate Change Policy Development, developed a CBT methodology. There has, however, been no active involvement from the country's

Ministry of Finance and Public Credit in the development or implementation of the method. This has resulted in a lack of ownership and integration into the national budgetary process.

Tagging climate-related expenditures have been conducted annually. The NPD has been expected to collect project-level data on subnational expenditure and apply it to an online database, however, the framework used to identify expenditure is largely mitigation focused (OECD, 2022b). The method was developed to supplement the thematic tags that had already been introduced e.g. peace agreement commitments, displaced persons. The challenges to implementation faced by government officials have been related to a lack of capacity, resources, and knowledge. Overworked national and subnational entities have viewed tagging as a significant administrative burden, and with the NPD not sufficiently capacitated to validate tags, the quality of the tagging across government varies (WB, 2021b).

Honduras and Nicaragua

The Republics of Honduras and Nicaragua are neighbouring Central American countries that are particularly vulnerable to frequent climate-related disasters. The impacts of these disasters are exacerbated by high poverty levels, which has resulted in low levels of adaptive capacity in each country.

In Honduras, there are only 2 levels of government, national and local. Their country has just under 300 municipalities that are largely autonomous and heterogenous. The Ministry of Finance and the Secretariat for Natural Resources and Mines introduced CBT into the national budget system in 2016 to track finance directed at climate related activities. In terms of how it has been practically carried out, budget officials within each national ministry have been expected to tag their activities. However, barriers have faced its implementation, including resistance from line ministries due to their high administrative requirements. This has resulted in officials in the Ministry of Finance tagging activities in the centrally managed financial management system (WB, 2021b).

Similarly, in Nicaragua, the CBT method was developed by the Ministry of Finance and officials only tag national government expenditure. It is managed by a climate finance office within the Ministry, and which has released a budget circular that requires entities to tag their climate related expenditures during the budget formulation process.

3.1.4. AFRICAN IMPLEMENTATION

The introduction of climate budget tagging into public financial systems in Africa has mainly occurred with East African Countries. The countries that have begun the process of implementing CBT are Ethiopia, Ghana, Kenya, and Uganda.

Kenya

Kenya is a coastal East African country that has been identified as a key economic hub in the region. It is a unitary country with the 47 autonomous counties being the only sub-national tier below national government. These counties are distinct and independent of national government and are expected to conduct relations through consultations. The government has a strong green public financing agenda and has created a multi-sectoral taskforce to oversee the development of the country's national climate change action plan early on.

The government has taken practical steps to greening its public financial management system including the introduction of a national climate finance policy in 2018. This has resulted in their National Treasury leading the way on green financial integration. Treasury introduced a climate change budget code and included it in the 2020/21 national budget outline. The tag has been expected to be applied onto programmatic expenditure by all sectoral ministries at the national and sub-national levels. Treasury and the Ministry of Environment have coordinated support for the tool's implementation. To assist state entities with mobilising resources, planning budgets and coding expenditures, the Treasury developed a handbook on tracking climate finance (WB, 2021b).

A major challenge for practically implementing CBT has been institutional coordination by government entities. This challenge has been raised due to the wide range of departments and levels that would need to be included in the tagging process. Along with this, the lack of capacity and incentives at the local level has further slowed the full integration of CBT into the budget at all levels.

Uganda

Uganda is a landlocked country. The governance system is decentralised, and local governments play a vital role in providing basic services to the people. These local government entities have both legislative and executive powers. Additionally, the country has a robust public financial management system and has introduced strong governance frameworks related to climate change. However, the lack of ownership by all government entities has been a major hindrance to the consistent rollout of climate-related policies and mechanisms (Allan, 2021).

In 2018 the government of Uganda, under its Ministry of Finance, Planning and Economic Development, developed a CBT tool. However, due to Covid-19, full roll-out was delayed. Since 2021, it has been fully integrated into the budgeting system and has been expected to be applied by technical staff at the local government level with the support of climate change focal points (WB, 2021b). Entities applying the tagging are expected to submit a review form that provides information of their climate-relevant objectives along with the submission of their budget proposals. When tagged expenditures are validated, adjustments are made based on these forms by the Ministry of Water and Environment which then compiles and consolidates the information provided (WB, 2021a). In addition, the climate change department in this ministry carries out awareness raising, knowledge support and advisory services to ministries and local governments who are tagging expenditure. The National Planning Authority is expected to review performance reports of climate change projects and ensure that climate tagged projects are aligned with the country's priorities.

In practice, there has been inadequate uptake of CBT by local institutions because of the weak linkages between national policies and local interventions as well as a lack of awareness around national planning instruments (Wilkinson et al., 2014b). This has been exacerbated by a lack of clear lines of accountability and ownership amongst government officials.

Ghana

The republic of Ghana is a West African country with 16 regions. It is largely reliant on gold and crude petroleum for export revenue. The Natural Resources, Environment and Climate Change Unit within the Ministry of Finance developed a climate finance tracking tool and integrated it into the national financial management system in 2018. The tool covers all national and subnational budget allocations and actual expenditures and is validated by the

environmental protection agency (WB, 2021b). In terms of the support provided, the Unit has included information on the implementation of the tool in the mid-term budget guidelines to assist government entities with tracking finance and implementing the tool. Practically, the process is automated and budget codes of policy objectives are marked for climate relevance.

Ethiopia

The Federal Democratic Republic of Ethiopia is a landlocked East African country and has a majority rural population. There are eleven autonomous regional states. Representatives are elected independently and responsible for the provision of public services, enforcement of public policies and collection of tax revenues. This has resulted in unequal service distribution across the country.

The Ministry of Finance and Economic Cooperation developed the country's first CBT method in 2017 but only expected to pilot it in 2021. However, there is a significant lack of data on how the process is implemented as there is no automated tagging process. In addition, officials do not tag expenditures for climate activities in the budget system (WB, 2021b).

3.1.5. INDONESIA DEEP-DIVE

Indonesia is an archipelago in southeast Asia and in 2019 it was ranked as the 14th most affected country by climate change (Eckstein et al., 2021). Fossil fuels such as goal and natural gas make up a large proportion of the country's exports. In addition, automotive manufacturing is a key growth sector that contributes to increased revenue and jobs in the country. This has led to a mitigation focused climate strategy and low investment into adaptation and the Just Transition.

Indonesia's governance structures and political history is similar to that of South Africa. Both countries faced centuries of colonisation, followed by an authoritarian regime leading up to the 21st century, which greatly impacted the countries' institutional pathways and societal culture. According to McCollum et al (2018), Indonesia has a history of a highly centralised and hierarchical government, which created expectations of national accountability and left a legacy of patronage and mismanagement of funds. These governance issues have remained in both countries' institutional structures due to the failure to adequately consider the impact of reforms in relation to institutional norms. The values held within the structure has impacted the ability of reforms to create real change. This has made accountability and transparency difficult and further exacerbated the countries' developmental problems.

Decentralisation in Indonesia took place at the dawn of its democracy just over two decades ago. The country's governance system now consists of three tiers – national, provincial, and regency (i.e. municipalities), all of which are led by elected officials for a 5-year term. There are 34 provinces and significantly more regencies and municipalities who are responsible for providing government services (Indonesian Government, 2019). Subnational authorities have administrative, political and fiscal responsibilities, so even though policies are set at the national level, they would have to be operationalised at the lower levels (McCollum et al., 2018). At the provincial level (tier 2), the government releases a 5-year regional medium term development plan to guide its strategy. This is further used to plan development at the city level. Each province and regency, however, has varying levels of technical expertise and administrative capability which has made it difficult to implement any

new reforms consistently across the country. This is particularly true for activities related to climate change as all regions are impacted differently.

As identified previously, Indonesia faces numerous climate related hazards and like South Africa, it is one of the largest developing countries that exports coal. In contrast to South Africa, however, Indonesia exports more coal than it uses domestically, but it still promotes energy independence and access (Desdiani et al., 2021). The resource, thus, has major linkages into the country's economic growth and ability to sustain itself, which has resulted in the need for large amounts of financing being directed at mitigation. The developing nature of the countries, however, means that finance towards adaptation and a just transition needs to increase as both countries shift away from coal, which is a key economic resource. It has significant implications for employment, poverty, inequality and access to energy across both countries and therefore impacts their political will to move away from a dependence on coal (Azzahra et al., 2022a).

Indonesia identified the need to develop a national climate strategy and clear financial plans early on. Within the Ministry of Finance there is a Centre for Climate Finance and Multilateral Policy that launched the Green Planning and Budgeting Strategy for Sustainable Development. This strategy has created a clear line of accountability for tracking climate finance within the financial sector in the country. National government has further set emissions targets at the provincial level that are required to be integrated into their action plans. Climate governance at this level, however, is low due to lack of information, knowledge, and capacity (Kawanishi et al., 2015). Furthermore, it has been found that even though higher levels of formal environmental expertise exist at the national level, local actors at the subnational level generally understand the need to address adaptation, development and disaster risk more, due to their proximity to its impacts on communities (Di Gregorio *et al.*, 2019).

Like South Africa, the implementation of CBT was supported by the World Bank and led by the country's ministry in charge of finance with support from domestic consultants. The Ministry of Finance in Indonesia initially developed the Low Emission Budget Tagging and Scoring System (LESS) in 2016 with the support of the Ministry of Planning. CBT is tracked by a handful of ministries that fall under the National Action Plan for Greenhouse Gas Emissions Reduction using an online budget tagging system, that is integrated into the existing budget system (Desdiani et al., 2021). Indonesia initially only focused on mitigation finance but has since included adaptation and increased the number of ministries required to integrate it into the planning processes.

CBT was initially only rolled out by ministerial decree to several emissions-relevant ministries. This was due to them having a better technical understanding of the environmental impacts of their projects. These ministries thus had a legal requirement to implement budget tagging. Government also introduced a climate change working group to reduce issues related to a lack of understanding (WB, 2021b).

The tool has been practically implemented by the Ministry's planning bureau, due to their experience with the country's planning tool. Spending has been measured by type of intervention. CBT is considered an essential instrument that should be carried out when preparing the government work plan and state budget. The use of CBT data has enhanced the information required for the green Sukuk bond that finances infrastructure in the country, as public bonds normally require high levels of information and transparency (OECD, 2021). It has allowed the country to increase green funding, whilst also increasing the effectiveness of this financing, which has resulted in increased ownership by government.

A high level of autonomy has been given to districts as they play a key role in policy and programme implementation whilst also determining spending at the project level. Indonesia does not, however, track the budgets of subnational entities. This has created a misalignment in the most effective strategy required for climate finance, as mitigation is strongly advocated for at a national level, whereas more adaptation finance is required at the lower levels. Mutiara *et al.* (2019), has identified that if CBT is applied consistently across subnational governments, then national government can use it to compare outcomes and refocus expenditures to achieve the necessary targets, but this is difficult due to the levels of inequality across subnational governments.

A few years after its initial implementation, the government began the process of implementing CBT at the provincial level. It began this process with only a small number of provinces due to capacity and information related issues but has subsequently expanded the pilots to eleven regions. The variation in technical and administrative capacity across provinces has made implementation more difficult because of the different tools required for each province (Mutiara et al., 2019). The regional planning agency – a unit within the national ministry of planning – conducted the CBT process, showing the level of national capacity support required. The tool was implemented through a process of socialisation, capacity building and data collection. However, the lack of autonomy and high reliance on central financial support of some provinces has hindered its ability to be integrated across all 34 provinces, even though the majority have mitigation plans (WB, 2021b).

The fiscal policy agency has prepared a guidance book and delivers annual training of the tagging methodology to several subnational governments. However, because there is no clear financial incentive and direct benefit for ministries tagging their expenditure, planning teams have not fully integrated it into their daily processes. This has meant that compliance, accountability and ownership remain major issues (WB, 2021b). Furthermore, it has been difficult to ensure coherence to policies at all levels of government as local governments have a different budgetary system and classification to central government (Halimatussadiah, 2020). Additionally, the lack of knowledge around green budgeting has led to low levels of compliance with the tagging system.

Lower levels of expertise, the limited budget and lack of supervision of policies has resulted in slow integration at the local level. In order to solve these issues, local government tagging has different criteria to that implemented at the national level and instead focuses on green economy priorities. Apart from this, providing capacity support at the national level is required as well as financial incentives to aid the limited budget (Desdiani et al., 2021).

The institutional culture of municipalities impacts how they operate and how they communicate with citizens and higher levels of government. This culture is affected by the countries' political history, governance structures and economic context (De Visser, 2005). South Africa and Indonesia have similar circumstances in terms of green public financial management due to issues of patronage, weak institutional structure, and a young democracy but Indonesia is ahead in terms of climate governance and climate financing tools. As previously identified, Indonesia initially introduced CBT across relevant national government departments but has begun implementing it at the subnational level. There is clear political direction for CBT as the purpose for the information being collected is to report on the use of funds from the green Sukuk bond issued by national government. The aim at the subnational level is to align to what they are already doing and to socialise local governments on what climate change means for their province to allow for a better understanding at this level. However, the issues they have faced when trying to implement it include a lack of resources to adequately train local officials periodically.

3.2. ANALYSIS OF GLOBAL TRENDS

The countries that have introduced climate budget tagging have faced unique challenges to its practical adoption, and have, thus, needed to take distinct pathways to implementing it. The international literature has shown that information on the actual implementation of climate budget tagging (CBT) into public financial management systems has been growing over the last few years. However, data is still lacking due to the recent introduction of the tool, with the first tagging procedure being carried out just over 10 years ago in Nepal in 2012. Even though various tagging guidelines exist such as the World Bank's International Review, the OECD's Draft Guidance on Green Budget Tagging, and the UNDP's Guidance Note on Climate Budget Tagging, each country has taken a unique approach due to their different institutional and governance structures. This, along with the context specific nature of political relationships, has made it difficult to directly compare countries and to expect that standard methodologies would play out in the same way. The countries that have introduced CBT are mainly developing countries with only two developed countries – France and Ireland - adopting a tagging approach. Additionally, these developing countries face major climate hazards, but do not have the resources to enhance their resilience. They, thus, rely quite significantly on external finance to bolster their adaptive capacity to climate-related events and thus have a clear function for the use of data that is climate tagged.

As noted in the country profiles, there have been several major challenges to using climate budget tagging to track government expenditure directed towards climate finance. This includes the labour-intensive nature of the task, high administrative load of budget officials, lack of financial incentives, low levels of knowledge and awareness about climate change, lack of ownership by key government entities and the organisational silo's that exist between government departments. Introducing the tool at the subnational level has resulted in additional challenges caused by the large number of subnational entities, unequal access to resources and lack of inter-governmental communication.

Furthermore, information on tagging the budget at the subnational level is scarce, as it is clear from the profiles that most countries who have developed CBT methodologies have implemented it at the national level. Countries such as Indonesia have begun the process of rolling out their tagging tools to lower levels of government (i.e. the provincial level) in a step-by-step manner to constituencies that have the capacity to do it. However, a key issue is that there is a very large number of entities at the subnational level that have varying access to resources.

A key finding from the literature is that the organisation of each country's political system plays a major role in the ability to implement a tagging system at each level of government. Countries have mainly introduced the tool at the national level of government due to higher levels of expertise and institutional capacity. The countries that have been more successful at introducing CBT at a subnational level of government (such as Indonesia, the Philippines and Kenya) have subnational governments that are relatively more autonomous than in other countries. Although the levels of autonomy and capacity vary across their large number of subnational entities, they have worked on integrating the tool into their existing budgeting systems and providing training and capacity building into processes that already exist.

For these countries who have attempted to introduce it at lower levels of government, the issue of financial ability, institutional capacity and resource inequality has been a common theme. All local government entities have not been sufficiently capacitated, both administratively and financially, to carry out the methods identified by CBT.

This has been exacerbated by the lack of communication and coordination mechanisms both between national and subnational as well as across subnational entities.

There are, however, clear trends that have emerged internationally outlining why certain countries have been more successful that others when implementing climate budget tagging at a global level. This includes that the process should be driven by the ministry that oversees the development of the national budget to create ownership by budget officials. In addition, it should be supported by the ministry that oversees matters related to climate change, which has the expertise to deliver technical training. This training, along with socialisation and awareness raising, has been an important pathway to capacitating budget departments to identify the climate relevance of expenditure and tag it appropriately. Furthermore, the development of training materials such as guidance books and periodic workshops that would be integrated into existing budgeting guidelines was key to create consistency over time. Additionally, it should not create a parallel process to the one currently used by budget administrators. Even so, budget administrators would need to be trained on tagging expenditure related to climate activities to equip them to practically carry out the activity. This training would generally take the form of workshops, lessons, and budget circulars.

Other indicators outlining successful implementation relates to which departments the tagging process has been rolled out to. Successful tools have often been rolled out to ministries with direct climate change experience, including water and energy. However, it would be necessary to have an overarching, coordinating body to reduce inefficiencies related to communication and lack of ownership. Furthermore, a pathway that was noted throughout the case studies but has not been introduced is the introduction of financial incentives to entities that are expected to conduct the tagging process.

Each country that has implemented CBT has done so for different reasons and has benefitted differently from the information collected, however, similar trends have emerged. Some countries have used the process to monitor the expenditure of their green bonds, create transparency around the direction of national spending or direct finance more effectively. The intention behind implementing the tool influenced the institutions that drove the process. In some countries, such as Ireland it was expected to inform programme design and resource allocation. In others, such as Indonesia, it was used to mobilise funding from external sources, or even identify financing gaps and enhance accountability and transparency, such as in Bangladesh. Countries have used CBT track finance more effectively and to report on other sources of finance such as green bonds. This has allowed more effective planning to direct resources to the sectors that require it.

In conclusion, the international literature on CBT reflects a growing awareness of its importance in tracking government expenditure directed towards climate finance. Despite the recent introduction of the tool, the literature highlights the unique approaches taken by different countries, influenced by their institutional and governance structures. There are many reasons that countries adopt CBT, however, the limited number of developed countries that have introduced the tool highlights the view that implementation is often driven by the urgent need for building climate resilience in developing countries who are more reliant on external finance for their climate adaptation activities.

4. THE PRACTICALITIES AROUND IMPLEMENTING CBT IN SOUTH AFRICA

In 2020, the World Bank supported South Africa's National Treasury to research and pilot Climate Budget Tagging (CBT), this project was implemented by two consultancies, OneWorld Sustainable Investments and Mokoro Consulting. During the implementation design phase, through extensive engagement, officials noted that CBT should be introduced across all levels of government, including at the subnational level.

As noted in the previous chapter on international implementation, majority of countries introduced CBT at the national level, so the South African tool stands out as one of the first countries to implement it at the subnational level. This distinction is primarily due to the strength and autonomy of South Africa's local governments, as discussed in chapter 2. Understanding the pathways and challenges encountered globally was essential for identifying the institutional frameworks required for CBT. However, it is equally important to explore South Africa's domestic experience in piloting CBT to grasp the practical challenges and opportunities faced by local government officials in tracking climate finance.

This section explores the information collected by OneWorld and Mokoro when researching, designing and piloting CBT in South Africa. To gain a better understanding of how the tool was received and applied, the information collected by the consultants during bilateral meetings, focus group discussions and workshops was categorised into three themes; challenges, pathways, and functions. These categories helped to systematically analyse how officials engaged with the tool, offering a clear view of the practical realities they faced as they worked with the tool. This disaggregation provided a detailed, pragmatic perspective on the complexities of launching a new process at the subnational level in South Africa, while also pointing towards potential pathways for tracking climate finance

4.1. OVERVIEW OF SOUTH AFRICA'S CBT PILOT

In 2020, OneWorld and Mokoro were identified by National Treasury and the World Bank to support the implementation of CBT. This project was the first stage of the CBT programme window and focused on the research, design, and piloting of the tool in South Africa. Some project activities included the analysis of key international literature, intensive stakeholder consultations and the piloting of the tool in eleven government entities at the national, provincial, and municipal level. The consultancies raised awareness on climate change, conducted capacity needs assessments, investigated the current and necessary infrastructure, and designed a tool to be implemented across budget entities.

4.1.1 Planning and Design of Climate Budget Tagging

The project was driven by National Treasury and implemented by the consultancies and was operationalised through a multi-step process that combined policy review, stakeholder engagement, technical refinement and real-time testing through the pilot. It included a series of structured engagements with government departments to both design and pilot the tool. During the inception phase, an Advisory Committee made up of several government departments and other entities was set up as the transversal governance structure of the project. At the national level, departments in the advisory structure included National Treasury as the co-chair along with the Department of Forestry, Fisheries and Environmental Affairs (DFFE), the Department of Planning, Monitoring and Evaluation (DPME) and the Department of Co-operative Governance and Traditional Affairs (COGTA). DFFE was included

due to their role in leading the country's climate change strategy and developing several programmes to mainstream climate change. DPME was included due to their oversight of the country's national planning system, which included the development of frameworks and guidelines for strategic and performance plans that is currently used at all levels of government. COGTA was included as it played an instrumental role in the coordination of local government and overseeing their monitoring and evaluation systems. In addition to these departments, the committee included several sectoral departments focused on Energy, Water and Sanitation, Transport, Agriculture and Finance at the provincial and national level due to their relationship with the projects being reviewed and the role they would need to play in the process. Furthermore, key departments in National and Provincial Treasury, such as the public finance and provincial expenditure management departments, were engaged to get a holistic view of the structures in place to house CBT. The tool was, thus, implemented by OneWorld and Mokoro and included inputs of various departments due to division of responsibilities across government ministries including budgeting, planning, climate change and implementation.

During the project planning phase, and prior to the actual piloting of the tool, OneWorld and Mokoro focused on researching the ideal design of CBT in the South African environment. They developed an extensive literature analysis of the tools international implementation and engaged key government stakeholders through bilateral interviews and focus group discussions. Key implementation questions were raised during these engagements and officials answered them based on their own knowledge of the environment. This included questions to identify the level of government that the tool should be implemented at and the structures that could be used to enhance its implementation amongst others.

The original tool that was designed and piloted by the consultancies attempted to align with existing climate related structures such as the green finance taxonomy, Climate Change Bill, and the Just Transition plan. Based on the engagement with government officials, it was identified that the tool should be piloted at all government levels, particularly local, due to the granularity of data that could be collected. In terms of implementation at the local level, officials noted that the local planning and budgeting system – mSCOA (the municipal standard chart of accounts framework) - could potentially enhance the ability to mainstream climate budget tagging at the local level. Additionally, the standardised green finance taxonomy was being developed by National Treasury, which would provide specific definitions that could simplify the identification of expenditure. Furthermore, several municipalities had already created climate strategies, which would make it easier to tag activities based on their objectives. These characteristics meant that adopting CBT at the local level should not prove as difficult as in other countries. Based on this, the Mokoro/OneWorld team created reference sheets and templates for an objectives-based and benefits-based approach to budget tagging, which were peer-reviewed by National Treasury and the World Bank. The pilot phase was designed to test the feasibility of the CBT framework and involved municipalities using Budget Activity Map Templates to categorise financial information. The process also explored how CBT could be integrated into financial management systems. However, as the pilot progressed, the consultant team discovered that these structures were not as firmly in place as had initially been indicated. Implementation, thus, faced several issues relating to governance, capacity and information access (Mokoro and OneWorld, 2022).

4.1.2 Operationalising the tool in South African government entities

Once the research and design phase were complete, several entities were identified for the initial piloting of the tool. The pilots were intended to be conducted in eleven entities – five municipalities (out of 257), three provinces and three national departments. However, only nine reached completion due to the demanding nature of the process and varying levels of commitment across all government entities. The three provincial departments were the Gauteng Department of Transport, Mpumalanga Department of Agriculture and Eastern Cape Department of Agriculture. The five municipalities included City of Cape Town, City of Johannesburg, uMhlatuze, Steve Tshwete and Tshwane. At the municipal level, officials who worked in the water, energy, transport and budget units amongst others joined. At the national level, none of the entities initially identified were included as they did not respond to the consultancies attempts to set up workshops (Mokoro and OneWorld, 2022).

The aim of the pilot was to test the design of the CBT tool. A central feature of the pilot was the detailed analysis of project-level information within the budgets of selected departments to identify whether they were adaptation, mitigation or just transition focused. Officials were supported by technical teams within the consultancies to help categorise expenditure. It included workshops with officials from each entities budget, climate and implementing unit. These workshops included an initial introductory session to gauge the understanding of climate change and explain the methodology, unit specific meetings to tag plans and budgets and a final review and close-out session.

The pilot was introduced by Mokoro/ OneWorld to government entities through several workshops and included several steps in the process. The first step involved a thorough review of individual programmes and projects within the budget of each selected ministry. Officials compiled a comprehensive list of all programmes and projects, assessing each for its relevance to climate change. Once a relevant expenditure was identified, it was allocated into one of three broad categories of relevance to climate change. This categorisation ensured that climate-related expenditures were tagged based on their degree of contribution to climate action, whether it be mitigation, adaptation, or cross-cutting measures. To further refine the tagging process, percentage weights were applied to each relevant expenditure. These weights reflected the proportion of each project or programme that directly contributed to climate goals. The weighting was not determined solely by line ministries; instead, it was a strategic decision validated through inter-ministerial meetings involving representatives from finance, climate change, and line ministries. The percentage weights were determined by gathering detailed information from official budget documents and conducting follow-ups with relevant ministry officials. However, ultimate responsibility for the final weighting decisions lay with the advisory committee.

Appendix 2: Description of pilot workshops and municipal/provincial entity context, provides an overview of the workshops conducted at the sub-national level. This includes comments by workshop participants on the context for climate budget tagging in their respective municipalities or provincial departments. The initial workshops were conducted online due to COVID-19, which added strain to the ability to engage directly with government officials, structures, and processes. Several logistical issues arose in each of the government entities that will be described in detail in the section that follows. These logistical issues resulted in varied attendance at pilot workshops. Some municipalities had excellent attendance and participation while others did not.

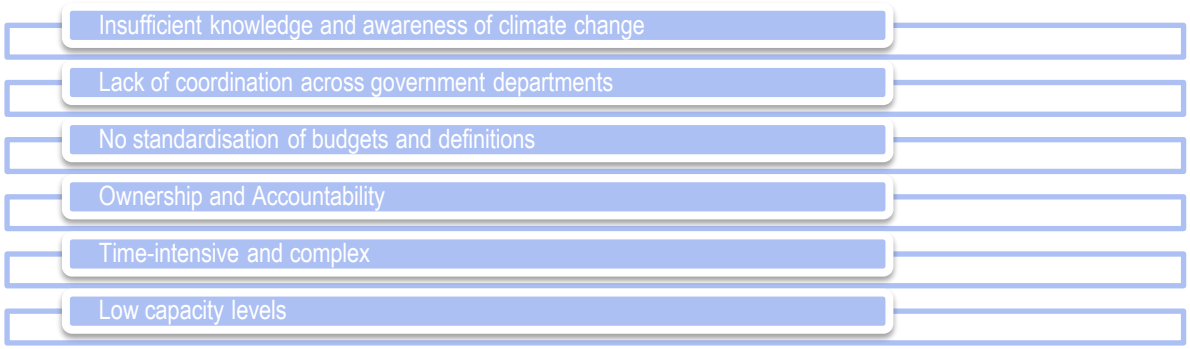
Once the pilots commenced, the initial design of the tool was put to the test to determine if it could be seamlessly integrated into government systems. However, the first obstacle that emerged related to the uniformity of government processes. Even though it was legislated that all municipalities had to be mSCOA compliant by 2017, the consultants found that municipalities were not compliant and noted that CBT would need to be rolled out alongside mSCOA in some municipalities. Municipalities such as uMhlatuze, who were mSCOA compliant, raised no major concerns with extracting budget information and implementing a CBT tag into the system. The lack of integration of this budgeting and planning system into municipal processes, coupled with the fact that the green finance taxonomy had not yet been finalised, thus removed the expectation of standardisation that underlay the initial design of the tool at the local level. In contrast, at the provincial level it was identified that provinces used standardised National Treasury reporting templates for their budgets, and some had a relatively good understanding of climate adaptation and mitigation.

4.2. CHALLENGES FACED BY SOUTH AFRICA'S CBT PILOT

As noted in the project findings, the lack of standardisation of budgeting systems and definitions proved to be a major barrier to the implementation of the tool across all local government entities as the consultancies needed to tailor the tool to the context of each entity when piloting it. The challenges identified were focused at the provincial and local level as the project failed to adequately conduct workshops at the national level due to the lack of involvement from national departments. Apart from this, several other challenges were identified by participants when piloting the tool (as noted in Appendix 3) including lack of internal capacity and political will.

The figure below summarises the key challenges identified by participants during the pilot, as categorised based on the information collected by the consultancies. These challenges relate to lack of capacity of administrative officials, lack of coordination across departments, time-intensive and complex processes, low climate knowledge and awareness and no clear identification for the use of CBT. At the municipal level, these challenges reduced the comparability of CBT and the ability to scale the tool across the large number of municipalities. The narrative that follows figure 5, provides a more detailed exploration of each challenge identified during the pilot, illustrating how these issues were experienced in practice. By integrating direct quotes from participants, this narrative aims to provide insights into the practical realities of applying the tool.

Figure 5: Summary of Challenges



Insufficient knowledge and awareness for climate change

The cross-cutting nature of CBT meant that it fell within the scope of several departments, with a particular emphasis on officials with finance or environmental expertise. As noted during the pilot, because the financial departments owned the budget process, they would have better knowledge on how and where the tag could be practically integrated into their systems without creating a parallel process. As participants from the City of Tshwane ('Tshwane') observed, '*only the specific cost-centre / GL managers would have sufficient knowledge of the activities undertaken under each budget line to allow for proper tagging*.' Therefore, the success of the tool relied on the expertise of officials from the financial departments as expenditure line items would need to be tagged.

However, the climate change knowledge assessments conducted by OneWorld and Mokoro revealed a gap in awareness within financial departments. Officials in the Gauteng Department of Transport ('Gauteng') highlighted the challenges, stating that '*finance departments particularly don't have much knowledge about climate change,'* which hindered their ability to tag expenditure appropriately at both the municipal and provincial level. Additionally, these same officials mentioned that '*the relationship with DFFE is not there and there is little knowledge about climate change,'* further exacerbating the lack of knowledge and awareness of climate change in a department that could not easily identify activities related to adaptation and mitigation efforts.

Lack of collaboration and co-ordination across government departments

Based on the feedback from participants during the pilot, departments directly impacted by climate change and climate-related activities, such as water and energy, were better positioned link their activities to climate adaptation or mitigation due to their technical understanding of their projects impacts on the environment. However, officials working in departments outside of the budget department, such as those working on climate-related projects, often struggled to break down the expenditure of their projects or determine what portion of the overall budget their projects fell under. The lack of collaboration across these departments made the implementation of the tool more complex, as highlighted by officials in Gauteng who indicated that '*There seems to be a lack of coordination across departments*.'

The pilot process further revealed that most project owners were not aware of how their functions related to the institutions overall budget or how programmes could be broken down to the budget level. For example, in the uMhlatuze municipality's pilot, it was observed that '*staff tasked with completing the CBT process could complete the tagging within their own sphere of responsibilities but were not able to expand the pilot process across the entire sector.*' This demonstrated the need for administrative budget officials to be part of the CBT integration process. However, this did not occur in most government entities due to both a lack of knowledge around the importance of mainstreaming climate change as well as insufficient coordination between departments.

Lack of standardisation of budgets and definitions

The insufficient climate knowledge and awareness by implementing units exacerbated the impact of the lack of standardisation of budgets and definitions, particularly at the municipal level. Each entity that the tool was piloted at used different accounting methods and financial management systems. For example, participants at the City of Johannesburg ('Joburg') mentioned that '*Most of the core services are delivered through corporatized municipal entities (City Power and Joburg Water) which have separate operational budgets and budgeting approaches, and*

do not prepare budgets under a vote/sub-vote structure, nor under cost-centres.' Thus, at the municipal level, pilots needed to be tailored to work with municipalities' internal budgets, rather than those used at a national level.

Furthermore, in the City of Cape Town ('Cape Town'), participants raised concerns around the initial design of the pilot, indicating that '*the financial data in the sheets do not align to that of our own data as we do not recognise directly the functional sub-categorisation of the departments*.' Moreover, the lack of coherent taxonomy meant that climate relevance was determined based upon individual interpretation, so projects were tagged against climate change categories with different levels of understanding.

Complex and time-intensive process

This increased complexity required to conduct tagging caused by lack of standardisation and insufficient climate knowledge, created a time-intensive process that was difficult to implement. This was coupled with the lack of financial and climate change skills as well as the capacity of administrative officials. Participants in uMhlatuze mentioned that '*the CBT process could impose additional burdens on municipal officials dealing with higher priority responsibilities. Evidenced by the length of time taken for the relatively limited tagging processes to be completed as well as the use of existing external supporting consultants for assistance in the process.*' Furthermore, officials in Cape Town further indicated: '*National Treasury places too much work on local government in terms of reporting on indicators*.' This made it difficult to implement all processes.

Additionally, even though most pilots took place in municipalities and metros with relatively higher capacities and appetite for climate change process integration, there was a lack of data availability. This was due to difficulty with retrieval of data for CBT caused by site-specific budgeting systems that were organised in a way that made it difficult to get the data. Tshwane participants noted that *'the process is relatively complicated and time intensive. The tagging process itself would need to be undertaken by the relevant managers and then returned into the system for input*.' The process thus became even more time and skill intensive as officials needed to first find the data before tagging the expenditure. This also meant the process would need to be conducted by higher level officials who could access the data.

Furthermore, both municipalities and provinces daily demands, administrative time constraints and the need to work across silos of expertise such as budgeting, planning and climate focused departments compounded the complexity. For example, the Eastern Cape workshops had to be rescheduled multiple times because the department was not able to attend. The complexity of the tool resulted in multiple municipal and provincial sites not completing the pilot phase.

No clear identification of use

The lack of coordination across government departments was further exacerbated as ownership of and accountability for CBT was not clearly identified. Even though pilot participants agreed on the need for information at this level, they voiced the concern that the lack of clarity around the tools implementation could result in it becoming a compliance exercise without real mainstreaming benefits. This was articulated by the officials in Joburg, who stated that '*the CBT system would be implemented as a mechanistic, "box-ticking" exercise and not really used to support climate change objectives*.'

The lack of ownership of specific tasks as well as the absence of clear pathways that align with processes that already exist created an environment focused solely on compliance rather than development because there was no clarity on the benefits and consequences of integrating the tool. Officials in Cape Town indicated that '*there is not a complete understanding of what the use, and associated value, of the information that a CBT system would produce would be*.' Further to this, even though participants in higher capacitated municipalities generally knew how the information could be used, the objectives for the data created was not clearly outlined, and it was not clear how it would be used practically. Officials therefore '*struggled to see value in the process, especially with the departmental structure changes. Information value exists, but it is difficult to see use for financial strategic decision making*.' This made the tool difficult to implement as overburdened officials needed to choose between completing daily tasks, that were clearly outlined in their job activities, in addition to tagging budgets, which was not.

4.3. PATHWAYS IDENTIFIED IN SOUTH AFRICA'S CBT PILOT

Apart from the challenges identified by officials during the pilot study, they also discussed pathways that would support the implementation of CBT to track climate finance at the subnational level. In addition to the activities identified by pilot participants, the consultant team proposed the implementation of a multi-stakeholder steering committee that would be mandated to make, document, and institutionalise decisions to direct and implement the tagging process. Because the system would be integrated across three autonomous spheres of government, it would need to be supported by a cooperative governance mechanism. This mechanism included a steering committee, advisory committee, technical task team and technical helpdesk that would be expected to provide methodological guidance and update activity lists periodically. To make the process simpler, clear templates would need to be created and integrated into existing financial management systems. Appendix 4 provides an overview of the pathways identified by officials and consultants in several entities that the tool was piloted at.

The figure below summarises the major pathways identified by participants during the pilot, as categorised based on the information collected by the consultancies. These pathways included identifying the department who would need to take responsibility for the tool and could, thus, be held accountable for its implementation; implementing it into existing processes and not as a new task; increasing capacity to undertake the task through human capital development and financial support; providing direct guidance documents with specific actions; implementing clear and consistent training for officials; and finally rolling it out by grouping municipalities and reducing the number of entities who will carry out the process. The narrative that follows figure 6, provides a more detailed exploration of each pathway identified during the pilot.

Figure 6: Summary of Pathways

Identifying the necessary departments

The cross-cutting nature of CBT meant that it would need to be integrated into activities conducted by several departments. Provincially, the officials in Gauteng indicated that '*finance departments within line departments would be the ones who would be entering the tagging in chart of account systems*.' However, at the municipal level, participants in uMhlatuze, noted that the '*allocation of responsibility for tagging should be given to line function departments and environmental planning unit coordinates. The budget departments must extract and provide budget information from the financial management system*.' As outlined, opinions on the key department who would need to be held accountable for the implementation of the tool varied amongst pilot participants. This was due to the tagging process requiring multiple departments to be responsible for different steps in tagging projects. One area of responsibility would lie with the officials who compile the budget, and the other area of responsibility would be with the departments executing the projects. However, in the section discussing challenges, it was outlined that departments developing and executing projects often lack a comprehensive understanding of the budget process and its broader implications. Furthermore, budget officials may not possess the necessary climate change knowledge to accurately tag projects.

Most participants, however, identified the clear need for the budget department to take responsibility for the tagging process by integrating it into existing systems. However, oversight responsibility from an environmental/ climate change focused department would be necessary. Even uMhlatuze participants indicated that '*a mandatory system needs to be included into the budgeting process where they take primary responsibility but a central unit outside of the budget and finance function needs to be involved to ensure quality control and consistency*.'

Officials in Tshwane discussed the importance of an environmental focal point outside of the budget department by noting that '*a CBT system would require coordination, capacity building, and support from a central point in the Metro, likely the City Sustainability Unit. Ultimately, however, the CBT system should be managed permanently from the Budget Office as part of the budget process*.' Therefore, it would become the responsibility of the departments implementing the projects to tag them appropriately at their level before submission to the budget department. The budget department, equipped with accounting codes aligned with these tags, would then be able to seamlessly integrate the information into any accounting system.

Integration into existing systems

Throughout the development of the project and implementation of the pilot, participants noted the importance of integrating the tool into processes that already exist, to mainstream it across government. This was emphasised by officials in Cape Town, who indicated that '*a CBT system needs to be part of the existing financial and project portfolio management systems of the municipality to ensure it is given the focus it needs. Otherwise, it becomes a secondary, unprioritised system and will not be used properly*.'

Participants further identified the processes that it could be integrated into as well as who it would need to be carried out by in the relevant government departments. However, there was no agreement on which system to integrate it into because of the different budgeting processes followed in each municipality and province. Tshwane officials indicated that '*the tagging should be done by, or with, managers responsible for cost centres in each line function department and an appropriate level of analysis for the pilot budget tagging process would be the General Ledger (GL) level*'. However, uMhlatuze argued that '*tagging should be done during vote creation, i.e. when the Budget office, in collaboration with the relevant department, creates a vote it could then include a tag with climate relevant expenditure*'. Finally, Cape Town held the view that '*Project tagging seems to be a more effective method than function or cost centre tagging*.' The common thread with all the options discussed was that it should be carried out in the budget department and with the support of relevant parties working on projects.

Capacitating the necessary departments

At both the provincial and local levels, a common challenge emerged - the lack of capacity among officials to effectively integrate CBT into their existing workloads. Capacity building would mean enhancing the human capital that already existed through education and training as well as by adding additional employees. Officials in Gauteng mentioned that '*adding an additional requirement would mean adding more staff*,' as it would require a significant amount of work to tag relevant climate expenditure in the budget. Additionally, the official identified would need to be held accountable for its implementation.

Furthermore, the integration of a tagging process would mean training staff to carry it out with the systems that are already used. Officials in Cape Town suggested that '*successful implementation of a new system will require a change management-based approach, supported by ongoing training and clear guidance.*' Therefore, building capacity within relevant departments would be a crucial step in seamlessly integrating CBT into the budgeting process. It would ensure that officials possessed the necessary skills and resources to effectively tag climate expenditure and use it for outcomes identified.

The pathways that follow further elaborate on the type of capacity building required, as well as the support needed to roll-out CBT to all municipalities.

Clear outline of actions

In order to streamline the task and ensure consistency in the process, regardless of the turnover of employees, a clear set of instructions would be required. This would further establish accountability and transparency in the way expenditure is tagged in the budget, reduce the level of ambiguity around the process and allow for easier extraction of data. In Tshwane, participants elaborated on what would be required to effectively integrate the tool

into government processes by stating that '*significant capacity building would be needed, as well as consideration of simplified and clearer tagging templates and support documentation, to ensure consistent tagging and tagging at the appropriate level of detail needed to provide meaningful outputs*.' They further identified ways to create a streamlined process by suggesting: '*the tagging (or justifications for climate relevance) should be done in fixed-text dropdown menus to ensure consistency and to assist participants,*' Furthermore, this would create a more simplified process that could be easier to integrate as officials would have a clearer idea of what would be required of them from the beginning of the process.

Workshops and training

Additionally, officials would need training on identifying climate relevant projects as well as green budget management to assist them with understanding the overall process. An important goal for the tool identified during the engagements was that it should be integrated into the existing budget structure and not become solely a reporting framework to national government as "*creating a parallel system would run the risk of becoming a compliance activity*", so training needed to be more hands on than only based on templates and methodological guidance.

The effectiveness of the tool being implemented into existing processes would be dependent on the quality of training and awareness building to officials using the current system. Training would need to be 'hands-on' to ensure participants understand what they need to do, how they need to do it, and where would fit into the overall system. Workshops would ensure that employees are well-equipped to understand, implement, and adapt to the new processes effectively. Officials in Joburg indicated that '*the initial encounter with the CBT was quite overwhelming, and it came across as overly complex and difficult. Only once there was a better understanding it was felt that the process was manageable*' which highlighted the importance of educating participants on how to use the tool in a language they understand and based on systems they understood. At uMhlatuze, participants emphasised that '*capacity building and training to ensure a maintenance of the tagging quality will be required'.* With appropriate initial training of the relevant staff, it was felt that the system would be able to be implemented across the municipality if it was made mandatory.'

Project Roll-out

Apart from the actual implementation of the tool within government processes, the pilots would need to be scaled and rolled out the to a large number of municipalities – if done at the local level. The final report developed by OneWorld and Mokoro (2022) identified that the District Development Model (DDM) could be used to roll-out CBT across the country as had been done in a previous project to develop climate health risk profiles in each district. This was due to the large number of municipalities that exist and the capacity constraints that impact them (Maswime, 2021). The capacity building workshops were separated into the nine provinces and provincial and relevant district stakeholders were invited to attend to be trained to use the tool (Petrie et al., 2021).

4.4. FUNCTIONS FOR CBT EXPLORED IN SOUTH AFRICA'S PILOT

One of the challenges identified that hindered the implementation of CBT was the lack of clear functions for the use of the tool. However, during the pilot workshops and throughout the project development process, the potential functions for the tool was also discussed. Identifying the need for the tool within existing structures would thus

be an important step in understanding what would motivate officials to track climate finance using climate budget tagging. Additionally, exploring the potential application of the information gathered would allow for clearer implementation at the subnational level, as lines of responsibility could be better outlined. Appendix 5 provides an indication of the potential functions for CBT identified by participants.

Even though the integration of CBT at the subnational proved to have several obstacles to its implementation, the potential benefits were significant enough for pilot participants to continue the process. A participant in Tshwane mentioned that '*there was potential for CBT to be used as a governance tool within the Metro, particularly in support of the Climate Action Plan.*' Not only would it bring accountability to budget processes, but it would also assist with mainstreaming climate change into the financial aspects of projects and strengthen the argument around its integration into strategic plans.

Furthermore, the tags would create data and could be used as a climate change indicator that would be measured and reported, thereby promoting the climate agenda, and enhancing governance processes and levels of accountability. In Tshwane, they recognised that it was *'possible tool to track progress against the Metro's Climate Action Plan*'. The uMhlatuze participants emphasized: '*CBT is relevant to the municipality's climate change management initiatives, mainly in the areas of tracking expenditure and reporting against municipal climate change and other environmental objectives*.' These indicators could then further be used to guide an entities climate strategy as it would, '*give better guidance to the decision-makers (including Council) in the Metro who can then make more informed decisions on issues relevant to climate change*.'

Additionally, they identified that CBT could be anchored in each municipalities climate action plans and directly support its objectives. However, it was clear that the process required much more simplicity and certainty to do this. An additional function of the tool would be to track spending based on funds from green bonds. This was identified by officials in Cape Town, who identified a potential overlap as they already '*tag projects in SAP system for green bonds.*'

4.5. SECTION CONCLUSION

The South African tool that was developed was based on international best practice, but its implementation would still need to face the wider political environment. CBT should not be viewed in isolation, but rather as a process that needs to be integrated seamlessly into the municipal system as it is just another tool to increase transparency and direct resources more efficiently. The capacity of the country's subnational government to carry out activities is quite strong relative to other countries that have implemented tagging, so it proves to be a good case study to use in determining the challenges to implement at this level. Furthermore, municipalities are responsible for the provision of basic services such as water, housing, electricity etc. However, there are several factors that hinder the ability of the subnational government to deliver efficiently, including the lack of standardised procedures, climate expertise and local capacity. Local government entities have faced obstacles with integrating this new tool due to lack of coordination and the ability to implement sound policies developed at the national level. This has been due to the system operating in silos and the lack of information and education provided to officials. Additionally, municipalities are not equally capacitated across the country, which impacts the ability to roll out

the tool to all areas efficiently. Furthermore, it is important to note that merely stating that the tool will direct strategy is insufficient. A clear articulation is essential, outlining how and where this data will be effectively employed at each level.

5. INTERPRETING KEY INSIGHTS AND LESSONS LEARNED

The information collected during the international review, contextual analysis and the piloting of Climate Budget Tagging (CBT) provide key insights into the ability to introduce the tool at the subnational level in South Africa and gain an understanding of the governance systems required to ensure its successful implementation.

As discussed during the international review of CBT, countries who introduced tool have shown a trend towards implementing it at the national level, across central level departments. Additionally, during the pilot programme, the context for tracking climate finance at the subnational level is particularly difficult due to several issues, with a particular emphasis on the lack of capacity at this level. However, pathways exist to enhance its practical implementation due to the opportunities for using the information to enhance transparency and direct strategy.

South Africa's history and institutional context plays a major role in its ability to implement a new tool such as climate budget tagging into its budgetary system. As set out in the second chapter - the South African subnational environment is well-established, in contrast to that of other countries who have introduced CBT. However, financial resources and skills are unequally distributed in municipalities and provincial entities across the country. When introducing a climate finance tracking tool such as CBT at the subnational level in South Africa, a major obstacle to its standardisation is the misaligned notion that all subnational governments are equally capacitated and operate in the same manner using similar budgeting tools sucg as mSCOA and clear definitions, as was initially the case when the pilot was designed with central budget officials. Therefore, to track climate finance using CBT, the recommendations must be multi-faceted and should support implementation through several different approaches that run concurrently.

The multi-faceted approach includes creating accountability and ownership for CBT by identifying where it should be housed, supporting officials to implement CBT, and identifying a structure that already exists to drive implementation across the country. The following sections interpret the findings for the global context, domestic institutional structure, and South African CBT pilot to develop actionable recommendations to track climate finance using CBT at the subnational level in South Africa.

5.1. CREATING ACCOUNTABILITY AND OWNERSHIP FOR CBT

Throughout the pilot conducted by OneWorld and Mokoro, officials at all levels of government indicated that CBT should be integrated into processes that already exist, rather than creating a parallel structure. This request, however, proves difficult in practice as the existing systems are often ineffective when introducing a new finance tracking tool in a standardised manner – which could be attributed to the lack of compliance with initiatives that exist to address this gap such as mSCOA.

Furthermore, the lack of coordination between national and subnational, as well the lack of collaboration within government entities, hinders the ability to introduce a cross-cutting tool such as CBT. As an example, that was noted during the pilot programme, low levels of awareness around the responsibilities for CBT from non-climate related departments such as budgeting makes it difficult to implement. This is due to officials operating in isolation, which results in budget departments having little awareness of the projects they collate information for, and climate-aligned departments, such as water and energy, having little awareness of the process for creating budgets. This trend of the cross-cutting nature of CBT impeding its integration into government entities is not

unique to South Africa, as noted during the analysis of international implementation of CBT. It even exists in countries who have already embarked on greening their public financial management systems. The literature found this to be due to budgets being compiled on a sectoral basis, within a static organisational structure. In the government entities assessed, sectoral departments usually work in isolation from each other due to a lack of communication both vertically (levels of government) and horizontally (government departments).

Several countries around the world – both developing and developed - have taken steps to providing transparency in their national climate change frameworks with tools introduced by international development partners. Tracking tools are generally introduced as part of broader green public financial management (PFM) processes and need to be coordinated across sectors and levels of government for countries to benefit most. Integrating these tools into a system where there is a legal foundation, clearly defined roles and terms, a review and validation process and a well set-out strategic plan makes the process much easier, because it creates ownership and accountability with all actors that are involved.

Implementing CBT to effectively track climate finance at the subnational level, given the associated challenges of its cross-cutting nature hindering ownership and accountability, can thus be done by clearly identifying the roles and responsibilities of officials in each department. CBT must be integrated at the nexus point where climate and financial governance frameworks intersect. Responsibility for the reporting of information collected by the tool should be placed with the budget department at the subnational level, because of the role it plays in collating expenditure across all departments. However, expenditure needs to be tagged by departments carrying out the projects when submitting it to the budget department.

To support budget departments with understanding the information supplied to them, tags should be aligned with accounting frameworks, so they have a clearer idea on how the information will be reported. It will also allow them to audit the information being provided by project-focused departments. Municipalities will then be able to formulate budgets where climate actions are identified clearly.

As the international case studies have shown, successful implementation of tagging procedures generally occurs when a) it uses the existing budget cycle and legal frameworks, b) includes clearly defined roles and responsibilities, c) has strong leadership and buy-in from the ministries of finance and planning, and d) is supported technically by the ministry in charge of the environment.

Enhancing the political will that drives the tool is key to creating ownership for CBT. At the national level in South Africa, the alignment between climate policy and financial governance is not strong. However, it is growing as National Treasury takes a more active stance in greening the financial system, despite opposing interests within the broader political environment.

Treasury has taken the lead in the implementation of CBT due to its own reporting requirements and the need to enhance transparency. However, the Department of Planning has oversight over annual plans that incorporate climate projects. Additionally, the Department of Forestry, Fisheries, and the Environment, holds the official mandate to coordinate the country's climate response but currently lacks the capacity to enforce policies at the subnational level. This has resulted in a lack of coordination with other departments, as identified during the pilot. All three departments will therefore need to play an active role in integrating the tools activities into their current structures. The process of mainstreaming climate change into the country's policies and strategies is thus key to

implementing CBT. It is already underway through process such as the Presidential Climate Commission's Just Transition Plan, as well as DFFE's Climate Change Bill. However, these linkages will still need to filter down to the subnational level.

Furthermore, the political will to introduce CBT comes with understanding how the data collected by tagging climate expenditure can be used to strengthen transparency and direct resources to the most vulnerable to climate change hazards. Opportunities for the use of CBT include tracking expenditure of green bonds. Municipalities, such as the City of Cape Town, have already introduced municipal green bonds, which thus creates a unique opportunity for the use of CBT. As noted by participants in the information collected by the pilot programme, ownership for the tool would be strengthened if there was a clear understanding of the use of CBT within each level of government. This would allow it to be better integrated into existing processes and enhance accountability around its implementation.

5.2. SUPPORTING OFFICIALS TO IMPLEMENT CBT

As noted during the pilot and the analysis of international implementation of CBT, structural issues that are related to insufficient capacity and knowledge, both financially and technically, also inhibit the ability to introduce CBT at the subnational level. The large administrative burden placed on local governments by national government, without sufficient resources to support it, risks the implementation of CBT becoming a compliance activity rather than a tool to track climate finance and use the information to direct strategy and enhance transparency at the subnational level.

The lack of climate change knowledge coupled with variations in the way the budget is created has been a key obstacle to the roll-out of CBT globally. Furthermore, there are fewer officials with knowledge of climate change at the subnational level than in national government. Administrative officials in government often refrain from operating outside of their scope of work. While they would often bear the consequences of a failed project, they would seldom reap the benefits of successful ones. Consequently, lower-level administrators tend to shy away from processes without clear guidelines, which has led to a bureaucratic culture and strict adherence to established rules and procedures. This lack of flexibility around entrenched systems and the paucity of practices that reward innovation further constrains the roll-out of CBT.

Moreover, the capacity of sub-national governments and a shrinking fiscal space reduces the prioritisation of climate issues in relation to that of socio-economic development and service delivery, this was highlighted during the pilot when participants often had to cancel workshops due to other daily tasks taking preference. It, thus, becomes pertinent to invest in developing the skill base of government officials and bringing in higher skilled officials. This includes increasing human capital or providing financial incentives to align with increased responsibilities. The entity driving CBT, will therefore, need to provide support both technically and financially to implement it effectively. According to both participants in the pilot study and international case studies this has been a key missing factor for its realistic implementation, given that increased responsibilities require increased support. Moreover, this support can be provided by leveraging existing structures in South Africa rather than creating parallel ones. Three such structures exist, as discussed during the assessment of the country's context.

Increasing human capital and the skills government entities have access to must be coupled with strengthening the skill base that does exist through successive workshop and training options. This will be supplemented by

guidelines and process documents that are co-produced by government officials to streamline CBT into the systems that already exist. The National School of Governance (NSG) can facilitate the introduction of these CBT training workshops, due to their mandate of building the skills and awareness of government officials. The NSG can introduce a course on the relevance of climate change and the way to tag expenditure for climate relevance. This structure already exists within the political system and will allow officials to be trained annually on how to use the tool. However, responsibility for overseeing the budget officials engage with the course will still lie with the municipal manager.

5.3. IDENTIFYING A STRUCTURE TO DRIVE CBT ACROSS THE COUNTRY

During the analysis of the data for the South African pilot a trend emerged relating to the capacity levels of government entities at all levels – national, provincial, and municipal (Mokoro and OneWorld, 2022). Officials were often not able to attend workshops or even complete work provided by the consultant team due to more urgent tasks, which then led to these workshops being postponed or cancelled. This was a recurrent theme, even though the entities that were selected to be pilots either had a larger resource base (Metros) or had already started the process of climate mainstreaming (uMhlatuze). Therefore, a challenge related to implementing CBT is that the process is time-intensive and complex. In addition, it places a significant administrative burden on line ministries that have to apply the tags due to the lack of capacity and communication. However, supporting local government through capacity building and support has become difficult due to the country's decentralised political and economic system.

The decentralised political environment at the subnational level increases the complexity around introducing CBT because local governments conduct activities differently, as noted during the pilot, when the use of the tool needed to be tailored to each entity's unique context in relation to their budgeting frameworks. Additionally, the strong will to keep the status quo in the political sphere keeps subnational governments in the dark about where to prioritise resources. There are some processes being implemented to change this, such as the Climate Change Bill, which will place requirements on key departments as well as on all three levels of government to produce climate strategies and oversight and accountability.

Furthermore, bottlenecks exist in relation to carrying out new budget-related tasks across all subnational governments in the country. The mSCOA framework and a green finance taxonomy should have created a conducive environment for the implementation of CBT, however, these structures have not been properly implemented across all entities. Integrating a new process such as CBT, thus, becomes a system-wide issue, instead of only a budgetary implication because of the lack of uniformity created by different budget formats and financial year end cycles across the three levels of government. This further leads to variations in budgeting systems, making the monitoring and co-ordination process significantly complex.

SALGA can play a facilitation role in supporting the implementation of this tool. This is due to it being mandated to build the technical capacity of government officials and serve as a knowledge hub for information that needs to be shared across local government. Theoretically, the associations' Working Group on Climate Resilience can identify the areas within local government that would require training and support to implement CBT. Additionally, they could engage with national government on how to practically provide this level of support as

they are required to co-ordinate co-operation amongst government levels. However, the association is also under capacitated, making it difficult to use as a structure.

Furthermore, as noted during discussions conducted in the pilot programme, the newly introduced District Development Model could support the scaling of the tool across municipalities in South Africa. If successful, it could be used to direct standardised capacity building and training workshops to all local municipalities in its constituency. A notable challenge to using the DDM to introduce CBT is the progress on the roll-out of this structure across the country. Moreover, it risks creating a parallel system, not easily integrated in some areas because the regulation of budgets is not a mandated activity for districts. DDM does, however, provide a useful avenue for increased support and expertise through its idea of District Hubs. Nevertheless, for co-operation in the provision of technical and administrative support between district and local to occur, local municipalities will need to request that support and be supported by the MEC for local government in the province. If it is used, training on the use of the tool should be conducted at the provincial level and information can be collected at the district level as done in the health risk and vulnerability assessment conducted by OneWorld and GIZ.

The Local Government Climate Change Support Programme is another structure that can be used to drive CBT implementation at the subnational level. As identified in the desk review, the program's core emphasis lies in municipal capacity building and fostering stronger intergovernmental relationships for climate change. It has been operating for over a decade and its widespread implementation creates a conducive environment for introducing CBT. Integrating climate change learnings into the existing "Let's Respond Toolkit" and climate finance guide appears to be the most promising approach. Leveraging this ongoing program offers the opportunity to capitalise on past experiences and collaborate with existing efforts, alleviating the common challenges faced by government departments when dealing with multiple consultants and strategies that often require implementation. By streamlining efforts through this established program, efficiency can be enhanced to ensure a more coherent and effective approach to CBT implementation.

Finally, at the subnational level, the provincial level of government is key to the implementation of CBT because of the role stipulated by budget legislation and its oversight responsibility. Provincial government will be required to work with the municipal mayor to set performance targets in relation to CBT and its implementation. Information collected at the local level should be submitted at the provincial level and aggregated to represent the whole province. This is due to provincial government being required to provide oversight to municipalities. Additionally, provincial treasury uses the same budgetary systems as at the national level, which makes it easier to report on the information. The District Development Model can be used to collate information for provincial entities and hold workshops to implement the project. Capacity building will, thus, be separated by province, with district officials being present to support the implementation of the tool.

6. CONCLUDING REMARKS

As the global commitment to increasing climate finance rises so does the need to enhance transparency around its use. Climate finance has historically been provided by the public sector, such as governments and international development finance institutions, but this is changing as the call for private sector involvement strengthens. Governments around the world are developing climate strategies to protect their citizens and reduce their emissions. Many are developing green public financial management plans to direct finance to the areas that require it most. Tools such as climate budget tagging have been developed to track climate finance and mainstream climate related expenditure and activities into government systems. However, implementing this tool is not straightforward because climate issues generally cut across government departments whereas these departments generally operate in silos – relying on separate systems and strategies to direct their actions.

This study established the context for tracking climate finance using climate budget tagging at the subnational level in South Africa by considering the institutional arrangements of local government and the strategic direction for climate related activities. This included an exploration of the existing structures that exist to implement CBT in the country. This was followed by an analysis of the international experience with using CBT to identify the major challenges faced by government entities, and the pathways that would support the introduction of CBT. Once this was completed, a deep dive into South Africa's experience with the piloting of CBT was assessed to create a clear understanding of the challenges and pathways identified by government entities who participated in the pilot.

The research has shown that most countries that have adopted CBT have done so at the national level of government with the support of international development organisations. Countries who have driven the process through their finance departments have garnered more success and buy-in than those who have done so through other departments. However, they have still faced obstacles related to the long-term implementation of CBT due to low levels of human resource capacity, a lack of climate knowledge and few financial incentives. A key point to understand is that many countries have developed tagging guidelines to track climate finance, but their execution has faltered due to the extensive capacity needed to gather the required information, the necessary climate expertise within government circles and the financial resources available to incentivise its large-scale implementation. The critical consideration here is not just the feasibility of developing such a system, as it can undoubtedly be done with the frameworks that exist, but rather its successful implementation over time, which has been a challenge faced by other processes worldwide.

The implementation over time has not been well documented as most countries have only begun including it in their budgets or are in the pilot phase. Furthermore, the introduction of CBT has not occurred at the subnational level globally. A few countries have begun expanding their national programmes to local and provincial entities with the capacity to implement the tagging methodology, but widespread implementation has lagged due to the number of entities with varying levels of resource access.

The South African tool piloted by OneWorld and Mokoro is fairly comprehensive and has been conducted at the local, national and provincial level, in contrast to its global counterparts. What sets the design of the South African tool apart is that it has attempted to be conducted the subnational level, a feature lacking in existing CBT systems

explored. The analysis of the South African pilot thus allowed the study to capture contextual nuances and understand the perspectives and experiences of key stakeholders involved at all levels of government.

Even though South Africa has begun the process of strengthening its climate response, the ability to practically implement climate finance tracking using climate budget tagging at the local level still requires support. Challenges related to insufficient knowledge of climate change, no clear lines of responsibility, unequal resources and capacity and inadequate standardisation have been major factors impeding the roll-out of the tool. Using Climate Budget Tagging to track climate finance, is however, a step that needs to be taken. Tagging increases the awareness of policymakers and government departments to integrate climate change into their budgets.

There are several pathways to that exist to successfully tracking climate finance using climate budget tagging, due to the institutional structures that operate in the South African context. This includes the strong leadership role taken by National Treasury to drive the implementation of the tool. This role should be filtered to budget departments at the local and provincial levels, with provincial governments playing a necessary oversight function. Additionally, officials must be supported to implement CBT. This can be done by increasing education and hands on training on the implementing of the tool, delivered via the National School of Governance. Furthermore, the tool will need to be implemented across all municipal, district or provincial entities if it is to effectively track the country's climate finance activities. Support can be provided by the Local Government Climate Change Support Programme by integrating the tool into the workshops and training manuals already being developed by this programme. This will allow for easier implementation across all municipalities. Additionally, the District Development Model will be able to support municipalities with climate and financial expertise through its District Hubs, however, this can only occur if the Model is properly introduced across the country, which is not yet the case.

All of this would, however, require significant financial investment so it is up to the political will of government to direct finance to these areas for the implementation of a new activity. Thus, to track climate finance using CBT at the subnational level, the focus should thus be on directing financing to the pathways highlighted. Investing in training and education is a key component of the solution. Enhancing the knowledge and skills of those involved will make the process simpler. Additionally, establishing clear lines of accountability is essential to identify the responsible parties for each stage of the process. Addressing these challenges and investing in the necessary improvements is the most viable path to making the system work effectively. The process of mainstreaming CBT into government systems is long and requires a significant number of resources across all South African regions.

In moving forward, countries can learn from these experiences to refine their CBT methodologies, considering the unique context of their political and institutional frameworks. The international community can further support these efforts by sharing best practices, facilitating capacity-building initiatives, and exploring innovative ways to address the challenges associated with CBT implementation at both national and subnational levels.

In conclusion, the novelty of climate budget tagging as a tool to track climate finance has resulted in a lack of data on its long-term success globally. The availability of data is thus a key limitation to the study. Additionally, the lack of expertise on climate budget tagging. Further areas of study include the role of green bonds in enhancing the introduction climate expenditure tracking. Finance provided through green bonds can thus be tracked using CBT, which will help to monitor the effectiveness of this investment at the local level. This is a key process to understand as tracking the expenditure of green bonds is already a requirement by investors providing funds for

these bonds. To do this, one can focus on unpacking how expenditure tracking is being conducted for green bonds and who reports on this information. In this respect, South Africa is a potential case study to identify due to the municipal green bonds that already exist.

7. REFERENCES

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APPENDICES

APPENDIX 1: GLOBAL COMPARISON OF PATHWAYS AND CHALLENGES TO IMPLEMENTING CBT

Country	Pathways	Challenges
Indonesia	• A CC unit within the Ministry of Finance (MoF) launched the Green Planning and Budgeting Strategy for Sustainable Development • Initially rolled out by ministerial decree to several emissions-relevant ministries • Introduced a climate change working group. • The tool was implemented through a process of socialisation, capacity building and data collection at the subnational level. • Prepared a guidance book and delivers annual training of the tagging methodology to several subnational governments. • The information is required for the green Sukuk bond that finances infrastructure in the country. • National government can use it to compare outcomes and refocus expenditures to achieve the necessary targets	• Overworked budget officials that have no incentive to do extra work for free. • Unequal resources across subnational government and the variation in technical and administrative capacity • Lack of political will to move away from income-generating carbon-intensive processes. • Higher climate expertise at central government level • No clear financial incentive and direct benefit for ministry's tagging the expenditure.
Philippines	• Climate change commission is the lead policy making body for climate issues. • National government agencies must tag budgets. Subnational level must tag annual investment plans. • CBT driven by commission and budget department. • CCC must train ministry budget officers and develop a module on CBT in the subnational capacity building program. • Budget department includes it in budget preparation instructions.	• Government officials lack knowledge and awareness to tag appropriately. • Large number of local government units – inter-governmental communication is difficult. • Lack of relevant technical expertise and financing support. • Short-termism of political candidates. • Overburdened administrative base.

Ireland	• Department of public expenditure and reform houses a CC unit that introduced tagging, but only covers government investment budgets at a central level. • They review all expenditure programmes then contact line ministries to validate and elaborate on projects selected. • The country's green bond requires the government to report on its allocation of funds to investors	• Cross-cutting projects that are directed by different departments.
Colombia	• National Planning Department (NPD) developed a CBT methodology. • Conducted annually, where the NPD is expected to collect project-level data on subnational expenditure and apply it to an online database	• No active involvement from the Ministry of Finance, • Overworked national and subnational entities view tags as a significant administrative burden. • NPD not sufficiently capacitated to validate tags.
Ethiopia	• Ministry of Finance and Economic Cooperation developed the country's first CBT method in 2017 but only expected to pilot it in 2021.	• Lack of data on how the process is implemented as there is no automated tagging process and expenditures are not currently tagged in the budget system.
Kenya	• The NT introduced a CC budget code and included it in the 2020/21 national budget. • Development of a tracking handbook to assist government officials with mobilising resources, planning budgets and coding expenditures. • The method covers all sectors on the national and sub-national levels, is coordinated by the NT and Ministry of Environment and is applied at the programme level	• Issue with institutional coordination for CBT by government entities due to the wide range of departments and levels that need to be included in the process. • Lack of capacity and incentives at the local level has further slowed the full integration of CBT
Uganda	• The National Planning Authority is expected to review performance reports of CC projects. • CC department provides awareness raising, knowledge support and advisory services to ministries and local governments • Tagging process is applied by technical staff at the local government level with the support of CC focal points and is fully integrated into the budgeting system	• Full rollout was delayed due to Covid-19 • Lack of clear lines of accountability and ownership • Weak linkages between national policies and local interventions.

APPENDIX 2: DESCRIPTION OF PILOT WORKSHOPS AND MUNICIPAL/PROVINCIAL ENTITY CONTEXT

Entity	Level	Pilots	Context
Gauteng (Transport)	Provincial	Workshop 1: Reasonable attendance. 14 subprogrammes represented by 8 officials.	Use standardised treasury reporting templates, Good understanding of adaptation and mitigation, Do not have climate specific M&E, Do not budget for disaster management and do not insure against disasters
		Workshop 2: only attended by 1 subprogramme - Gautrain Management Unit	
Mpumalanga (Agriculture)	Provincial	Workshop 1: undertook a rapid climate change impact assessment, participation good	
		Workshop 2: attended by 5 officials representing 16 sub-programmes.	
Eastern Cape (Agriculture)	Provincial	Workshop 1: About 9 units attended (/18)	
		Workshop 2: 2 units attended	
City of Joburg (energy and water)	Local	Workshop 1: Representation from the sectors, climate change directorates and the budget office were present.	Most of the core services are delivered through corporatized municipal entities (City Power and Joburg Water) which have separate operational budgets and budgeting approaches, and do not prepare budgets under a vote/sub-vote structure, nor under cost-centres.
		Workshop 2: took place with water representatives	Relatively advanced processes in integrating climate change management into environmental management, city planning and service delivery in the city.
		Workshop 3: took place with energy representatives	Established a Climate Action Plan (CAP) in 2021. The CAP does not have its own budget and relies primarily on mainstreaming climate action into the CoJ budget.
City of Cape Town (energy and water)	Local	Workshop 1: Most attendees out of all the pilot workshops. Extensive representation across the sectors, budget office and climate change unit.	Climate strategies are feeding into budget decisions in other departments but not through budget processes.
		Workshop 2A: 6 participants from 3 units within the municipality (Energy, Finance and Policy units)	Off-budget parallel systems exist where there are indicators similar to tagging, but not built into budget systems
		Workshop 2B: 5 participants to conduct it for the water sector	Significant discussion regarding the value and purpose of CBT and its applications.
		Workshop 3: Closing session attended by 8 participants from budget, energy and water	
Steve Tshwete	Local	Workshop 1: 2 participants, one from each sector department (transport and water)	Significant delays in communication when trying to set up workshops (pilot not completed)
uMhlatuze (energy and water)	Local	Workshop 1: There was representation from the Water and Sanitation and Air Quality Management Departments and the Budget Office	Tagging was done clearly, very good understanding and reasoning. Good understanding of local relevance.
		Workshop 2A: 3 participants for the energy sector	Only non-Metropolitan municipality that acted as a pilot site
		Workshop 2B: 2 participants for the water sector	mSCOA compliant and has a relatively standard budgeting and service delivery approach, and no fundamental concerns were raised with the ability to extract relevant budget information. As an mSCOA compliant municipality there were not any significant obstacles or changes that would be needed to implement a CBT process and to include the resultant tags within the system.

		Workshop 3: Closing session attended by 3 participants	Incorporated climate change considerations into its municipal strategy since at least 2009, when they developed a climate change strategy. Pre-existing level of awareness of climate change responses in the sectors that participated. An Environmental Planning Unit exists that is already tasked with coordinating climate change responses.
Tshwane	Local	Workshop 1: Conducted late in the process, when most other municipalities were finishing off. 8 participants at the initial kick-off from 5 units.	Developed a rudimentary system of CBT through capital planning system. When project owners capture projects they must integrate if the project has climate benefits
		Workshop 2: combined workshops for all 3 sectors (water, energy and transport), 21 participants from 5 units	The city has prepared a Climate Response Strategy (2022), which is a precursor to the City of Tshwane's Climate Action Plan developed under the C40 Cities Programme.
		Workshop 3: closing	Tshwane is not yet operating under the mSCOA system, and the current municipal system is SAP-based.

APPENDIX 3: CHALLENGES IDENTIFIED TO THE IMPLEMENTATION OF CBT

Institution	Level	Barriers
Gauteng (Transport)	Provincial	There seems to be a lack of coordination across departments
		Relationship with DFFE is not there and there is little knowledge about CC
		Finance departments particularly don't have much knowledge on CC
Eastern Cape (Agriculture)	Provincial	The large on-line workshops have not worked well
		Workshops had to be scheduled postponed multiple times because the Department was not able to attend.
City of Joburg (energy & water)	Local	Initial encounter with the CBT was quite overwhelming, and it came across as overly complex and difficult. Only once there was a better understanding it was felt that the process was manageable.
		CBT system could be implemented as a mechanistic, 'box-ticking' exercise and not really used to support climate change objectives.
City of Cape Town (energy and water)	Local	Difficult to tag OPEX budget because it is determined by availability of funds. Overheads very difficult to allocate, rather avoided
		There is a view that National Treasury places too much work on local government in terms of reporting on indicators.
		Timing of the process was challenging
		The financial data in the sheets do not align to that of our own data as we do not recognise directly the functional sub-categorisation of the departments.
		Participants struggled to see value in process, especially with the departmental structure changes. Information value, but difficult to see use for financial strategic decision making
		Project managers in the CoCT are currently overwhelmed with work generally, including climate change-related initiatives.
		There is not a complete understanding of what the use, and associated value, of the information that a CBT system would produce would be.
		The challenge of implementing new systems was raised as a concern, especially in a technical area where there is limited understanding of these issues throughout the City's business units and personnel.
Steve Tshwete	Local	Struggling to identify climate relevance due to the selection of Transport as a sector
uMhlatuze (energy and water)	Local	Concerned about operationalizing aspects of CBT as it needs to be fully understood
		Narrow focus - staff tasked with completing the CBT process could complete the tagging within their own sphere of responsibilities but not be able to expand the pilot process across the entire sector.
		CBT process could impose additional burdens on municipal officials dealing with higher priority responsibilities. Evidenced by the length of time taken for the relatively limited tagging processes to be completed as well as the use of existing external supporting consultants for assistance in the process.
Tshwane	Local	It's likely that only the specific cost-centre / GL managers would have sufficient knowledge of the activities undertaken under each budget line to allow for proper tagging.
		Potential for duplication of existing processes. There is already a Specific, Measurable, Attainable and action-oriented, Relevant, and Time-bound (SMART) indicator programme in the Metro aimed at formulating indicators for expenditure in the Medium-Term Revenue and Expenditure Framework (MTREF).
		Possibility of over-estimating climate relevant expenditure
		The process is relatively complicated and time intensive. The tagging process itself would need to be undertaken by the relevant managers and then returned into the system for input.
		A CBT process might lead to "malicious compliance" where the CBT process became just a box-ticking exercise.
		It was not clear that a CBT process was nuanced enough to readily identify how budgets were allocated to the most important adaptation items. Tagging not being well aligned to the specific climate change impacts on the city.

APPENDIX 4: PATHWAYS IDENTIFIED BY PARTICIPANTS.

Institution	Level	Pathways
Gauteng (Transport)	Provincial	Adding an additional requirement would mean adding more staff
		Finance departments within line departments would be the ones who would be entering the tagging in chart of account systems
Joburg (energy & water)	Local	Only work with the municipal CAPEX data for the pilots. But that to get the full benefit of a CBT system, operational expenditure should be included. It was recognised that this would need considerable capacity development within each department.
City of Cape Town (energy and water)	Local	Finance departments are unlikely to tag (solution: need mandated CC department to guide finance departments)
		Project tagging seems to be a more effective method than function or cost centre tagging
		Clear guidance documents supporting the required processes and procedures.
		Continuous workshopping would be required with project managers in the process of implementing the system to develop their technical expertise to implement the system effectively.
		Assisting with the design of the system itself; specifically, how it can fit in seamlessly with the existing financial and project management systems the City has.
		CBT system needs to be part of the existing financial and project portfolio management systems of the municipality to ensure it is given the focus it needs. Otherwise, it becomes a secondary, unprioritised system and will not be used properly.
		There needs to be a clear set of definitions (supported by guidance and procedures) for the various elements that would be used in the CBT system and associated processes.
		Successful implementation of a new system will require a change management-based approach, supported by ongoing training and clear guidance. This will also require technical support by either internal and/or external resources to support business units and their associated financial support personnel, to build their capacity to undertake the associated climate change-related analysis and classifications required.
uMhlatuze (energy and water)	Local	Applying those tools into the budget framework becomes critical- this would imply that there are dedicated resources in place to look at each project to ensure they adapt or mitigate CC in relation to the tools mentioned.
		Tagging to be done during vote creation, i.e. when the Budget office, in collaboration with the relevant department, creates a vote it could then include a tag indicating climate relevant expenditure.
		Allocation of responsibility for the tagging being given to the line function departments, with the Environmental Planning Unit playing mainly a coordinating and facilitating role. The main role of the Budget Office was to extract and provide budget information from the financial management system as needed.
		In practice the tagging would be undertaken within the line function departments outside of the financial management system and included in the system as budget tags once completed.
		Capacity building and training to ensure a maintenance of the tagging quality will be required. With appropriate initial training of the relevant staff, it was felt that the system would be able to be implemented across the Municipality if it was made mandatory.
		A mandatory system to be included into the budgeting process where they take primary responsibility but a central unit outside of the budget and finance function needs to be involved to ensure quality control and consistency.
Tshwane	Local	Appropriate level of analysis for the pilot budget tagging process would be the General Ledger (GL) level, which is equivalent to a sub-vote within each line function department for operating expenditure
		Significant capacity building would be needed, as well as consideration of simplified and clearer tagging templates and support documentation, to ensure consistent tagging and tagging at the appropriate level of detail needed to provide meaningful outputs
		The tagging should be done by, or with, managers responsible for cost centres in each line function department.
		The tagging (or justifications for climate relevance) should be done in fixed-text dropdown menus to ensure consistency and to assist participants – there could be an “Other” category as well to allow more specific inputs.

		Individual sector departments would need to play a central role in the process, therefore significant capacity building and training of the sector departments is required on the CBT process.
		A CBT system would require coordination, capacity building, and support from a central point in the Metro, likely the City Sustainability Unit. Ultimately, however, the CBT system should be managed permanently from the Budget Office as part of the budget process.

APPENDIX 5: OPPORTUNITIES AND FUNCTIONS FOR THE USE OF CBT IDENTIFIED BY PILOT PARTICIPANTS

Institution	Level	Opportunities/ Functions
City of Joburg (energy and water)	Local	Helped the team better understand the concept of mainstreaming climate relevant actions, as well as supporting thinking about moving towards deliberate intentions in business planning and budgeting.
		Process is useful in helping to guide thinking about the relationship between budgeting and the CAP process.
City of Cape Town	Local	Tag projects in SAP system for green bonds (potential overlap)
uMhlatuze (energy and water)	Local	CBT is relevant to the municipality's climate change management initiatives, mainly in the areas of tracking expenditure and reporting against municipal climate change and other environmental objectives
		CBT process could be made more relevant to the municipality if it was designed to track expenditure and progress against this Plan through specific "sphere strategy" tagging
		A CBT system could support current environmental management objectives.
Tshwane	Local	Potential for CBT to be used as a governance tool within the Metro, particularly in support of the Climate Action Plan.
		Results of CBT could give be used to give better guidance to the decision-makers (including Council) in the Metro who can then make more informed decisions on issues relevant to climate change
		Assist in mainstreaming climate change activities into line function departments
		Assist in raising finance for climate change management initiatives
		Possible tool to track progress against the Metro's Climate Action Plan