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Mainstreaming sustainability in public finances: where PFM meets landscape approaches

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ABSTRACT

Tackling climate change and environmental sustainability requires collaboration of multiple stakeholders, across several sectors. Traditionally, government responses to environmental issues have tended to come from regulation, taxation, and subsidies. This article is concerned with taking a holistic approach to integrating sustainability into government policy and practice through public financial management (PFM) and proposes incorporating features of a landscape approach, a concept from conservation and ecology studies, into PFM. The article sets out the many benefits of integrating landscape approaches with PFM and provides an operational framework for policy practitioners. In so doing, the public sector is positioned as one of many sectors in the landscape, and government public finances as a tool to directly address climate change, and to support initiatives driven by non-governmental actors.

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1. Introduction

Climate change and environmental sustainability have become dominant in contemporary discourse. From the 2016 Paris Agreement 2016,¹ to the 2021 COP26 Climate Pact,² countries have made various public commitments to address climate change; with ambitious targets on achieving “net zero” greenhouse gas emissions and limiting the rise in temperatures. Pihl (2020, 45) argues that these agreements often have low levels of commitment and that countries: “should use measures that governments can control and be made accountable for.” One such tool that governments are directly responsible for is the budget and associated public financial management reform. Traditionally, government policies have targeted climate issues through regulation, taxation and subsidies (Harris and Roach 2017; Peters 2012), with the aim of nudging firms and consumers toward more sustainable behaviors. Beyond these established interventions, there is scope to integrate sustainability into other aspects of public

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financial management, and to use public finances to support sustainability initiatives driven by the private sector or civil society in an integrated approach.

This article takes a holistic approach to integrating sustainability into government policy and practice through public financial management (PFM) and proposes integrating features of a landscape approach (which has traditionally been used in the private sector), with PFM. Experimentation with participatory budgeting in Porto Alegre, Brazil, suggests that including multiple stakeholders in the regional budgeting council can positively impact on environmental outcomes (Calisto Friant 2019). Alongside this, landscape approaches in Latin America have become increasingly popular, but do not position government public finance as integral to the approach (Reed et al. 2016; Reed et al. 2020). This paper is thus novel in proposing a framework for integrating landscape approaches with PFM.

A landscape approach reconciles conservation and development and adopts a multi-stakeholder process to tackling environmental concerns (Freeman, Duguma, and Minang 2015; Reed et al. 2020; Sayer et al. 2013). Unlike other multi-stakeholder approaches which address a variety of policy and/or development issues—see overviews in Biekart and Fowler (2018) and Fowler and Biekart (2017), landscape approach as a concept was born out of the conservation literature and its governing principles associated specifically with land use (Sayer et al. 2013). It follows that applications of the approach have related to reforestation and conservation schemes, with links to the private sector and trade (Bastos Lima et al. 2017; Deans, Ros-Tonen, and Derkyi 2018; Reed et al. 2016; Reed et al. 2020). Like other multi-stakeholder approaches, a landscape approach recognizes that actors have competing interests. However, while other multi-stakeholder approaches stress *participatory processes* and *consensus* on goals (De Bakker, Rasche, and Ponte 2019; Cheyns 2011), a landscape approach emphasizes the need to find a common entry point to successfully tackle conservation (Sayer et al. 2013; Reed et al. 2020). The focus on a common entry point assumes action will be expedited if concerns and solutions are owned by each stakeholder (Reed et al. 2020, 3).

PFM refers to “the set of laws, rules, systems and processes used by sovereign nations (and sub-national governments) to mobilize revenue, allocate public funds, undertake public spending, account for funds and audit results” (Lawson 2015, 1). As Allen, Hemming, and Potter (2013, 2) note, “while PFM encompasses taxes and other government revenue, borrowing and debt management; its main focus is expenditure management, especially in the context of public budgeting.” Throughout this article we emphasize the expenditure side of PFM in line with Allen, Hemming, and Potter (2013). The universe of PFM reform is very large (Andrews et al. 2014). Here, we emphasize a set of PFM reforms relevant to landscape approaches.

Recent papers have discussed “greening” aspects of public finances such as public procurement and public infrastructure (Mélou 2020; Wilker, Rusche, and Rymas-Fitschen 2016). Petrie’s (2021) contribution on “Environmental Governance and the Greening of Fiscal Policy” is the most comprehensive recent work in this area (that we are aware of), and builds on Jordan and Lenschow (2008) edited volume. Petrie (2020) posits a green approach to components of fiscal policy including strategic planning, budgeting and citizen’s engagement. Another important contribution is that of Sakrak

and Battersby (2021) who usefully document recent green PFM efforts, and propose a framework for “green PFM.”

The present paper builds on the foundations laid by Jordan and Lenschow (2008), Petrie (2021) and Sakrak and Battersby (2021). It advances the discourse on greening public finances in two ways. First, by linking landscape approaches and PFM, we consider how the government can use fiscal policy to work alongside/with various stakeholders from the private sector and local communities as part of a multi-stakeholder approach to tackling defined and agreed environmental targets. Previous applications of landscape approaches have been primarily private sector-driven and industry specific, and not directly linked to PFM. The paper is thus innovative in this regard. Second, drawing on the conceptualization of the PFM cycle and the key actors involved at various stages put forward in Lawson (2015), we take a deeper dive into how sustainability can be integrated into various stages of the PFM process as part of a landscape approach. The paper is thus useful to scholars as it presents a new framework linking PFM to landscape approaches, as well as to policymakers and practitioners as it outlines operational aspects of the approach. The article is especially timely as governments reposition fiscal policy to support a green post-pandemic recovery (OECD 2020).

Methodologically, the approach is inductive and relies on secondary literature as the main research tool, complemented by the authors’ professional experience of PFM in developing countries. The paper takes a three-step approach. First it draws on instructive literature from the landscape approaches and PFM discourse to outline the main tenets in each area. Second, the key challenges of landscape approaches based on theoretical and empirical insights are extracted from the literature, and PFM positioned as a means of mitigating some of these challenges based on lessons from the PFM literature alongside the authors’ practical experience with PFM technical assistance and reform.³ Third, based on the theory and evidence reviewed and the authors’ experience, the paper makes theoretical and normative arguments for integrating landscape approaches with PFM.

The rest of the paper proceeds as follows. Section two reviews the literature on landscape approaches and provides a brief overview. Section three does similar for PFM. Section four makes the case for integrating landscape approaches with PFM. Section five puts forward an operational framework which links PFM to landscape approaches. Section six concludes by discussing challenges and ways forward.

2. Landscape approaches—an overview

A landscape approach is a conceptual framework for addressing conservation and sustainability issues which involve collaboration of stakeholders to reconcile competing social, economic and environmental objectives (Freeman, Duguma, and Minang 2015; Sayer et al. 2013). The concept was born out of early conservation philosophy which promoted landscape-style thinking related to biodiversity of a geographic area, and then expanded to include people and society and their respective priorities in the landscape (Sayer et al. 2013). The landscape “constitutes an arena in which entities, including humans, interact according to rules (physical,

biological, and social) that determine their relationships" (Sayer et al. 2013, 8350). It can be a physical boundary such a country or jurisdiction within a country, and the approach can be sectoral/industry-specific (for example focusing on supply-chains related to cocoa farming) or integrated, where the approach is framed around multifunctionality and driven by cross-sectoral processes (Freeman, Duguma, and Minang 2015).

Landscape approaches have become increasingly popular in the private sector in the past decade. Recent examples include its use to better manage social and environmental issues in Brazil, Mexico and Ecuador, including helping to reduce emissions from deforestation and forest degradation (REDD+) and limit bio-diversity loss (Bastos Lima et al. 2017). It has also been used to promote better value chain collaboration in the Ghanaian cocoa sector (Deans, Ros-Tonen, and Derkyi 2018) and Malaysian oil-palm industry (IDH 2021).

A defining feature of a landscape approach is that there are multiple stakeholders, often with competing interests (Freeman, Duguma, and Minang 2015; Reed et al. 2020; Sayer et al. 2013). It is therefore imperative that a common concern entry point is defined, and targets agreed, which in turn requires significant negotiation and coordination (Sayer et al. 2013). For example, a landscape approach seeking to address biodiversity loss from palm-oil production would need to bring together private sector companies, local farmers, local consumers, local residents, development partners, civil society, and sub-national and national governments. Once a common entry point has been established and targets agreed, operational aspects like assigning land rights, defining responsibilities, and monitoring and evaluation of performance against set targets need to be managed (Sayer et al. 2013).

According to Bürgi et al. (2017), four pillars are needed to operationalize a landscape approach: (i) solid understanding of how the landscape functions and the roles and responsibilities of various groups, (ii) knowledge of societal demands and how the environment is changing, (iii) agreement on how the future landscape should look, and (iv) an agenda for transformation based on negotiated interventions. At the heart of any landscape process should therefore be support systems which bring stakeholders together, facilitate negotiations and mobilize resources (Vermunt, Verweij, and Verburg 2020). To be truly successful, the approach should consider continuity and institutionalizing the new "trajectory" from inception (Vermunt, Verweij, and Verburg 2020).

The increasing interest in landscape approaches has been particularly acute among global companies wishing to expand beyond using voluntary sustainability standards (VSS) to utilize a more holistic approach "to engage their supply chains, meet their deforestation commitments, and make claims about their progress" ISEAL (2018, 1). International bodies such as ISEAL and IDH have been integral to the landscape approach/global value chain space. From examples of landscape approaches in the past decade (Bastos Lima et al. 2017, IDH 2021, Reed et al. 2016, Reed et al. 2020), the government (either national or sub-national) is an important stakeholder, but not always the main driver of the process. As we will argue later in the article, the government is best placed to harness the sustainability benefits of a landscape approach using its public finances.

3. Public financial management—an overview

Public financial management concerns the institutional framework (laws, rules, process) that govern how governments raise, spend and report on public finances (Allen, Hemming, and Potter 2013; Lawson 2015). Several authors describe the PFM system in relation to the annual budget cycle (Andrews et al. 2014, 2; PEFA Secretariat 2011, 4; Kristensen et al. 2019, 2). In this conception, the budget cycle has four main elements (Figure 1): (i) budget formulation—how plans, policies, strategies and projections are incorporated into the budget; (ii) budget execution—the standards, process and controls that ensure resources are collected and used as planned; (iii) accounting and reporting—the accuracy and reliability of records, and timely dissemination of information; and (iv) external audit and scrutiny—independent review of public finance documents and processes. Lawson (2015, 1) extends the standard four-part conceptualization by adding “policy” as a first stage and “budget approval” as an intermediate step between budget execution and accounting and reporting. In so doing, Lawson (2015) stresses the importance of other key stakeholders in the PFM process—those that feed into policy, and the legislators who approve the budget.

Others have expanded the definition of PFM beyond processes to also capture its objectives. Andrews et al. (2014) note that PFM relates to how “governments manage public resources (both revenue and expenditure) and the immediate and medium-to-long-term impact of such resources on the economy or society.” Cangiano, Curristine, and Lazare (2013) similarly acknowledges the role of PFM in medium-term objectives, and also recognizes its contribution to reducing fiscal risks. PFM can also be vital in

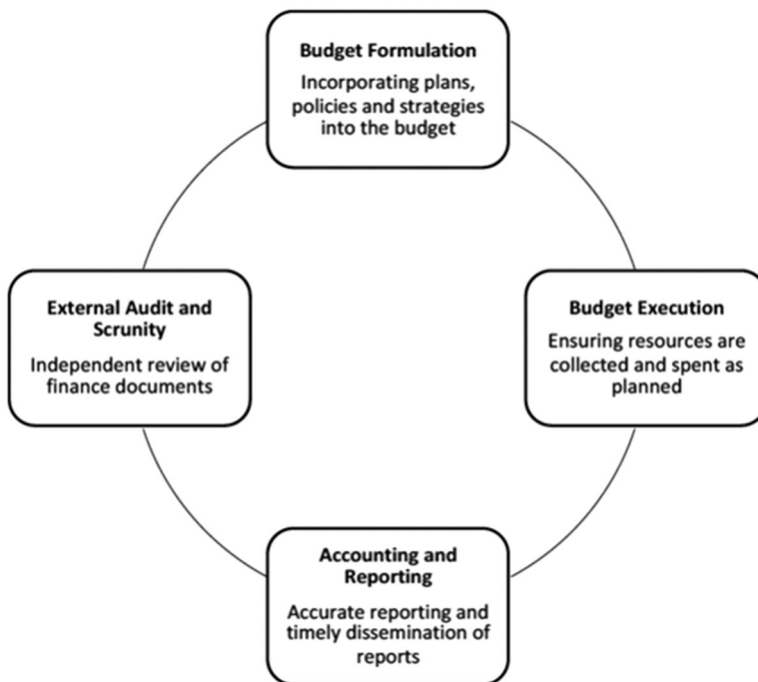


Figure 1. The PFM cycle.

Source: Authors' illustration drawing on Andrews et al. (2014), PEFA Secretariat (2011) and Kristensen et al. (2019).

achieving broader development objectives such as state building, macroeconomic stability, efficient resource allocation, and service delivery (Kristensen et al. 2019; Lawson 2015). We posit that environmental sustainability and climate change mitigation can be added to this list.

Achieving PFM objectives requires PFM reform aimed at improving the quality of budget institutions. Such changes are often far reaching and extend beyond revenue and spending to legislative changes. Common examples of interventions include (Allen, Hemming, and Potter 2013; Andrews et al. 2014; Cangiano, Curristine, and Lazare 2013): formalized budget preparation processes with established coding systems, medium-term planning and expenditure frameworks, fiscal rules to control government spending, public procurement reform, performance-based budgeting to incentivize achieving set policy objectives, legislative strengthening targeting parliamentary oversight of the budget, independent revenue collection agencies, integrated financial management information systems and consolidating all government revenues into a single treasury account, enhancing the reporting and audit functions, and promoting increased citizen participation in the budget.

4. Integrating landscape approaches with PFM

This section sets out the main arguments for integrating landscape approaches with PFM. We begin with theoretical arguments, followed by a discussion on how PFM can practically overcome some challenges with implementing landscape approaches identified in the literature. Finally, we discuss how existing PFM processes can be exploited to support a landscape approach.

4.1. Theoretical arguments

Analytically, the environment can be classified as a public good. In economics, public goods have two defining characteristics. They are non-rivalrous (consumption by one party does not prevent another from also consuming) and non-excludable as everyone can enjoy the benefits of the good (Stiglitz and Rosengard 2015). Economic theory suggests that public goods should be “provided” by the state as the private market fails to do this efficiently. It follows that environmental protection/conservation should be led by either central or sub-national governments, and as with other government policies the budget should be instrumental in sustainability objectives.

A second *a priori* argument stems from the nature of challenges related to environmental protection. These challenges are “wicked” problems (Head 2008). They are complex problems with multiple causes, non-linear dynamics, and adverse effects for society if left unaddressed. Addressing these problems requires large investment, given the scale of intervention needed, and bringing together multiple sectors over an extended period (often decades). Again, the government is best placed both in terms of resources and reach across many sectors.

A final argument lies with the intergenerational nature of the problem. Though administrations change, the “state,” in principle, continues to exist. From a cost-benefit

perspective, the government is thus one of the few entities for which the future costs (and benefits) naturally enter the optimization equation—though not perfectly.

4.2. Using PFM to overcome challenges with a landscape approach

The literature identifies several implementation challenges associated with landscape initiatives. Figure 2 summarizes challenges documented in recent papers, drawing on both theoretical contributions (ISEAL 2018; Sayer et al. 2013), and empirical reviews (Bastos Lima et al. 2017; Deans, Ros-Tonen, and Derkyi 2018; IDH 2021; Reed et al. 2016; Reed et al. 2020). Deans, Ros-Tonen, and Derkyi (2018) and IDH (2021) discuss examples from the Ghanaian cocoa sector and Malaysian palm oil industry where actors outside the value chain become involved in value-chain collaboration (VCC). The Bastos Lima et al. (2017), Reed et al. (2016) and Reed et al. (2020) all review experiences in Latin America as part of the reducing emissions from deforestation and forest degradation (REDD+) initiative. In none of these cases were the government and its budget as significant to the landscape approach as proposed in this paper. Some challenges (related to coordination and participation, for example) surfaced under other multi-stakeholder approaches (De Bakker, Rasche, and Ponte 2019; Cheyns 2011), and experiments with participatory policy and budgeting (Calisto Friant 2019; Saguin and Cashore 2022). Others are specific to the conservation focus of landscape approaches—for example defining land rights and measuring deforestation.

Challenges identified can be grouped into four categories based on Vermunt, Verweij, and Verburg (2020) framework. These include participation problems where key stakeholders fail to engage; interaction problems where issues with negotiation, collaboration and communication arise; resource problems where necessary resources

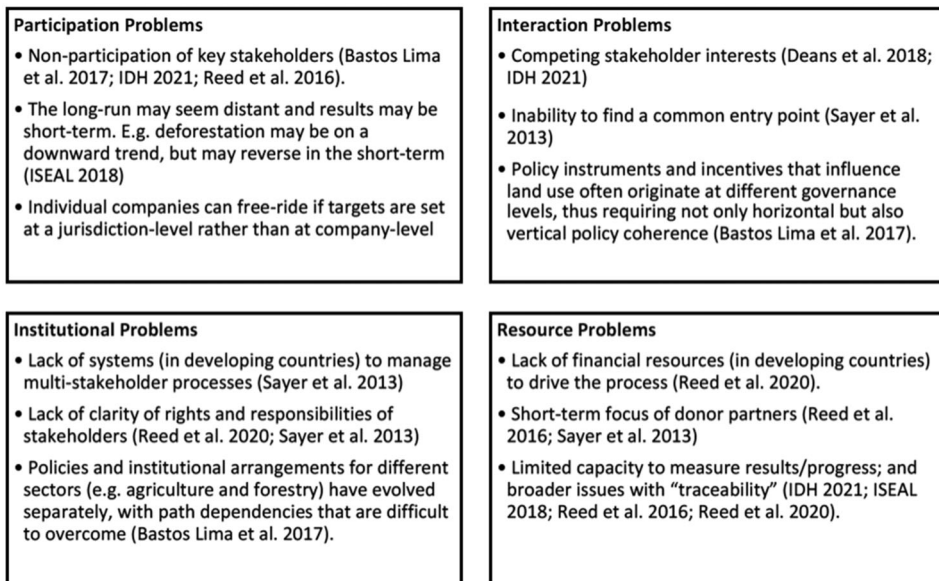


Figure 2. Challenges to implementing a landscape approach.

Source: Authors’ illustration: challenges identified from the literature and classified using Vermunt, Verweij, and Verburg (2020) framework.

such as finances or knowledge are lacking; and institutional problems where institutional arrangements are either missing or ill-suited. The government, through the use of its public finances and other policies, can overcome several of these challenges.

Budgetary resources can be used to relax resource constraints. As noted above, the scale and public goods nature of conservation efforts would result in no/insufficient effort from private actors, especially when there are many distinct actors (Stiglitz and Rosengard 2015).

One example of using budgetary resources to address these issues is by funding a coordination office. This would alleviate a management/organizational challenge, and facilitate bringing multiple stakeholders together. Such a function would address participation, interaction and institutional problems (see [Figure 2](#)). It would host dedicated human resources to: (i) engage stakeholders, thereby increasing chances of participation of difficult to reach groups; (ii) work toward understanding interests of various stakeholders, with the objective of converging toward a common entry point; (iii) collaborate with other government bodies to ensure legal rights are clearly established (such as land tenure) and that other government policies (such as agriculture, trade and industry) are consistent with sustainability goals; and (iv) monitor performance against targets agreed by stakeholders. Other examples (which also boost participation) include using subsidies to incentivize different agents to participate in conservation efforts—for instance subsidizing local sustainable farming or capacitating agricultural extension services to better advise on sustainable practices.

The examples above assume government's ability to allocate resources to supporting the landscape approach. The government can also use the budget to simultaneously generate resources. For example, taxes can be used to incentivize participation—taxing large polluting firms to reduce emission which also raises revenue (to fund pro-environmental spending). Admittedly, government resources may be limited in developing countries (Reed et al. 2020). Here, development partners can assist through budget support, say, but this requires a long-term outlook by donors (Reed et al. 2016; Sayer et al. 2013).

4.3. Building a landscape approach into the PFM process

Recent work has focused on “greening” the budget or types of spending (Mélon 2020; Wilker, Rusche, and Ryma-Fitschen 2016). Petrie (2021) and Sakrak and Battersby (2021) expand the literature beyond green budgeting, conceptualizing broader integration of environmental sustainability into the PFM process. On the other hand, both Petrie (2021) and Sakrak and Battersby (2021) focus primarily on the public sector, giving insufficient attention to efforts by private actors and civil society, and how government can support these actors. A landscape approach positions the government as one of many stakeholders, and the public sector as one of many sectors in the landscape.

Building on the PFM cycle presented in Lawson (2015, 1), [Figure 3](#) illustrates a landscape approach to PFM, highlighting both the multi-faceted feature of government and the multi-stakeholder nature of PFM processes. It places the government as one of many actors in the “landscape” with PFM as a tool for promoting green government objectives and supporting initiatives that may be driven by other actors such as the

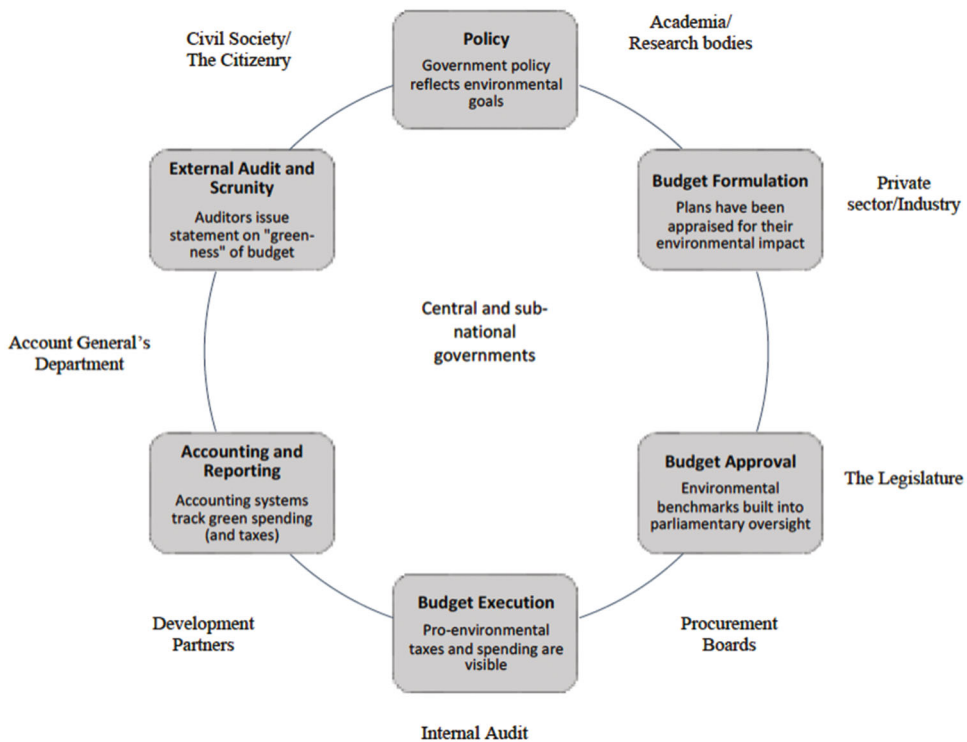


Figure 3. Key actors in a landscape approach to PFM.

Source: Authors' illustration, modified from Lawson (2015, 1).

private sector, development partners, civil society, and other citizen groups. Importantly, such an approach recognizes that climate mitigation and environmental sustainability require collaboration of different stakeholders at all stages in the PFM cycle. Stakeholder participation in Figure 3 captures the two logics described by (Saguin and Cashore 2022)—“participation for design” at the policy and budget formulation stage, and “design for participation” at the reporting and scrutiny stage to enhance legitimacy.

Research bodies, academics and other members of the scientific community can provide knowledge on the current (baseline) environmental situation, which can inform policy and targets. They can also provide evidence to feed into evidence-based policy-making and budgeting. For example, academic studies can inform if subsidies for green farming should be funded, and the appropriate levels to motivate a given behavioral response.

Private sector companies are usually the biggest emitters of greenhouse gases, and citizens' livelihoods are affected when a new green policy is introduced (Reed et al. 2020). Both are thus key stakeholders in policy formation to ensure buy-in and compliance. The latter is particularly important in jurisdictions where there is limited capacity to enforce laws and regulations. Both groups can also present initiatives borne in either the private sector or among communities for institutionalized backing through policy and/or financial support through the budget. For example, Voluntary Sustainability Standards (VSS) and jurisdictional compacts have been used by environmentally

conscious companies (IDH 2021; ISEAL 2018), but could be further enhanced through public sector support.

With respect to budget approval, budget execution and accounting, capacity development of key groups/agencies is needed to ensure a green budget is realized. The legislature should be sensitized on climate change mitigation to competently question and engage with the budget presented. Procurement boards should be trained on green procurement and a list of “green suppliers” established, and the internal audit function in turn should provide checks on this. The Accountant General’s Department could amend the chart of accounts to better track and report on green spending. Related to this, development partners can incentivise green spending by linking it to development support.

Finally, the external audit should be able to comment on how “green” the actual budget performs against targets, linking this to wider policy objectives. Performance should also be reported to the citizenry, in keeping with transparency and accountability standards of good PFM practices (Kristensen et al. 2019; Lawson 2015), and ensuring communities that are most affected remain an active part of the process.

5. Operationalizing a linked approach

Drawing on the literature on landscape approaches and PFM, and our practical experience of PFM reform, we propose a framework that links PFM and landscape approaches (Figure 4). It comprises two areas—foundational interventions and operational interventions. Foundational interventions are initial conditions needed before a landscape approach can be fully implemented. Operational interventions are continuous actions needed to successfully execute a landscape approach.

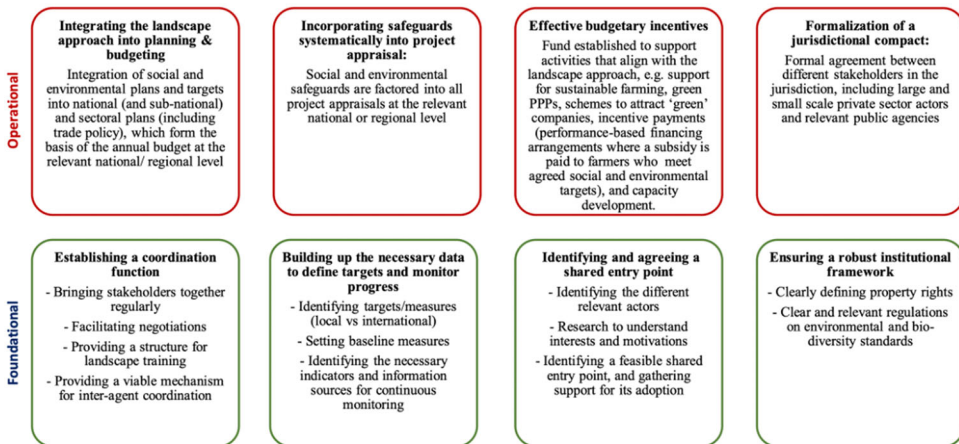


Figure 4. Framework for operationalizing a landscape approach—foundational and operational interventions.

Source: Author illustration drawing on literature and professional experience.

Note: Foundational conditions are initial conditions that are needed before a landscape approach can be fully operationalized. Operational processes are the policies/action steps that need to be taken to operationalize a landscape approach linked to the main parts of the PFM cycle.

5.1. Foundational interventions

Before a landscape approach can be fully operationalized, certain foundations are necessary. These processes/conditions lie at the base of the framework and relate to institutional and organizational challenges the government can help to unblock.

First, and arguably most important given the multi-stakeholder, multi-sector feature of an integrated landscape approach, a coordination unit (financed through the budget) is needed to bring together stakeholders, facilitate negotiations and arrive at a shared entry point, formalize agreements reached through instruments like jurisdictional compacts or memoranda of understanding (MoUs), and to organize/facilitate any capacity development initiatives. To ensure continuity and institutionalization of the landscape approach—a true measure of success according to Vermunt, Verweij, and Verburg (2020), such a team should ideally exist within central government (for example the Ministry of Planning), with support from sub-national government (where it exists).

Second, any compact/MoU or incentive scheme needs to be informed by agreed targets and performance measured against targets. Data challenges often make setting targets difficult (IDH 2021; ISEAL 2018; Reed et al. 2016; Reed et al. 2020). For example, current institutions may not be capable of measuring and monitoring greenhouse gas emissions, deforestation, soil quality, etc. Data infrastructure are thus foundational. To support a landscape approach, the government can assume responsibility for data collection and monitoring, even if this mean bringing together data collected by other agents into one repository. Some crucial steps in this include agreeing on (i) data sources, (ii) data formats—for consistency and ease of evaluation, (iii) baseline performance levels; and (iv) target performance over time (ISEAL 2018). Here, the government can draw on researchers and the scientific community to advise on optimization models, climate scenarios and monitoring frameworks.

Third, understanding different incentives and formulating a shared entry point is foundational. For example, understanding what drives large private sector companies versus small-scale farmers in the local area is critical before devising policy, setting regulations, or formulating financial incentives. To arrive at a shared entry point, trust and understanding among partners is needed to enable a collaborative learning processes (Bürgi et al. 2017). The process should not be top-down, and should include all relevant stakeholders.

Fourth, basic institutional arrangements are needed to overcome collective action problems and minimize free-riding. For instance, incentives for farmers to improve sustainability are more powerful when property rights are clearly defined (versus if land were common property). Sustainable farming derives long-term benefits but with high upfront costs, land insecure farmers are less likely to invest if property rights are unclear. Strengthening the institutional framework is thus foundational.

With these foundations in place, the government can then utilize public finances operationally to support the landscape approach and mainstream sustainability in fiscal policies and PFM operational procedures.

5.2. Operational interventions

Operational interventions directly link to the PFM cycle. First, government should ensure that social and environmental issues are integrated into planning processes. For example, are limits on deforestation/re-afforestation targets mainstreamed into sectoral policies and plans such as agriculture, housing, trade, works and transport? Is trade policy aligned with broader environmental goals and recognized standards? A coherent government-wide approach at the strategic level is essential.

Second, the project appraisal system should include an environmental impact assessment. Such a system may require initial capacity development, financed through the budget (or by a development partner). Capacity development may also be needed for some foundational processes such as data management and coordination.

Third, the budget can be used to support sustainable/green initiatives. For example, sustainable farming can be supported with grants/low interest loans to small-scale farmers, and/or incentivized through performance-based financing/subsidies (or tax breaks to larger companies) linked to environmental targets. A more direct approach would entail spending on green public goods (such as irrigation systems) or aligning public works programmes with environmental objectives.

Fourth, the government can use its many platforms for public awareness. This can range from reporting on green PFM performance as outlined in [section 4.3](#), to using public platforms to raise awareness of other non-government driven initiatives in the landscape that contribute to sustainability goals—for instance Voluntary Sustainability Standards and jurisdictional compacts.

It should be noted that although the framework for operation presents a two-stage approach, it should be viewed as a dynamic and iterative process rather than a linear one. Moreover, the foundational areas are co-dependent and should be addressed simultaneously. For example, a shared entry point is fundamental to the landscape approach (*foundational*). To arrive at this requires: (i) identifying different actors, (ii) researching/understanding their interests/motives, and then (iii) identifying feasible shared entry points. Once a shared entry point is reached, a jurisdictional compact can be agreed, and incentives which target identified interests incorporated in the budget (*operational*). However, the identification of a shared entry point and development of a jurisdictional compact requires a strong coordination team to bring together various stakeholders (*foundational*). It is also possible that after a jurisdictional compact is agreed and budgetary incentives put in place (*operational*), new data emerges or new stakeholders are identified (*foundational*), which require updating operational processes. Regular iteration between operational and foundational areas is thus essential to the success of the process.

6. Challenges and ways forward

Landscape approaches have not been positioned within PFM processes. This is relatively new and has significant potential. We have presented theoretical arguments, potential benefits of integration, and a two-stage operational framework. We conclude by highlighting some challenges that remain and discussing ways forward.

Addressing environmental sustainability requires an “all hands-on deck” approach and strong policy coordination. The core of a landscape approach requires a shared entry point. It may be possible, however, that consensus is reached on the problem but a common entry point that all stakeholders agree with may be difficult to attain. As noted, a strong coordination unit is essential to mitigating this challenge. However, with many competing stakeholder interests, there is always a risk that interests diverge beyond a point of reconciliation.

Tackling environmental sustainability also requires strong political will to drive the process. This has proven to be a challenge in previous landscape approach interventions (Bastos Lima et al. 2017). For example, if an environmentally unsustainable practice is deeply linked to cultural traditions, political actors are unlikely to commit to the approach through policy and public finances if their interests diverge (from a political economy perspective). In developing countries, donor partners can play a role in this regard by linking parts of budget support to green public sector performance.

A third set of challenges, and one which affects other types of multi-sector approaches, relate to institutional and bureaucratic issues. If policies and institutional arrangements for different sectors have evolved separately, attempting an integrated approach may be challenging owing to path dependencies that are difficult to overcome. For example, if trade policy has been underpinned by attracting large extractive companies, attempting to reconcile this with a green agriculture policy will be difficult, especially in the short-term. The extent to which this can be overcome depends on existing institutional structures, how amenable systems are to change, and in the case of regional initiatives, the autonomy of sub-national governments to make changes.

Despite these challenges, there can be significant benefits from bringing landscape approaches into the public sector and harnessing public finance to achieve environmental sustainability objectives. These range from mainstreaming environmental objectives across the public sector to addressing some of the challenges experienced when implementing landscape approaches. There is also opportunity to learn and improve with each effort. The past decade has taught us important lessons with landscape approaches (Reed et al. 2020), and knowledge of PFM reform continues to advance. Specifically, the government budget has progressed beyond its traditional fiscal objectives to target wider social issues like gender. We contend that environmental sustainability requires a similar “mainstreaming” in public financial management as the global community and their representative governments work toward the ambitions set out in the Paris Agreement and subsequent climate change conferences.

Notes

1. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>
2. <https://ukcop26.org/the-glasgow-climate-pact/>
3. Both authors have extensive experience in public finance and public policy – over 35 years’ in 47 countries and 10 years’ experience in 6 countries.

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Disclosure statement

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