Report

Public expenditure on trees on farms and sustainable management of natural resources in Uganda from 2015 to 2020

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Photo by Douglas Sheil/CIFOR
Landscape of Uganda.

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Definition of key concepts

Below is a definition of some of the key concepts used in this document, providing a better understanding within the context of this budgetary analysis:

i. **Agroforestry:** The interaction of agriculture and trees, including the agricultural use of trees, a focus area of World Agroforestry (ICRAF). It involves the interfaces and interactions between agriculture and forestry, encompassing farmers, livestock, trees and forests on multiple scales. Interactions between trees and other components of agriculture may be important on a range of scales: in fields (where trees and crops are grown together), on farms (where trees may provide fodder for livestock, fuel, food, shelter or income from products, including timber) and landscapes (where agricultural and forest land uses combine in determining the provision of ecosystem services).[1]

ii. **Trees on farms (TonF):** The integration of different tree species within agricultural lands for the purpose of contributing directly to household food security, firewood, household incomes, medicines, and ecosystem services that provide supporting and regulating functions, such as carbon sequestration, the prevention of soil erosion, as well as improved soil and water quality.

iii. **Sustainable management of natural resources (SMNR):** Interventions intended to reduce environmental degradation pressures and restore degraded ecosystems on farm lands.

iv. **Budget allocation:** Funds appropriated and approved by the Parliament for a particular purpose, in this case **sustainable resource management activities** or **trees on farms.** This may cover wages/salaries to staff in the agencies concerned; the planting or distribution of tree seedlings to farmers; extension and advisory costs; tree nursery development and certification; and capacity building.

v. **Budget release:** The actual amount sent to the vote/institution against the approved budget. This amount is usually below the approved budget, depending on the economic performance of the country. When the released budget is above the approved budget, it may imply a supplementary budget release during the course of a financial year.

vi. **Vote:** The spending entity against which the budgetary funds are allocated or appropriated. Examples: MWE – Vote 019, NFA – Vote 157.

vii. **Ministerial policy statement:** An annual publication of the ministry/vote on past financial performance, the work plans and the requisite budgetary allocation for the financial year ahead.

viii. **Sector performance report:** An annual performance report produced by the sector secretariat. It should include both financial and physical achievements of the financial year ended.

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1   Coulibaly JY, Chiputwa B, Nakelse T, Kundhlande G. 2017. Adoption of agroforestry and the impact on household food security among farmers in Malawi. *Agricultural Systems* 155: 52–69

Table 1. Conceptual framework guiding the public expenditure report

1	Spending basics	Which ministries are allocated a budget for the management of natural resources and TonF? How much do they spend, and what do they spend it on – establishing a "business as usual" scenario upon which to build a biodiversity finance plan
2	Agriculture and environment categories	What are the trends in budget allocations and expenditure for the Ministry of Agriculture and the Ministry of Water and Environment over the past 5 years?
3	TonF and SMNR categories	What are the trends in budget allocations and expenditure for SMNR and TonF over the past 5 years?
4	Policy alignment	Is spending aligned with the stated government policies and priorities? Which thematic areas/ministries are the better financed ones and why? How does financing compare with these sectors' contribution to GDP? How does spending on agriculture and environment as well as TonF and SMNR compare with spending on other sectors/objectives?
5	Delivery patterns	Is all the money that is budgeted being allocated? Has all the money that has been allocated been disbursed and spent? If not, what are the possible explanations? Are there barriers to spending allocated budgets? What opportunities exist for integrating TonF and SMNR more effectively into the budgeting processes?
6	Financing sources and solutions	Are there opportunities for improved efficiency of TonF and SMNR financing within the public expenditures?
7	Future spending business case	What TonF and SMNR expenditure trends and data can be identified to predict future spending? How do these projections compare with future expected TonF and SMNR needs?
8	Business case	How can we use the information in this expenditure review to make a better business case for increased TonF and SMNR allocations? The outputs of this report will be turned into 2–3 policy briefs that answer the above questions. These will help policymakers understand the general trends in TonF and SMNR expenditures, and whether this is in line with Bonn Challenge pledges and the government's post-2020 vision.

1 Introduction

This report presents findings from an assessment conducted on selected key votes, namely those relating to the Ministry of Water and Environment (MWE), the National Forestry Authority (NFA), the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and the National Agricultural Advisory Services (NAADS). It is based on approved work plans and budget allocations to the votes, programmes and sub-programmes from 1 July 2015 to 30 June 2020.

This technical report highlights total budget allocations within the two above-mentioned ministries and their agencies in relation to their allocated budget shares towards the financing of sustainable resource management activities on the agricultural landscape in general, and the financing of trees on farms in Uganda over the past 5 years.

The report seeks to establish and improve the extent to which government financing is consistent with the overall objectives of the IKI Trees on Farms project. These objectives are to;
i. support long-term sustainable development by helping to conserve biodiversity, contribute to ecosystem services and provide sustainable incomes through the incorporation of trees into agricultural and productive landscapes
ii. help mitigate climate change by increasing net aboveground biomass
iii. increase understanding of the biodiversity and agricultural communities so that institutions will incorporate trees on farms in biodiversity planning
iv. develop interventions that are cost-effective in financial and livelihood terms.

1.1 Background and context

Uganda has a total area of 24.155 million ha, of which the land area is about 20.4 million ha, and the rest is covered by open water and wetlands[2]. For many years, the country has depended on its natural resources, including natural forests and woodlands, for economic development and the livelihoods of the country's mostly rural population. According to the Forest Landscape Restoration Opportunity Assessment Report for Uganda (2016), standing forests covered about two million ha (approximately 9.6% of the land area) in 2015, and these are categorized broadly into forest plantations, tropical high forests and woodlands. However, there are also trees scattered in bush lands, grasslands, subsistence farmlands and commercial farmlands (The FSC National Forest Stewardship Standard of the Republic of Uganda 2018).

Forest cover has declined from 24% (or 4.9 million ha) in 1990 at an annual rate of about 1.4% (200,000–220,000 ha), placing Uganda among the world's most rapidly deforesting nations, while the forest sub-sector contributes more than 6% of gross domestic product (GDP). Deforestation and forest degradation have occurred mostly in northern moist farmlands (Greater Acholi, Lango and West Nile), southwest rangeland (the Cattle Corridor), western mid-altitude

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2 https://www.nfa.go.ug/images/reports/drafttechnicalreport.pdf

landscapes (Bunyoro and Toro) and on the slopes of the Rwenzori and Elgon mountains (MWE/ UG-FLR 2016). At this rate, it is projected that the country will be devoid of forest cover by 2040 if no serious action is taken.

However, in 2019, standing forests represented 12.4% of the land area as a result of a massive forest restoration campaign by the government and its partners, with commercial plantations and agroforestry accounting for this slight increment from 2015 to 2019. This change has been noted in southwestern and central-northern Uganda.3 Woodlands are the dominant forest type in the country, making up 61% of the forest area, followed by well-stocked tropical high forest (26%), low-stocked tropical high forest (5%) and plantations (8%).

To reverse these trends, the government of Uganda has undertaken to implement various actions through the Ministry of Water and Environment. These actions are complemented by efforts of the National Forestry Authority – which is mandated to manage the country's central forest reserves – and the National Tree Seed Center, which provides quality tree-planting materials.

Another major actor is the Ministry of Agriculture, Animal Industry and Fisheries, which is implementing tree-planting programmes, mainly fruit trees and particular agroforestry species to ensure that agricultural activities do not degrade the environment.

1.1.1 Overview of forestry in Uganda

Forestry in Uganda is mainly in the form of natural forests, commercial forest plantations and agroforestry systems on farmland. Natural forests in government forest reserves are categorized into central forest reserves (CFRs) under the management of NFA, and national game parks under the Uganda Wildlife Authority. In the game parks, forests are managed under strict preservation measures, whereby no extraction is allowed. The CFRs are divided into production zones – where sustainable utilization is allowed – and strict natural reserves, which are for conservation purposes, such as research and ecotourism.

Commercial forest plantations exist both on private land and on government forest reserves in the form of a license to private individuals. Agroforestry systems, on the other hand, are exclusively located on private land where farmers integrate trees on farms. The trees are mainly for food (fruits and nuts), herbs, forage/fodder, woodlots (timber and fuelwood), boundary marking, shade, and ornamental purposes.

1.1.2 Government of Uganda actions to address the loss of forest cover and reverse the degradation:

i.   A number of policies and laws have since been put in place to manage the environment and natural resources, including the management of forest resources. These laws include the recently enacted National Environment Management Act (2019); the Uganda Wildlife Act (2019); and National Forestry and Tree Planting Regulations (NFTPR), established in 2016 under the National Forestry and Tree Planting Act (2003), which is currently undergoing a review. If well enforced and implemented, they will strengthen the regulatory framework for the sustainable management of forest resources.
ii. The government prepared a national strategy for reducing emissions from deforestation and forest degradation (National REDD+ Strategy 2018). It clarifies the programmes to be undertaken to reduce carbon emissions and increase carbon stocks while increasing climate resilience and improving livelihoods at the community level.

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3   NFA National Biomass Study (2017)

iii. The government of Uganda prepared a Forest Landscape Restoration Opportunities Assessment Methodology (FLR-ROAM, 2016) to determine the country's restoration potential. The report stratifies Uganda into seven restoration zones. This will serve as a guide for the development and implementation of restoration interventions in an integrated and holistic manner, using the landscape approach.

iv. The Ministry of Water and Environment has embarked on massive tree-growing campaigns focusing on the establishment of commercial tree plantations for the sustainable supply of much-needed fuelwood, timber and other forest products. This is also intended to reduce pressure on the few remaining natural forests. Some of the ongoing projects include the Farm Income Enhancement and Forest Conservation Project (Phase 2) (FIEFOC 2); the National REDD-Plus Project; the Sawlog Production Grant Scheme (SPGS); the Investing in Forests and Protected Areas for Climate-Smart Development (IFPA-CD) project; and the Community Tree Planting Programme. These projects support the promotion of tree growing from small-scale to large-scale farmers as well as institutional tree planting.

v. The Running Out Of Trees (ROOTs) Campaign: The government plan to plant 40 million trees annually aims to reinstate the country's richness in indigenous species while engaging local stakeholders on national restoration goals through increased public awareness and participation in the conservation and protection of indigenous tree species to address the ongoing loss and conversion of primary and secondary natural forest. This campaign is expected to have about 177,000 ha of trees planted each year through different technologies. More than 200 million trees will be added by 2026 across different landscapes.

1.2 Context of the study

The UN Convention on Biological Diversity (CBD) is a legally binding treaty that includes 196 countries and promotes national strategies for the conservation and sustainable use of each member's natural resources. The Strategic Plan for Biodiversity comprises 20 time-bound, measurable targets set in Aichi (Japan) in 2010 (Aichi Biodiversity Targets[4]) that were to be met by the year 2020. Through their respective National Biodiversity Strategies and Action Plans (NBSAPs), each country was expected to pursue specific targets at multiple levels.

Despite this, the UN Decade on Biodiversity 2011—2020 resulted in little progress towards the global biodiversity targets. For a second consecutive decade, the world failed to fully achieve any of the 20 goals that were designed to protect ecosystems and wildlife. The CBD CoP15 adopted new targets under the Post 2020 Global Biodiversity Framework for the next 30 years.

Target 7 of the *Aichi Biodiversity Targets* pledged that *"areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity"*. As stressed by Aichi Target 7, agriculture has an important role to play in ensuring the conservation of biodiversity. It is therefore necessary to sustainably manage the entire landscape, including agriculturally productive areas.

The abilities of countries to meet Aichi Target 7 (Sustainably Managed Agricultural Areas) are improved by advancing knowledge of trees on farms (TonF) for biodiversity and human wellbeing. TonF perform a key function in connecting ecosystems and maintaining soil and agrobiodiversity. However, the significance of TonF has not been adequately incorporated into the NBSAPs of partner countries. The "Harnessing the Potential of Trees on Farms" project uses various approaches to improve knowledge about trees on farms. By integrating Indigenous and

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4   The Aichi Biodiversity Targets were named after the Aichi Prefecture, Japan, where the 10th COP meeting was held on 18—29 October 2010.

local knowledge, the project provides relevant stakeholders with context-specific, tree-based measures that can contribute to biodiversity conservation, the avoidance of greenhouse gas emissions, and adaptation to climate change impacts. The project also supports the integration of sustainable management and agricultural biodiversity into the fields of policy and planning. This study is to improve understanding among the biodiversity and agricultural communities in relation to the institutional and Ugandan government budgetary provisions for trees on farms as part of their sustainable resource management activities on agricultural lands.

"Harnessing the Potential of TonF" to meet national and global biodiversity targets is funded by the International Climate Initiative (IKI) and implemented by CIFOR-ICRAF in partnership with the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), the International Union for Conservation of Nature (IUCN), Georg-August-Universität Göttingen and Leibnitz Universität Hannover. The TonF project is aimed at building awareness of the role that trees on farms can play in biodiversity conservation in Peru, Indonesia, Honduras, Uganda and Rwanda. It uses various approaches to improve knowledge about TonF.

1.3 Objective of the budgetary allocations analysis study

The main objective of this study is to identify budgetary allocations for two key ministries – the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and the Ministry of Water and Environment (MWE) – involving "sustainable resource management activities" and "trees on farms" on agricultural lands. This will assist in establishing potential allocations under which TonF roadmaps (as defined in Work Package IV of the Project Document) can be integrated (either fully or partially) into national programmes.

1.4 Linkages to policy and planning frameworks

The Trees on Farms project and community tree planting are in line with the national development priorities of NDP III, and the Green Growth Development Strategy (GGDS). The TonF initiative is aligned with the objectives of NDP III, which seek to enhance forest cover to 15% and add value to key growth opportunities, while strengthening the private sector to drive economic growth.

TonF is consistent with the Forest Policy of 2001, whose Policy Statement No. 6 on farm forestry states that "tree-growing on farms will be promoted in all farming systems, and innovative mechanisms for the delivery of forestry extension and advisory services will be developed".

It is also linked to the Uganda Forest Investment Programme (FIP) (2017) of Uganda's REDD+ Strategy and Strategic Programme for Climate Resilience (SPCR) (2017). The project complements existing efforts in the Green Growth Development Strategy, whose goal is to improve natural resource management, and the sustainable use of forests and wetlands.

TonF is also in line with the Natural Resources, Environment, Climate Change, Land and Water Management programme, particularly Objective 2: Increase Forest, tree and wetland coverage, restore bare hills and protect mountainous areas and rangelands.

1.5 Fund allocation and release to spending entities/votes

The approval of the annual budget by Parliament provides the legal authority for spending agencies (votes) to spend and for the Ministry of Finance, Planning and Economic Development to make releases to spending agencies. The release of funds to spending agencies is on a

quarterly cash-flow planning horizon. The system for the release of funds to central government ministries starts when the ministries receive a communication from the Director of Budget indicating the quarterly cash limits allocated to each ministry for spending in the coming quarter. Each ministry will then prepare expenditure projections based on the cash limit ceiling. Every month, the Director of Budget advises the Accountant General of the releases to local governments (LGs) and their accounting officers detailing the amounts released.
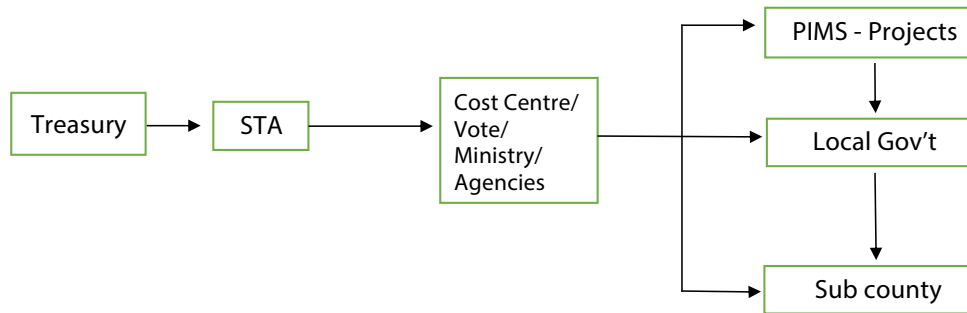
Figure 1. Flow of resources from Treasury

Notes:
STA   – Single Treasury Accounts
PIMS – Project Information Management Systems

2 Methodology and approach

This section presents the design and methodology of the analysis, including the study methodology, study area and scope, sample size and sampling criteria, sample size determination criteria, data collection methods as well as data analysis techniques and plan.

2.1 Study methodology

The study used both qualitative and quantitative approaches in cross-sectional and retrospective procedures for investigating budget allocation and expenditure on sustainable resource management activities on agricultural landscapes, in general, and the financing of trees on farms in Uganda.

A combination of methods and approaches ranging from identification of key players, their roles, constraints and opportunities was employed to address study objectives. These included a review of the relevant literature; key informant interviews; a collection of secondary data on budget spending for the past 5 years; and an analysis in Excel format. The choice of mixed methods was intended to improve the credibility and objectivity of the evidence. The sources of data and information have been annexed to the report and cited as they could support similar studies in the future. Key methods that the consultant has employed are:

2.1.1 Literature review

A review of key documents in the public domain was undertaken to extract information and secondary data. Annex 2 provides the sources of data and information accessed during the study. The review of literature added value to the budget analysis by providing information on the budget allocations, trends and patterns; policy plans and priorities in the two sectors; and opportunities for integrating the Trees on Farms project funding in Uganda.

Among the documents reviewed were: (i) the Ministerial Policy Statements of MWE and MAAIF for the financial years 2015/16, 2016/17, 2017/18, 2018/19, 2019/20; (ii) the National Development Plans II & III; (iii) the Natural Resources, Environment, Climate Change, Land and Water Resources Management Programme – Implementation Action Plan; (iv) the Uganda Forest Policy of 2001; (v) the National Agricultural Advisory Services Act; and (vi) the Agricultural Sector Development Strategy and Investment Plan.

2.1.2 Study area and scope

The study was limited to two ministries – the Ministry of Water and Environment (MWE) and its affiliate agency the National Forestry Authority (NFA), and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) as well as its statutory semi-autonomous body the National Agricultural Advisory Services (NAADS). In terms of geographical scope, the study considered results all over the country where the two ministries and the affiliated agencies undertook environment management activities.

The report mainly focuses on government budget expenditure towards tree planting on private land. This government budget spending also includes foreign development support in the form of loans and grants from partners – this is channeled through the Ministry of Finance, Planning and Economic Development. It does not cover interventions implemented directly by the development partners and nongovernmental organizations, although these provide a significant contribution to trees on farms.

The budget figures presented only capture the cost of seedlings / planting materials and do not include expenditure on technical backstopping and extension services.

2.1.3 Data collection techniques

Data were collected from various sources using a combination of approaches:
i.   A review of secondary data sources, including Ministerial Policy Statements for the financial years 2015/16, 2016/17, 2017/18, 2018/19, 2019/20 and 2020/21; national and sectoral Budget Framework Papers; sectoral investment plans and performance reports in the Programme Budgeting System (PBS); sector quarterly progress reports and work plans; budget speeches; public investment plans; approved estimates of revenue and expenditure; and data from the budget website.
ii. Review and analysis of data from the Integrated Financial Management System (IFMS).
iii. Consultations and key informant interviews with ministry and agency planners, as well as project managers in implementing agencies and projects such as Farm Income Enhancement and Forestry Conservation (FIEFOC), Sawlog Production Grant Scheme (SPGS), Investing in Forests and Protected Areas for Climate-Smart Development (IFPA-CD), and Reducing Emissions from Deforestation and Forest Degradation (REDD+).

2.1.4 Data analysis

The data were analyzed using qualitative and quantitative approaches. Comparative analysis focused on the relative importance of the outputs, and on the overall weighted scores. The relative importance (weight) of an output was based on the amount of budget attached to it, as well as the link to TonF land and community tree planting. This was derived from the approved annual budget of each of the votes, and was sorted according to the budget items of agricultural supplies and cultivated assets, as coded in the Integrated Financial Management System and the Programme Budgeting System.

Data gathered through key informant interviews and consultations were transcribed and analyzed to develop thematic areas, such as challenges, impacts, lessons learnt, and recommendations to facilitate further analysis and policy improvement. Graphs and tables were generated using MS Excel software and exported to MS Word for final presentation. Excel formed the basis for analyzing trends, patterns, execution rates, proportionality between sector functions, and budget categories. Brief explanations will be provided about the variances between budgets approved, budgets released and actual expenditures.

2.1.5 Limitations of the exercise

i.   Uncoordinated sub-programmes/outputs that do not contribute to the main project objectives/ programme outcomes. The outputs are lumped together under projects for budgeting purposes, which is a reflection of poor planning.
ii. Some output activities are qualitative, without specific target figures and costs, and the sector performs based on the availability of funds. This makes it challenging to measure performance for analysis.
iii. Limited information on the indicators and parameters that the study was using.

iv. Inability to track some donor funds, especially grants, as some were off budget and implemented directly by non-state actors.

v. Difficulty in identifying local government expenditures. Since this information is not on the system, obtaining it would have required a visit to all 135 districts, which was not possible given the resource constraints, except for project expenditures appropriated through the ministries.

vi. Budget aggregation of outputs and sub-outputs makes it difficult to know their specific allocations, thus complicating their analysis.

vii. The data from the Programme Budgeting System seemed duplicated, so it necessitated a lot of cleaning and validation.

viii. Use of varying budget item lines to allocate funds for trees.

3 Key findings of the study

This chapter presents key findings of the study. They include budgetary allocations and expenditures per vote over the observed period, as well as trends and variances.

3.1 Macroeconomic and fiscal trends (2015–2019)

Table 2. Main macroeconomic and fiscal trends over the recorded period

Indicator	2015	2016	2017	2018	2019	Source
GDP (nominal) in USD bn	27.445	29.598	31.398	34.223	38.001	IMF
Population (in millions)	38.2	39.6	41.2	42.7	44.3	Population.un.org and UBOS
Inflation (%)	5.41	5.45	5.64	2.63	2.87	Data.worldbank.org and BoU
Unemployment (%)	1.86	1.83	1.78	1.75	1.72	Data.worldbank.org
National budget allocation in UGX	23,972.25	26,360.45	29,008.5	32,702.8	40,487.9	Budget.go.ug
Exchange rate (UGX to USD)	3,377.01	3,610.50	3,635.1	3,713.35	3,665.2	https://www.bou.or.ug/bou/bouwebsite/Statistics/Statistics.html
National budget in USD bn	7.10	7.30	7.98	8.81	11.05	

3.2 Share of the national budget to the agricultural and water & environment sectors

In Table 3, environment and agriculture have national budget allocations below 3%, except in fiscal year 2016/17 when the budget for agriculture rose to USD 0.24 bn, representing 3.24% of the national budget, which is well below the 10% goal in the Maputo Declaration on Agriculture and Food Security. Furthermore, the allocation for environment in FY2019/20 rose to USD 0.36 bn, representing 4.03% of the budget, which is below the required funding for Environment Natural Resources and water access activities. The spike in the budget is attributed to the government responding to the Bonn Challenge. The budget provisions for environment represent both water and environment budgets.

Table 3. Budget allocation and expenditure towards the environment, agriculture in USD bn

Budget allocation		2015/16	2016/17	2017/18	2018/19	2019/20	TOTAL
National	Amount	7.10	7.30	7.98	8.81	11.05	42.23
	Percentage	100%	100%	100%	100%	100%	100%
Agriculture	Amount	0.15	0.24	0.24	0.25	0.29	1.17
	Percentage	2.13%	3.24%	2.99%	2.89%	2.60%	2.77%
Environment	Amount	0.17	0.20	0.19	0.36	0.30	1.22
	Percentage	2.41%	2.79%	2.37%	4.03%	2.73%	2.89%

Source: Ministry of Finance, Planning and Economic Development – https://budget.finance.go.ug
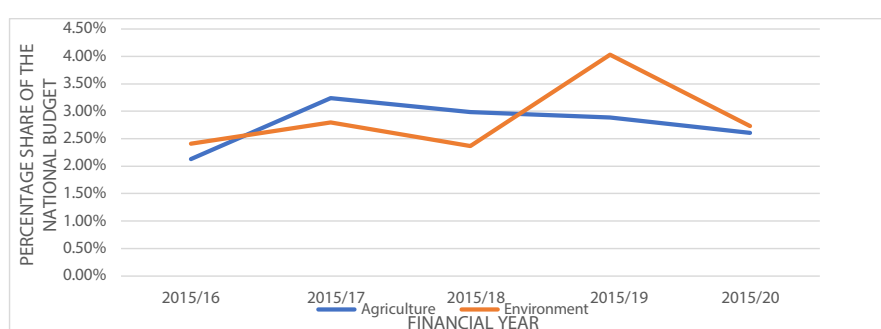
Figure 2. Trend percentage share of the environment and agriculture budget allocations from the national budget

Allocation trends indicate that – on average – 2.7% of the national budget was spent on agriculture, while 2.9% was allocated to the environment during the period under review. The highest percentage cover was in 2016/2017 for agriculture and 2018/2019 for the environment.

3.3 Budgetary allocations and spending of the Ministry of Water and Environment

The Ministry of Water and Environment (MWE) has overall responsibility for the development, management and regulation of water and environmental resources in Uganda. In the financial years under review, the MWE approved a budget of 4,329.841 billion Ugandan shillings (UGX). This included recurrent budget expenditure (wage and non-wage), development expenditure (Government of Uganda as well as donors), arrears, off-budget spending, and non-tax revenue (NTR).

On review of the MWE budgets and ministerial policy statements, the funding for community tree planting mostly came from the Forest Sector Support Department (FSSD) with a little support from other departments, such as Environment Support Services; Water Resources Planning; and Water for Production. It may be noted that the other line of funding for community tree planting is channeled through projects, including the Farm Income Enhancement and Forestry Conservation Project, REDD+, the Sawlog Production Grant Scheme (community/

institutional support), Investing in Forests and Protected Areas for Climate-Smart Development (IFPA-CD), and the NFA's Community Tree Planting Project. The funds are reflected in two main budgetary items: agricultural supplies and cultivated assets.

While the approved budget towards tree planting increased steadily, the actual release of funds was inconsistent. This may be attributed to a number of factors, such as low national revenue performance, hence the Treasury's inability to fully fund the budget. Such inconsistencies undermine restoration efforts and threaten the minor gains made so far.

Table 4. Breakdown of budget allocations to MWE (Vote 019)

| Financial year	Wage	Non-wage	GoU Dev't	Donor Dev't	Arrears	Off budget	Total
FY 2015/2016	5.356	7.839	189.401	233.276			435.872
FY 2016/2017	4.366	12.494	216.751	357.129			590.74
FY 2017/2018	4.53	11.02	244.35	233.61			493.51
FY 2018/2019	7.182	12.6	263.712	316.303	0.102		599.899
FY2019/2020	7.18	14.68	245.16	290.35	12.93	93.49	663.79
FY2020/2021	13	3.26	446.74	1,076.83	0	6.2	1546.03

Source: Ministerial policy statements: www.mwe.go.ug

Table 5. The approved and released funds for tree planting in USD

Financial year	Approved	Released	Deficit	% Release
FY 2015/2016	266,508	0	266,508	0
FY 2016/2017	1,052,486	1,052,486	0	100%
FY 2017/2018	1,870,660	1,870,660	0	100%
FY 2018/2019	2,406,722	2,387,950	18,772	99.22%
FY2019/2020	2,346,388	1,513,277	833,038	64.50%
FY2020/2021	2,918,356	2,452,012	466,344	84.02%

Source: Ministerial policy statements: www.mwe.go.ug

3.3.1 Analysis of trends in budget allocations to the Ministry of Water and Environment

Allocations to the Ministry of Water and Environment grew steadily from USD 0.1708 bn in FY2015/2016 to USD 0.3017 bn in FY2019/2020. There was consistent growth in the budget's development component with a visible shift towards external financing either through loans or grants. The recurrent budget remains small with rampant cuts year after year.
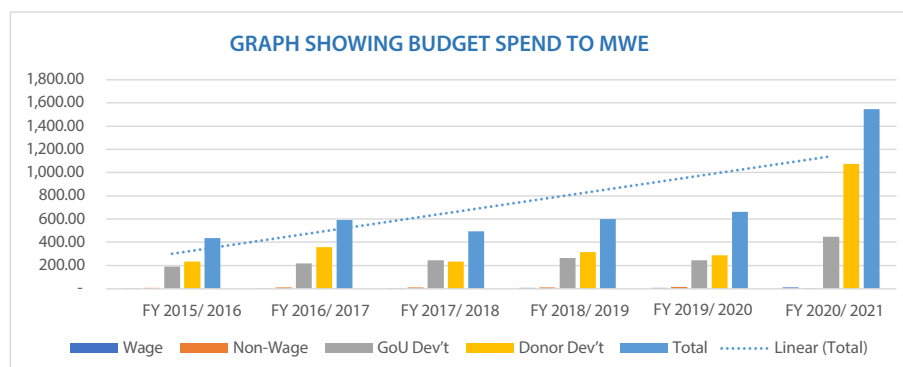
Figure 3. MWE budget allocation according to category

Source: Ministerial policy statements: www.mwe.go.ug
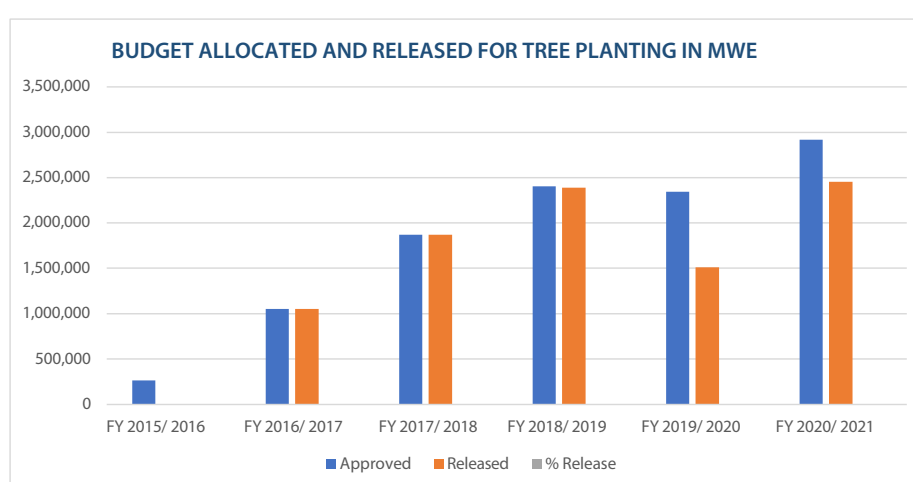
Figure 4. Budget released versus allocation for tree planting in MWE

Ministerial policy statements: www.mwe.go.ug

3.4 Budgetary allocations and spending to the National Forestry Authority

The National Forestry Authority (NFA) was established under Section 52 of the National Forestry and Tree Planting Act and launched on 26 April 2004. The NFA is a semi-autonomous agency responsible for the sustainable management of all central forest reserves (CFRs), as well as the supply of quality seed, seedlings and forest products to local communities and the private sector.

The NFA addresses the issues of trees on farms through a project called the National Community Tree Planting Programme, which is exclusively aimed at raising indigenous tree seedlings for distribution to the general public free of charge. Over the past 5 years, the NFA has managed 34 nurseries across the country with a production capacity of about 10 million seedlings per season.

Table 6. Allocations and expenditures for community tree planting in NFA (in Bn Ugandan shillings)

Financial year	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/2020
GoU development (UGX bn)	1.9	0.693	4.344	5.359	3.636
Expenditure against release	1.85	0.693	4.534	5.25	3.63

Source: NFA planning data: https://www.nfa.go.ug/

The graph below shows NFA allocations towards the Community Tree Planting Programme over the past 5 years.

In Figure 5, allocation to community tree planting began slightly below the UGX 2 bn mark and slumped the following year before rising to a peak in FY 2018/2019. In addition, it was observed that the programme had distributed 50 million trees during the period under review.

The graph below shows allocations versus expenditures and the growth in trend of fund releases.
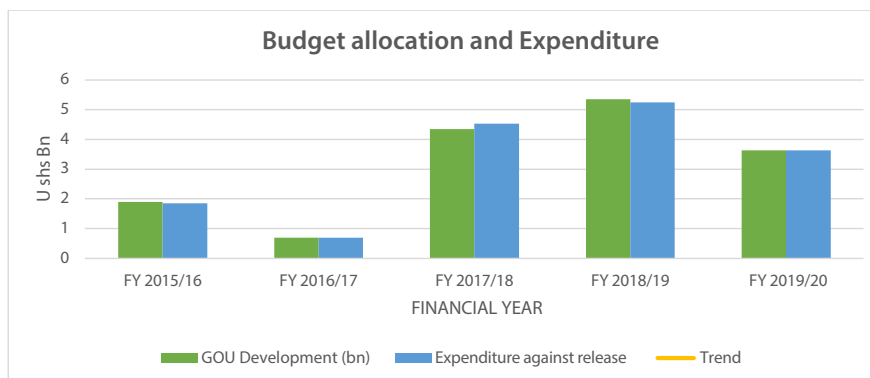
Figure 5. Expenditure versus allocated budget

Source: Ministry of Finance, Planning and Economic Development: https://budget.finance.go.ug/
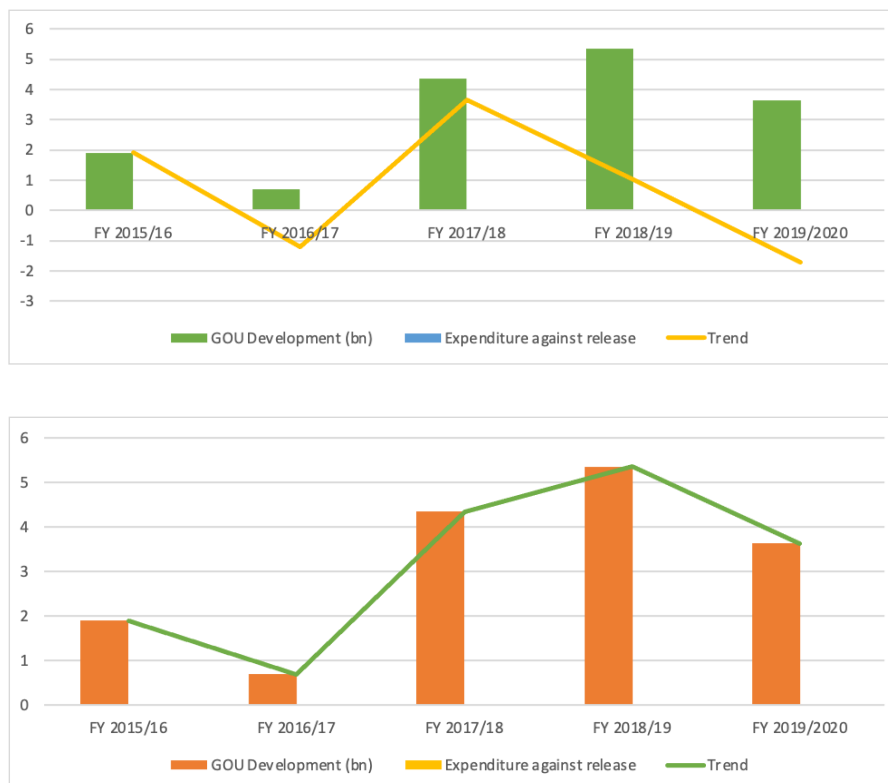
Figure 6. Allocations Versus Expenditures and The Growth in Trend of Fund Releases

Ministerial policy statements: www.mwe.go.ug

3.5 Approved Budget and Expenditure by MAAIF and Agencies in the Agriculture Sector

Uganda loses almost 2% of its forests annually. The biggest contributor to this loss is the agricultural sector. Half of Uganda's land area is committed to agriculture, which is believed to employ about 70% of the population, most of whom are smallholder subsistence farmers. As farmers clear their land – either for expansion or to accommodate new crops – they tend to cut down trees. In some parts of the country where farmers predominantly grow crops like pineapples, rice and maize, but also lack proper advisory services, they tend to clear all the land of trees, thus impacting biodiversity. The situation has worsened due to calls for the commercialization of agriculture, which has led to the establishment of big farms that use machinery. These farms have cleared broad swathes of forest and trees to make way for the large-scale cultivation of crops such as sugarcane, palm oil and rice, among others.

The Ministry of Agriculture, Animal industry and Fisheries sought to reverse this situation by encouraging the planting of trees on farms, either to provide shade for cash crops like coffee and cocoa or to grow fruits for food. In some other cases, the ministry has promoted trees that grow cashew nuts or macadamias to generate alternative income sources for farmers, but also to help protect the environment.

These efforts are mostly channeled through the National Agricultural Advisory Services (NAADS), which procures trees for distribution to farmers. Some of the other distributed items include citrus, mangoes, apples and jackfruit.

In the period under review, support focused on fruit trees to enhance production and boost the livelihoods of farmers, who received seedlings that were tolerant to pests and diseases, and had desirable fresh and processing characteristics. The support also improved post-harvest handling and established processing facilities for citrus, mangoes, apples and pineapples in 10 local government districts.

According to the Ministry of Agriculture Animal Industry and Fisheries, a total of 41,426,303 citrus seedlings; 28,706,281 mango seedlings; and 2,439,155 apple seedlings were distributed. These interventions over the past 4 years have already resulted in a 20% increase in export volumes for fruit and vegetables, growing from 57,358 Mt in 2015 to 68,862 Mt in 2019. Export values increased 13% from USD 32.1 million in 2015 to USD 36.1 million in 2019.[5]
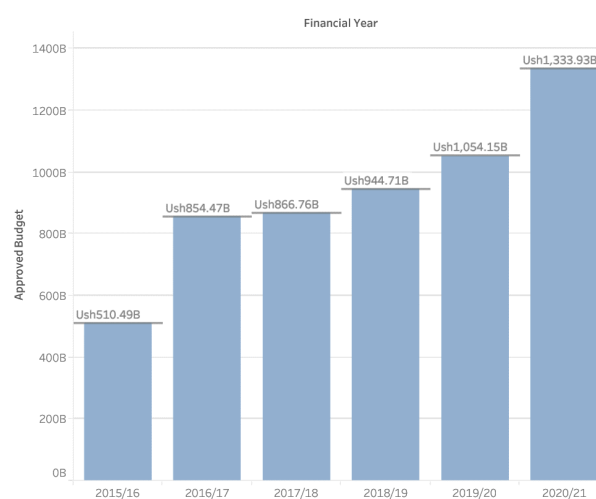
Figure 7. Approved budgets over time (nominal)

Source: Ministry of Finance, Planning and Economic Development: https://budget.finance.go.ug/

5   Ministry of Agriculture, Animal Industry and Fisheries: Analysis of the fruit (citrus, mango and pineapples) value chain in Uganda (2020)

3.6 Budget allocations under MAAIF

The agricultural sector has been receiving – on average – 2.774% of the approved national budget. In financial year 2015/16, the agricultural sector received USD 0.512 bn of the USD 7.10 bn approved national budget. Of the budget approved for the agricultural sector in the same year, a total of USD 0.0576 bn – representing 38% of the agriculture budget – was spent on TonF.

Table 7. Allocations of the agriculture budget towards TonF

Budget allocation	National budget	Agriculture			
	Amount in USD bn	Amount	Percentage	Release for TonF	% of agriculture budget
2015/16	7.10	0.1512	2.13%	0.0576	38%
2016/17	7.30	0.2367	3.24%	0.1164	49%
2017/18	7.98	0.2384	2.99%	0.0834	35%
2018/19	8.81	0.2544	2.89%	0.0924	36%
2019/20	11.05	0.2876	2.60%	0.0728	25%
TOTAL	**42.23**	**1.16829**	**2.77%**	**0.4225**	**36%**

Note: *This figure is a sum of allocations in two budgetary items, namely "agricultural supplies" and "cultivated assets." It does not give information on the specific budget for trees on farms, or how much is allocated to non-tree cultivated assets, such as pineapples and other fruit crops.*

Source: www.budget.finance.go.ug
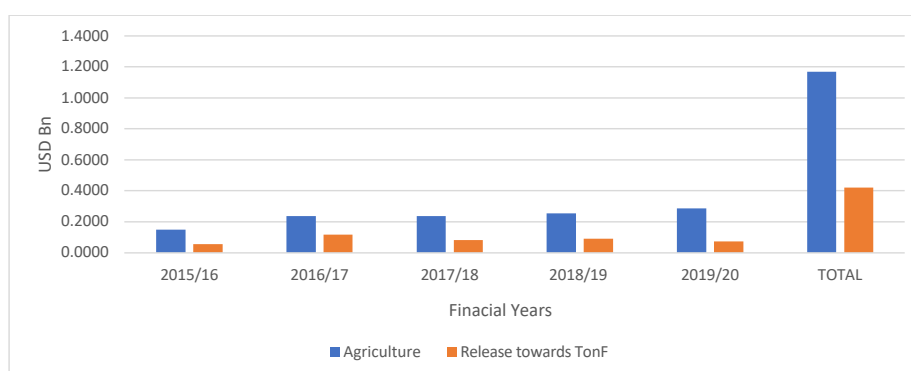
Figure 8. Share of agricultural sector funding released for TonF

Source: Ministry of Finance, Planning and Economic Development: https://budget.finance.go.ug/

3.7 Budget allocated and spent by the districts on TonF

Apart from the composite budget approved and released to the districts and lower-level governments, data on funds allocated to community tree planting or trees on farms could not be obtained. There is therefore a need to have budget data disaggregated to the lowest level to allow for proper analysis.

## 3.8 Total budget expenditure on TonF in both ministries

The total allocation for trees on farms under the two ministries – the Ministry of Agriculture, Animal Industry and Fisheries and the Ministry of Water and Environment – for the period under review stands at USD 2.388 bn, representing an average of 5.66% of the national budget.

The graph below shows the share of TonF allocations in the two ministries versus the total allocation.

Table 8. Budget allocations for TonF as percentage of the national budget

Budget allocation (USD bn)					
Financial year	**National**	**Agriculture**	**Environment**	**Overall total**	**Percentage**
2015/16	7.098661	0.151167	0.170808	0.321975	4.54%
2016/17	7.301052	0.236662	0.203963	0.440625	6.04%
2017/18	7.980165	0.238442	0.188925	0.427367	5.36%
2018/19	8.806824	0.254409	0.355118	0.609527	6.92%
2019/20	11.046548	0.287609	0.301682	0.589291	5.33%
TOTAL	**42.233251**	**1.168289**	**1.220496**	**2.388785**	**5.66%**

Source: Ministry of Finance, Planning and Economic Development: www.budget.finance.go.ug
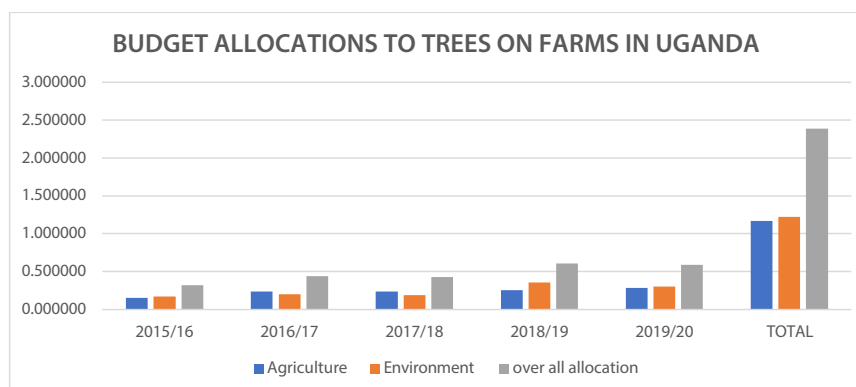
Figure 9. Total allocation towards TonF

3.9 Summary of issues identified during the exercise

S/N	Issue category	Description of issue	Remarks/actions
1	Policy and legal frameworks	During the study, it was observed that the current policies and laws on forestry are very old. While Policy Statement 6 of the Uganda Forestry Policy (2001) commits to promoting farm forestry, it does not fully provide for agroforestry, emerging issues, and markets.	Review the policy and the attendant law to incorporate and prioritize agroforestry issues. This is profiled in the national REDD+ strategy as the most sustainable strategic option for climate resilience.

S/N	Issue category	Description of issue	Remarks/actions
2	Coordination of actors: government, NGOs, private sector and farmers	While the MWE is expected to give policy direction on forestry matters, and the MAAIF on agriculture matters, it was observed that there was an overlap in mandate on agroforestry. Furthermore, agroforestry has attracted multiple stakeholders who need proper coordination if the national targets on biodiversity and afforestation are to be met.	The MWE, through its Forestry Sector Support Department and in collaboration with the MAAIF, could issue guidelines for all practitioners to follow. Formulation of forums for practitioners to share knowledge and information for sustainability of the interventions. The District Forestry Services should be empowered to effectively perform this role, which is part of their mandate.
3	Extension and advisory services	During the study, it was observed that there was a big gap in extension and advisory services, especially at district level. The structures at district level fulfil decentralized functions on forestry, yet they are insufficient to support the whole district. This has led to weak enforcement of the laws and guidelines; low uptake of researched agroforestry technologies; and poor site-species matching.	Support the FSSD and districts to provide extension and advisory services to village level. The structure of the district forestry services should be reviewed to provide for more positions up to sub-county or even parish level.
4	Seedling inspection and research	It was observed that there is no national guide or standard on seedling inspection and certification. Each agency, ministry or project has its own inspection and certification procedures.	The existing standards could be harmonized into national standards on inspection and certification and widely disseminated. The MWE, in collaboration with the Uganda National Bureau of Standards, should come up with standards for the establishment and maintenance of woodlots and plantations.
5	Research and technology transfer	It was also expressed that there is a disjoint between research and practice. This is attributed to the National Forestry Resources Research Institute, which operates under the National Agricultural Research Organisation (NARO), having a research agenda determined by the agricultural sector, and not necessarily by the challenges of the forestry sector. The Government of Uganda adopted a domestication agenda for species traded under CITES to conserve them as alternative livelihood options among farming communities, while preserving them in the wild and protected areas. But this faces challenges at farm level because the introduction of these species onto farms needs to be guided by research. NARO focuses more on research into fruit trees, leaving out other species. This was evident in the amounts that the NFA and some private nursery operators spend on importing seed for some species that would otherwise be sourced locally.	Realign current forestry research to meet the needs of the sector.

S/N	Issue category	Description of issue	Remarks/actions
6	Financial services	Allocations to the environment sector remain small compared with the goals. Due to the disjointed financing, interventions can only cover small sections of the country, like particular landscapes and catchments. Yet the country was zoned into seven agro-ecological landscapes, all of which were to be integrated with trees. During the analysis, government funding to the sector was not consistent, especially on projects with a donor component. The government failed to meet its counterpart fund in some cases.	Discourage, or at least consolidate, all off-budget financing and ensure that the interventions are properly guided to create an impact. Create database and record of all funding as well as its outputs annually. Launch sustainable resource financing schemes.
7	Markets for produce	A lack of data on investments in the agroforestry sector, including by the Government of Uganda, partners, and the private sector. Need for revenue projections from investments per hectare.	Create a database on investments over time. Raise awareness on human-induced climate change and its effects. Popularize modern harvesting techniques.

S/N	Issue category	Description of issue	Remarks/actions

4 Formulation of conclusions and policy recommendations

4.1 Conclusions

The study has revealed important socio-economic aspects associated with trees on farms and community tree planting in Uganda. Embracing the recommendations and prudent action will make great contributions to the transformation and commercialization of the agroforestry sub-sector for sustainable resource management and financing, household food security and incomes. Production, processing and marketing practices for fruits and tree products at various stages of value chains have been assessed. Constraints impacting performance at various levels were identified and analyzed, while opportunities that can be exploited to develop the fruits sub-sector have been aptly described.

4.2 Recommendations

i.   Review the policies and law to fully incorporate and provide for agroforestry issues and TonF. These could also be aligned with the national REDD+ strategy, among other planning tools that have prioritized agroforestry as the most sustainable REDD+ strategic option.

ii.   There is a need to restructure and empower the District Forest Services department to provide for structures at lower levels of government, preferably at sub-county level so as advisory services are assured for all farmers. This will help ensure value for money for the budget allocated to tree seedlings distributed to farmers.

iii.   The MWE and MAAIF could identify all fruit and agroforestry trees that qualify under the TonF project and develop the value chains as a way of assuring incomes and encouraging farmers to adopt them on farms. This should then bring about self-sustaining, farmer-owned tree enterprises.

iv.   Create a database and record of all funding for trees on farms and the related outputs, beyond government funding to the sector.

v.   Consolidate all off-budget financing and ensure that the interventions are properly guided and aligned with the sector's plans to make the desired impact.

vi.   While budgetary allocations to tree on farms is welcome, farmer education and increased awareness of the intermediate and long-term benefits could sustain more trees on farms as a result of farmer motivation through the sourcing of own planting materials beyond what any public budget can support.

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