



Scoping Study for Extension Services in Southern Highlands Zone

September 2018, Iringa, Tanzania



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Scoping study for Extension Services in the Southern Highlands of Tanzania, September 2018

RLabs Tanzania

Report authors:

RLabs, Team Leader

University of Iringa, Business Analyst

RLabs, Junior Economist

Yusuf Sessanga

Deo Sabokwigina

Kelvin Mveyange

Other contributors:

RLabs Advisor

Naomi Rouse

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ABBREVIATIONS

CBO	Community Based Organisation
CSO	Civil Society Organisation
DFO	District Forestry Officer
EAMCEF	Eastern Arc Mountains Conservation Endowment Fund
FBD	Forest and Beekeeping Division
FBO	Faith Based Organisation
FDT	Forestry Development Trust
HIMA	Hifadhi ya Mazingira
IGA	Income-Generating Activity
KCC-MP	Kihansi Catchment Conservation and Management Project.
NGO	Non-Governmental Organisation
NOSC	Njombe Out Growers Service Company
PFP	Private Forestry Programme
RLABS	Reconstructed Living Labs
SHIPO	Southern Highlands Participatory Organisation
SME	Small and Medium Enterprise
SPSS	Statistical Package for the Social Sciences
TFCG	Tanzania Forest Conservation Group
TFS	Tanzania Forestry Services
TGA	Tree Growers Association
USAID	United States Agency for International Development
VICOBA	Village Community Bank
VSLA	Village Savings and Loans Association
VLUP	Village Land Use Planning

EXECUTIVE SUMMARY

RLabs was engaged by PFP to identify existing extension services and gaps in Southern Highlands of Tanzania and opportunities for PFP to add value through its programmes. The scoping study included a desk review and semi-structured interviews with extension service stakeholders in the Southern Highlands.

A review of available literature confirms that government capacity has not kept up with the need for rural forest extension services as commercial forestry has expanded in Tanzania. Though the government recognises the importance of extension work to enhance commercial forestry productivity, extension services are scarce and poorly coordinated.

240 farmers were interviewed for the study as well as District Forestry Officers from 11 Districts and representatives from forestry organisations operating in the Southern Highlands.

TGA members are predominantly farmers, with secondary activities in livestock. Few have secondary education or small business experience, though they urgently need alternative livelihoods to support them while their trees grow and to fund the maintenance of their plots. Young people are under-represented in TGAs and respondents from several villages said young people were put off by the long wait for returns from commercial forestry.

TGAs supported by PFP are active and valued by their members, as much for social support as for practical support in tree growing. Some TGAs have over a decade of experience, and others were set up in the last two years. Some criticisms of TGA leaders were raised by members and non-members, and TGA leaders themselves said they are keen to develop their leadership and management skills. Some of the TGA leaders were accused of dishonesty, either with land allocation to their members (Lugolofu village) or resources from stakeholders (Ikangasi village). It is important to help TGAs resolve these kinds of conflicts to maintain trust in the programme.

Only a minority of TGA members are following good tree-growing practices, though many are keen to receive practical support to improve their tree production, and recognise that there are more advanced forestry techniques and better inputs available than they are currently using. Around half of farmers currently hire labour to help with farm preparation and planting, but few use labour for other tasks. The estimated cost of labour to produce trees for one acre of land is 333,700/=. Lack of capital was highlighted as tree-growers' greatest challenge, followed by bush fires and lack of access roads.

Demand for training exceeds local capacity from government and other local organisations. PFP is one of the major providers of extension services in the surveyed villages, mentioned by over half of respondents, along with other non-governmental organisations. Tree growers said they had little contact with government forest extension workers, and see government support for forestry as non-existent, possibly because there is a mismatch between the services government is providing and the services that tree growers most want to receive. Tree growers most want technical support for production (training and quality seeds, fertilisers and equipment) and support for marketing and price negotiation, whereas district and village government engagement in forestry is focused on revenue collection, oversight of government plantations, and enforcing regulation on harvesting forestry products.

Village Savings and Loans Associations are already widespread in the PFP programme area. 75% of respondents said they are already present in their villages, and positively viewed by the community, though they noted the need to improve members' businesses, and generate more innovation and diversity, so that the businesses are more profitable.

Lack of local extension workers was seen as the main reason for lack of technical support from government, by TGA members. District Forestry Officers themselves also highlighted inadequate funding, lack of staffing and transport, as the major barriers to delivering technical support. Only six of the eleven districts surveyed have any extension staff below district level, which means that most DFOs have large areas to cover and need funding for transport.

Despite these challenges, examples of how good leadership has enhanced commercial forestry were revealed in the survey. For example, some villages have organised their own road repairs, which directly benefits tree growers in improving transport links. One District Forestry Officer successfully lobbied the district to reinvest forestry revenues in replanting, which would not otherwise have happened. Another DFO used his free time to train tree growers in bee-keeping to help them develop alternative income sources. These examples demonstrate what is possible even within resource constraints, where local government officials have a proactive mindset and recognise the importance of forestry for improving incomes and environmental sustainability.

In addition to government forestry departments, there are 11 active organisations providing forest extension in different forms in the target Districts. Some of these organisations are working primarily for conservation rather than commercial purposes, but are providing relevant capacity building and training for farmers (e.g. supporting tree planting, nurseries, and farmer education), which complements the work of PFP and the government's regulatory work. Though there is a lot of demand for services, this still represents significant capacity across the Southern Highlands, and there is potential to achieve greater impact if work is better coordinated. Several organisations expressed interest in improving coordination between extension service providers, and working closely with PFP.

TGA members have a positive perception of PFP, and most appreciate the training and improved seedlings, while TGA leaders also highlighted the valuable learning and networking opportunities created through TGAs. Strengthening VSLAs emerged as a major recommendation for further work by PFP, as well as support for road building, tree nurseries and fire control equipment. Government officials, like the other agencies, all recommended closer collaboration between PFP with local government to ensure coordination of activities and sharing of expertise.

In conclusion, there is significant untapped demand for extension services. Collectively the government and a range of non-state actors have considerable capacity and expertise, and there is a need to improve coverage and coordination to better deliver services to tree growers. While lack of funding and staffing is a genuine challenge, there is an important advocacy and awareness-raising role to help define how and where the government can add more value, leveraging existing capacity. While this is not solely PFP's role, PFP could play a major leadership role. Mobilising government investment and improving coordination of extension services could be one of the most valuable legacies from PFP's programme in the Southern Highlands, in addition to continuing to build the capacity of TGAs and coordination between agencies. Market mechanisms could also be leveraged for provision of extension services, and work to enhance income-generating activities would enable farmers to pay for such services.

PFP is recommended to:

1. Leverage TGAs to increase coverage of extension services and continue to invest in their governance and technical capability
2. Develop initiatives targeting greater youth engagement in tree-growing
3. Strengthen VSLAs with entrepreneurship training to raise their income and in turn, their ability to invest in forestry inputs and training
4. Explore a market-driven model for provision of extension services
5. Mobilise TGAs and other PFP partners and networks to identify and engage local champions
6. Build advocacy capacity of TGAs and District officials to lobby for increased forestry funding
7. Strengthen engagement with district and local government, including multi-agency planning to define complementary roles, and regular reporting to districts with forestry data

Additional recommendations emerging from stakeholder feedback include starting an internship programme for forestry students, extending forest extension education into schools and considering active engagement of communities in infrastructure improvement.

1. INTRODUCTION

1.1. Background

The Private Forestry Programme (PFP) is a Finnish government-funded programme established on 1st January 2014 in the Southern Highlands of Tanzania, where the sparse populations, vast stretches of suitable land, and the growing demand for timber for construction make smallholder forestry viable. The programme was designed to increase rural income by promoting both the commercial management of smallholder plantations and small and medium enterprises (SMEs).

The main aim of the programme is to increase rural income in the Southern Highlands through developing sustainable and inclusive private forestry that contributes to Tanzania's economic growth and poverty alleviation. The programme envisages a profitable forestry sector throughout the entire value chain from seeds to quality wood products in the markets. The first phase of the programme (2014-2017) is to embark on economically viable, sustainable and inclusive plantation forestry and related value chains that provide employment and increased income for private forest owners, SMEs, and vulnerable households in the project area.

PFP promotes smallholder-based plantation forestry through extension services and in-kind support from beneficiaries for establishment of private smallholder woodlots. The main interface between PFP and individual tree growers are community-based Tree Growers' Associations (TGAs).

The PFP extension services involve creating awareness and training stakeholders in target villages on the need for the Tree Growers Associations (TGAs) and participating in their formulation; conducting demand-driven training to stakeholders on intensive commercial tree growing; coordinating and supervising stakeholders in conducting professional forest management activities, like tree nursery, land preparation, planting, pruning, thinning, and forest protection (e.g. fire prevention); disseminating forest management best practices to tree growers; as well as monitoring tree growing progress.

1.2. Study Objectives

The overall objective of this scoping study is to inform PFP programme planning and implementation through a better understanding of existing extension services in the programme area, the needs of tree growers, and therefore the gaps and opportunities which could be met by PFP through its programmes.

Specific objectives of the study are to:

8. To assess the extent to which local communities have been supported in extension services by the Government, including instructions, manuals, guidelines and tangible field support.
9. To identify national and international organisations (development partners, private sector, national and international CSOs, NGOs, FBOs, CBOs) that support extension services in the Southern Highlands and provide an overview of organisations' geographic outreach, target groups, main focus, implementation modality and other relevant information;
10. To conduct a situational analysis of TGAs and their activities including their needs for forestry extension services;
11. To provide an analytical assessment of opportunities in provision of extension services in Southern Highlands.

For the purposes of the flow of this report, the profile of TGA members and their extension service needs (objective 3) are presented first in section 3.1 followed by current provision of services (objectives 1 and 2) and then recommendations for PFP considering TGA needs and current service provision (objective 4).

1.3. Methodology

The study used a combination of approaches:

- i) **Inception meeting:** The assignment commenced with three inception meetings with PFP officials in order to gain a clear understanding of the problem and its context, to understand the aspirations of the client, on-going initiatives and experiences.
- ii) **Desk-top review and collection of secondary data:** Consultants reviewed relevant documents on extension services including reports from Government and other organisations that engage in extension services.
- iii) **Primary data collection**
 - **Semi-structured questionnaire:** A semi-structured questionnaire was administered to 240 tree growers, both TGA and non-TGA members. 36 of these were TGA leaders.
 - **Interviews with key stakeholders:** Consultants conducted face to face interviews and focus group discussions with key stakeholders in extension services including extension officers at District, tree farmers, both TGA members and non-TGA members, and officials from other organisations dealing with extension services. For those who could not be met physically, telephone interviews were conducted.

Forestry Sector stakeholders	No. interviewed
District Extension Officers	11
PFP extension officers	8
Tree farmers per village	21 Focus Groups
CEO of TFS	1
FDT Business and Market Facilitator & General Manager	2
SHIPO Manager	1
EAMCEF Manager	1

TGA and non-TGA Farmers were randomly selected. Officials from other organisations dealing with extension services were purposively selected.

- ii) **Data compilation, analysis and synthesis:** Quantitative data was analysed using descriptive analysis, which was done through SPSS Version 20. Qualitative data was analysed through content/theme analysis.

2. OVERVIEW OF FOREST EXTENSION IN TANZANIA

Tree growing by rural people in Tanzania was first given formal backing in 1967 with the establishment of a national Village Afforestation Programme. At that time, the Forest and Beekeeping Division (FBD) was responsible for management and protection of forest plantations and reserves. Its role was then augmented to basic extension services including the distribution of tree seedlings and advice to farmers. In early years of the programme, the forest service promoted scaled-down plantations or woodlots, with the intention of producing wood fuel or poles for light construction purposes. Tree seedlings were raised in central government nurseries and distributed to villagers free-of-charge (Shanks, 1990).

Today, attention has shifted from traditional natural forests to market-oriented plantation forests, as rapid population growth has driven demand for timber and other non-timber forest products, and natural forests have dwindled due to unsustainable use. Introduction of new technologies, market expansion and government forestry policies have therefore become significantly more important, and extension services play a vital role in improving productivity and sustainability. First and foremost, extension services are needed to encourage rural foresters to understand and effectively use improved technologies and forestry practices in order to improve timber yields. Forest extension is now increasingly expected to encompass a wide range of services from market linkages, effective advocacy structures such as tree grower associations, resource conservation, health, monitoring of food security, nutrition, family education, and youth development and partnering with a broad range of service providers and other agencies (USAID, 2002 quoted in Mensah 2013).

If done properly, tree planting creates employment and leads to the growth of other industries such as transportation, furniture industry, construction, and many others. Forest extension work could therefore play a valuable role in helping lift communities out of poverty. Given the nature of tree growing, which requires farmers to wait for long before harvesting, it is imperative that extension services include business development services so farmers have other income generating activities.

The literature highlights a lack of forest extension services, or where they exist, fragmented with little coordination between players, and a lack of sustainable funding as a major challenge. Experience shows that where NGOs, CBOs, and other private organisations have provided extension services, most projects were successful as long as there were donor funds to cover extension services. There is therefore a need to figure out a sustainable mechanism to deliver extension services to private tree growers with limited resources. It is also imperative to objectively determine the actual cost of extension given the diversity of needs for quality services (BACAS (1997).

The National Forestry Policy (2013) acknowledges the need to improve forest extension services:

“To ensure increased awareness and skills amongst the people on sustainable management of forest resources, the forestry extension services will be strengthened.”
(Policy statement 33, National Forestry Policy, 2013)

The policy advocates for involvement of NGOs, CBOs and other institutions in forestry extension activities, although the government does not allocate funding for these activities, presumably with the expectation that other agencies would source their own funds to do this.

It was in recognition of the need to coordinate with and complement existing service provision that PFP commissioned this scoping study.

3. PROFILE OF RESPONDENTS

In total, 240 tree growers took part in the study. The majority of respondents were male (79%), primary school leavers (73%) married (82%) and engaged in subsistence farming (82%). 61% of respondents were members of TGAs at the time of the survey¹.

3.1. Age of Respondents

The majority of respondents were aged between 31 and 50 (63% of respondents). Respondents mentioned specific barriers for older and younger people participating in tree growing. For older members of the population, one of the barriers mentioned was the long distances to walk, as trees are planted far from their homes. For younger people, the lack of capital to invest and the need to get an immediate income is a major barrier. Only 15% of respondents were under 30, highlighting that young people are under-represented in tree growing activities, as 15 – 35-year olds make up 35% of the population in Tanzania. Respondents from several villages said young people were put off by the long wait for returns.

One farmer in Ifinga village remarked: ***“Young people in our village are not so excited about tree growing because they do not see benefits quickly”***. This is a group with significant potential that may need a targeted strategy.

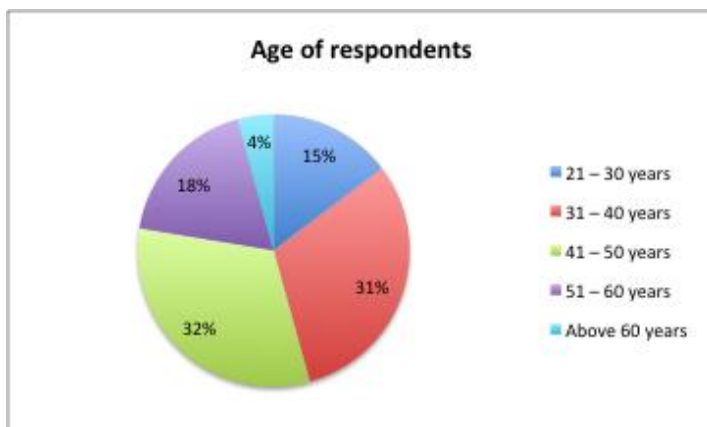


Figure 1: Age of respondents

3.2. Economic Activity

The main occupation of respondents was subsistence farming (82%) with livestock keeping as the most common secondary occupation (47%). It is notable how few respondents have commercial experience, or experience of running small businesses. There was little difference between men and women’s activities, except for timber trading (with only 3 male respondents and no females).

PFP’s decision to expand Village Savings and Loans Associations (VSLAs) and provide entrepreneurship training recognises the importance of developing these secondary activities, so that tree growers have a source of income in the years before they can sell their trees.

¹ Proportionally, fewer women interviewed were TGA members – just over half (53%) of the women interviewed were TGA members, compared with 63% of men who were TGA members

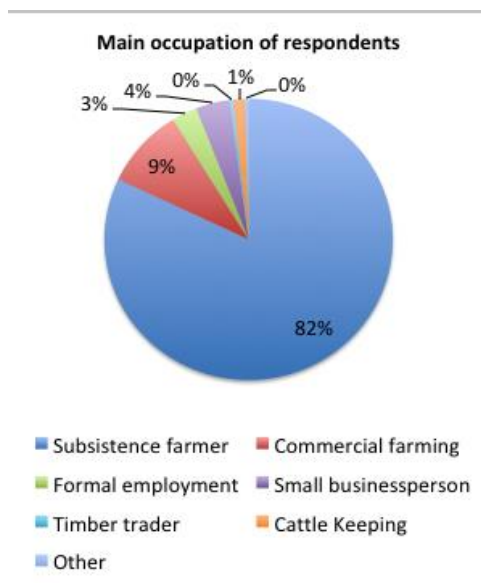


Figure 2: Main occupation of respondents

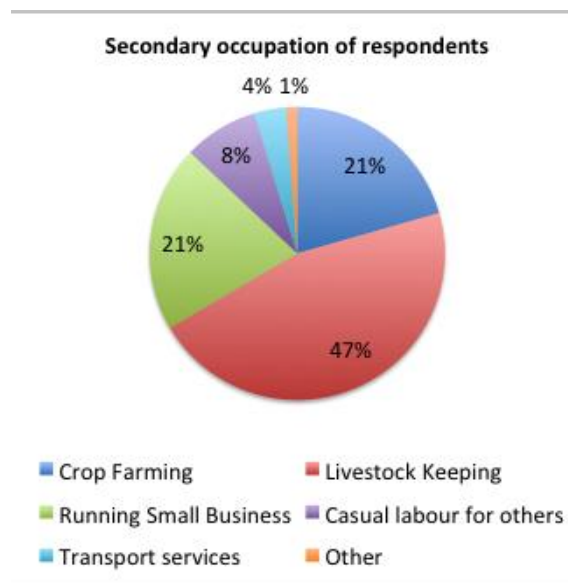


Figure 3: Secondary Occupation of Respondents

3.3. Levels of education

The majority of TGA members are educated to primary level (73%), which has important implications for their training needs. Low levels of education can also impede tree growers in negotiating prices and accessing markets. TGA leaders generally had higher levels of education, with 66% having secondary education, and 9% with a certificate or diploma.

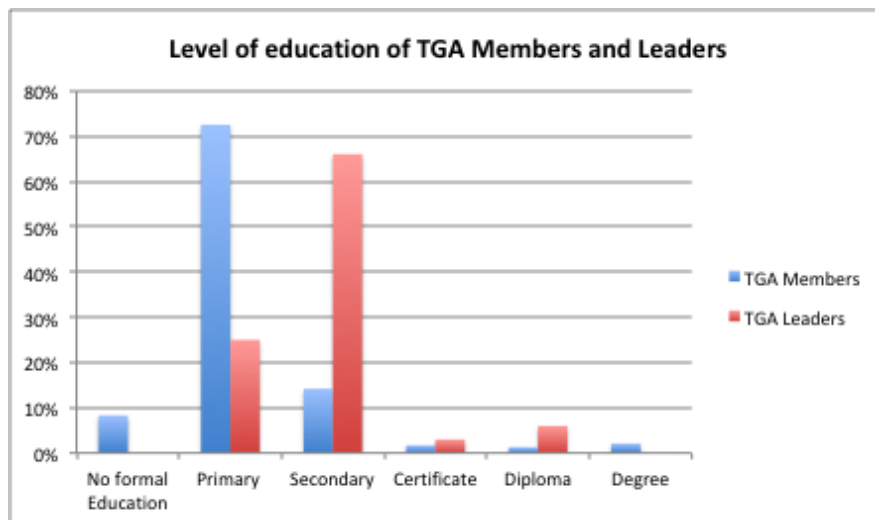


Figure 4: Level of education of TGA Members and Leaders

4. TGA MANAGEMENT AND CAPACITY NEEDS

4.1. TGA Activities

20 TGAs were interviewed during the study. Out of these, two have been operating for over a decade, and therefore have substantial experience. Of the seventeen TGAs that knew how long they had operated, seven were set up in the last two years, and ten groups have between three and eight years' experience. A list of the year each group started is included in Annex 1.

Interestingly, the most commonly mentioned TGA activity was social support (47% of respondents), with a slightly higher proportion than mentioning support for tree growing (44%). It is positive that members experience this as a benefit of TGA membership, as this creates a foundation for leveraging the group's social ties for other aspects like organising transport together and also high levels of trust as required for savings and loans associations.

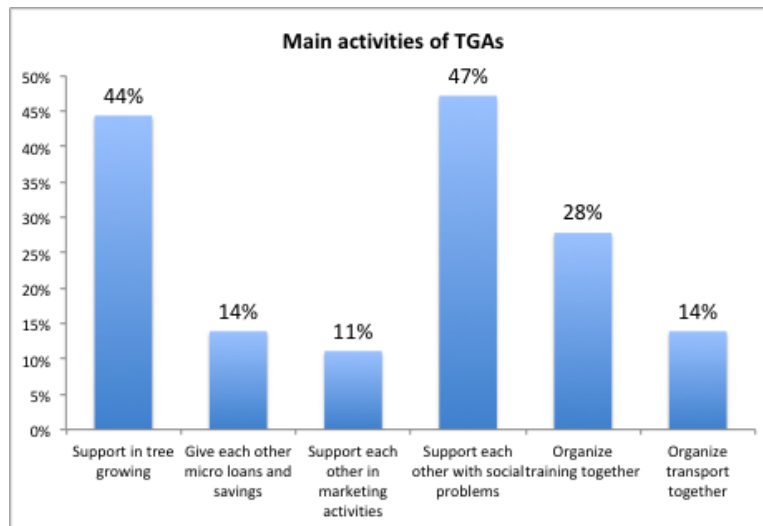


Figure 5: Main activities of TGAs

All groups meet regularly, with 61% meeting once a month, and 39% meeting twice. Groups supported by PFP seemed to be more active than those not currently supported, and it was encouraging to hear that TGAs regularly share knowledge with non-members.

4.2. Perceptions of TGAs

The study included 93 respondents who are not currently members of TGAs. 54% had not heard of TGAs, and for these respondents, this was the main reason for not being a member as they didn't know about TGA activities.

Just under half of respondents who are not already TGA members (46%) said that they had heard of TGAs. Most non-members said they simply didn't want to be in a group (22%) and a small number of respondents (10%) said they had once been in a group but had left.

In all the villages surveyed, farmers indicated that there was demand for PFP to reach out to those who don't meet PFP conditions. Although there is sharing of knowledge between TGA and non-TGA members, tree growers who don't meet the PFP conditions (for example having 500 acres of communal land) or are not in TGAs feel left out of the programme and would like to be involved in some way.

In Mbega village, farmers said they have been waiting for improved seedlings for over one year ever since they heard about PFP.

The focus group discussions raised some criticisms of the management of TGAs and also fears and misconceptions. Non-TGA members in two villages (Lugholofu and Madope) claimed that some TGA leaders have favoured their relatives and friends when allocating land to group members, and this was given as one of the reasons why some farmers are not members of TGAs.

“They would start associations targeting new projects coming into the village but not necessarily for helping members. After realising their dishonesty, I stopped being a member.”
Former TGA member from Lugolofu village.

In Ukimo village, TGA leaders were recruiting members at the time of this survey, and said that some people were hesitating to join the TGA because they feared that their land would be taken.

Most communities mentioned promises of support from PFP which they are concerned are not going to be fulfilled, including the promise to reward those with well cared for plantations, working on infrastructure in collaboration with TASAF, supporting IGAs, etc. In some cases this was the cause of the accusations that TGA leaders have been dishonest, as members suspected that PFP had provided support but it had not been announced to the farmers and only the leaders had benefited. This demonstrates the challenging context in which the programme operates and the importance of PFP being very clear on commitments for support. In some villages where PFP does not have presence yet, community members sounded discouraged and unsure whether PFP will start operations there because they have been waiting for a long time.

4.3. TGA Capacity Needs

TGA leaders were asked about their strengths, weaknesses and training needs. Leaders mentioned several positive aspects illustrating their commitment and willingness to share learning with others, but many also expressed concern about their lack of education (86%) and leadership skills (61%).

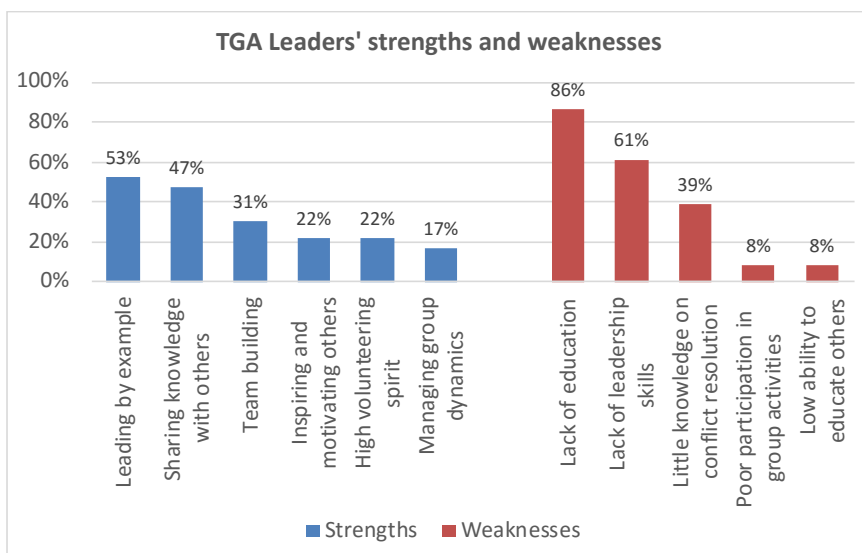


Figure 6: Strengths and weaknesses mentioned by TGA leaders

TGA Leaders were also asked about the work issues they struggle with, and the areas where they would like more training. Report writing and conflict management were among the most commonly mentioned issues. The majority of TGA leaders said they were keen to improve their marketing skills, leadership and tree growing practices as well as record keeping, planning and managing group dynamics.

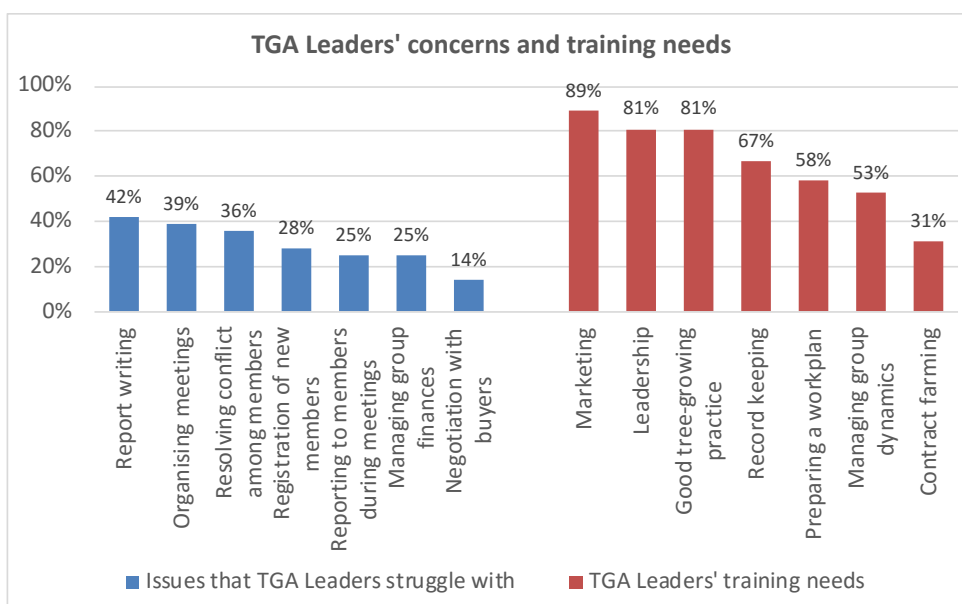


Figure 7: Issues that TGA leaders struggle with, and training needs

These insights should be considered in developing the training plan for TGAs. Good governance and transparency is also clearly an important issue for strengthening TGAs and facilitating good relationships between PFP and communities.

5. COMMERCIAL FORESTRY CHALLENGES AND EXTENSION SUPPORT NEEDS

5.1. Tree growing practices

Only a minority of respondents are following good tree-growing practices, by their own admission. For example, only a third of respondents said that they practise thinning and use improved seedlings.

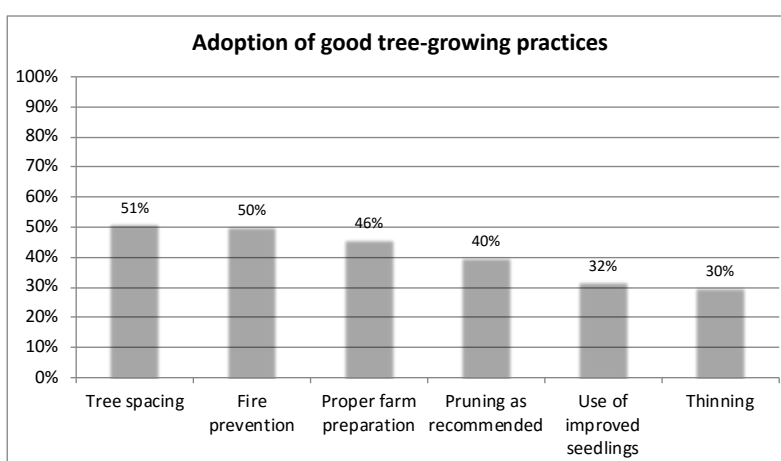


Figure 8: Adoption of good tree-growing practices

5.2. Use of casual labour for tree farming

Farmers currently hire casual labourers for a number of activities, particularly in the early stages of tree farming. Around half of respondents used labourers to prepare the land and dig holes for planting. Only a quarter use labourers for pruning and gap filling, and fewer than 10% use labourers for applying fertilisers.

Table 1: Activities where farmers hire labour

Activity	Number of farmers	Percentage
Farm preparation	112	47%
Digging holes for planting	125	52%
Planting seedlings	97	40%
Gap filling	46	19%
Applying fertilizers	19	8%
Making a fire line	20	8%
Pruning	62	26%
Harvesting	38	16%

Some of the participants indicated that, if they can get technology to simplify planting, the costs for establishing plantations can go down.

In order to establish the cost of growing trees on one acre of land, tree growers were asked to mention the cost of labour in various activities in their respective villages. The details of the cost of labour are provided in Table 2. In 6 villages, farmers are yet to engage in commercial farming and were not able to provide figures for labour costs.

Using the average costs for each activity, gives an estimated total cost of 333,700/= for the additional labour needed to produce trees on one acre of land (and not including the cost of seeds and other agricultural inputs). This is a significant cost for community members, many of whom are only saving 5,000/= per week, even after the introduction of VSLAs. Some of the participants said that they expect that if they could use technology to simplify planting, the costs for establishing plantations would go down.

Table 2: Cost of labour in villages (TSH/acre)

Village	Farm preparation	Digging holes	Seedling planting	Applying fertilizer	Fire line making	Pruning	Harvesting
Ukwama		120,000	24,000			10,000	
Ngalanga	50,000	50,000	50,000	10,000	50,000	50,000	
Ifinga	35,000	25,000	30,000				
Lipilipili	40,000	30,000					
Mbega	100,000	50,000	50,000			70,000	62,500
Mkongobaki	50,000	25,000	25,000			40,000	30,000
Madope	50,000	35,000	25,000			75,000	70,000
Ikangasi	40,000	35,000	20,000			30,000	
Ukimo	50,000	100,000	30,000				
Kipingo	75,000	50,000	50,000	25,000	50,000	100,000	30,000
Lyamuko	50,000	35,000	35,000	15,000		60,000	
Nyakipambo	50,000	120,000					
Wangama	50,000	100,000	60,000				30,000
Mfriga	50,000	50,000	50,000			30,000	
Average	53,077	58,929	37,417	16,667	50,000	51,667	44,500

5.3. Challenges for rural farmers in commercial forestry

Lack of capital to invest in tree planting was the most common challenge raised by tree growers, and the high cost of seeds and maintenance of plantations. Bush fires and lack of access roads were also mentioned by nearly half of the respondents. Availability of land was not a problem for most respondents.

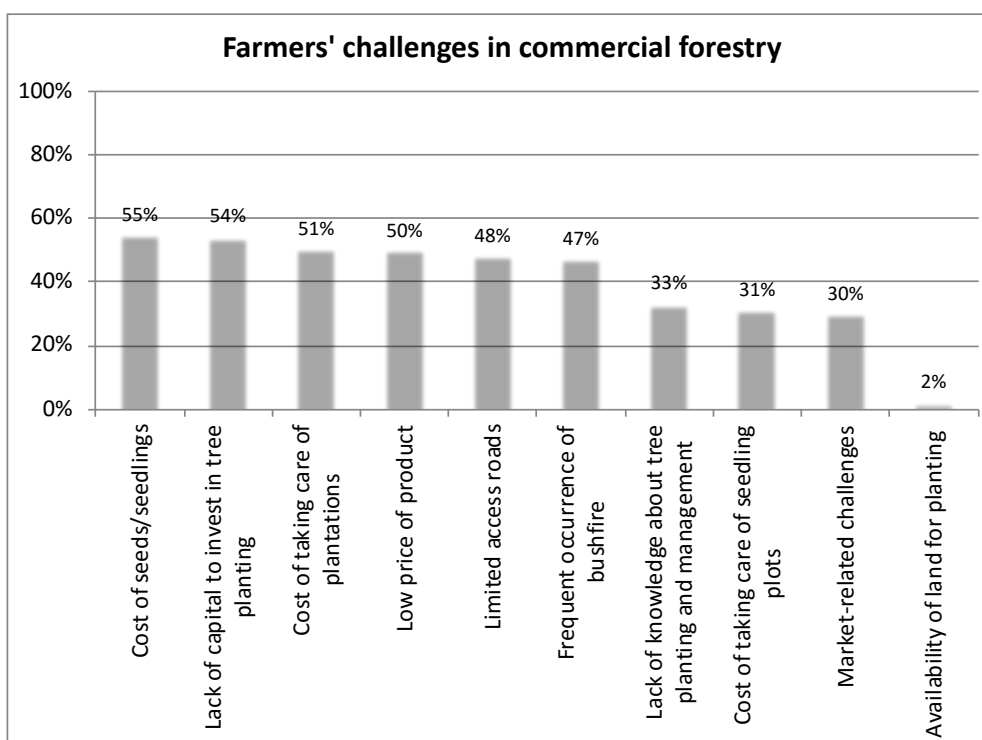


Figure 9: Farmers' challenges in commercial forestry

In some of the villages especially where PFP is not yet operational, respondents were keen to learn more about better forestry techniques and said that they would be willing to pay up to twice the current price to get improved seedlings, and also to pay for extension services as they recognised their potential value.

“We hear that there is a way to make the trees grow faster but we don’t exactly know how this is done. As long as we get improved seedling, even if they cost twice the normal price we are willing to pay. We heard that by using fertilisers when planting trees grow much faster but we are not sure of exact fertilisers to use and the rates. We are willing to pay an expert to teach us how to go about this because we want to grow trees commercially and profitably”

TGA leader from Mbega village

During the focus group discussions, there was an outcry about the low prices for tree products. It is therefore not surprising that marketing of tree products comes on top of all other training needs. Respondents said that because farmers need money quickly, it reduces their bargaining power. ***“Every individual farmer has a right to do what they want with their tree. The TGA cannot stop them, even when middlemen exploit them; it is willing buyer - willing seller. This distorts the market”.***

Farmer from Uchindile village

5.4. Access to information about forestry

Farmers were asked about sources of information about forestry available to them locally. They identified a wide range of formal and informal channels.

NGOs and PFP were mentioned by the highest number of respondents (55%) followed by seminars, village meetings, farmers’ groups and extension officers mentioned by a third of respondents.

Agricultural shows and input suppliers were mentioned by around 20% of respondents. Government agencies were only mentioned by 5% of respondents.

Printed materials do not seem to be widely available or used, possibly due to unavailability or because of their level of education. People with low levels of education tend to prefer oral means of communication, or may not be well used to absorbing new technical information in written form.

During the focus group discussion in Ilang'asi village, cinema was mentioned as one of the methods extension experts used to train them. In a discussion with FDT it was mentioned that they contracted TFS to use cinema to reach out to more tree farmers. The film included videos taken from the demonstration farm to show good forestry practices. These materials could be of use to other agencies.

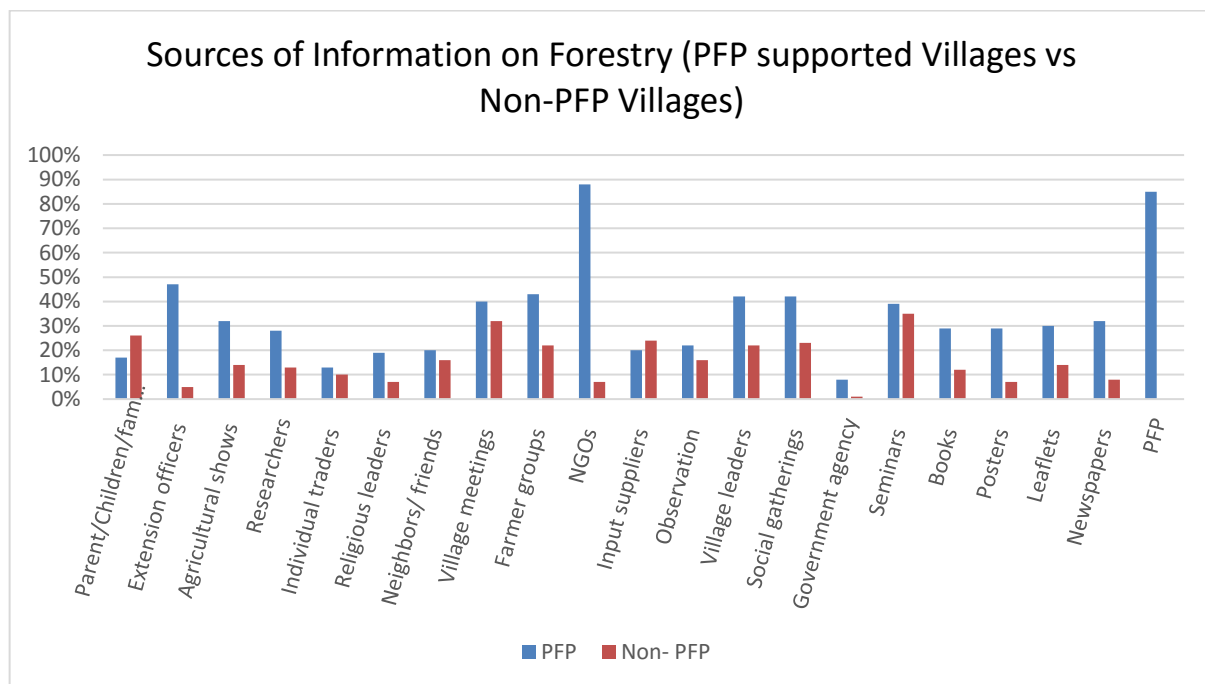


Figure 10: Sources of information on forestry

A minority of tree farmers (44%) said there were forest extension services available in their village. 85% of tree farmers indicated that they had been contacted by NGOs and 14% by donor agencies² in the past year but only 1% of respondents had been contacted by a Government extension officer³.

This was corroborated by District Forestry Officers in the in-depth interviews, who said that government involvement in forest extension has been minimal (discussed further in section 6 below). Government extension work seems to have been most active in Makete District.

Tree growers perceive extension services primarily as technical support such as tree seedling production, land preparation, planting, weeding, pruning, thinning, and forest protection. One of the major functions of DFOs is revenue collections from tree harvests, but farmers do not perceive the regulatory role of DFOs as a type of extension service.

When farmers were asked to mention agencies supporting extension apart from PFP, only 37% of respondents mentioned at least one organisation. Those mentioned include NOSC, FDT, SHIPO and HIMA. More details on the NGOs, their core activities, methodologies and coverage area are provided in section 6.2 of this report.

² Note that stakeholders considered PFP to be an NGO

³ Unfortunately the questionnaire did not allow for multiple options, so we do not know if those respondents who had been contacted by NGOs had also been contacted by government extension officers.

Tree growers were asked open questions about the type of extension services they most want to receive. They were also asked separately about what services they currently receive. As these were open questions with the respondents providing answers in their own words, there is not a direct match of answers for services wanted and services received, but their responses have been brought together in figure 11 below, highlighting that while the type of service provision broadly maps to farmers' needs there are still some notable gaps.

Responses have also been disaggregated by whether they are from villages already receiving support from PFP. (This includes villages that have received extension service support and also support with land use planning)

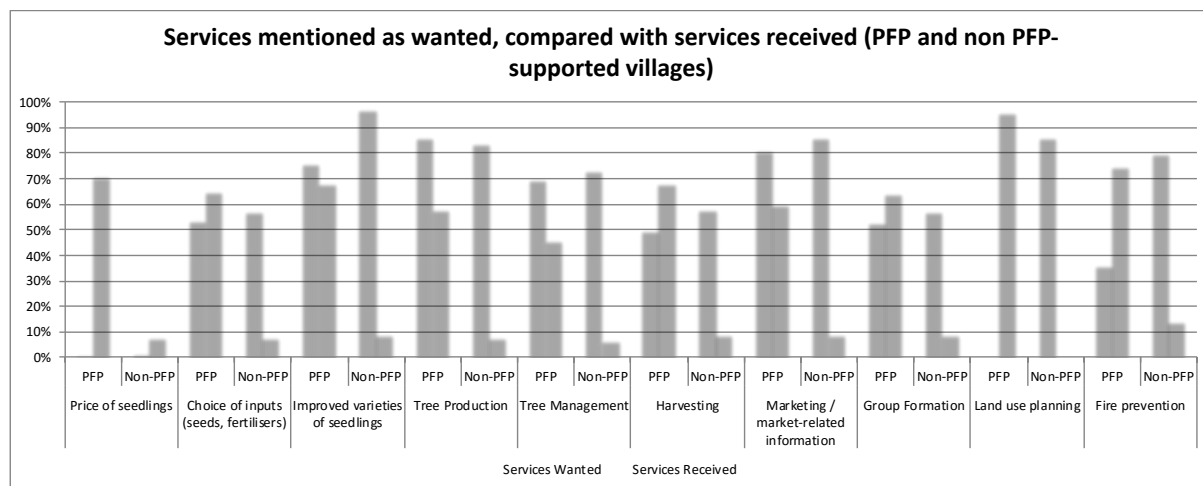


Figure 11: Extension services wanted compared with services received

This comparison highlights that:

- PFP is a significant provider of extension services, and the PFP-supported villages had received more extension support than villages not currently in the programme.
- A high proportion of respondents in the PFP-supported villages also wanted training in the full process from choice of inputs to harvesting and marketing, but the gap between the proportion who wanted services, and those who had already received them was smaller than for non-PFP supported villages – suggesting that some of the demand has been satisfied by PFP's programme.
- The biggest gaps between services wanted and services received were seen in tree production, tree management and marketing.
- For non-PFP supported villages there is untapped demand across the full range of training for best practice in tree planning and maintenance, from choice of input and improved seedlings to planting, harvesting and marketing, and fire prevention. In all of these areas, a significantly higher proportion of respondents said they wanted to receive those services, than said they had already received them.
- There was also significant demand for Land Use Planning among non-PFP supported villages.

Tree farmers said that the biggest challenge was the lack of available forest extension officers (mentioned by 73% of respondents) or extension officers located close enough to the village (28% of respondents). They were also concerned about the quality of the information they were receiving, and 67% of respondents felt that there was a lack of modern forestry technology content. While less than 2% of respondents mentioned communication between extension officers and farmers as a challenge, when asked about their recommendations for improving extension provision, 100% of respondents recommended close communication between extension officers and farmers, as well as allocation of officers close to the village and more modern forestry content.

Given that it might not be practical to have resident extension officers for each village, the approach currently employed by PFP to empower some individuals from each village will help in building local capacity for forest extension. In two of the villages, respondents proposed that since agricultural officers are more available than forestry officers, there should be deliberate effort to equip agricultural officers with forestry knowledge so they can serve both crop and tree farmers. However, some other villages felt that this option is not viable because agricultural officers are overwhelmed with the work they already have and adding other responsibilities would make them less productive.

In Ifinga village, respondents proposed that extension knowledge is extended into schools. The village is willing to allocate at least ten acres of land to both primary and second school so that young people are exposed to commercial tree growing at early age. They believe students can pass on the extension knowledge to their families.

5.5. Availability of Village Savings and Loans Associations

Village Savings and Loans Associations⁴ are widespread in the PFP programme area. 75% of respondents said that VSLAs are already present in their villages, and they generally had a positive perception, with half of respondents saying they thought VSLA performance was 'good', 6% saying 'very good' and the remainder saying they thought it was 'average'.

Several respondents highlighted some of the challenges facing VSLA members due to their lack of business experience, creativity and diversity of businesses. Comments included:

"The VSLAs should be trained on how to use money. Some of them borrow from the group but don't know what to do with the money".

Respondent from Lugolofu Village

"There is a need for diversification of businesses. A big percentage of the people do similar businesses for example setting up kiosks. We need more knowledge on how to be innovative".

"We all do the same businesses. We don't know how to create different businesses. We need help with new business ideas".

Respondent from Ukimo Village

Another respondent added that lack of business diversity was a reason for members struggling to return loans from the VSLAs giving an example that many female VSLA members had borrowed money for local beer business, but had made a loss.

Respondents also shared VSLA success stories. In Mang'oto village, VSLA members started a collective bee-keeping business precisely to avoid the losses that individuals used to get. Members agreed to share part of the revenues they obtain from it and retain another part for further investment. When asked if this was helpful, they answered that they had increased their capital which had almost doubled from the earning they got during the two years that have engaged in the business and they had further expectations to get more earning in future resulting from increased investment in bee hives

6. PROVISION OF EXTENSION SERVICES IN THE SOUTHERN HIGHLANDS

6.1. Government provision of forest extension services

Government provision of forest extension services has been minimal despite the fact that more than half of DFOs interviewed (Mufindi, Kilolo, Makete, Kilombero, Njimbe TC and Njombe DC) said forestry is the major income earner for their districts. In Makete, forestry revenues make up 43% of district income, and other districts are likely to be similar.

⁴ VSLAs or VICOBA groups, used interchangeably

Lack of staffing is the primary challenge. Only 6 of the 11 districts surveyed have any extension staff below district level (Table 3 below). Provision is also unequal: while Kilolo and Kilombero Districts each have 4 Division level extension officers, most others have none.

Table 3: Availability of forestry extension officers according to DFOs

District	Availability of Extension at Division level	Availability of extension at Ward level
Mufindi	Nil	Nil
Kilolo	4	Nil
Njombe TC	Nil	Nil
Madaba	Nil	Nil
Makete	1	Nil
Ludewa	Nil	Nil
Wangingombe	Nil	Nil
Njombe DC	Nil	3
Kilombero	4	Nil
Mbinga	Nil	3
Nyasa	2	Nil

This means that for most districts, extension services are provided from the District level, which means that they have large areas to cover and need more funding for transport.

District Forestry Officers (DFOs) indicated that their major role is regulatory work, rather than technical support or training. Their work includes supervising District or Village-owned forests, provision of permits to harvest trees and demarcating village and forests boundaries (see table 4 below **Virhe. Viitteen lähde ei löytynyt.**). Division level staff are often responsible for arresting charcoal sellers, and the fine is considerable – 30,000/= for each sack of charcoal.

Table 4: Services provided by District Forestry Officers

S/N	Services of District/Division/Ward forestry officers	Provided to the community	
		%	Count
1	Organise technical trainings in good forestry management to tree growers in the community:	0	0%
2	Supervising District/Village forest plantation and management	11	100%
3	Patrolling the natural forests as well as District and Village forests	11	100%
4	Provide extension services manuals / guidelines / instructions to tree growers	0	0%
5	Assist the community in forestry problem-solving	3	27%
6	Participating in demarcating village/forest boundaries	11	100%
7	Forest revenue collection	11	100%
8	Provision of permits to harvest District/Village/natural forests	11	100%
9	Ensure forestry legal and regulatory framework	11	100%

DFOs said that their biggest challenge was lack of resources – lack of funding, equipment, and staff. (

Table 5: Challenges facing DFOs in provision of extension services).

Table 5: Challenges facing DFOs in provision of extension services

S/n	Challenges facing DFOs in provision of forestry extension services	YES Count	%
1	Inadequate budget for extension services	11	100

2	Low number of forestry extension service officers in the District	11	100
3	Shortage of transport and equipment/materials	11	100
4	Involvement in non-extension activities	10	91
5	Inadequate per-diems	8	73

In some of the districts like Kilombero, road network was mentioned as a major hindrance to interaction between government extension experts and farmers. They cited the example of Uchindile and Masagati villages where commercial tree growing is happening, that it requires one to travel by train from Kilombero to Uchindile or Masagati, or by road to Mafinga and spend another day to travel from Mafinga to Uchindile or Masagati.

District Forestry Officers said that they rarely meet with tree growers due to limited funding. In Nyasa District, agriculture extension staff also help with forest extension, although their major focus is crops not forests.

Community members seem disappointed with support from the District, because they are expecting more technical support and training to improve their production. In some of the villages like Songambebe and Mango in Nyasa district, farmers said they have on several occasions formally asked the district officials to help them with extension support but are yet to get feedback.

“Extension officials from government do not have a structured schedule to meet with us. They once came and told us to grow cocoa, which we did. But they never came back to help us with pests and disease control and marketing. As a result many of us lost interest in what they advise us to do because we don’t see their commitment. We hope the situation will be different with PFP.”

Farmer from Songambebe, Nyasa District

Despite these challenges, the study also revealed examples of proactive leadership where progress was being made despite the resource constraints. The DFO in Makete, who is a bee-keeping expert, and has worked in his own free time to train tree growers in bee keeping to provide alternative sources of income. The DFO in Kilolo successfully influenced the Local Government Council to allocate budgets for forestry.

“Some time back, we harvested trees and earned two hundred and sixty million shillings. Although the district wanted to use all the funds on other non-forest related activities, I was able to convince them to put aside sixteen million to replant the forest and give seedlings to tree growers”

District Forestry Officer, Kilolo District

At the village level, proactive leadership has also made a visible difference. Two villages had managed to overcome some of the major challenges facing tree growers: wild fires and poor transport. Respondents from Nyakipambo village said they had not had problems with fires for many years, since instituting bye-laws prohibiting bush burning that have been strictly observed by villagers. In Ng’alanga village, instead of waiting for the government or donors to work on its roads, leaders mobilized people to provide labour to repair the roads; those who cannot physically participate contributed money. It was clear that the village leadership was generally very proactive, building a good office block with facilities for meetings using their own money.

District officials said they are keen to see greater coordination between agencies and more involvement of government in PFP’s work.

“Our level of engagement with PFP has so far been mainly with village land use planning. It would be good if we were involved more in field extension together with PFP staff.”

District Forestry Officer, Njombe TC.

While the survey uncovered examples of committed and proactive leaders at District and village level (demonstrating what is possible), on the whole, many government officials seemed resigned and powerless in the face of inadequate funding. More active government involvement

may help to build understanding of the importance of forestry and increase local commitment to make the best use of the limited resources available, as well as to lobby for greater investment.

6.2. Non-government provision of forest extension services

Respondents to this survey mentioned thirteen organisations providing extension services, of which eleven are still active. Table 6 gives the list of organisations and where they were mentioned, indicating how well the organisations are known 'on the ground', and therefore implying how active they are in providing extension services. Table 7 (further below) gives more detail on their activities.

A wide range of organisations have a stake in forest extension services: commercial tree and tea companies, NGOs and donor-funded projects with conservation aims, and government forestry agencies. This represents significant capacity for delivering support to tree growers in the target districts. However, many of these organisations seem to have limited reach in the rural areas.

Table 6: Organisations and where they were mentioned

Organisation	Villages where the organisations were mentioned	Districts where the organisations were mentioned
Private Forestry Programme (PFP)	Ukwama, Ngalanga, Ifinga, Madope, Lugolofu, Uchindile, Songambebe, Ikangasi and Lipilipili	All 11 districts
Forest Development Trust (FDT)	Mkongobaki	Kilolo, Njombe and Mufindi
Green Resources	Lugolofu and Uchindile	Kilolo, Mufindi and Kilombero
Tanzania Forestry Fund (TFF)	-	All 11 districts
Tanzania Forest Conservation Group (TFCG)	-	Kilolo and Kilombero
Kihansi Conservation Catchment (KCC)-MP	-	Kilombero
Eastern Arc Mountains Conservation Endowment Fund (EAMCEF)	-	Kilolo and Kilombero
New Forest Company	Uchindile	Kilolo and Kilombero
Njombe Outgrowers Service Company (NOSC)	Ngalanga	-
Mufindi Paper Limited (MPL)	Lugolofu and Uchindile	-
Southern Highlands Participatory Organisation (SHIPO)	-	Ludewa
HIMA	Wangama	-
Fondazione ACRA	Madope	-

PFP was the best-known organisation in the villages surveyed, and mentioned in all 9 villages where the programme is active. This suggests that PFP is the most active of the 11 organisations in providing rural extension services. Several organisations were only known at District level, but not in the villages, suggesting that extension services are not being delivered in practice. The assumption is that if these organisations were active they would be better known in the villages.

By their own admission, several of the organisations said they have not had an active programme of extension service provision, though they would like to if the funds allowed, and it is indeed part of their stated programme of work. This included Tanzania Forest Services and New Forest Company, who said they don't have a well-defined schedule but that they organise activities as and when there is money. These organisations would like to reach more villages if they had the resources.

Main services include provision of improved seeds, technical / practical training on tree planting, fire prevention. Some engage communities in alternative income generating activities around commercial plantations or natural forests in order to protect those areas.

The Tanzania Forest Fund (TFF) has district employees based in the council offices working closely with DFOs. This accounts for the close working relationship between TFF and Districts. They could be a good partner if PFP embarks on government capacity building.

Two organisations were mentioned that are no longer operational. Fondazione ACRA and HIMA closed projects many years back. Fondazione ACRA was working on renewable energy but would encourage villagers to plant trees, especially along riverbanks to protect the water sources providing hydro-electric power. HIMA was a DANIDA funded project that promoted tree growing in Iringa region to protect the environment. By that time Njombe, Makete and Wanging'ombe were all part of Iringa region. The fact that the farmers in Wanging'ombe still remember HIMA suggests that the project had impact but also that no new extension service provider has had presence in the district for a long time.

Table 7: Organisations that provide forestry extension services in the study area

Name	Type of Organisation	Core activities	Other activities	Nature of extension service	Coverage area
Private Forestry Programme (PFP)	Donor Programme	Promotion of commercial tree planting	Promotion of IGAs	Forest extension to farmers through TGAs -education, provision of high quality seedlings. Presence of extension staff in villages of operation	11 districts in Southern Highlands
Forest Development Trust (FDT)	NGO	Promotion of commercial tree planting	Promotion of IGAs	Forest extension services to farmers Works through tree nursery operators and a demonstration plantation.	Iringa, Mbeya and Njombe regions
Tanzania Forestry Fund (TFF)	Trust	Conservation	Conservation education	Funds different organisations involved in environmental conservation and protection of native forests through tree planting and related activities. TFF have extension officers in every district, based in the district council and therefore working closely with government, but say they have had limited funds to deliver extension services.	National coverage of Tanzania
Tanzania Forest Conservation Group (TFCG)	NGO	Conservation	Education and research	Providing seedlings to farmers living near natural forests in order to protect them, and also creating alternative sources of income. Also work on advocacy and research.	Eastern Arc Mountains and Coastal areas
Kihansi Conservation Catchment (KCC)-MP	Donor Funded project – World Bank	Biodiversity Conservation	Planting of trees along river banks	Funding conservation projects and capacity building	Kihansi Catchment Area, includes parts of Kilolo and Kilombero

Eastern Arc Mountains Conservation Endowment Fund (EAMCEF)	Donor funded project	Funding projects aimed at Conservation of biodiversity.	Other IGAs aimed at protecting the environment	Funding conservation projects and capacity building including Kilolo and Mufindi. Districts can apply for funding including for training tree growers – subject to submitting successful proposals.	Eastern Arc Mountains
Green Resources	Commercial Company	Commercial plantations and production of tree products		Training and provision of seedlings to farmers who are near the commercial plantations and educating on fire prevention	Mufindi, Kilolo
New Forest Company	Commercial company	Commercial production plantations and production of wood products		Training and provision of seedlings and education to farmers around company plantations, and educating on fire prevention	Kilolo, Mufindi and Kilombero
Mufindi Paper Limited (MPL)	Commercial company	Commercial production of paper	Tree planting	Engaging villagers as labourers in company plantations Villagers who work in plantations take back the knowledge to their private tree plantations, which is well established in these areas.	Mufindi, Kilolo, Kilombero
Njombe Outgrowers Service Company (NOSC)	Commercial	Tea production	Tree planting	Providing seedlings and education on tea and tree planting to outgrowers.	Njombe
Southern Highlands Participatory Organisation (SHIPO)	NGO			Not their main activity, but they provide seedlings to farmers to plant fruit for income generation. Also in collaboration with PFP, provided seeds to 20 schools in Ludewa, for income generating for the school.	

HIMA <i>(Inactive)</i>	NGO	Promotion of tree planting for conservation and sustainable agriculture			Iringa Region (before it was divided)
Fondazione ACRA <i>(Inactive)</i>	NGO	Renewable Energy		Tree planting to protect water bodies that provide water for renewable energy	Ludewa

Tanzania Forest Services (TFS) has presence in the districts and is tasked with extension work, but say their work has been limited by lack of funds. They are keen to see greater coordination between agencies and a shift in mindset to recognise the importance of commercial forestry. The CEO of TFS feels that the mindset of most TFS and other government forest officers is not commercially oriented, and there is not enough awareness of the commercial value of forestry. Given that revenue collection is one of the major ways that government interacts with tree growers, the entry point for engaging local government would be to demonstrate how investment in training / better extension services could improve revenues for the local authority.

“As TFS, our role is to manage revenues from forests and managing forests. We have a role in extension services but we have not been able to do it because of lack of funds. We may have one or two people at district level, which makes it impractical.

TFS is currently preparing extension materials and will use specialised vans to reach out to farmers. We have strengthened the extension unit and turned it into a department. We have also appointed extension officers at zonal level.

The idea of going private is new in our country, PFP can help to change the mindset so extension officials can develop a business mindset. It is also possible to combine both conservation with business. Ecotourism is another aspect we can work on together.

There is no proper coordination of extension initiatives. This sometimes leads to duplication of efforts or organizations targeting the same group of people. This is partly because different stakeholders have different interests.

However, lately I have seen organizations try to work together but there is a lot of room for improvement. The directorate of forestry is mandated to coordinate extension in the country but it has not been working effectively. The good news is that it is being revived and I am optimistic this challenge of coordination will be addressed. We shall need support from all stakeholders dealing with extension services.”

Chief Executive Officer, Tanzania Forest Services

The **Tanzania Forest Conservation Group** were similarly keen to engage with PFP and other partners to work out areas for collaboration. This is a USAID-funded project targeting 17 villages in Kilolo, Mufindi and Kilombero, but so far working in 5 villages. Their focus is conservation of Udzungwa nature reserve and Kilombero river, developing a system where water users can contribute towards conservation of water bodies. They use participatory forest management, and among the trees they promote are indigenous trees that are friendly to water bodies. In 2012 and 2013 they supported farmers to plant commercial trees, and they currently support farmers to strengthen IGAs in order to reduce their dependence on activities that destroy natural forests for the people living near them.

The **Forestry Development Trust** is another potentially promising partner. FDT has 5 extension officers, four of which serve the PFP target districts⁵. These extension officers have freedom to prepare their own workplan and train tree growers based on their training needs (typically including land preparation, tree spacing, thinning, fire control and pruning). FDT surveys tree growers' practice to assess how knowledge has been applied. In 2018, FDT have developed a map for potential tree growing villages that they haven't reached and they are now planning to reach them. They are developing a system called Making Markets Work for the Poor (M4P), which aims to empower communities to solve their own challenges and create sustainable extension service provision even when the donor assistance ceases. They are exploring the option of tree growers paying for extension services. FDT would be interested in collaborating with PFP to use the Mafinga Training Centre for their tree growers and also to engage PFP in the development of the M4P initiative.

⁵ One provides extension service to Makete and Wanging'ombe districts; the second provides service to Njombe DC and Njombe TC districts; the third one serves Ludewa and Madaba; the fourth serves Iringa rural, Kilolo and Mufindi districts and fifth serves Mbeya rural, Mbozi, Busokelo and Rungwe districts in Mbeya region.

6.3 Community and government perceptions of PFP

All TGA leaders and 88% of TGA members said they were aware of PFP. (The remaining 12% were TGAs that were not yet served by PFP by the time of survey). Both TGA leaders and ordinary members particularly appreciate PFP for providing improved seedlings and support in tree farming. Leaders were the most appreciative of PFP's support to TGAs, which was their most liked activity (36%), probably reflecting the fact that leaders are more aware than members of TGA management issues and the forms of support provided by PFP.

22% of TGA members thought that PFP is already involved in improving roads to farms (and appreciated this), though they may be wrongly attributing these improvements to PFP.

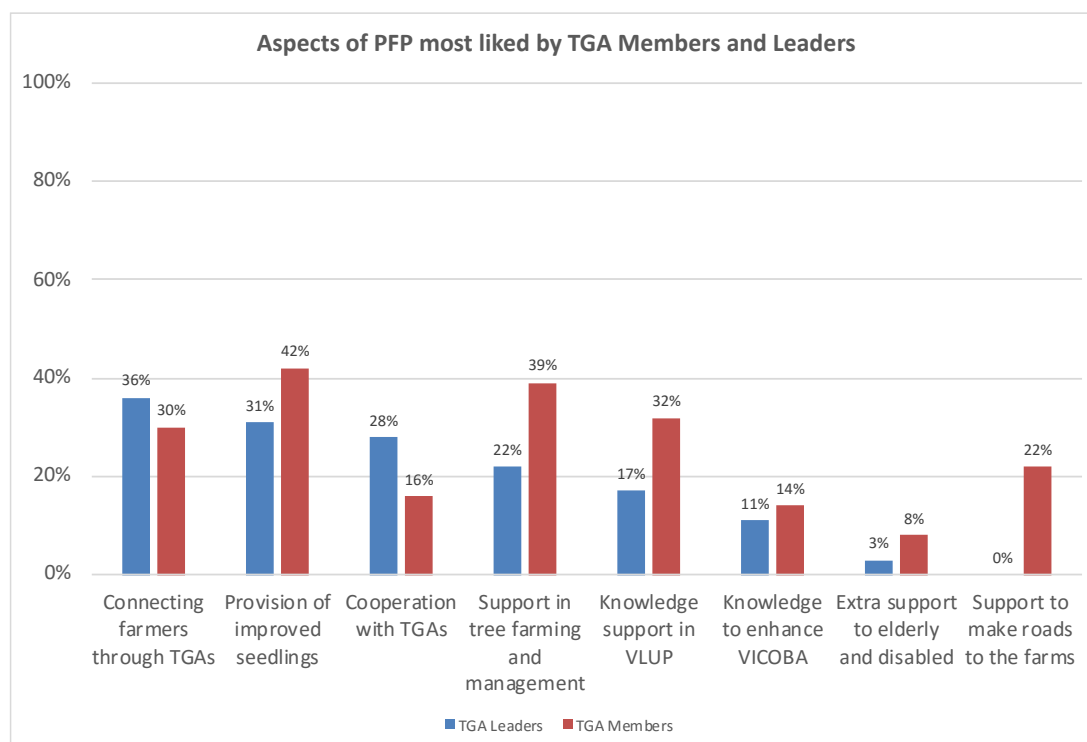


Figure 12: Aspects of PFP most liked by TGA Members and Leaders

PFP-supported groups appeared to be more competently managed than groups not yet receiving PFP support, many of which had major governance challenges (Mfriga in Njombe DC, Nyakipambo in Mufindi, Mbega in Njombe TC, Ilamba in Kilolo, Mafinga and Wangama in Wanging'ombe). In Mbega, they could not remember the last time they met as TGA, in Nyakipambo, they had only one female member.

TGA members and leaders were asked about their recommendations for PFP's programmes. Support for VSLA / VICOBA groups and for income-generating activities were the areas highlighted by the most TGA members. Other areas highlighted (figure 13 below) were support for road building, tree nurseries, and fire control equipment.

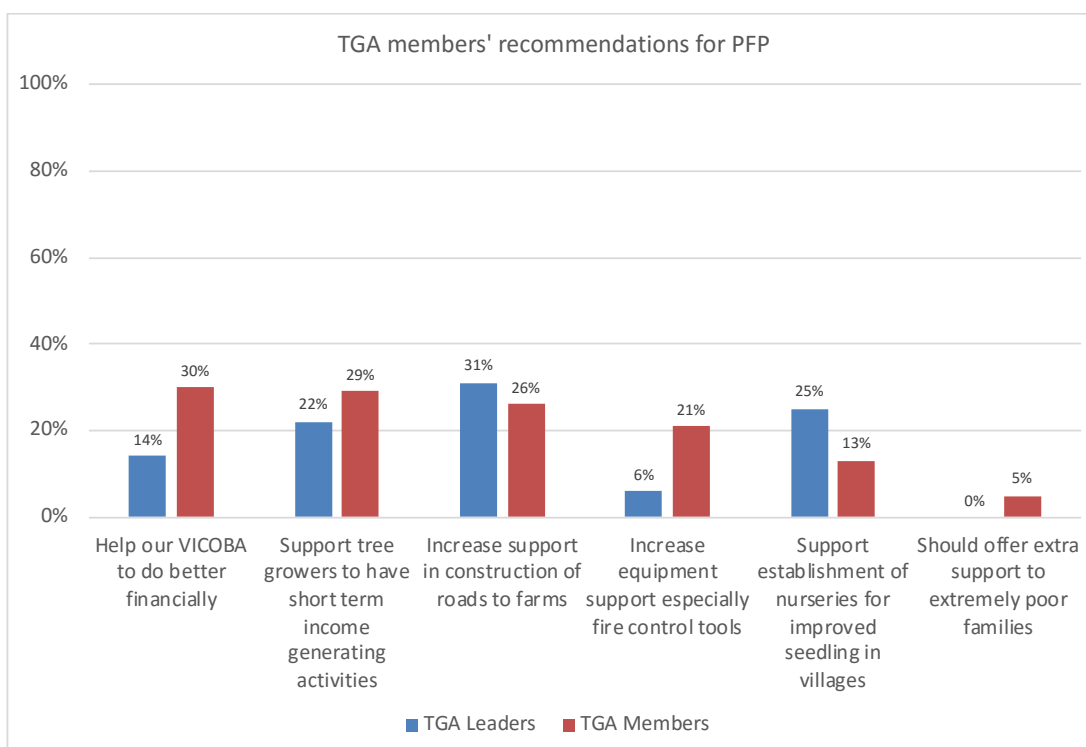


Figure 13: TGA members' recommendations for PFP

In focus group discussions, some of the participants said that PFP staff need to work more closely with village leaders and not only TGA leaders, especially where village leaders are not TGA members. Village leaders were identified by the highest proportion of TGA members (29%) as the most influential people in their village, followed by other professionals – 28% (teachers, agriculture officers etc) and NGOs – 25%.

Involvement of village leadership is strategic in PFP's programme. At the outset, village leaders can help avoid misconceptions and ensure that the programme is well understood and trusted – as raised in this study, in some villages there was initial distrust that PFP was trying to take away village land. Later, many have realised this was not true although there are still a few who doubt the intentions of the project. Village leaders can also support tree growers by enforcing by-laws, supporting fire breaking, road building and repair, as seen in Ngalanga village.

District Forestry Officers also highlighted the need for good coordination with other stakeholders and particularly with District officials. Some said that they felt that their districts were not yet well included in PFP planning and implementation, and that although they are aware of PFP's work, some feel they don't have a full picture of what is going on in the villages. DFOs also mentioned demand for PFP to extend its work to more villages (Table 8).

Table 8: DFOs advice to PFP on areas for improvement

District	Advice to PFP
Mufindi	We appreciate their work because as a district we don't have resources to do what they do. We just need to work closely.
Kilolo	We should share more about plans in villages.
Njombe TC	Not only to PFP but all stakeholders in forestry, we need to work more closely, they should not be far from us. Since the project has an end, it is important to share extension expertise with district professionals like they are doing with land use planning.
Madaba	PFP should work more closely with district professionals and should extend project to more villages where pine and eucalyptus don't perform well.
Makete	They should share their plans more with us.
Ludewa	No comment
Wanging'ombe	Should start operations in Wanging'ombe.
Njombe DC	Reach more villages.
Kilombero	PFP should take on more villages.
Mbinga	PFP is new, so I cannot say much.
Nyasa	To help us with more training in extension.

7. CONCLUSION AND RECOMMENDATIONS

7.1. Conclusion

There is significant untapped demand for extension services. Tree growers need technical support to improve tree-growing and support to negotiate prices and access markets, but in the 22 villages surveyed there was little evidence of regular extension service provision. They also urgently need support to develop alternative livelihoods. While 11 organisations operate within this geographical area, their provision of extension services has been limited in rural areas, by their own admission, and there is negligible coordination between agencies. PFP and FDT are already doing this, for example they share training materials. More such deliberate collaborations could increase the programme impact.

Government provision of extension services is weak, though it is not non-existent, as many stakeholders seem to think. Income from timber makes up 43% of the District revenues in Makete, and officials from 6 other Districts said that timber was the major revenue source for their Districts. There is therefore a strong business case that government investment in forestry would generate returns for District Councils, but more proactive leadership is required. While lack of funding and staffing is a genuine challenge, best practice examples exist where good leadership has overcome local barriers, highlighting an important advocacy and awareness-raising role to help define how and where the government can add more value.

Collectively the government and a range of non-state actors have considerable capacity and expertise which could be leveraged to deliver improved support services to tree growers. While this is not solely PFP's role, PFP could play a major leadership role. Mobilising government investment and improving coordination of extension services could be one of the most valuable legacies from PFP's programme in the Southern Highlands, in addition to continuing to build the capacity of TGAs.

Market mechanisms could also be leveraged for provision of extension services. Some Tree Growers are sufficiently aware of the value of tree growing that they are willing to pay for extension services and improved seedlings. At the same time, some agencies are using private input suppliers like nursery operators and fertilizer distributors to deliver extension knowledge to farmers. This could be a sustainable market-driven model, which also gives local companies a competitive advantage in offering services to their farmers. One of the other active agencies, the Forestry Development Trust is developing an initiative Making Markets work for the poor (M4P) which includes exploring such mechanisms. This could be a valuable collaboration for PFP to explore. Work to enhance income-generating activities would enable farmers to pay for such services.

7.2. Recommendations

1. **Leverage TGAs to increase coverage of extension services and continue to invest in building their technical forestry capability as well as their governance**

Capitalise on the strong desire among farmers to learn from each other and the emerging networks through which TGAs are already sharing knowledge including to non-TGA members. Help build internal accountability to ensure that members have confidence in TGA leadership and in the partnership with PFP, and empower members to hold TGA Leaders to account.

2. **Consider initiatives to attract youth engagement, including targeted awareness-raising so that youth understand the returns, and offer small start-up incentives.** Lack of capital and short-term income-generating initiatives are major barriers to youth engagement in tree growing. Awareness about commercial tree growing can go hand-in-hand with introducing them to TGAs so that they can meet short term income needs. Young people also have the opportunity of benefiting from offering services to tree growers such as plant nursery establishment, training others on fire-fighting, and offering labour on other forestry agronomic activities.

3. **Strengthen VSLAs especially with entrepreneurship training** so that community members can create profitable and innovate businesses, in turn improving their income and ability to invest in forestry inputs and training.
4. **Explore a market-driven model for provision of extension services** include collaborating with the M4P initiative, e.g. working with private input suppliers, and testing the feasibility of charging tree growers for services. This would be most successful if coming in the second phase of the PFP programme when TGA members' incomes have increased through investment in VSLAs and entrepreneurship training.
5. **Mobilise TGAs and other PFP partners and networks to identify and engage local champions** by using the best practice examples from this report which demonstrate the potential for local advocacy and action. There is more that could be done with existing resources, if the potential and importance of forestry were fully understood.
6. **Build advocacy capacity of TGAs and District officials to lobby for increased forestry funding**
 In addition to better leveraging existing resources, there is also a need to increase investment in forestry. The good practice examples demonstrate that internal advocacy for increased government funding is possible. PFP could empower DFOs with data and advocacy strategies to lobby local government for greater investment in forestry, as well as support budget planning to identify the technical investments that would yield the best returns. Districts would need to be open to sub-contracting technical work to some of the non-governmental organisations operational in the area, if they can deliver greater impact and value for money than government agencies. There is also a valuable role for TGAs, as active members of ward and village budget meetings, where community members are asked about their priorities for the next year's budget, so that forestry priorities are reflected in the council's plans.
7. **Strengthen engagement with district and local government, which could include:**
 - Multi-agency forum with government stakeholders and other implementing partners to improve coordination of activities and define complementary roles: for example, it may make sense for the 11 organisations to continue focusing on technical service provision while the government enhances and improves its regulatory role.
 - Develop a plan for building government capacity to deliver extension work which takes into account the lack of dedicated forestry staff, but makes use of other relevant government roles at district and local levels.
 - Regular reporting to Districts, including revenue information where known, and data on numbers of tree growers to demonstrate demand and capacity.
 - Identify government champions and engage them actively in PFP work.

Other recommendations emerging from the stakeholder feedback, which may be beyond the scope of PFP's work:

8. **Internship program for forestry students**
 It could be valuable to involve college/ University students in PFP field extension work as field attachment for some time to help with mind-set change in the long run. Students of today will be the extension workers of tomorrow. If they are given a chance to experience how PFP works with farmers and other stakeholders at an early age it will help create a pool of competent extension specialists.
9. **Extend forest extension education in schools**
 In some of the villages, respondents recommended that extension education could be extended to primary and secondary schools. Some villages are willing to offer land to schools to have their own commercial plantations. This would be valuable because then the tree growing knowledge can take root at an early age, though it may be beyond the scope of PFP's work. Children can train their parents on the best practices in tree planting. For example, school competitions on good forestry practices could be organized for different districts, clubs promoting commercial forestry could be formed and passionate students given further training. This approach may be a cost effective way of extending forest education in rural areas.

10. Consider active engagement of communities in infrastructure improvement

In almost all the villages where roads are very bad, farmers are willing to contribute labour to repair them if they can have culverts and other materials to construct bridges. In some of the villages like Ngalanga, this is already happening. Village leaders mobilize the community to repair roads. Access to markets being a key aspect of extension, PFP in collaboration with other stakeholders could tap into this social capital to improve infrastructure. Although infrastructure improvement is not PFP's primary responsibility, effectiveness of the programme is also dependent on good roads. Poor infrastructure is a major hindrance to successful commercial forestry. A cheaper way to could be to fabricate or buy moulds for making culverts, provide or ask villagers to contribute towards cement and provide sand and labour, then culverts can easily be made. This should be done in collaboration with district engineers for professional advice, instead of engaging expensive road construction companies.

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APPENDIX 1: LIST OF VILLAGES AND YEAR TGA WAS ESTABLISHED

Village Name	Year TGA was established
Nyakipambo	2001
Wangama	2008
Mang'oto	2010
Uchindile	2010
Lyamuko	2013
Ilamba	2013
Lugolofu	2013
Ngalanga	2014
Ikangasi	2014
Mafinga	2015
Ukwama	2016
Ifinga	2016
Madope	2016
Lipilipili	2017
Ukimo	2017
Mango	2017
Songambebe	2017
Mbega	Unknown
Mkongobaki	Unknown
Mfriga	Unknown