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PRIVATE FORESTRY PROGRAMME

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SEEDLING DELIVERY EXERCISE
IN 2017/18 PLANTING SEASON

FINAL REPORT



United Republic of Tanzania
MINISTRY OF NATURAL RESOURCES AND TOURISM
Forestry and Beekeeping



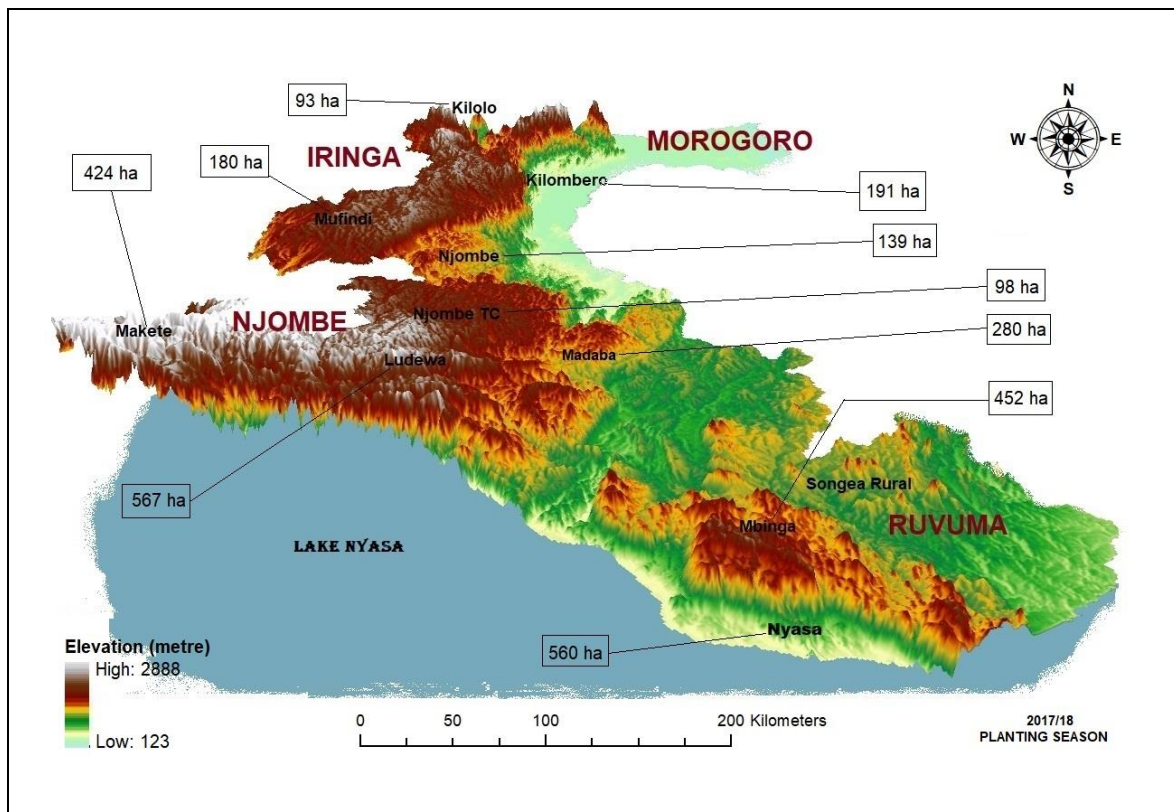
MINISTRY FOR FOREIGN
AFFAIRS OF FINLAND



PFP seedling delivery exercise in 2017/18 planting season

Final report

August 2018, Iringa, Tanzania



United Republic of Tanzania
**MINISTRY OF NATURAL RESOURCES
AND TOURISM**
Forestry and Beekeeping Division



**EMBASSY OF FINLAND
DAR ES SALAAM**

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EXECUTIVE SUMMARY

A seedling delivery exercise was conducted for 14 weeks, from 15 January, 2018, to 22 April, 2018, to transport seedlings from the contracted nurseries of GRL, Lugarawa, TTSA Mbinga, TTSA Wino, and TTSA Liuli to 52 PFP beneficiary villages as well as to villages supported by the Lugarawa hydroelectric project.

The seedling delivery exercise followed the procedure laid out in the updated 2017/18 TGIS guidelines¹. The guidelines provided benchmark information about all the procedures and roles to be followed in implementing the TGIS. The overall objective of the exercise, as called for in section 2.1 of the document, was to *“deliver the seedlings from the nursery supplier to an accessible road head near the planting site without extra charges for the service.”*

According to the project’s records, the total number of seedlings delivered to various villages in the 2017/18 planting season was 3,888,426, including 2,716,101 pine, 893,569 eucalyptus, and 278,756 teak seedlings. Altogether, about 98% of the seedlings raised were delivered to beneficiaries; less than 2% were not delivered. The latter were all *Pinus caribaea* seedlings which were not delivered because demand was low and transportation was problematic.

TGAs reported that out of the received seedlings, 78,656 were used for replanting old, damaged woodlots, and 134,906 were used for blanking at the end of the planting season. TGAs furthermore stated that 45,989 seedlings were so damaged they could not be planted. Thus, an estimated 3,628,875 seedlings were used to establish new woodlots. Assuming seedling consumption of 1,200 seedlings/ha this corresponds to about 3,024 ha of new woodlots. Replanting old, damaged woodlots added another 66 ha to the total.

Fifty-two villages in 10 districts across four regions received seedlings. Roughly two-thirds of the applicants for seedlings were male and one-third female, suggesting that the project’s target for gender balance was partially met. Schools accounted for only about 1% of the applicants.

The seedling delivery exercise faced several challenges which hindered its smooth execution. These included unexpectedly low demand in the first selection of TGAs, a shortage of seedlings at some nurseries, delays on the part of transportation service providers, inaccurate counting during the packing of seedlings at some nurseries, mortality during transportation and at temporary nurseries, poor road conditions, and an unexpected dry spell in the middle of the planting season. That said, the management team was able to mitigate most of the challenges.

It should be noted that the data and information presented in this paper allowed for drawing performance-related conclusions only at the programme level. The circumstances in individual clusters and villages were so different that it was not possible to compare their performances.

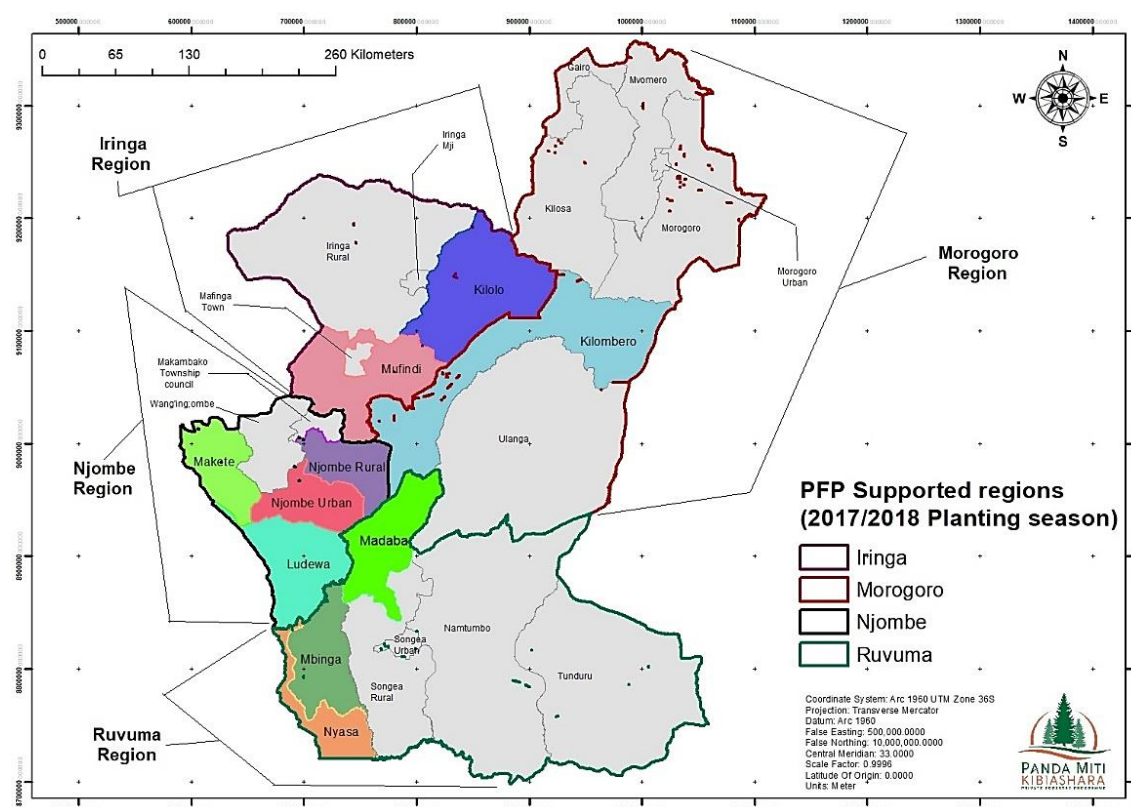
¹ <http://www.privateforestry.or.tz/en/resources/view/pfp-tree-growing-incentive-scheme-guidelines-2017-18>

1. OVERVIEW

As called for in the 2017/18 TGIS guidelines, the PFP implemented a tree-growing incentive scheme (TGIS) to support tree-growing in selected villages in 10 districts in Ruvuma, Njombe, Iringa and Morogoro regions (Figure 1.1). The TGIS intended to strengthen private plantation forestry among smallholder tree growers by offering seedling support and cash incentives for weeding in the 2017/18 planting season. This report provides detailed information about the entire seedling delivery exercise of the 2017/18 season, from planning to planting.

The seedling delivery exercise lasted 14 weeks, starting from 15 January, 2018, and ending on 22 April, 2018. Seedlings were transported from the contracted nurseries of GRL, Lugarawa, TTSA Mbinga, TTSA Wino, and TTSA Liuli to a total of 52 PFP beneficiary villages.

Figure 1.1 PFP-supported districts in the 2017/18 planting season



In the 2017/18 planting season, seedlings were delivered to 10 of the 25 districts in which the programme works (Table 1.1). They included Kilolo and Mufindi in Iringa Region, Ludewa, Makete, Njombe TC and Njombe DC in Njombe Region, Kilombero in Morogoro Region, and Madaba, Mbinga and Nyasa in Ruvuma Region.

Table 1.1 Number of districts supported in the 2017/2018 planting season

Region	Number of districts	Supported districts	Percentage
Morogoro	7	1	14%
Njombe	6	4	67%
Iringa	5	2	40%
Ruvuma	7	3	43%
Total	25	10	40%

2. DESCRIPTION OF THE PROCESS AND RESOURCES USED

2.1 Planning stage

The planning of the seedling delivery exercise started with the formulation of a road map for the planting season. This guideline acted as a benchmark guide to a series of activities to be carried out for the successful execution of the exercise (Annex 1).

First, at a series of staff meetings, various resolutions and documents guiding the execution of and follow up and reporting on the 2017/18 planting season were drafted. Below is a list of the documents developed:

- The 2017/18 planting season road map (18 September, 2017)
- The 2017/18 TGIS guideline, updated and launched (8–22 September, 2017)
- Resolutions from a Result Area 2 workshop meeting (20–22 September, 2017)
- Description of the process for verifying the planting area (29 September, 2017)
- Estimates for 2017/18 planting figures (continuously updated throughout the planting season)
- Seedling transportation framework for the 2017/18 planting season (December 2017)

Seedling delivery was implemented as called for in the seedling delivery framework for the 2017/18 planting season.

2.2 Selection of field areas

After an internal office meeting was conducted to identify potential geographic areas to support in the 2017/18 planting season, the areas were verified in the field, and then TGAs identified planting sites and estimated their areas using satellite images.

2.3 Organising transportation

To hire suitable service providers for transporting seedlings from the contracted nurseries to the respective villages, the following process was followed:

- Drafting a detailed transportation plan (including distance tables)
- Planning the tendering process
 - a. Preparing documents and making media announcements
 - b. Scouting for additional tenderers as necessary
 - c. Organising a workshop for tenderers
- Launching the tendering process
- Selecting service providers

2.4 TGIS application process

The TGIS application process had the following steps:

- Delivering of TGIS application forms to TGAs and launching the application process
- Screening and approving applications by TGAs and PFP extension officers
- Delivering a summary of statistics on the TGIS applications to the PFP office

2.5 Materials

- **Seedling delivery dispatch notebooks** were used for keeping records of delivery and monitoring service providers. Each truck received one dispatch notebook in which to record the details of every trip it made. Four identical copies of each note were produced: the extension officer took the original and copies were given to recipient TGAs, the transportation service provider (for billing), and the office, which kept it in its dispatch book. At the end of the exercise, all 15 dispatch books were returned and handled over to the office.

- **Plastic bags and crates for packing seedlings** were used to facilitate transportation during the loading and offloading of trucks as well as to help the TGAs carry seedlings from the offloading point to their respective woodlots. Figure 2.1 shows how crates and plastics bags were utilised during the transportation of seedlings.

Figure 2.1 Seedling delivery crates and plastic bags in use during the offloading of a delivery truck

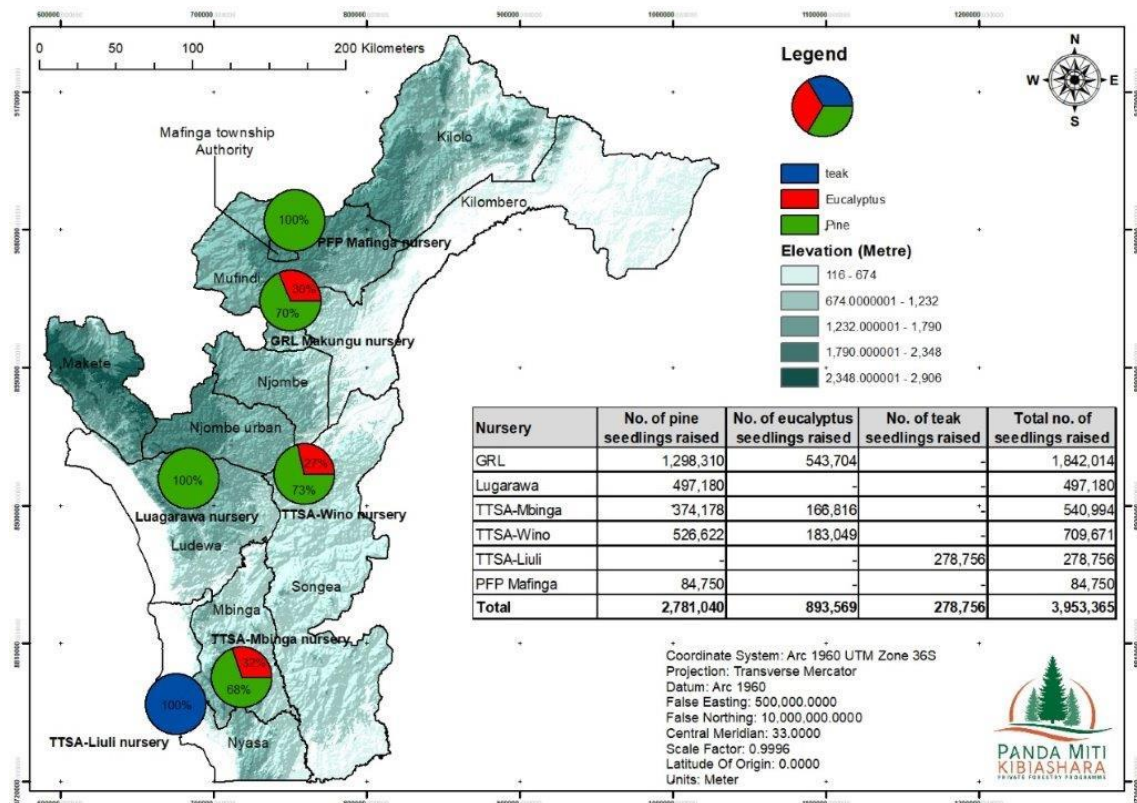


3. RESULTS OF THE SEEDLING DELIVERY

3.1 Seedling production

Figure 3.1 depicts the spatial locations of the nurseries as well as the species of seedlings each raised. A total of 3,953,365 pine, eucalyptus, and teak seedlings were raised by the nurseries.

Figure 3.1 Spatial locations of the contracted nurseries and the species of seedlings each produced



In most nurseries, there was a difference between the number of seedlings that was supposed to be raised and the number that was actually produced. A total of 4,664,750 seedlings was to be produced in all five contracted nurseries and one PFP-owned nursery at Mafinga.

Figure 3.2 compares the difference between amounts of seedlings that were supposed to be produced versus the actual number of seedlings produced by each nursery. Altogether, about 15% of the contracted number of seedlings, or a total of 711,385, was not produced.

The shortages resulted in unexpected changes in the schedule for seedling transportation and in meeting seedling requests. For example, the shortage of seedlings at TTSA Mbinga nursery required a change in the transportation plans, which increased the costs of the exercise since seedlings had to be transported from the GRL, TTSA Wino, and PFP Mafinga and Lugarawa nurseries to Mbinga and Nyasa highland villages in order to meet the demand.

Figure 3.2 Comparison between the number of seedlings contracted to be produced and the actual number of seedlings produced by each nursery

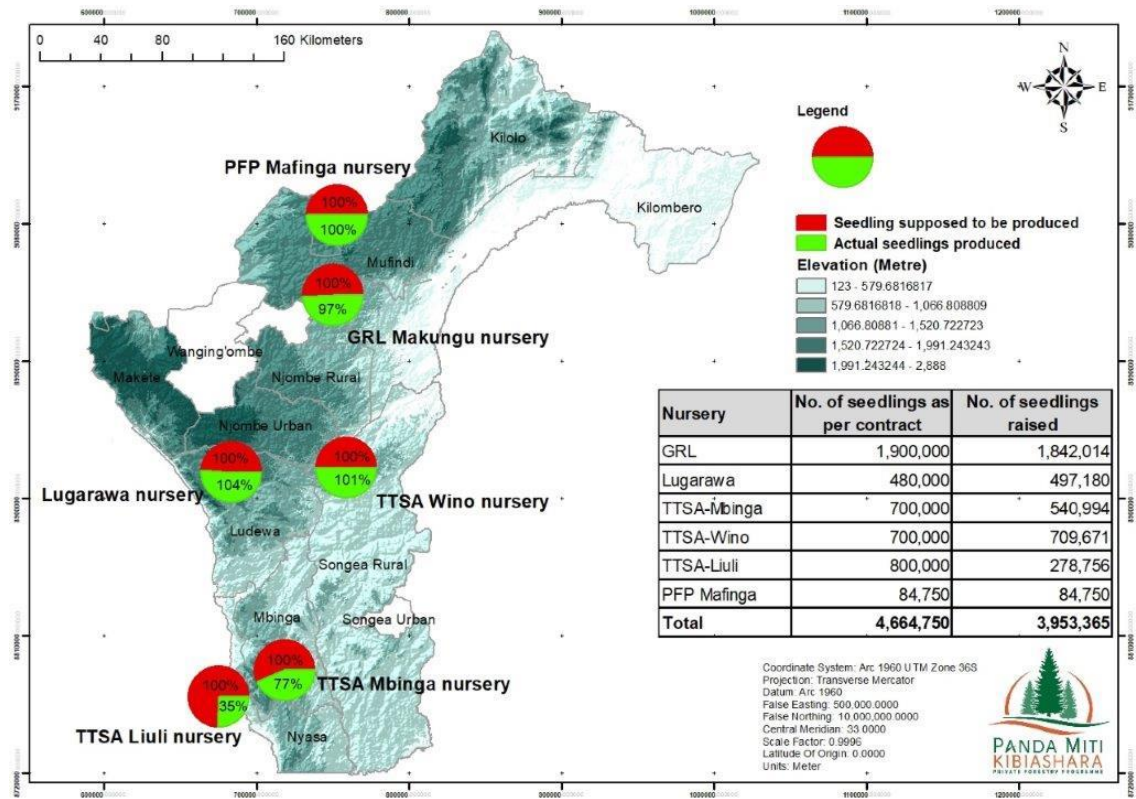
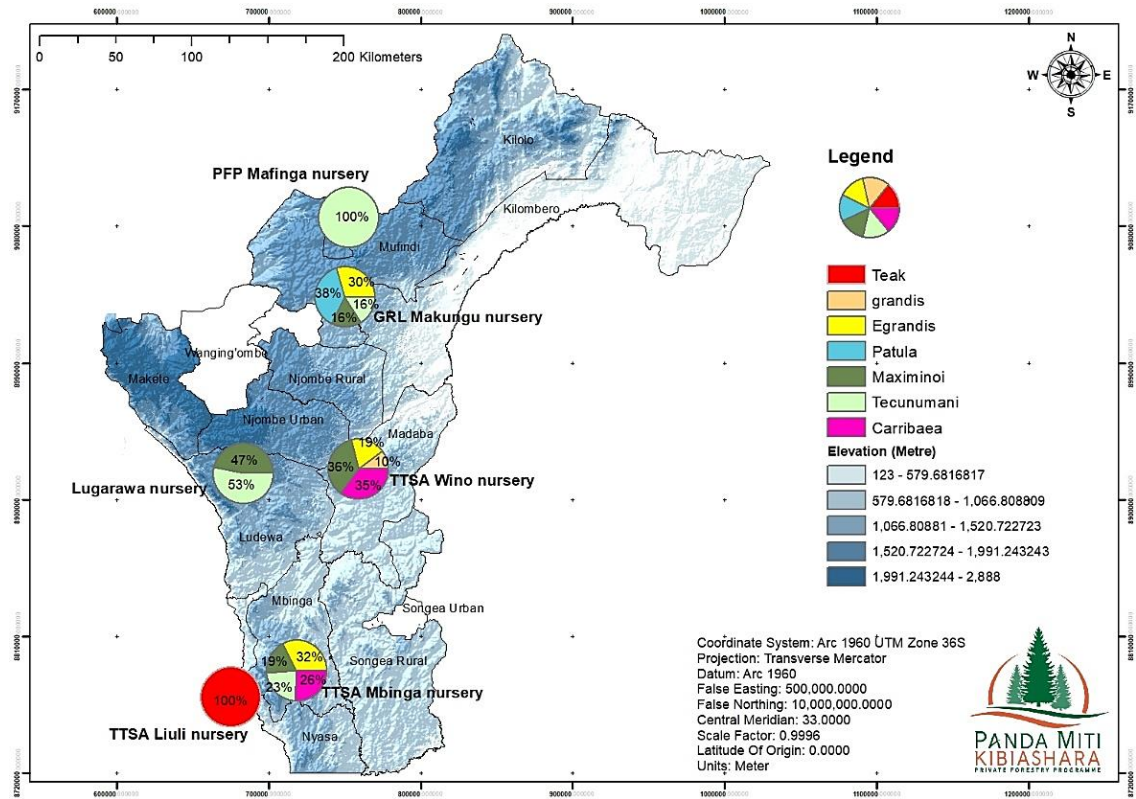


Figure 3.3 Proportions of different species raised at each nursery



3.2 Seedling delivery by clusters and villages

3.2.1 Overview

Of the seedlings raised in total, 98,4%, or 3,888,426 seedlings, were delivered to beneficiaries (Table 3.1). The 1.6% that were not delivered were *Pinus caribaea* seedlings produced at SUA Ifinga nursery and obtained by the PFP through a seedling exchange. These seedlings were not in high demand because of their altitude range and transportation difficulties.

Because the local supply was slightly inadequate, 16,680 pine seedlings that had not been contracted for were procured from the Lugarawa nursery. In addition, 500 seedlings were taken to Tree Planting Day inauguration held in Ngalanga village, bringing the nursery's total supply to 497,180 seedlings (Table 3.2) rather than the 480,000 seedlings originally contracted. Table 3.3 shows the final number of eucalyptus seedlings delivered by each nursery. The number of eucalyptus seedlings that the nurseries managed to raise for the PFP was generally lower than that stated in their contracts.

Table 3.1 Summary of the supply and delivery status of teak, pine and eucalyptus seedlings by the end of the exercise

Species group	Raised for PFP	Delivered to beneficiaries		Remained	
	No.	No.	%	No.	%
Pine	2,781,040	2,716,101	97.7%	64,939	2.3%
Eucalyptus	893,569	893,569	100.0%	-	0%
Teak	278,756	278,756	100.0%	-	0%
Total	3,953,365	3,888,426	98.4%	64,939	1.6%

Table 3.2 Summary of the supply and delivery status of pine seedlings by nursery

Nursery	Raised for PFP	Delivered to beneficiaries		Remained	
	No.	No.	%	No.	%
GRL	1,298,310	1,298,310	100.0%	-	0%
Lugarawa	497,180	497,180	100.0%	-	0%
TTSA-Mbinga	374,178	374,178	100.0%	-	0%
TTSA-Wino	526,622	461,683	87.7%	64,939	12.3%
PFP Mafinga	84,750	84,750	100.0%	-	0%
Total	2,781,040	2,716,101	97.7%	64,939	2.3%

Table 3.3 Summary of the supply and delivery status of eucalyptus seedlings by nursery

Nursery	Raised for PFP	Delivered to beneficiaries		Remained	
	No.	No.	%	No.	%
GRL	543,704	543,704	100.0%	-	0%
TTSA-Mbinga	166,816	166,816	100.0%	-	0%
TTSA-Wino	183,049	183,049	100.0%	-	0%
Total	893,569	893,569	100.0%	-	0%

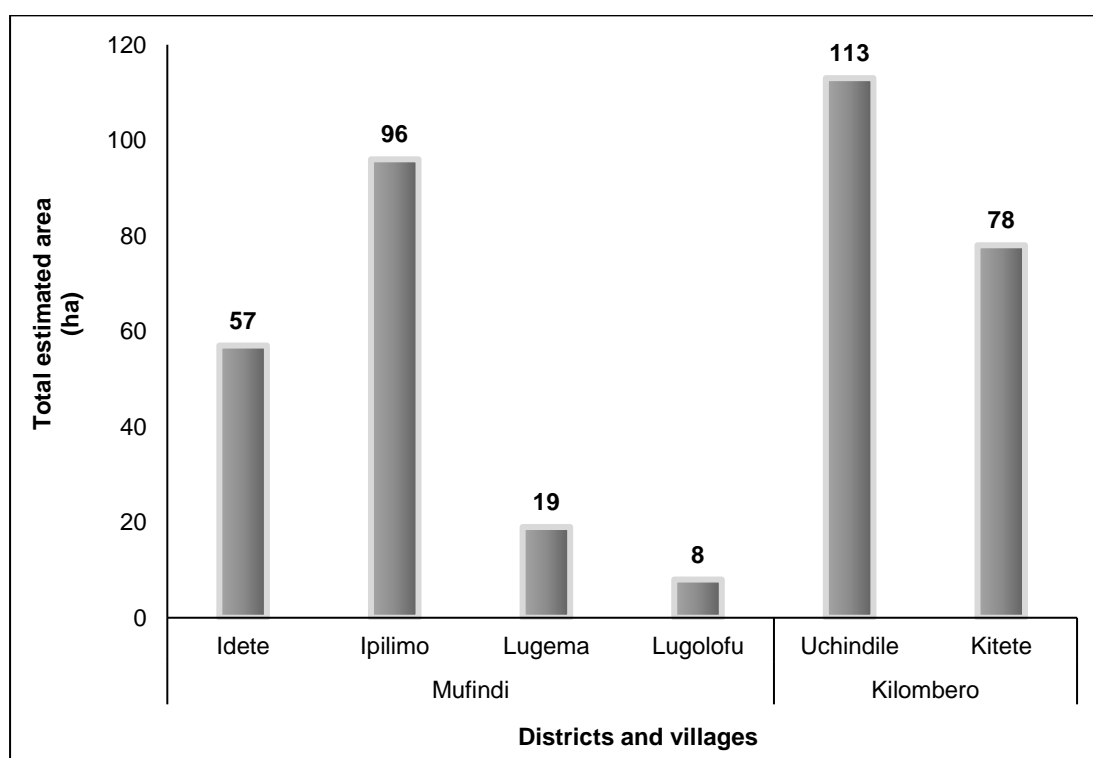
3.2.2 Cluster A

Cluster A received a total of 449,542 seedlings. Of them, 32,000 were used to replant old woodlots, 5,750 were used for blanking, and 411,792 seedlings were used to establish new woodlots. The estimated area of new plantations based on the seedling delivery figures is 371 ha (249 ha of pine and 122 ha of eucalyptus).

Table 3.4 Seedling delivery in programme-supported villages in Mufindi and Kilombero districts (Cluster A)

Village	Supplying nursery	Total delivered to beneficiaries		Used for blanking		Used for replanting	
		Pine	Euca	Pine	Euca	Pine	Euca
Idete	GRL	68,404	-	2,250	-	-	-
Ipilimo	GRL	120,802	-	3,500	-	-	-
Kitete	GRL	82,120	11,172	-	-	-	-
Lugema	PFP-Mafinga	22,500	-	-	-	22,500	-
Lugolofu	PFP-Mafinga	9,500	-	-	-	9,500	-
Uchindile	GRL	-	135,044	-	-	-	-
Total		303,326	146,216	5,750	-	32,000	-

Figure 3.4 Estimated new plantation area based on the seedling delivery figures in PFP-supported villages in Mufindi and Kilombero districts (Cluster A)



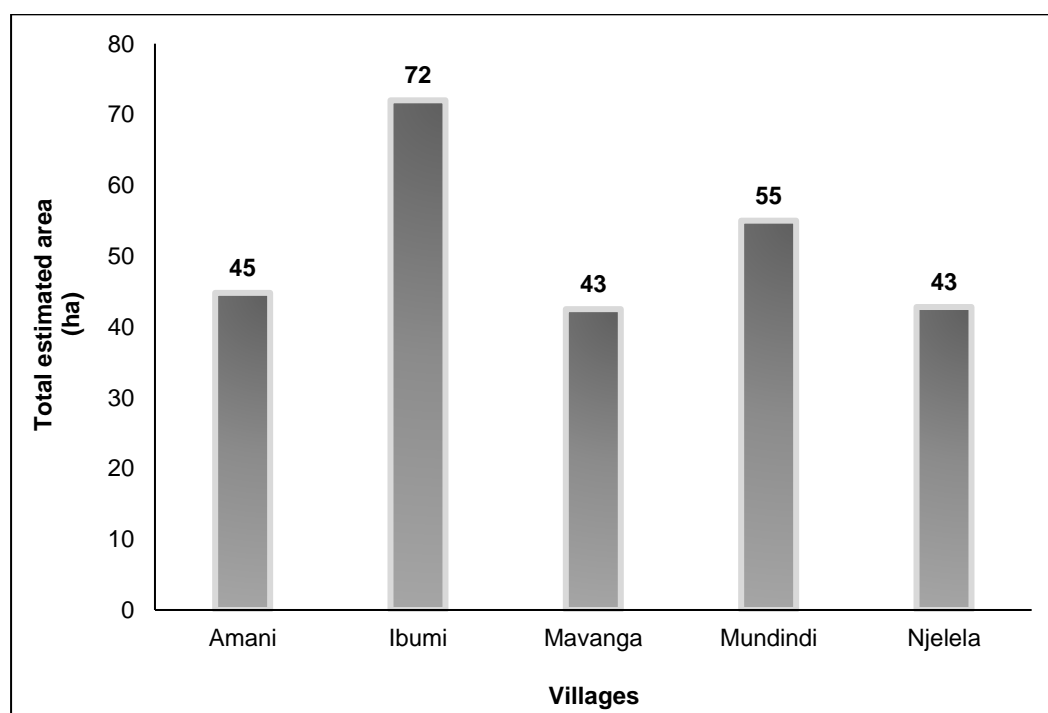
3.2.3 Cluster B

Cluster B received a total of 328,920 seedlings, all pine. Of them 20,400 seedlings were used for blanking and 308,520 seedlings were used to establish new woodlots. The total estimated new plantation area based on seedling delivery is 258 ha.

Table 3.5 Seedling delivery in PFP-supported villages in eastern Ludewa District (Cluster B)

Village	Supplying nursery	Total delivered to beneficiaries		Used for blanking	
		Pine	Euca	Pine	Euca
Amani	Lugarawa	53,760	-	-	-
Ibumi	Lugarawa	93,600	-	7,200	-
Mavanga	Lugarawa	51,000	-	-	-
Mundindi	Lugarawa	75,600	-	9,600	-
Njelela	Lugarawa	54,960	-	3,600	-
Total		328,920	-	20,400	-

Figure 3.5 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in eastern Ludewa District (Cluster B)



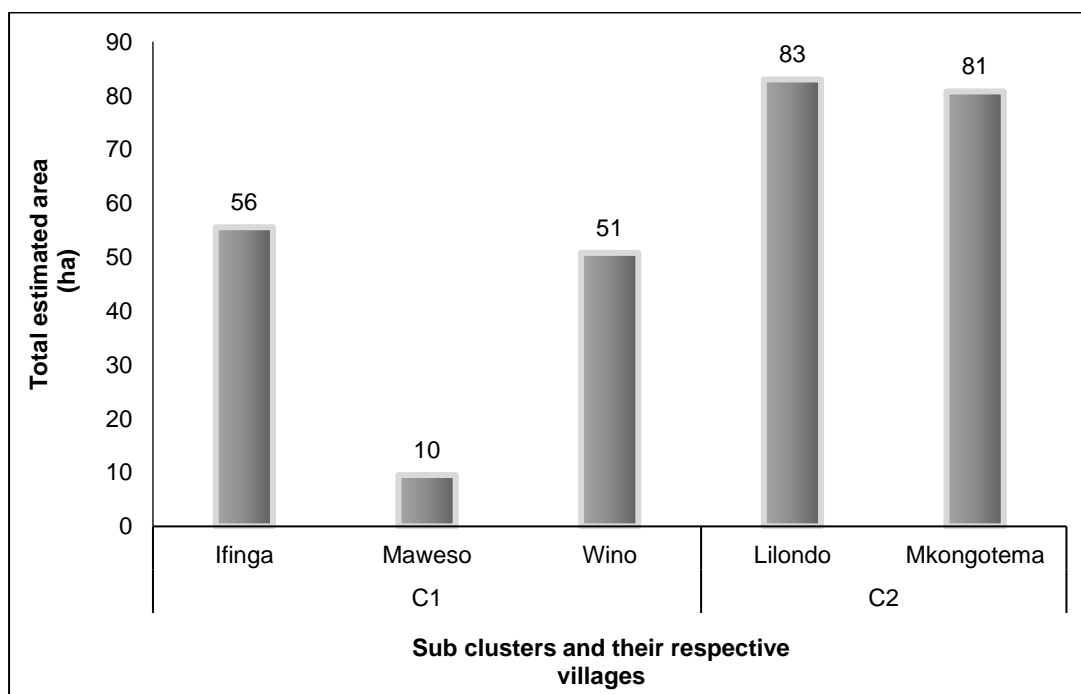
3.2.4 Cluster C1 and C2

Clusters C1 and C2 received 366,998 seedlings in total, 159,949 for C1 and 207,049 for C2. Of these, 6,474 seedlings were reported to be too damaged to plant. Altogether 24,917 seedlings were used for blanking and 335,607 seedlings were used to establish new woodlots. These figures indicate that the total new plantation area for C1 and C2, including both pine and eucalyptus, is about 281 ha.

Table 3.6 Seedling delivery in PFP-supported villages in Madaba District (Clusters C1 and C2)

Cluster	Village	Supplying nursery	Total delivered to beneficiaries		Used for blanking	Reported as damaged
			Pine	Euca		
C1	Ifinga	TTSA-Wino	52,400	18,720	-	4,450
	Maweso	TTSA-Wino	5,984	5,564	-	104
	Wino	TTSA-Wino	34,915	42,366	14,409	1,920
	Sub-total		93,299	66,650	14,409	6,474
C2	Lilondo	TTSA-Wino	47,736	57,928	6,058	-
	Mkongotema	TTSA-Wino	57,474	43,911	4,450	-
	Sub-total		105,210	101,839	10,508	-
Grand total			198,509	168,489	24,917	6,474

Figure 3.6 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in Ludewa District (Clusters C1 and C2)



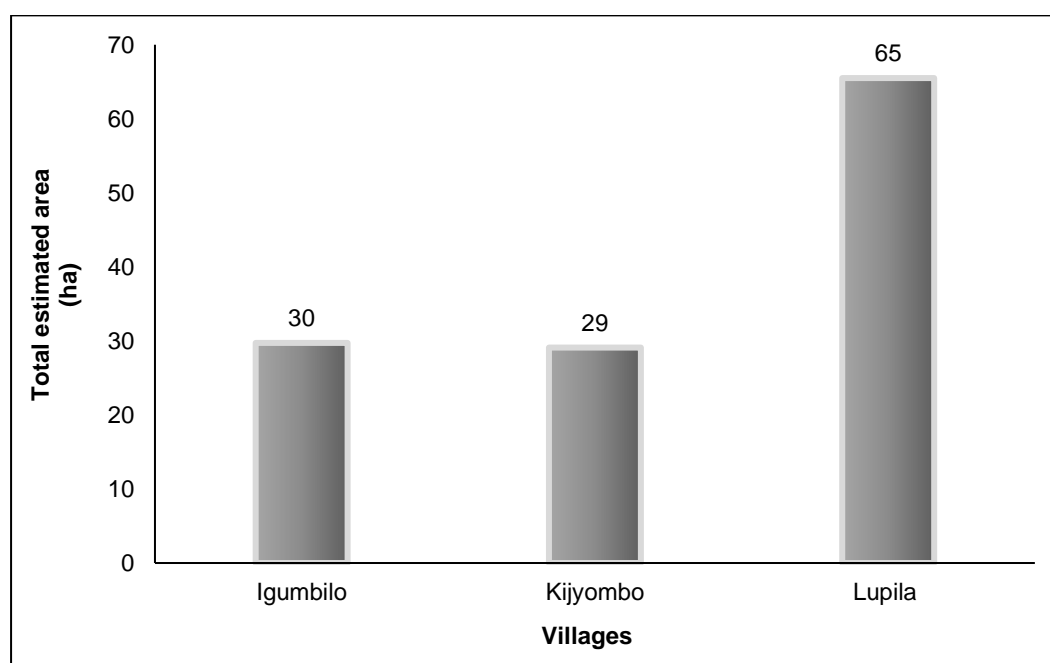
3.2.5 Cluster D

Cluster D received a total of 199,528 seedlings, all pine. Of them, 30,351 seedlings were used for blanking, 19,992 seedlings were too damaged to plant, and 149,185 seedlings were used to establish new woodlots. These figures indicate that the total estimated new plantation area is 124 ha.

Table 3.7 Seedling delivery in PFP-supported villages in southern Makete District (Cluster D)

Village	Supplying nursery	Total delivered to beneficiaries		Used for blanking		Reported as damaged	
		Pine	Euca	Pine	Euca	Pine	Euca
Igumbilo	GRL	48,804	-	9,212	-	3,920	-
Kijyombo	GRL	51,156	-	12,123	-	4,116	-
Lupila	GRL	99,568	-	9016	-	11,956	-
Total		199,528	-	30,351	-	19,992	-

Figure 3.7 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in southern Makete District (Cluster D)



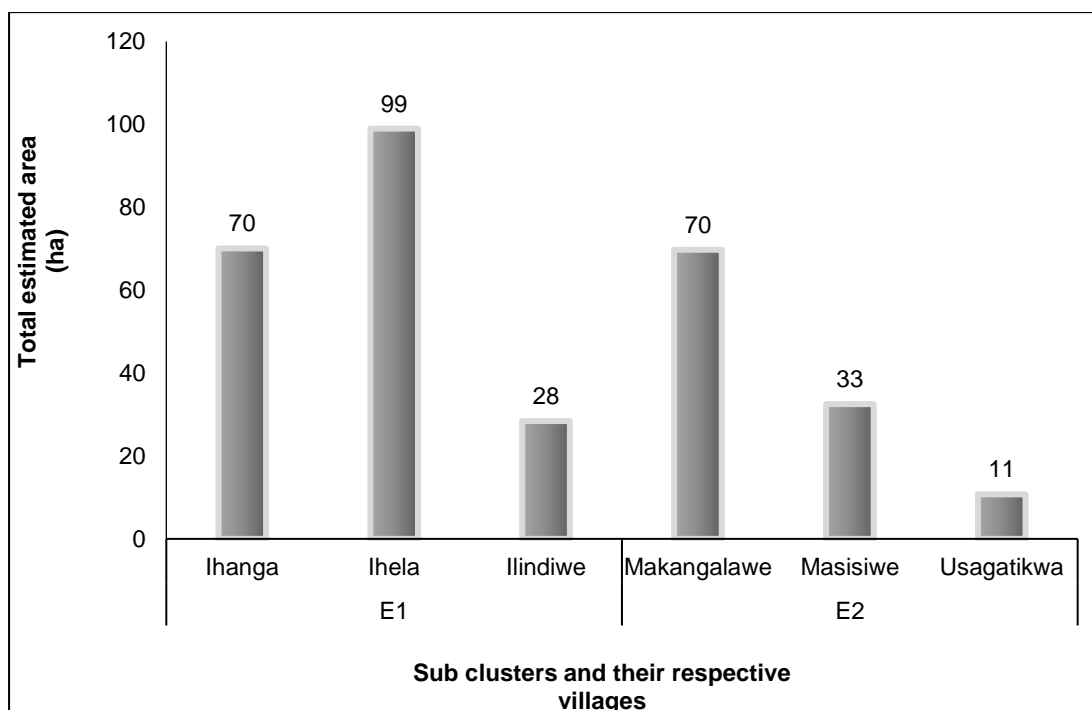
3.2.6 Cluster E1 and E2

Clusters E1 and E2 received 384,944 seedlings in total, 236,964 for E1 and 147,980 for E2. All were pine. Of these, 1,311 seedlings were too damaged to plant, 1,073 seedlings were used for blanking, and 372,560 seedlings were used to establish new woodlots. Based on these figures, the total estimated new plantation area is 311 ha.

Table 3.8 Seedling delivery in PFP-supported villages in Makete District (Cluster E1 and E2)

Cluster	Village	Supplying nursery	Total delivered to beneficiaries		Used for blanking	Reported as damaged
			Pine	Euca		
E1	Ihanga	GRL	84,084	-	-	-
	Ihela	GRL	118,776	-	-	-
	Ilindiwe	GRL	34,104	-	-	-
	Sub-total		236,964	-	-	-
E2	Makangalawe	GRL	89,180	-	4,380	1,100
	Masisiwe	GRL	43,907	-	4,688	211
	Usagatikwa	GRL	14,893	-	2,005	-
	Sub-total		147,980	-	11,073	1,311
Grand total			384,944	-	11,073	1,311

Figure 3.8 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in Makete District (Clusters E1 and E2)



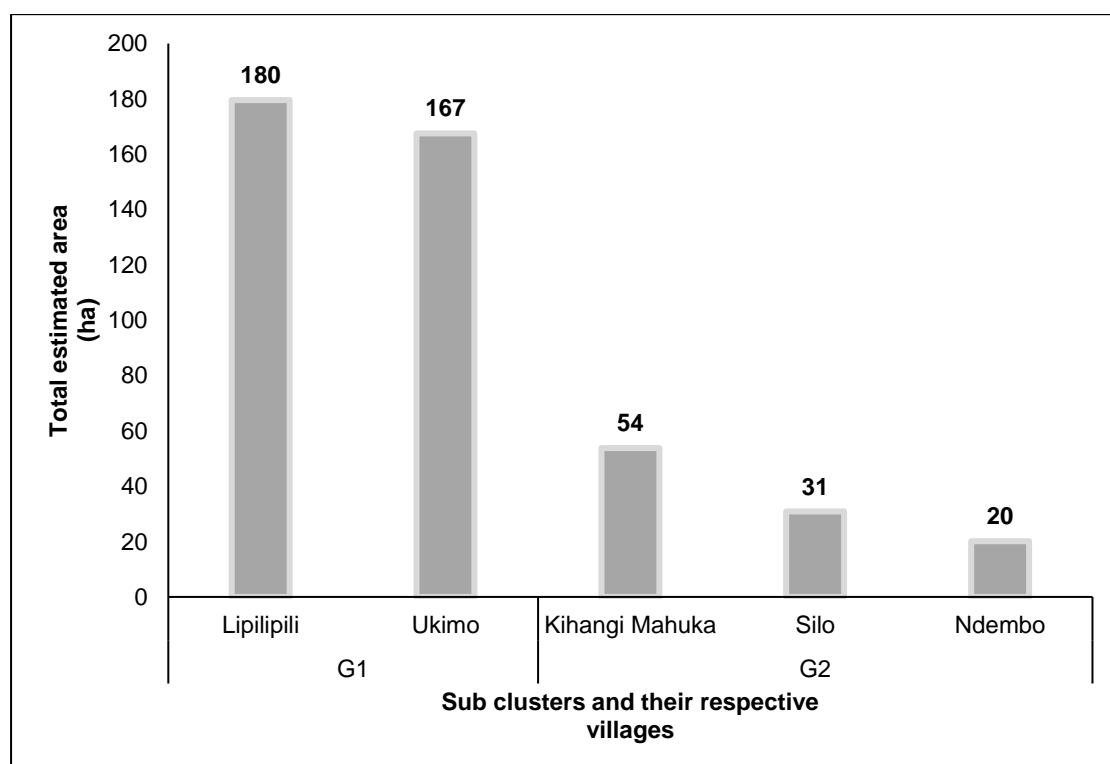
3.2.7 Cluster G1 and G2

Clusters G1 and G2 received 542,922 seedlings in total, 426,284 for G1 and 116,638 for G2. Of these, 364,626 were pine and 178,296 were eucalyptus. All were reported as having been used to establish new woodlots, accounting for an estimated 452 ha.

Table 3.9 Seedling delivery in programme-supported villages in Mbinga District (Clusters G1 and G2)

Cluster	Village	Supplying nursery	Total delivered to beneficiaries	
			Pine	Euca
G1	Lipilipili	TTSA-Mbinga & GRL	90,320	84,104
	Ukimo	TTSA-Mbinga & GRL	157,668	94,192
	Sub-total		247,988	178,296
G2	Kihangi Mahuka	TTSA-Mbinga & GRL	64,598	-
	Silo	TTSA-Mbinga & GRL	32,040	-
	Ndembo	TTSA-Mbinga & GRL	20,000	-
	Sub-total		116,638	-
Grand total			364,626	178,296

Figure 3.9 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in Mbinga District (Clusters G1 and G2)



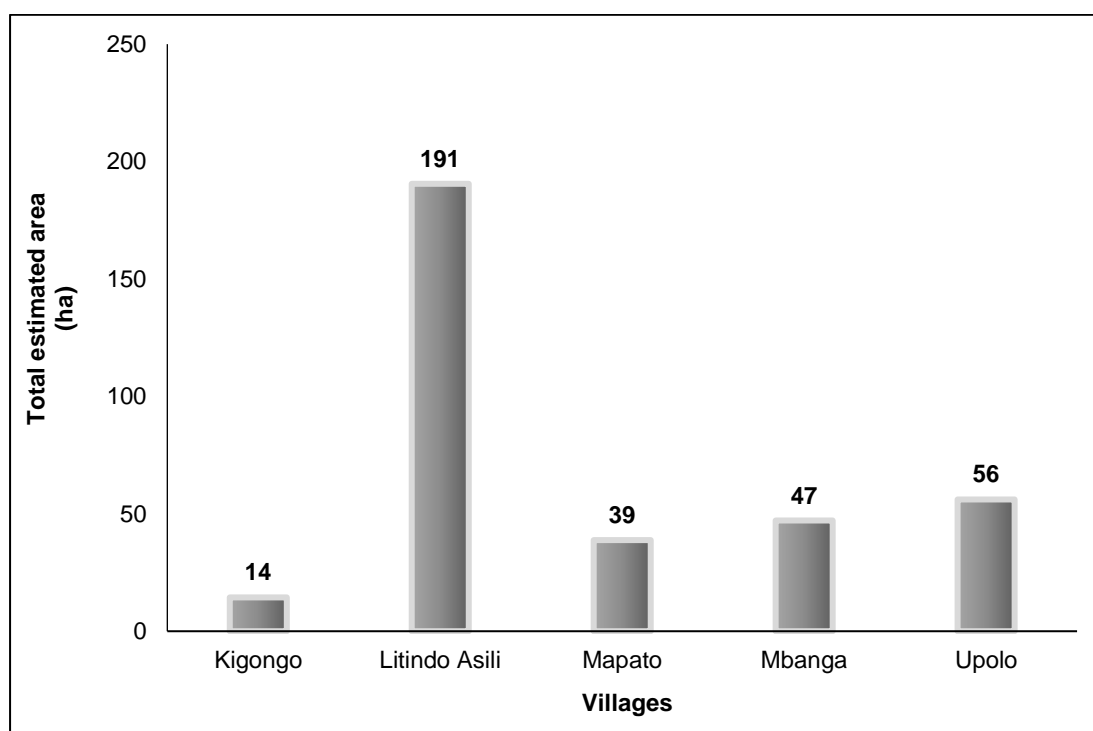
3.2.8 Cluster I

Cluster I received a total of 448,964 seedlings, all of which were pine. All were reportedly used to establish new woodlots, making for a total estimated area of 374 ha.

Table 3.10 Seedling delivery in PFP-supported villages in Nyasa District highland (Cluster I)

Village	Supplying nursery	Total delivered to beneficiaries	
		Pine	Euca
Kigongo	TTSA-Mbinga & GRL	12,128	5,200
Litindo Asili	TTSA-Mbinga & GRL	147,068	81,512
Mapato	TTSA-Mbinga & GRL	37,220	9,364
Mbanga	TTSA-Mbinga & GRL	56,732	10,504
Upolo	TTSA-Mbinga & GRL	53,044	36,192
Total		306,192	142,772

Figure 3.10 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in Nyasa District highland (Cluster I)



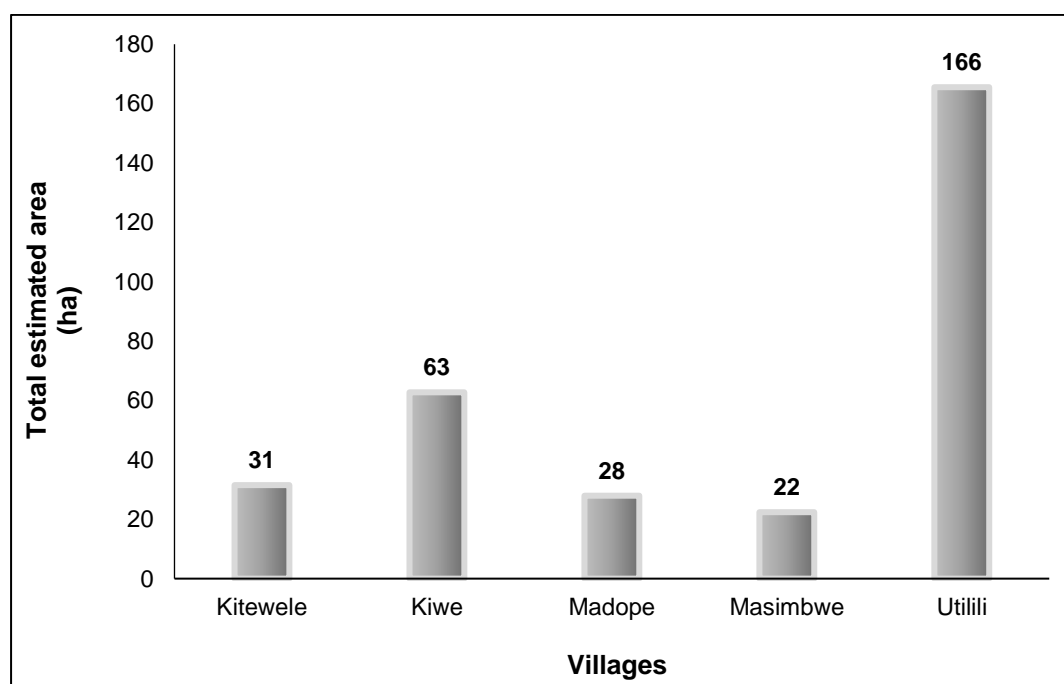
3.2.9 Cluster K

The cluster received a total of 392,402 seedlings, of which 78,656 seedlings were used to replant old woodlots, 17,776 seedlings were used for blanking, 11,140 seedlings were reported to be too damaged to plant, and 284,830 seedlings were used to establish new woodlots. Based on these figures, the total estimated area is 310 ha.

Table 3.11 Seedling delivery in PFP-supported villages in western Ludewa District (Cluster K)

Village	Supplying nursery	Total delivered to beneficiaries		Used for blanking	Used for replanting	Reported as damaged
		Pine	Euca			
Kiteweile	GRL	25,882	8,820	-	-	-
Kiwe	GRL	43,512	37,240	-	-	2,365
Madope	GRL	35,692	-	-	33,516	-
Masimbwe	GRL	16,072	-	-	26,852	-
Utilili	GRL	171,284	53,900	17,776	18,288	8,775
Total		292,442	99,960	17,776	78,656	11,140

Figure 3.11 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in western Ludewa District (Cluster K)



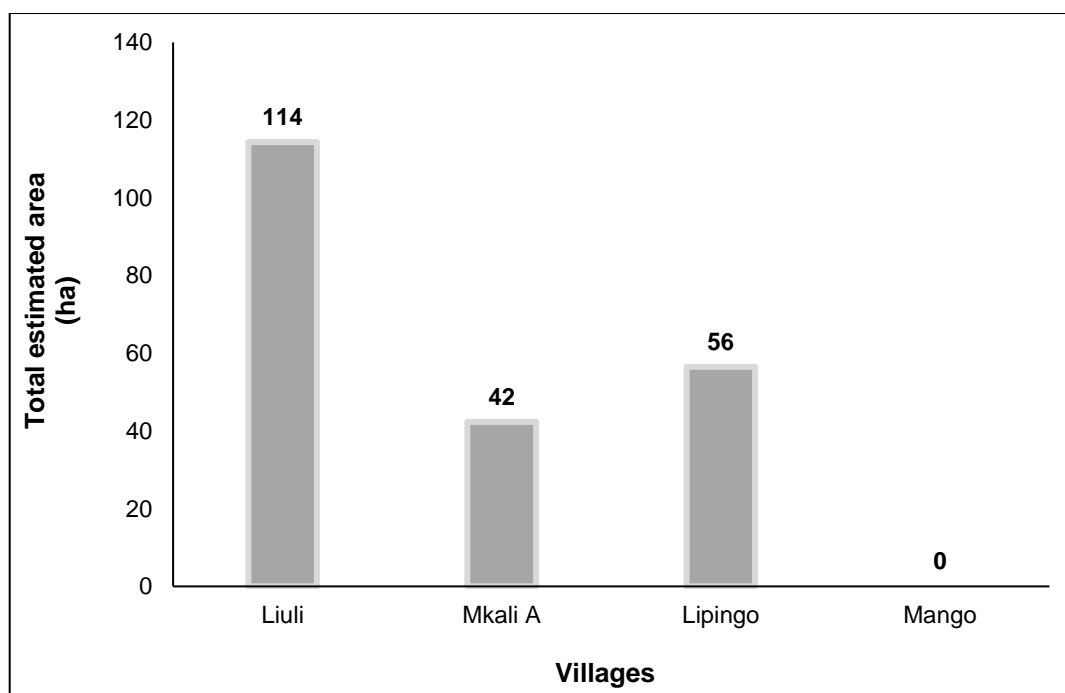
3.2.10 Teak zone

A total of 278,756 teak stumps were delivered to beneficiaries during the course of the exercise. The stumps were delivered both from the TTSA Liuli nurseries (205,848 stumps) and from a TTSA nursery outside the programme area (72,908 stumps). These figures indicate that about 212 ha was planted.

Table 3.12 Seedling delivery in PFP-supported villages in the lowlands of Nyasa District (the teak zone)

Village	Total delivered to beneficiaries	Used for blanking	Reported as damaged
Liuli	144,482	5,564	1,667
Mkali A	57,054	5,120	1,110
Lipingo	73,660	5,315	555
Mango	3,560	-	3,560
Total	278,756	15,999	6,892

Figure 3.12 Estimated new plantation area for PFP-supported villages in the lowlands of Nyasa District (the teak zone)



Since all of the 3 ha established in Mango village were uprooted, its area is reported to be 0 ha.

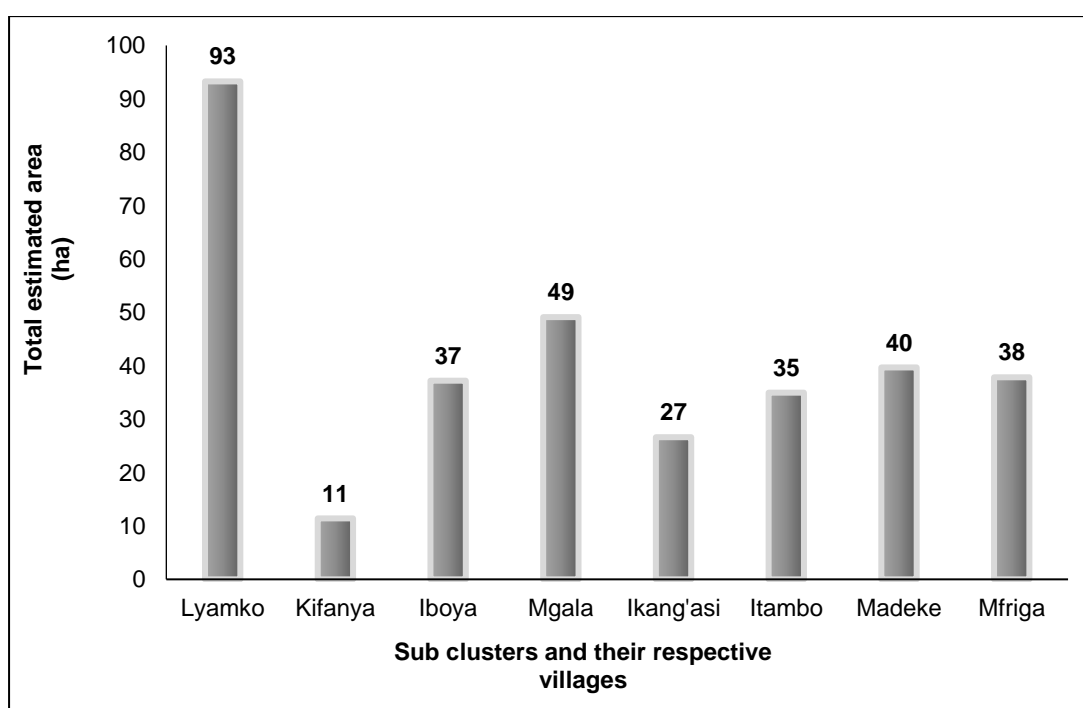
3.2.11 Other

A total of 427,150 seedlings were delivered to beneficiaries in other villages, 134,436 to the villages of Lyamko and Kifanya, 103,592 to Iboya and Mgala, and 189,122 seedlings to Ikang'asi, Itambo, Madeke and Mfriga. These figures indicate that a total of about 356 ha was planted in all three villages.

Table 3.13 Seedling delivery in PFP-supported villages in Kilolo District, Njombe DC, and Njombe TC

Village	Nurseries	Total delivered to beneficiaries		Used for blanking	Reported as damaged
		Pine	Euca		
Lyamko	GRL	92,708	28,028	8,640	180
Kifanya	TTSA-Wino	13,700	-	-	-
Sub-total		106,408	28,028	8,640	180
Iboya	Lugarawa & GRL	27,600	15,900	-	-
Mgala	Lugarawa & GRL	40,320	19,772	-	-
Sub-total		67,920	35,672	-	-
Ikang'asi	TTSA-Wino & GRL	-	31,948	-	-
Itambo	TTSA-Wino & GRL	27,400	14,560	-	-
Madeke	GRL	-	47,628	-	-
Mfriga	TTSA-Wino	67,586	-	-	-
Sub-total		94,986	94,136	-	-
Grand total		269,314	157,836	8,640	180

Figure 3.13 Estimated new plantation area based on seedling delivery figures in PFP-supported villages in Kilolo District, Njombe DC, and Njombe TC



In addition, seedlings were delivered to Lugarawa Hydroelectric project for use in replanting old woodlots which had burned after the 2016/17 planting season. Another 500 seedlings were handed out during the inauguration of Tree Planting Day in Ngalanga village.

Table 3.14 Seedling delivery for the Lugarawa hydroelectric project and the inauguration of Tree Planting Day in Ngalanga village

Category	Village/Institution	Seedlings delivered
Lugarawa hydroelectric project	Four schools	4,800
	Masimbwe	22,500
	Madope	18,500
	Luvuyo	22,000
	Sub-total	67,800
Tree Planting Day inauguration	Ngalanga	500
	Sub-total	500
Grand total		68,300

3.3 Resource utilisation

3.3.1 Plastic bags and crates for seedling packing

A total of 1,858 seedling delivery crates were returned to FWITC Mafinga after the seedling delivery exercise. 190 seedling delivery crates were later hauled to PFP Njombe office from the TFS office in Wino, while GRL nursery remained with six crates. When the exercise was complete, the PFP owned 2,054 crates, 45 of which were reportedly in a state too bad to make re-use possible. The rest can be re-used.

About 2,100 plastic bags remained unused after the exercise, but some were used later to transport seed orchard seedlings.

3.3.2 Seedling dispatch books

The 15 seedling delivery dispatch books used by the three transportation service providers were all returned to the PFP main office.

4. CHALLENGES

- **Unexpectedly low demand:** Initially, applications for TGIS support were very low and a significant share of seedlings was projected to remain. For this reason, a number of “plan B villages” were brought in midway through the planting season. However, even later it was discovered that many nurseries had not produced the number of seedlings they were contracted to produce, a fact with the following outcomes:
 - Some TGA members, especially late applicants, did not receive any seedlings at all and some did not receive as many seedlings as they had asked for. A shortage was most evident with eucalyptus seedlings, which ran out first.
 - Plans were changed: some TGIS applicants were required to accept species other than the ones they had requested due to limited availability. Suitability was also considered.
 - Costs increased unexpectedly since for example Mbinga and Nyasa highland clusters had to get some seedlings from the GRL nursery.
- **Deficit of seedlings:** Nurseries produced fewer seedlings than the contracted amount. The shortfall was estimated to be 711,385 seedlings. The shortfall at the GRL nursery was 57,986 seedlings (56,296 eucalyptus and 1,690 pine seedlings), while the shortfall at the TTSA Mbinga nursery was 159,006 seedlings (33,184 eucalyptus and 125,822 pine seedlings). In addition, the TTSA Liuli nursery failed to provide 521,244 teak seedlings.
- **Delays by transportation service providers:** Trucks did not appear at nurseries at the times agreed despite the fact that all preparations had been made and that the TGA was standing by to receive scheduled deliveries. Most delays occurred with the COSTNEY Company, which reportedly faced financial problems. The issue was addressed by utilising a complementary service provider.
- **Packing of the seedlings at the nurseries:** Beneficiaries claimed that in numerous cases, the number of seedlings packed per plastic bag was less than what nurseries reported. Deputing a PFP-designated overseer to most nurseries reduced the problem but did not remove it completely.
- **Mortality during transportation and in temporary nurseries:** Because some stakeholders were not careful enough while handling seedlings, some seedlings died. Other seedlings died during transportation due to poor road conditions that shook seedlings excessively and prolonged transportation times.
- **Road conditions:** Especially when it rained, it was difficult to access some villages. In fact, it took up to three days for some deliveries to reach remote villages like Ibumi.
- **Unexpected dry spell:** Tanzania Meteorological Agency reported that there was a two-week dry spell across most of the Southern Highlands in the middle of the planting season. This spell brought a temporary halt to seedling delivery and plantation. It particularly affected the highlands of Nyasa, Mbinga, Njombe TC, Njombe DC and Mufindi.

Other, indirect challenges: In most cases, the tree planting season is the same as the agricultural crop season and most TGA applicants gave greater priority to crop cultivation, short-changing tree plantation. In some villages, the relative devaluation of tree plantation caused delays and, thereby, higher-than-normal rates of seedling mortality rates because seedlings were in temporary nurseries for long periods as agricultural priorities were attended to.

Annex 1 Road map to 2017/2018 planting season

Activity	Lead responsibility	Timing
Finalisation of TGIS guidelines 2017/18	Arttu	8.9. (DL)
Launching of the new TGIS guidelines and the application process in RA 2 workshop	Juhani	20.-22.9.
Collection and screening of individual TGIS applications	TGA leadership & facilitator <i>EO to observe and verify</i>	25.9.-20.10.
Drafting of individual TGA planting plans (including maps)	TGAs	23.10.-22.11.
Organising transportation Drafting of a detailed transportation plan (including distance tables) Planning of the tendering process Preparation of documents and media announcements Scouting for additional tenderers as necessary Organising a workshop to tenderers Launching the tendering process 4) Selection of service providers	Juhani	29.9. (DL)
Drafting of District forest reserve MoU (Lihumbe & Upolo)	Michael & Sangito	15.9. (DL)
Checking of the last season's planting in the selected villages	Arttu	15.9. (DL)
Monitoring logistics of seedling delivery Loading at nurseries Specific PFP-allocated trusted person to supervise on site (counting seedling bags/boxes; random checks to count bag/box contents etc.) Unloading at road-head Specific PFP-allocated trusted person to supervise on site. Responsibility allocation concerning seedling handling to be made extremely clear with the TGAs. Mid-storage / Temporary nursery Loading at temporary nursery for planting area Arrangements for monitoring to be determined Unloading at planting area Arrangements for monitoring to be determined	PFP Logistics Officer	Jan 2018 –



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