

JAPAN INTERNATIONAL COOPERATION AGENCY

**MINISTRY OF MINES, NATURAL RESOURCES
AND ENVIRONMENT, MALAWI**

**PILOT STUDY
ON
COMMUNITY VITALIZATION AND AFFORESTATION
IN MIDDLE SHIRE
IN
MALAWI**

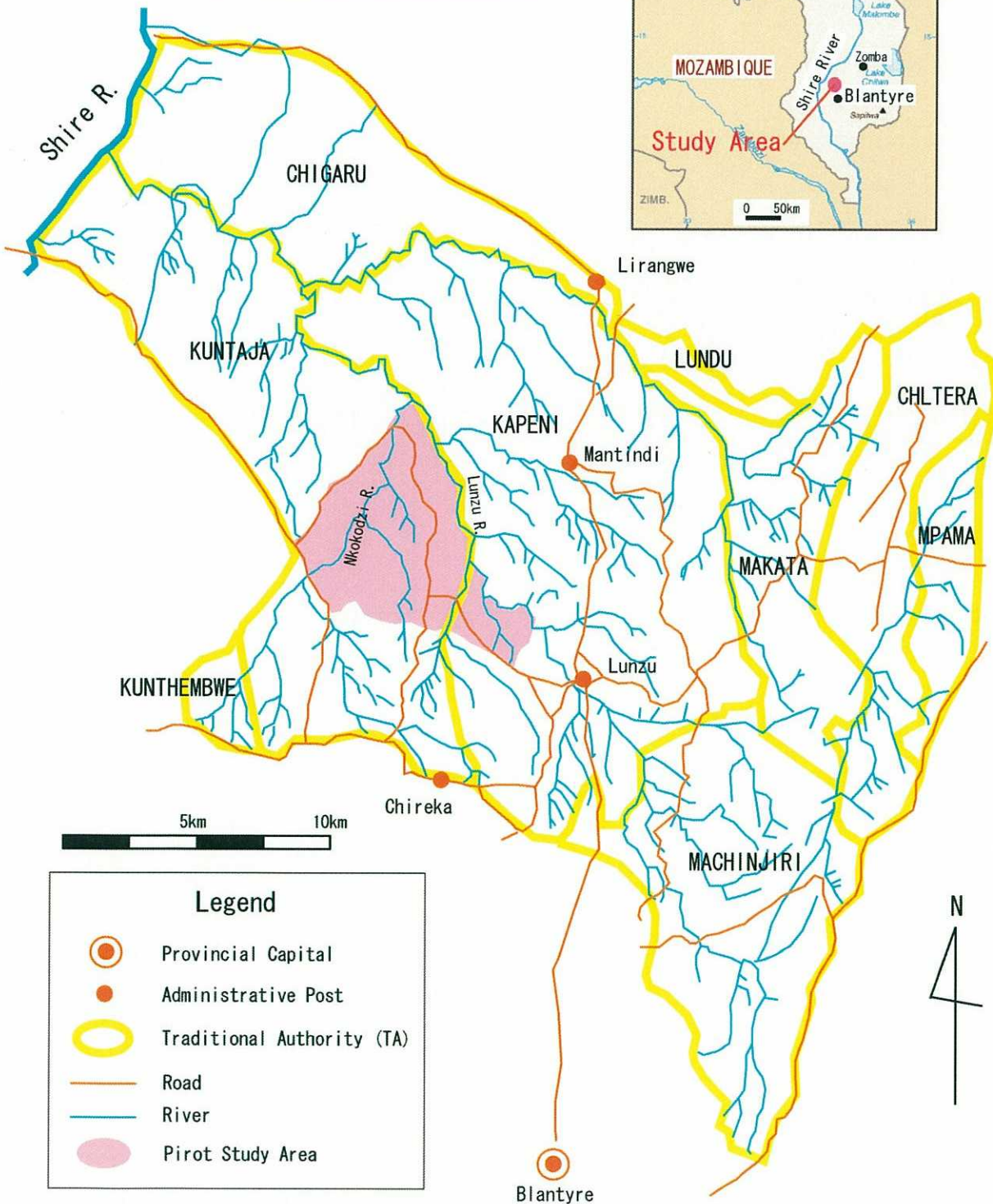
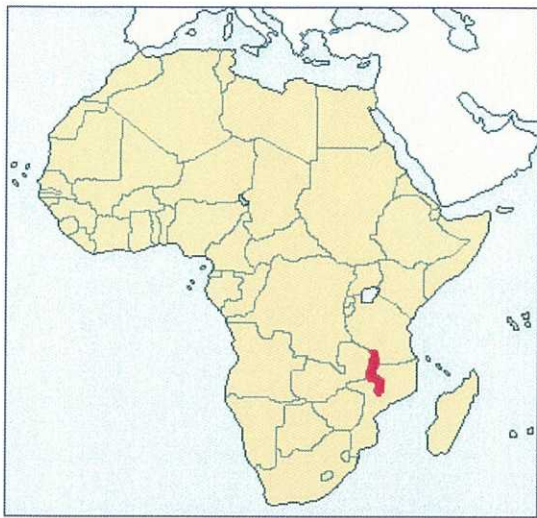
FINAL REPORT

ANNEXES

MARCH 2005

SANYU CONSULTANTS INC.

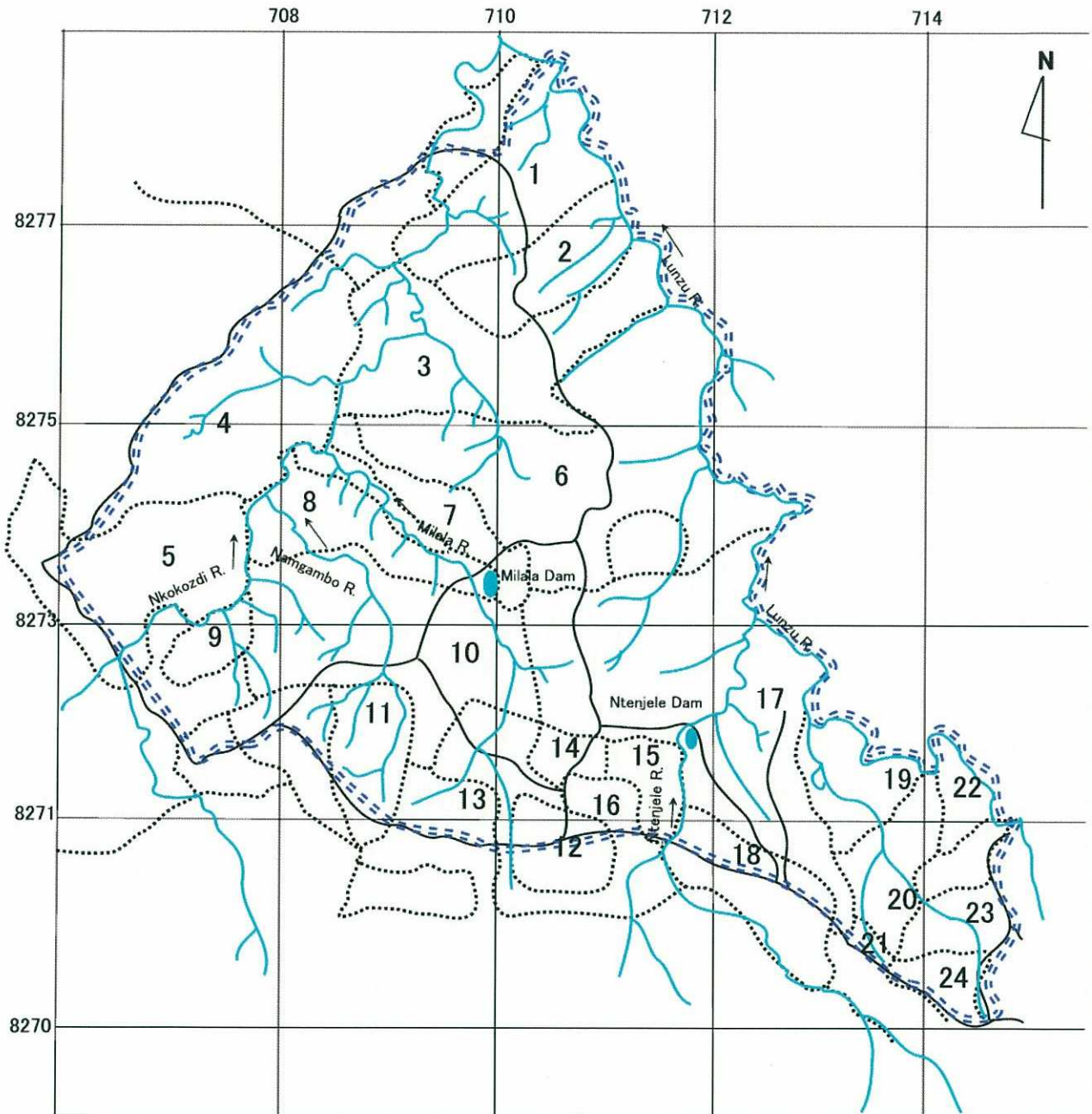
Location Map of the Study Area



Legend

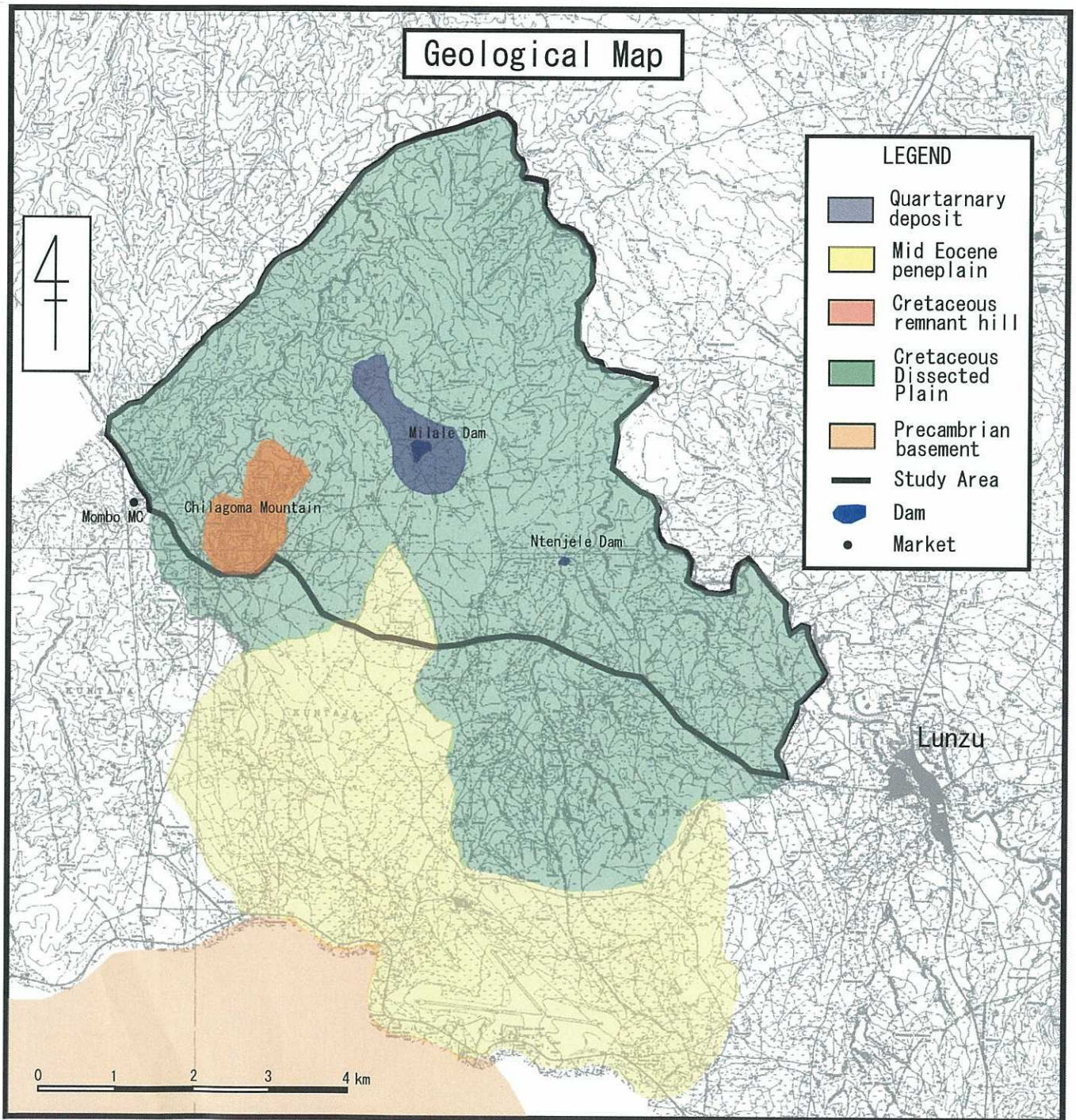
- Provincial Capital
- Administrative Post
- Traditional Authority (TA)
- Road
- River
- Pirot Study Area

Location Map of the Study Area



Legend	
	Road
	River
	Village Boundaries
	Project Area Boundary

No.	Village Name	No.	Village Name	No.	Village Name
1	Makonokaya	9	Chakana	17	Kamwendo
2	Siyandima	10	Lemu	18	Peter Bilila
3	Kaumbata	11	Magombo Ngondo	19	Ndemanje
4	Mdala	12	Kam'mata	20	Simon Mpombe
5	Nanjiwa	13	Kumanda	21	Kateya
6	Chikoja	14	Tamve Kenji	22	Maluwa
7	Manjelo	15	Chilangali	23	Kumponda
8	Teula	16	Daniel Mbeza	24	Kumisati Chigumula



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ANNEX A. Village Situations

Summary Tables of Baseline Survey 2002

Common Features to All the Villages in the Study Area

A. Social Division of Daily House-keeping

Roles and responsibilities			
Boys	Girls	Men	Women
<ul style="list-style-type: none"> ➤ Digging rubbish pits, pit latrines ➤ Building houses ➤ Molding bricks ➤ Chopping firewood ➤ Washing plates ➤ Gardening ➤ Miller going ➤ Shearing maize ➤ Mice digging ➤ Drawing water ➤ Income generating activities 	<ul style="list-style-type: none"> ➤ Sweeping ➤ Smearing floors ➤ Gardening ➤ Drawing water ➤ Pounding maize ➤ Cooking ➤ Income generating activities ➤ Caring for children ➤ Washing ➤ Firewood collection ➤ Miller going 	<ul style="list-style-type: none"> ➤ Looking for food ➤ Farming ➤ Molding bricks ➤ (Same as boys) 	<ul style="list-style-type: none"> ➤ Cooking ➤ Washing ➤ Fetching relish ➤ Caring for children ➤ Sweeping ➤ Gardening ➤ Cutting grass ➤ Construction of bathrooms ➤ Doing businesses ➤ Firewood collection ➤ Distribution of jobs
➤	➤	➤ Income keeping	➤ Income keeping
➤	➤	➤ Decision maker	➤
➤	➤	➤	➤ Heritage

Group Villages, Area and Household, Number of Tube-wells and Majority Tribe
 Kuntaja – Chakana 49; 50&0 Ngoni. Mdala 801;306&3 Yao– Nanjiwa 234; 120&1
 Ngoni, Kaumbata 316;112&1 Ngoni, Siyamudima 119;168&0 Lomwe,
 Makonokaya 164;56&0 Ngoni. Kammata 171;244&3 Yao– Kumanda 127;46&0 Ngoni,
 T.Kenji 36;56&1 Ngoni, D. Mbeza 70;41&0 Ngoni, Chilangali 51;40&1 Ngoni. Lemu
 349;496&2 Ngoni– M. Ngondo 107;82&1 Ngoni, Teula 127;142&0 Yao, Manjelo
 69;67&1 Yao, Chikoja 233;169&1 Yao. Kumponda 190;264&1 Ngoni – P.Bilila
 129;72&3 Yao, Kamwendo 315;59&1 Chewa, Ndemanje 144;38&0, Manganje – S.
 Mpombe 54;65&1 Ngoni, Maluwa 45;62&1 Ngoni, K. Chigumula 102;160&3 Yao,
 Kateyo 15;23&0 Ngoni.

Stream; Ntenjela = Kamwendo, Chilangali P.Bilila, S.Mpombe, K. Chigumula, Kateyo
 Namingomba = M.Ngondo, Nasonje = Kamwendo, Ndemanje, S. Mpombe, Kumponda
 Milala = Lemu, Teula, Manjelo, Kammata, Nkokodzi = Nanjiwa, Mdala, Kaumbata,
 Makonokaya, Teula, Chikoja, Chakana, Mkokafadya = Kunponda, Lunzu = Kaumbata,
 Siyamudima, Kamwendo, Ndemanje, Kumponda, S.Mpombe, Maluwa, Nangombe =
 Lemu

B. Village Organizations

Village	VDC	Forestry	Borehole	Orphan*	School	Health	Police**	PTA	Others
1. K.chigumura	W	W		W					(W) Home Ecoomics
2. Kumponda			A		A	A			(A) Social Committee
3. Kateya			W						
4. S. Mpombe			A	A		A	A		
5. Ndemanje	A		A		A	A			
6. Maluwa	I				I	I			
7. Peter Bilila			W				W		
8. Kamwendo	E			E			E		(E) UDF
9. Chilangali	W		W						(W) Advisory Committee
10. T. Kenji			W		N				(W) Red Cross
11. D. Mbeza									no organization yet
12. M. Ngondo		N	W		E	W			
13. Kumanda	W			W		W			(W) Agriculture
14. Kammata	E		E		I		E		
15. Chakana			I		I	E			
16. Chikoja			W			W			(W) Red Cross
17. Manjelo			I	I	W	E			(W) Counselor
18. Teula	W					W	W		(W) UDF
19. Nanjiwa			I		W	W	E		
20. Lemu	A				A	E		I	
21. Mdala		W			W	I	W		
22. Kaumbata		E	E		W				
23. Siyamudima		A		E	E	I			
24. Makonokaya		I		E		I			(W) Fresh-water Slab
Total	9	6	14	7	13	15	7	1	83 (3.5 in a village)

Note: * Sometimes called "Youth Club", NGO called "DAPP" supports it with a fund. ** also called Security /Neighbor Watching. W; willing A; active, E; Effective, I; inactive, N; not functioning Borehole supported by Concern Universal with a fund. UDF; Union democratic front (political party)

C. Forestry and Agro-forestry Resources

RANK	NAME	BOTANICAL NAME	REASON for POPULARITY	
1	Bulugama	Eucalyptus spp	◆ Favoured for poles and firewood ◆ Grows fast easily managed & coppice well	
2	Mango	Mangifera indica	◆ Used for food (fruit) ◆ Source of income	
3	India	Melia azaderach	◆ Coppice well and Fast growing	
4	Kesha	Senna siammea	◆ Grows on its own after seed dispersal	
5	Malaina	Gmelina arborea	◆ Coppice well	
6	Gwafa	Psidium guajava	◆ Vigorously thriving fruit tree	
7	Mpakasa	Lonchocarpus capassa	◆ Coppice well ◆ Retained for fixing soil nutrients	
8	Naphini	Terminalia sericea	◆ Used for firewood and charcoal	
9	Tsamba	Brachystegia spp	◆ Used for firewood and charcoal	
10	Chitimbe	Piliostigma thoningii	◆ Used for firewood and charcoal	
Exotics / Indigenous Tree Specie		Usage	Rank Distribution in Villages	Total Rank
<i>Eucalyptus spp</i> (Blugama)		wood	1,3,0,1,1,3,3,2,1,0,4,3,5,2,2,1,4,4,2,2,1,	87 II
<i>Mangifera indica</i> (Mango)		edible	4,1,1,2,2,2,2,3,1,2,8,1,2,1,1,1,4,0,1,1,1,2,	64 I
<i>Melia azaderach</i> (Indya)		medicinal	3,2,0,4,3,9,9,4,8,12,0,7,0,6,5,0,5,12,13,6,5,4,	175 IV
<i>Senna siammea & spectabilis</i> (Kesva)		firewood	9,5,3,3,4,5,1,1,3,11,10,4,3,3,3,3,10,3,4,3,	94 III
<i>Gmelina arborea</i> (Merina)		timber	7,12,0,8,5,7,0,9,6,1,0,5,3,10,9,8,11,0,10,3,5,	194 V
<i>Psidium guajava</i> (Gwafa)		firewood	0,4,0,7,6,0,0,0,0,0,13,0,0,0,0,0,0,11,5,7,6,	332 IX
<i>Carica papaya</i> (Papaya)		edible	0,14,0,0,0,4,0,0,13,0,0,0,0,6,0,11,4,8,	354 XII
<i>Margqarertta Rosea</i> (Nchenje)		firewood	8,0,0,0,0,0,0,7,0,0,0,0,0,0,10,0,0,14,0,0,10,0,	385
<i>Ziziphus mauritiana</i> (Masawo)		edible	13,9,0,0,0,0,8,0,0,0,0,9,0,0,0,0,13,0,0,0,12,	354 XII
<i>Tamarindus indica</i> (Bwemba)		edible	0,0,5,0,0,0,0,13,0,0,0,0,0,0,0,0,0,0,9,0,0,	
<i>Thevetia peruviana</i> (Milk-hedge)		fencing	0,0,4,0,0,0,7,0,0,0,0,0,0,0,0,0,5,0,0,7,0,6,0,	365
<i>Citrus sinensis & Anona senegalensis</i>		edible	0,0,9,0,0,0,0,11,0,0,0,0,0,0,(9),0,0,0,0,11,(12),	
<i>Delonix regia</i>		Street shade	0,0,0,10,0,0,0,12,11,4,0,0,0,0,0,0,0,0,0,0,	
<i>Persea americana</i> (Avocado pear)		edible	0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,12,0,13,	
<i>Canthium crassum</i> (Mbilina)		edible	0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,9,0,0,0,	
Naphini(<i>Terminalia sericea</i>)		mortar	2,7,2,8,0,1,5,10,6,7,0,6,2,6,4,0,9,7,0,0,10,7,	186 VI
Mthunbu (<i>Kirkia acuminata</i>)		firewood	5,0,0,0,0,0,0,0,7,9,0,0,9,8,0,10,5,12,0,0,	338 X
Chiumbu(<i>Ranea discolor</i>)		firewood	0,8,0,6,0,0,0,0,0,0,5,11,0,0,0,0,0,5,0,14,0,0,	385
Mphakasa(<i>Lonchocarpus capassa</i>)		firewood	6,0,0,7,0,0,4,0,7,3,0,12,4,9,12,6,0,0,0,9,0,	289 VIII
Tsamba(<i>Brachystegia spp</i>)		charcoal	10,6,6,5,9,0,6,0,0,0,10,0,0,2,11,13,8,7,3,0,8,	248 VII
Mombo(<i>Brachystegia spp</i>)		charcoal	11,0,0,0,0,0,0,0,0,0,1,0,0,9,0,2,6,13,0,0,	357 XIII
Khobo(<i>Commifora spp.</i>)		edible	12,0,0,11,0,0,0,0,0,0,0,0,10,0,0,0,0,0,	
Mateme (<i>Strichnos spinosa</i>)		firewood	0,14,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,	
Mtombozi(<i>Dipolynchus condylocarpon</i>)		firewood	0,10,0,0,0,0,0,0,4,0,6,0,0,0,0,7,0,0,6,0,0,	394
Chitimbe(<i>Piliostigma thonningii</i>)		firewood	0,0,0,9,10,0,6,10,0,0,0,13,11,0,7,0,0,12,0,0,	351 XI
Mcheje(<i>Diospyros kirkii</i>)		firewood	0,0,8,0,0,0,0,5,0,0,0,0,0,0,0,0,0,0,0,	
Chinama(<i>Combretum collinum</i>)		firewood	0,0,0,0,0,6,0,0,2,0,0,0,7,0,0,0,0,2,8,0,0,	361 XIV
Mphando(<i>Bauhinia petersiana</i>)		firewood	0,13,0,0,0,8,0,0,0,0,8,0,0,0,9,8,8,0,0,0,	369
Mlambe(<i>Adansonia digitata</i>)		edible	0,0,7,0,0,0,13,0,0,0,0,8,0,0,0,0,10,0,0,12,0,	387
Sambanhumu(<i>Azelia quanzensis</i>)		medicinal	0,0,0,0,0,0,8,0,0,0,0,0,0,0,0,0,0,0,	
Kachere(<i>Ficus natalensis</i>)		shade tree	0,0,0,0,0,0,0,9,2,0,0,0,0,4,11,0,0,0,13,0,	375
Nkalati(<i>Bulkea africana</i>)		edible	0,0,0,0,0,0,10,0,0,0,0,0,0,0,0,0,0,0,	
Mfula(<i>Sclerocarya caffra</i>)		edible	0,0,0,0,0,0,0,5,0,0,0,0,0,0,0,0,0,0,	
Mkuyu(<i>Ficus capensis</i>)		edible	0,0,5,0,0,0,12,0,0,0,0,0,0,0,0,0,0,0,	
Matowo(<i>Azanza garckeana</i>)		edible	0,11,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,14,0,	
Khwambala(<i>Smilax craissiana</i>)		firewood	0,0,0,0,0,0,11,0,0,0,0,0,0,0,0,0,0,0,	
Mlobwa(<i>Pterocarpus angolensis</i>)		timber	0,0,0,0,0,0,0,0,5,0,0,0,0,0,0,0,11,0,0,	
Mtbawa(<i>Kaya anthotheca</i>)		timber	0,0,0,0,0,0,0,0,3,0,0,0,0,0,0,0,0,0,	
Mthudza(<i>Flarxoutia indica</i>)		firewood	0,0,0,0,0,0,0,0,0,0,0,0,8,0,10,0,0,0,0,	
Kapangale(<i>Dichrostachys cinerea</i>)		firewood	0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0,	
Khalagongoni(<i>Carissa edulis</i>)		edible	0,0,0,0,0,0,0,0,0,0,0,0,0,0,2,0,0,0,	
Chipenbere(<i>Landia spp.</i>)		firewood	0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,9,0,0,	

Although quantitative canopy cover cannot be obtained from the result of the baseline survey, frequency of occurrence by tree species in the villages of Study Area can be outlined. Mango tree, Eucalyptus (mostly *E.tetecornis* but also some *E.camaldulensis* and *E. grandis* are found) and Cassia are by far common throughout the Area. These are not indigenous but planted exotic species. The characters of these are also tabulated above, among these mango is most important for the villagers because it gives nourishing fruit during famine season. Eucalyptus suits land conditions in the Area, and villagers have experienced its out-planting through the projects sponsored by MASAF etc. Cassia, along with *Gmelina arborea* and neem tree (*Melia azadirach*), has tough proliferation and surviving power than other exotic species, accimatizing themselves to drying climate with deeply reaching root systems. All high ranked exotic species are tolerant to drought spell and show faster growth than others. Frequently recorded species do not necessarily covers larger land area because observers' eyes tend to watch them planted at homestead or near housing quarters as hedge plant (*Thevetia peruviana*) etc. Generally speaking, exotic species are by far more commonly observed in the Area than indigenous ones mainly because of vanishing natural Miombo forest during deforestation process and substitution of indigenous canopy with exotic ones planted later. Deforestation has been accelerated since 1980s through charcoal production for vending in urban consuming areas. Villagers fell trees that are suitable for charcoal production (for example *Brachystegia speciformis* and *Julbernardia spp.*), while those that yield poor charcoal quality have left standing (such as *Adansonia digitata*, *steculia quinqueloba* and *Terminalia sericea*). Shrub trees that are hardly browsed by goats, such as agro-forestry leguminous species including *Gliricidia sepium*, *Tephrosia vogelii* and *Senna (Cassia) spp.*, tend to survive, giving additional advantage to these fast growing species.

As regards indigenous species, *Terminalia sericea*, *Lonchocarpus capassa* and *Brachystegia spp.* are most frequently found, but their occurrence is mostly confined to hill-side shrubs and cemetery yards where villagers traditionally do not enter to fetch firewood. Only *Lonchocarpus capassa* is widely found in cropped field owing to vigorous proliferation and deep rooting. Indigenous species tend to be concentrated in northern part of the Area (in the villages of Mdala, Nanjiwa, Makonokaya, Siyamudima, and Kaumbata) presumably on account of sparse population density and relatively higher firewood availability. In densely populated southern part where many households have to buy firewood, they only survive in grave-yards after rampant collection of firewood and production of charcoal. In common, growth of indigenous tree species is much slower than that of exotic ones, and this would lead to faster disappearance of indigenous canopy than that of planted or exotic one. particularly, hard wood species like *Terminalia sericea* (villagers use this timber for making mortar), *Pterocarpus angolensis* or *Kaya senegalensis* & *anthothea* grow very slowly but their timber can be sold at dearer prices. *Terminalia sericea* and *Lonchocarpus capassa* bear abundant seed in younger age and this fosters higher survival rate than other indigenous species. Villagers do not have custom to plant indigenous tree species and this serves one of the causes of depleting lignous resources in and around their villages. Seed of indigenous trees is still available, but villagers have no idea to use it.

Some indigenous tree species are useful for medicinal use because majority of villagers cannot afford to go to medical doctors and clinics even though they seriously suffer from diseases. Bark or leaves of *Azela quanzensis*, seed and bark of *Melia azadirach* and *Cinchona succirubra* (material of anti-malaria medicine) are useful as free of charge herbal drugs for poor families. Villagers more and more feel difficulty in sustaining their families as resources available within their reach are depleting and failure of access to hitherto available ones may cause theft and other crimes. In fact, untapped tree stands in secondary forest around Chilangoma Hill (especially Nanjiwa and Chakana villages) are recently subject to increasing poaching (theft felling) by strangers. Very few of these villagers are aware of future outcome of measure-less exploitation. In other TAs like Machinjiri and Mpama (adjacent to Blantyre~ Limbe City), villagers now have to pay 10~20 MK for buying day to day firewood in spite of their meagre annual income (mostly less than ten thousand MK per family). As demand for firewood increases, price will naturally escalates and it never fails to make additional burden on people's livelihood. There's still no prospect of fuel substitution because other energy (electricity, oil, coal and gas) costs are evidently higher than firewood in Malawi.

D. Extension Activities Delivered to the Villages

Village	Agriculture	Forestry	Health	Community Development
1. K.Chigumura	W. lady staff	N. no visit for 6 yrs	E. drugs provided	N. lady living too remote
2. Kumponda	E. only livestock	N. poor visit	E. staff active	N. service not existing
3. Kateya	N weak concern	N. service not exist	N. service not exist	N. service not existing
4. S. Mpombe	A. lady helpful	N. no casual visit	N. no regular visit	A. lady staff helpful
5. Ndemanje	A. lady helpful	N. no visit at all	E. drug supplied	E. for livestock technique
6. Maluwa	E. skill training	E. created nursery	E. drugs supplied	E. veterinarian's vaccine
7. Peter Bilila	N.service not exist	N. service not exist	E. male, helpful	N. service not existing
8. Kamwendo	E. lady staff	N. no visit for 6 yrs	N. male staff	N. lady living too remote
9. Chilangali	A. manure made	N. staff unhelpful	N. staff is lazy	N. no development staff
10. T. Kenji	E. but livestock W.	N. no visit at all	E. drugs provided	N. service not existing
11. D. Mbeza	A. good advice	N. irregular visit	E. monitor well	N. services not existing
12. M. Ngondo	N. no field visit	N. no site visiting	N. but helpful	N. services not existing
13. Kumanda	W. Weak	N. service not exist	A. drug delivery	W. Weak
14. Kammata	VE. manure made	E. nursery taught	VE. hygiene kept	E. for animal vaccination
15. Chakana	VE. manure made	VE. seed supplied	N. no visit at all	N. service not existing for home
16. Chikoja	VE. manure made	VE. seed supplied	N. irregular visit	N. service not existing
17. Manjelo	A. skill instructed	N. no visit at all	A. drug delivered	W. only nominal activity
18. Teula	E. lady, very useful	E. lady, very helpful	N.service not exist	N.service not given for home
19. Nanjiwa	E. regular visit	E. nursery planned	A. clinic provided	N.service not given for home
20. Lemu	W. lack interest	W. irregular visit	W. irregular visit	A. for education, vet. also
21. Mdala	N. no casual visit	N. interest faded	N. no visit at all	N. for livestock care
22. Kaumbata	W. rarely visit	E. nursery built	W. irregular visit	N.service not given for home
23. Siyamudima	W. male, few visit	A. male, helpful	W. irregular visit	N.service not given for home
24. Makonokaya	N. irregular visit	N. lack of tools	A. drug delivered	N.service not given for home
T o t a l (E=A)	VE3, E11, W5, N5	VE2, E6, W1, N15	VE1, E11, W3, N9	E5, W2, N17

Note: E; Effective, A; Active, W; Weak, N, Not Acting, or not effective, worst one is "service not existing"

If assigned staff lives near the village, he/she can visit frequently. If some merits, for example chance to acquire loans for the extension staff himself/herself, he/she will visit the villages. Usually, an assigned staff should cover too many villages by bicycle, hence his/her visiting frequency is affected by distance from residence. Among various extension services, agriculture has the highest evaluation by the villagers, followed by health. Forestry extension has been negatively assessed

perhaps on account of less visit to the villages and home husbandry received the worst mark due presumably to low attendance of extension staff who usually live in urban areas.

D. Firewood Availability

Village	relative availability of wood in village	distance & time of fetching wood	recent change in firewood resources	pattern of firewood use in households
1. K.Chigumura	75% buying wood	100m, < 1 hour	cost = MK20 / day	very few use charcoal
2. Kumponda	wood remains riverside	0.3~3 km, 0.3~1hr	2.2 hrs to cook a day	mostly 3 stone type
3. Kateya	at times buy roadside	0.5~2km, 1hr	headload lasts 3~7days	usually 3 stone type
4. S. Mpombe	from hill, also m. stalks	3~5km, 2 hrs /day	fetching twice a day	few use mud stoves
5. Ndemanje	riverside shrub	1 ~ 2 km, 1.5 hrs	resource declining	mostly 3 stone type
6. Maluwa	getting much scarcer	5~10km, 2~3times/w	headload lasts 7days	few use mud stoves
7. Peter Bilila	barely self-supplied	2 km, 2~3 times/w	cooking 6 hrs/day	only 3 stone type
8. Kamwendo	fetching within village	1 km, 3 times a week	3.5 hrs a day by mafuwa	only 3 stone type
9. Chilangali	scarcity problem arises	1~2 km, twice a day	headload lasts 7days	few use charcoal stoves
10. T. Kenji	at times using stalks	3~4km, 5 hrs, once/w	headload lasts 7days	mud stoves destroyed
11. D. Mbeza	barely self-supplied	2 km. < 1 hr.	headload lasts 3~7days	people want mud stove
12. M. Ngondo	hill & indigenous trees	2 km, 6 hrs	headload lasts 7days	3-stone, digging hole
13. Kumanda	shrubs of Milala Dam	1 km, 15min. 2~3/week	a headload lasts 2 days	only 3 stone type
14. Kammata	using Eucalyptus branches	2 hrs. 1~2km, daily	also use residue stalks	3 hrs a day by 3-stone
15. Chakana	very scarce in hills	1 km, < 1hr. daily	difficult to fetch headload	only 3 stone type
16. Chikoja	Nkokozi river basin	2~4km, 5~7 hrs, 3/w	difficult to fetch headload	people want mud stove
17. Manjelo	Milala Dam basin	2~3km, 1.5hrs,daily	a felled tree lasts a week	only 3 stone type
18. Teula	barely self-supplied	3~4km, 5 hrs, once/w	a headload lasts 3 days	only a house has mud stove
19. Nanjiwa	fairly easily available	0.5 km, 30min. daily	local trees often stolen	only 3 stone type
20. Lemu	use also residue stalks	1.5 km, 3 hrs, 1/week	< 3 hrs. a day to cook	only 3 stone type
21. Mdala	getting scarce these years	0.5 km, 2~3 hrs	difficult to fetch headload	only 3 stone type
22. Kaumbata	shrubs along streams	1~2 km, 2hrs. daily	difficult to fetch headload	only 3 stone type
23. Siyamudima	use also residue stalks	0.5~1km, 1~3hrs,1/w	1~2.5 hrs to cook a day	people want mud stove
24. Makonokaya	some buy from neighbors	0.5km, 1~2hrs, daily	have to use residue stalks	only 3 stone type
T o t a l	S:10, SS: 3, A:11	1.4~2.4km, 3.2hrs	BF; 2, DTFH; 4, O;18	3S only; 14, mix;10

Note: Abbreviations; m; maize, S; scarce, SS; still barely self supplied, A; available, DTFH; difficult to fetch head-load, BF; Buying firewood, O; other situation. hrs; hours, /w; per week

From the above listed survey results, it can be said that the Study Area already began to suffer from firewood scarcity to the extent that 40% has failed to supply within the village though 45% can meet village demand. Villagers have to travel about 2km taking 3 hours to fetch firewood a few times a week. About 60% uses primitive, three stone type fireplace for cooking. The observed changes in firewood supply has brought about since a few years back because villagers admitted that firewood trees were enough to supply firewood in 1990s. As shown below, villagers have to sell firewood amidst acute shortage to sustain their families and 18 villages out of 24 actually sell firewood (some even charcoal), and they fear dwindling depletion of firewood resources within their reach.

1				2				3				4			
Makonokaya				Siyamudima				Kaumbata				Mdala			
Classification	Number/Quantity	Remarks	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks
Population	Male; Female	109 ; 121	Very sparsely populated	Population	Male; Female	118 ; 105	Depopulation process has been going on	Population	Male; Female	714	overpopulated because of suburbs	Population	Male; Female	278 ; 454	sparsely populated owing to rural area
Household	Household Number	56		Household	Household Number	168		Household	Household Number	112		Household	Household Number	306	
Land Use	Form	data in ha		Land Use	Form	data in ha		Land Use	Form	data in ha		Land Use	Form	data in ha	
(Total 164 ha)	Rain-fed Farm land	54.1	15% under fallow	(Total 119 ha)	Rain-fed Farm land	60.6	15% under fallow	(Total 316 ha)	Rain-fed Farm land	126.4	20% under fallow	(Total 370 ha)	Rain-fed Farm land	135.8	30% under fallow
	Residential area	32.8			Residential area	17.9			Residential area	61.2			Residential area	90.5	
	Exotic trees	19.7			Exotic trees	2.4			Exotic trees	9.5			Exotic trees	13.8	
	Dimba (marshy land)	16.4			Dimba (marshy land)	5.9			Dimba (marshy land)	37.9			Dimba (marshy land)	20.3	
	Unallocated land	11.5			Uncultivated hill	6			Football ground	2			Uncultivated land	69	
	School	0			Grazing yard	9.5			School	0			School	3.5	
	Roads	2.5			Roads	3.6			Roads	3.5			Roads	3	
	Indigenous Forest	4.9			Indigenous Forest	11.9			Private Forest	69.2	as chief's wood-lot		Indigenous Forest	27.2	
	Grave yard (Chief's tomb)	22.1			Grave yard (Chief's tomb)	1.2			Grave yard (Chief's tomb)	6.3	burial at Chigumula		Grave yard	6.9	
Livelihood Activity	Resource based one	Sale of reed mats	sale of firewood	Livelihood Activity	Resource based one	Sale of firewood	sale of grass	Livelihood Activity	Resource based one	Sale of quarry product	sale of firewood	Livelihood Activity	Resource based one	Sale of dimba vegetable	sale of firewood
	Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of brewed beer	Retail of charcoal/grocery
Problems	Location related	HIV threatens	narrow land per capita	Problems	Location related	HIV threatens	crop theft often occurs	Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	crop theft often occurs	narrow land per capita
	Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage
Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	0 km to nearby one	inside Ndala Village
	Hospital	km to hospital	Mulanje Hospital		Hospital	km to hospital	Mulanje Hospital		Hospital	km to hospital	Mulanje Hospital		Hospital	6 km to Clinic	Mombo Clinic
	Well (potable water)	no borehole in village			Well (potable water)	no borehole in village			Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	3 borehole in village	
Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users
Grass	Readily available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass		Owner of land	Owner	Grass	Readily available	Owner of land	Owner
Wild animals	Moderately-Readily avail.	None	Communal	Reed	Moderately available	None	Communal	Wild animals		None	Communal	Wild animals	Rarely available	None	Communal
Bamboo	Rarely available	Land holder	Private	Birds & Guinea fowl	Readily available	None	Communal	Birds		None	Communal	Guinea fowl	Readily available	None	Communal
Potable water	Readily available	village	Communal	Fish	Rarely available	village	Communal	Potable water		village	Communal	Potable water	enough to meet demand	village	Communal
Land	Readily available	Headman	Individual landowner	Land	Rarely available	Headman allocated all	Individual landowner	Land		Headman	Individual landowner	Land	Readily available	Headman	Individual landowner
Exotic Trees	Readily available	Individual	Private	Exotic Trees	Moderately available	Individual	Private	Trees (Fruit)		Individual	Private	Exotic trees	Moderately available	Individual	Private
Indigenous Trees	Rarely available	none but Communal	reduction by field burning	Indigenous Trees	Moderately available	none but Communal	reduction by field burning	Grass		none but Communal	reduction by field burning	Indigenous trees	Readily available	none but Communal	reduction by field burning
Stone pieces	Readily available	Private landholder	communal in hills	Stone pieces	Moderately available	Private landowner	private	Quarry Stones		Private quarry owner	private	Natural stone pieces	Readily available	Private land holder	Communal
Water in streams	Abundantly available	Communal	Available all year round	Water in 1 stream	Readily available	Communal	Available all year round	Water in 3 streams		Communal	Available all year round	Water in 5 streams	Abundantly available	Communal	Available all year round
Domestic Animals	Numbers declining	Individual	number declining	Domestic Animals	Readily available	Individual	number declining	Domestic Animals		Individual	number declining	Domestic Animals	Rarely due to theft	Individual	number declining
Reed	Rarely available	Communal	Land holders	Wild Animals	Moderately available	Communal	Rarely seen in the village	Wild Animals		Communal	Rarely seen in the village	Reed	Readily available	Communal	Rarely seen in the village
Natural water source	2 perennial streams	Nkokodzi & Lunzu	river	Natural water source	Sometimes in short	Lunzu river only		Natural water source		Mkokofadya, Lunzu	and Nasonje river	Natural water source	6 perennial streams	Nkokodzi, Chitole, Kachere,	Telekacho, Kaweta etc.

5 Nanjwa				6 Chikoja				7 Manjelo				8 Teula			
Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks
Population 489	Male; Female	223, 254	overpopulated	Population 233	Male; Female	246; 269		Population 69	Male; Female	76 ; 109		Population 127	Male; Female	231 ; 213	
Household	Household Number	120	because of suburbs	Household	Household Number	169		Household	Household Number	67		Household	Household Number	142	
Land Use (Total 234 ha)	Form	data in ha		Land Use (Total 233 ha)	Form	data in ha		Land Use (Total 69 ha)	Form	data in ha		Land Use (Total 127 ha)	Form	data in ha	
	Rain-fed Farm land	93.6	35% under fallow		Rain-fed Farm land	135.4	25% under fallow		Rain-fed Farm land	46.5	20% under fallow		Rain-fed Farm land	50.8	20% under fallow
	Residential area	35.1			Residential area	46.6			Residential area	10.1			Residential area	25.4	
	Exotic trees	33.1			Exotic trees	2.3			Exotic trees	2.2			Exotic trees	6.4	
	Dimba (marshy land)	16.4			Dimba (marshy land)	23.5			Dimba (marshy land)	4.3			Dimba (marshy land)	12.7	
	Football ground	2			Football ground	-			Uncultivated land	0.9			Uncultivated field	12.7	
	School	0			School	-			Dam Site	2.5			School	-	
	Roads	7			Roads	2			Roads	1.3			Roads	1	
	Private Forest	46.8	as chief's wood-lot		Indigenous Forest	7			Private Forest	0.2	as chief's wood-lot		Indigenous Forest	9.1	as chief's wood-lot
	Grave yard (Chief's tomb)	0	burial at Chigumula		Grave yard (Chief's tomb)	4.7			Grave yard (Chief's tomb)	-	burial at Teula		Grave yard (Chief's tomb)	8.9	burial at Chigumula
Livelihood Activity	Resource based one	Sale of dimba product	sale of charcoal	Livelihood Activity	Resource based one	Sale of dimba vegetables	production/sale of charcoal	Livelihood Activity	Resource based one	Sale of garden produce	sale of chicken	Livelihood Activity	Resource based one	Sale of firewood/charcoal	sale of fish & bloom
	Business based one	Sale of paprika	sale of livestock		Business based one	Sale of brewed beer	Retail of dried fish		Business based one	Sale of brewed beer	Retail of firewood, baskets		Business based one	brewing beer/spirit	Hawking
Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	theft often occurs	narrow land per capita
	Resource related	Low crop productivity	erratic rainfall in Jinja		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low soil fertility	firewood & timber shortage
Access to Facilities	Primary School	1 km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	2 km to nearby one	Milala chigodi school	Access to Facilities	Primary School	1 km to nearby one	Chigodi and Milala	Access to Facilities	Primary School	1 km to nearby one	Kumisati Chigumula
	Hospital	12 km to hospital	Mulanje Hospital		Hospital	0 km to hospital	Chikoja clinic		Hospital	2 km to hospital	Chikoja clinic		Hospital	5 km to hospital	Mulanje Hospital
	Well (potable water)	2 boreholes in village	not enough to cover demand		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	no borehole in village	
Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users
Grass	Abundant available	Owner of land	Owner	Grass	Readily due to less cattle	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner
Wild animals	Some available	None	Communal	Bamboo and Reed	Rarely available	Private landholder	Private	Wild animals	Rarely available	None	Communal	Wild animals	Rarely available	None	Communal
Birds	Rarely living	None	Communal	Sand	Readily available	None	Communal	Birds and Mice	Moderately available	None	Communal	Fish	Moderately available	None	Communal
Potable water	Not enough	village	Communal	Exotic trees	Moderately available	Private	Individual owner	Potable water	not always abundant	village	Communal	Potable water	in short	village	Communal
Land	Some available	Headman	Individual landowner	Land	Readily available	Headman	Individual landowner	Land	All allocated	Headman	Individual landowner	Land	Readily available	Headman	Individual landowner
Trees (Fruit)	Fairly available	Individual	Private	Trees (Fruit)	Rarely available	Individual	Private	Trees	Moderately available	Individual	Private	Trees (Fruit)	Rarely available	Individual	Private
Grass	Fairly available	none but Communal	reduction by field burning	Fish	Rarely available	none but Communal	reduction by field burning	Flying insects	Readily available	none but Communal	reduction by field burning	Reed	Moderately available	Private land owner	reduction by field burning
Quarry Stones	some	Private quarry owner	private	Stone pieces	Rarely available	Private quarry owner	private	Stone pieces	Moderately available	Private quarry owner	private	Stone pieces	Rarely available	Common	land holder
Water in a stream	no deficit	Communal	Available all year round	Water in the stream	sometimes dried up	Communal	Available all year round	Water in 1 stream	Abundantly available	Communal	Available all year round	Water in the stream	Moderately available	Communal	Available all year round
Domestic Animals	few	Individual	number declining	Domestic Animals	Rarely seen due to theft	Individual	number declining	Domestic Animals	Only goats, rarely av.	Individual	number declining	Domestic Animals	Moderately available	Individual	number declining
Wild Animals	existing but few	Communal	Rarely seen in the village	Wild Animals/Flovers	Rarely available	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village
Natural water source	decreasing	Mkokofadya, Lunzu	and Nasonje river	Natural water source	Readily available	Nkokodzi river only		Natural water source	4 perennial streams	Milala River & Dam		Natural water source	Sometimes in short	Milala river only	

9 Chakana				10 Lemu				11 Magombo Ngondo				12 Kammata			
Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks
Population	Male; Female	57 ; 75	Population density is getting sparser	Population	Male; Female	420 ; 578	relatively sparse due to remoteness	Population	Male; Female	175 ; 154	overpopulated because of suburbs	Population	Male; Female	534 ; 659	overpopulated in old village
Household	Household Number	50		Household	Household Number	496		Household	Household Number	82		Household	Household Number	244	
Land Use (Total 49 ha)	Form	data in ha		Land Use (Total 349 ha)	Form	data in ha		Land Use (Total ha)	Form	data in ha		Land Use (Total 88 ha)	Form	data in ha	
	Rain-fed Farm land	26.6	32% under fallow		Rain-fed Farm land	244.3	30% under fallow		Rain-fed Farm land	36.8	20% under fallow		Rain-fed Farm land	26.1	33% under fallow
	Residential area	4.9			Residential area	39.9			Residential area	24.5			Residential area	15.9	
	Exotic trees	1			Exotic trees	8.7			Exotic trees	6.1			Exotic trees	8.5	
	Dimba (marshy land)	0			Dimba (marshy land)	14			Dimba (marshy land)	12.3			Dimba (marshy land)	6	
	Uncultivated land	10.5			Football ground	4			Uncultivated land	18.1			Unallocated land	4	
	School	0			School	2.5	Milala primary school		School	-			Uncultivated land	12.6	
	Roads	0.5			Roads and water area	9 +14			Roads	2.5			Roads	1	
	Indigenous Forest	3	as chief's wood-lot		Hill-top Forest	5.2	as chief's wood-lot		Private Forest	6.7	at Chilangoma Hill		Indigenous Forest	5.2	private wood-lot
	Grave yard (Chief's tomb)	2.5			Grave yard (Chief's tomb)	4.5			Grave yard (Chief's tomb)	-	burial at Lemu		Grave yard (Chief's tomb)	8.7	
Livelihood Activity	Resource based one	Sale of firewood	Sale of charcoal	Livelihood Activity	Resource based one	Sale of firewood	sale of firewood	Livelihood Activity	Resource based one	Sale of dimba vegetables	sale of firewood, charcoal	Livelihood Activity	Resource based one	sale of agricultural prod.	sale of firewood
	Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of cooked foods	Hawking		Business based one	Sale of brewed beer	Retail of grocery goods		Business based one	Sale of brewed beer	sale of poles(Eucalyptus)
Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	many suffer from sick	narrow land per capita	Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	crop theft often occurs	Orphans increasing
	Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage
Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	0.5 km to nearby one	Milala primary school	Access to Facilities	Primary School	3km to nearby one	Chigodi Milala P.S.	Access to Facilities	Primary School	1km to nearby one	Chigodi
	Hospital	km to hospital	Mulanje Hospital		Hospital	7 km to hospital	Mulanje Hospital		Hospital	2 km to hospital	Chikoja Clinic		Hospital	5 km to hospital	Mulanje Hospital
	Well (potable water)	no borehole in village			Well (potable water)	2 boreholes in village	not enough to cover demand		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	3 boreholes in village	25% of villagers walk far.
Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users
Grass	Readily available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass	More readily available	Owner of land	Owner
Wild animals	Rarely available	None	Communal	Reptiles	Moderately available	None	Communal	Wild animals	Rarely available	None	Communal	Wild animals	Rarely available	None	Communal
Fish	Rarely available	None	Communal	Birds	Readily available	None	Communal	Birds	Rarely available	None	Communal	Fish	Rarely available	None	Communal
Potable water	Difficult to fetch	village well committee	Communal	Potable water	water dried up earlier	village	Communal	Potable water	Moderately available	village	Communal	Potable water	Readily available	village	Communal
Land	only one hill, almost barren	Headman	Individual landowner	Land	Moderately available	Headman	Individual landowner	Land	Unallocated scarce	Headman	Individual landowner	Land	Moderately available	Headman	Individual landowner
Trees (Fruit)	recently becoming rare	Individual	Private	Trees	Moderately available	Individual	Private	Trees (Fruit)	Readily but decreasing	Individual	Private	Trees (Exotic)	Readily available	Individual	Private
Natural Guinea fowl	Rarely available	none but Communal	reduction by field burning	Insects	Readily available	none but Communal	reduction by field burning	Indigenous forest	only one	none but Communal	reduction by field burning	Indigenous trees	Rarely available	none but Communal	reduction by field burning
Stone pieces	Plentiful in the hill	Private quarry owner	private	Mice	Moderately available	no management	private	Stone pieces	Moderately available	Private landholder	private	Stone pieces	Moderately available	Private landholder	private
Water in the stream	mostly available	Communal	Available all year round	Water in 2 streams	Plenty with Milala dam	Communal	Available all year round	Water in 2 streams	Moderately available	Communal	Available all year round	Birds	Readily available	Communal	Communal
Domestic Animals	only chicken moderately	Individual	number declining	Fish	Moderately available	Individual	number declining	Reed	Moderately available	Communal	growing area declining	Domestic Animals	Moderately available	Individual	affected by theft
Indigenous trees	becoming scanty	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village	Fish and Mice	Readily but decreasing	Communal	Rarely seen in the village	Sand	Rarely available	Communal	Rarely collected
Natural water source	only Nkokozi river	Nkokozi river only		Natural water source		Nangombe and Milala	river	Natural water source	2 streams but not enough	Nangomba, Milala river	water not abundant	Natural water source	Groundwater abundant	Lunzu river only	

13 Kumanda				14 Tamve Kenji				15 Chilangali				16 Daniel Mbeza			
Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks
Population	Male; Female	130; 147	orphans increasing	Population	Male; Female	116; 137	overpopulated	Population	Male; Female	122; 257		Population	Male; Female	41; 71	
	Household number	46	owing to AIDS	Household	Household Number	56	due to limited land	Household	Household Number	40		Household	Household Number	41	
Land Use (Total 100 ha)	Form	data in ha		Land Use (Total 21 ha)	Form	data in ha		Land Use (Total 51 ha)	Form	data in ha		Land Use (Total ha)	Form	data in ha	
	Farm land	61.2	a third under fallow		Rain-fed Farm land	8.1	15% under fallow		Rain-fed Farm land	25.5	20% under fallow		Rain-fed Farm land	18	40% under fallow
	Residential area	20.4			Residential area	4.5			Residential area	16.8			Residential area	13.1	
	Exotic trees	5.1			Exotic trees	1.3	chief's wood-lot		Exotic trees	0			Exotic trees	4.4	
	Dimba (marshy land)	4.08			Dimba (marshy land)	2.5			Dimba (marshy land)	4.7			Dimba (marshy land)	17.5	
	Unallocated land	4.08			Football ground	-			Football ground	0			Uncultivated land	16.2	
	Football pitch	3.06			School	-			School	-			School	-	
	Roads	2.04			Roads	0.5			Roads	2.6			Roads	0.8	
	Individual Forest	2.04	as wood-lots		Indigenous Forest	3.2			Private Forest	1.5	as chief's wood-lot		Private Forest	-	
	Grave yard	only outside village	burial at Kammata		Grave yard (Chief's tomb)	0.9			Grave yard (Chief's tomb)	-	burial at Kammata		Grave yard (Chief's tomb)	-	burial at Lemu
Livelihood Activity	Resource based one	Brick production	by household	Livelihood Activity	Resource based one	Sale of garden vegetables	Sale of Mango fruit	Livelihood Activity	Resource based one	Sale of quarry product	sale of firewood	Livelihood Activity	Resource based one	Sale of dimba vegetables	sale of firewood
		Mat weaving	by household		Business based one	Sale of firewood	Hawking with grocery sale		Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of brewed beer	Retail of charcoal
Problems	Location related	Remote access to Lack /shortage of	water sources firewood & timber	Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	HIVS prevails	narrow land per capita	Problems	Location related	no reliable water source	narrow land per capita
					Resource related	Low crop productivity	firewood & timber shortage		Resource related	Hyanes hunt domestic an.	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage
Access to Facilities	Primary School	2 km to nearby one	Nkhungulu P.S.	Access to Facilities	Primary School	3 km to nearby one	Milala primary school	Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula
	Hospital	6 km to hospital	Lunzu Townhospital		Hospital	6 km to hospital	Mulanje Hospital		Hospital	km to hospital	Mulanje Hospital		Hospital	km to hospital	Mulanje Hospital
	Well (potable water)	1 borehole in village	newly drilled		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	no borehole in village	acutely short meeting demand
Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users
Grass	Moderate	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner
Wild animals	Rare	None	Communal	Wild animals (hare)	Scanty to catch	None	Communal	Wild animals	Rarely available	None	Communal	Indigenous trees	Decreasing	None	Communal
Mice (protein source)	Readily	None	Communal	Birds and Mice	Readily available	None	Communal	Fish	Moderately available	None	Communal	Birds	n. a.	None	Communal
Livestock	Rare due to theft	Owner	Owner	Potable water	Too short	village	Communal	Potable water	in short of demand	village	Communal	Potable water	Rarely available	village	Communal
Reeds	Moderately	None	Communal	Land	Meager to allocate	Headman	Individual family	Land	Rarely available	Headman	Individual landowner	Land	n. a.	Headman	Individual landowner
Bamboo	Rare due to theft	Owner	Owner	Trees	Readily available	Individual	Private	Trees (Fruit)	Moderately available	Individual	Private	Trees (Fruit)	Moderately available	Individual	Private
Sisal	Rare	Owner	Owner	Grass	Moderately available	none but Communal	reduction by field burning	Bamboo	Rarely available	landholder	reduction by field burning	Reed	n. a.	none but Communal	reduction by field burning
Stones	Readily	None	Communal*	Stone pieces	Depleting	Private owner	private land holder	Stone Pieces	Sparsely available	None	Communal	Stone pieces	n. a.	Private quarry owner	private
Trees	Rare due to felling	Owner	Owner	Water in the stream	No stream passing	Communal	Available all year round	Water in borehole	Readily available	Communal	Available all year round	Water in stream	No perennial river	Communal	Available all year round
Land	Rare	Owner	Owner	Domestic Animals	Rarely kept	Individual	number declining	Domestic Animals	not commonly kept	Individual	number declining	Domestic Animals	Moderately available	Individual	number declining
Streams (perennial)	2	None	Communal	Wild Animals	Rarely observed	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village
Birds	Readily	None	Communal	Natural water source	only dimba & well	no perennial river in	the village	Natural water source	Ntenjela river w.shed	no perennial stream in	the village	Natural water source	water always in short	no perennial river in	the village
Natural water source	0 no perennial river	-	-												

17 Kamwende				18 Peter Bilila				19 Ndejanje				20 Simon Mpombe			
Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks
Population	Male; Female	260, 372		Population	Male; Female	190; 245	slightly	Population	Male; Female	110, 125		Population	Male; Female	119; 156	
Household	Household Number	59		Household	Household Number	73	overpopulated	Household	Household Number	38		Household	Household Number	65	
Land Use	Form	data in ha		Land Use	Form	data in ha		Land Use	Form	data in ha		Land Use	Form	data in ha	
(Total 315 ha)	Rain-fed Farm land	204.75	road included here	(Total 45 ha)	Rain-fed Farm land	18	20% under fallow	(Total 144 ha)	Rain-fed Farm land	47.5	20% under fallow	(Total 54 ha)	Rain-fed Farm land	31	30% under fallow
	Residential area	22.05			Residential area	11.3			Residential area	13			Residential area	11	
	Exotic Planted wood	9.45			Homestead exotic trees	0.9			Exotic trees	18.7			Exotic trees	1.7	
	Dimba (marshy land)	12.6			Dimba (marshy land)	6.8			Dimba (marshy land)	18.7			Dimba (marshy land)	3.8	
	Football ground	-			Unallocated land	6.8			Football ground	0			Football ground	1	
	School	-			School	-			School	0			School	-	
	Uncultivated Land	47.25	20% under fallow		Roads	-			Roads	5.8			Roads	1.2	
	Private Forest	3.15	as chief's wood-lot		Private Forest	-	as chief's wood-lot		Private Forest	23	as chief's wood-lot		Private Forest	2.8	
	Grave yard	15.74	burial at Chigumula		Grave yard (Chief's tomb)	1.4			Grave yard (Chief's tomb)	17.3	burial at Chigumula		Grave yard (Chief's tomb)	1.4	
Livelihood Activity	Resource based one	Gardening in Dimba	Sale of riverbed sand	Livelihood Activity	Resource based one	Sale of fish	sale of firewood	Livelihood Activity	Resource based one	Sale of dimba product	sale of mat, earth-pot	Livelihood Activity	Resource based one	Sale of quarry product	sale of firewood
	Business based one	Sale of brewed beer	Groceries vending		Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of irrigated maize	Sale of honey		Business based one	Sale of brewed beer	Retail of charcoal
Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	too many AIDS		Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Location related	no communal land	narrow land per capita
	Resource related	Availability declining	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	too much trees are felled	firewood & timber shortage
Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	3km to nearby one	Kammata	Access to Facilities	Primary School	0.3 km to nearby one	Nasonjo donated school	Access to Facilities	Primary School	0.2 km to school	Nasonjo donated school
	Hospital	km to hospital	Mulanje Hospital		Hospital	6 km to hospital	Mulanje Hospital		Hospital	6 km to hospital	Mulanje Hospital		Hospital	4.5 km to hospital	Mulanje Hospital
	Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	3 boreholes in village			Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	1 borehole in village	not enough to cover demand
Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users
Reeds	Readily A.	Owner of land	Owner	Grass	increasing without cattle	Owner of land	Owner	Reed	some but not plenty	Owner of land	Owner	Grass	abundant for goats	Owner of land	Owner
Fish	Readily A.	Owner	Communal	Wild animals (mice)	Rarely available	None	Communal	Fish	few	None	Communal	Wild animals	only mice abundant	None	Communal
Birds (Guinea fowl)	Readily A.	Owner	Communal	Grasshoppers / termites	Readily available	None	Communal	Birds	very few	None	Communal	Insects & Birds	abundant	None	Communal
Potable water	Readily A.	none	Communal	Potable water		village	Communal	Potable water	very limited	village	Communal	Potable water	one well not enough	village	Communal
Sand	Readily A.	Headman	Communal	Land	A shrub hill is available	Headman	Individual landowner	Land	little remain common	Headman	Individual landowner	Land	all allocated, short	Headman	Individual landowner
Trees (not only fruit)	Readily A.	Individual	Private	Trees (Fruit)	Rarely available	Individual	Private	Trees (Fruit)	a little	Individual	Private	Trees (Fruit)	in short	Individual	Private
Grass	Readily A.	none but Communal	reduction by field burning	Grass	Readily available	none but Communal	reduction by field burning	Grass	fair in Nasonje River	none but Communal	reduction by field burning	Grass	readily available	none but Communal	reduction by field burning
Quarry Stones	Available	Private quarry owner	private	Stone pieces	Readily available	Communal	private	Quarry Stones	some available	Private quarry owner	private	Indigenous trees	in short	Communal	Communal
Water in 2 streams	Readily A.	Communal	Available all year round	Water in a stream	Readily available	Communal	Available all year round	Water in 3 streams	fairly plenty	Communal	Available all year round	Water in 3 streams	surface water enough	Communal	Available all year round
Domestic Animals	Rare	Individual	number declining	Wild Animals	Moderately available	Individual	number declining	Domestic Animals	many goats, chicken	Individual	number declining	Domestic Animals	few except goats	Individual	number declining
Wild Animals	Relatively available	Communal	Rarely seen in the village	Fish	Still available in river	Communal	in a dam and in dimba	Wild Animals	rare but a lot of mice	Communal	Rarely seen in the village	Wild Animals	rare	Communal	Rarely seen in the village
Natural water source	usually enough	Ntenjela, Lunzu river		Natural water source	3 boreholes drilled here	Only Ntenjela River		Natural water source	mostly stream	Mkokafadya, Lunzu	and Nasonje river	Natural water source	relatively available	Ntenjela, Lunzu &	Nasonje river

21 Kateya				22 Maluwa				23 Kumponda				24 Kumisati Chigumula			
Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks	Surveyed Item	Classification	Number/Quantity	Remarks
Population	Male; Female	21; 22	overpopulated	Population	Male; Female	73; 55	Overpopulated	Population	Male; Female	302; 444	overpopulated	Population	Male; Female	295; 595	densely populated
Household	Household Number	23	because of suburbs	Household	Household Number	62	due to narrow land	Household	Household Number	264	because of suburbs	Household	Household Number	160	because of school
Land Use (Total ha)	Form	data in ha		Land Use (Total 45 ha)	Form	data in ha		Land Use (Total 52 ha)	Form	data in ha		Land Use (Total 47 ha)	Form	data in ha	
	Rain-fed Farm land	1.4	80% under fallow		Rain-fed Farm land	10.35	35% under fallow		Rain-fed Farm land	25.5	20% under fallow		Rain-fed Farm land	18	23% under fallow
	Residential area	0.75			Residential area	6.75			Residential area	10.2			Residential area	5.85	
	Exotic trees	0.15			Exotic trees	5.4			Exotic trees	-			Exotic trees	2.25	
	Dimba (marshy land)	9.3	Ntenjela river basin		Dimba (marshy land)	6.5			Dimba (marshy land)	5.1			Dimba (marshy land)	4.5	
	Uncultivated field	2.3			Unallocated shrub	7			Football ground	1.83			Unallocated land	2.25	
	School	-			School	-			School	-	at K.Chigumula		School	3.15	
	Roads	-			Roads	-			Roads	2.04			Roads	0.8	
	Private Forest	-			Private Forest	-			Private Forest	1.02	as chief's wood-lot		Individual Forest	6.75	as private wood-lots
	Grave yard (Chief's tomb)	-	burial at Ntenjela		Grave yard (Chief's tomb)	2.25	burial at Chigumula		Grave yard (Chief's tomb)	1.02	burial at Chigumula		Grave yard	5.25	a few villages use it
Livelihood Activity	Resource based one	Sale of garden products	sale of firewood	Livelihood Activity	Resource based one	Sale of quarry product	sale of firewood	Livelihood Activity	Resource based one	Sale of quarry product	sale of firewood	Livelihood Activity	Resource based ones	Sale of crushed-stone	Grass cutting & sale
	Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of brewed beer	Retail of charcoal		Business based one	Sale of brewed beer	Retail of charcoal		Business based ones	Retail food vending	Cake processing
Problems	Location related	depopulation by AIDS	narrow land per capita	Problems	Location related	bush fire destroys	narrow land per capita	Problems	Location related	crop theft often occurs	narrow land per capita	Problems	Resource related issue	Firewood scarcity	them to buy at 20Mk/day
	Resource related	declining wild animals	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Resource related	Low crop productivity	firewood & timber shortage		Location related issue	High population fosters	too frequent theft damage
Access to Facilities	Primary School	2 km from the village	Milala Primary School	Access to Facilities	Primary School	km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	1km to nearby one	Kumisati Chigumula	Access to Facilities	Primary School	located in the village	Nkhungulu P.S.
	Hospital	5 km to nearby hospital	Mulanje Hospital		Hospital	km to hospital	Mulanje Hospital		Hospital	2.5 km to hospital	Mulanje Hospital		Hospital	2 km to hospital	Mulanje hospital
	Well (potable water)	only one in village	water tends to deplete		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	1 borehole in village	not enough to cover demand		Well (potable water)	3 boreholes in village	
Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users	Resources in village	Availability	Management entity	Ownership/ Users
Grass	Readily Available	Owner of land	Owner	Grass	Readily available	Owner of land	Owner	Grass	Relatively abundant	Owner of land	Owner	Grass	Relatively abundant	Owner of land	Owner
Wild animals	Rarely available	None	Communal	Wild animals		None	Communal	Wild animals	Rare	None	Communal	Wild animals	Rare	None	Communal
Birds and Mice	Rarely available	None	Communal	Fish	Readily available	None	Communal	Birds	Moderately existing	None	Communal	Mice (protein source)	Readily	None	Communal
Potable water	Only one well	village	Communal	Potable water	not enough	village	Communal	Potable water	in short	village	Communal	Reeds	Amplly available	None	Communal
Land	Scarce	Headman	Communal	Land	Readily but futile	Headman	Individual landowner	Land	Rarely available	Headman	Individual landowner	Land	Available	Headwomen	Soil is eroded / degraded
Trees (firewood)	Rarely available	Individual	Persons who use land	Trees (Fruit)	Readily available	Individual	Private	Trees (Fruit)	Rarely esp. bamboo	Individual	Private	Trees	Moderately available	Individual	Depleting
Grass	Readily Available	Land users	still readily available	Sand	Readily available	none but Communal	Communal	Grass	Moderately available	none but Communal	reduction by field burning	Grass	Moderately available	Communal	Depleting
Natural Stone Pieces	Readily Available	Communal	Communal	Stones	Moderately available	Private quarry owner	private	Quarry Stones	Moderately available	Private quarry owner	private	Querry Limestones	Moderately available	Owner of the land	Depleting
Water in a stream	Only Ntenjela River	Communal	Available all year round	Water in the stream	Readily available	Communal	Available all year round	Water in 3 streams	Moderately available	Communal	Available all year round	Water and Dam	Moderately available	Communal	Available all year round
Domestic Animals	Quite few	Individual	number declined	Domestic Animals	Very few except goats	Individual	number declining	Domestic Animals	Rarely available	Individual	number declining	Domestic Animals	Rarely available	Individual	Very few in existence
Wild Animals	Rarely available	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village	Wild Animals	Rarely available	Communal	Rarely seen in the village
Natural water source	Scarce	Ntenjela River		Natural water source	depleted in winter	Lunzu River only		Natural water source	Abundant perennial	Mkokafadya, Lunzu	and Nasonje river	Natural water source	Abundant	Ntenjela river	

1 Makonokaya				2 Siyamudima				3 Kaumbata				4 Mdala			
Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship
(GVH: Mdala)	Siyamudima, Chimseu	Kantumbiza	Kaumbata, Mdala	(GVH: Mdala)	Makonokaya, Kaumbata	Chimseu, Salimu	Kantumbiza	(GVH: Mdala)				(GVH: Mdala)	Matete, Kalonboza	Nanjiwa, Chikoja	Lemu, Kantumbiza
Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)
Groundnut, unshelled	1/10	1 plateful (#10)	50 t	Chicken	1/14	adult fowl	MK 55 – 110	Pumpkin leaf		6 leaves		Groundnut	1/19	1 plateful (#10 plate)	MK 1–2
Mustard leaf	2/10	4 leaf bundle	MK 1	Mustard leaf	2/14	4 leaf bundle	MK 1	Tomato		3 pieces		Pigeon pea	2/19	1 plateful (#10 plate)	MK 1
Tomato	3/10	1 heap (3–4 fruits)	MK 1	Peanut (shelled, unshelled)	3/14	1 plateful (#10)	MK 2 & shelled MK 5	Okra		1 heap		Tomato	3/19	1 heap (3–4 fruit)	MK 0.5 – 10
Bambara bean	4/10	1 plateful (#10)	MK 2	Pig	4/14	head depending on size	MK 800 – 4,000	Quarry stone		7 ton (one truck-full)		Bambara bean	4/19	1 plateful (#10 plate)	MK 1.5
Chicken	5/10	adult fowl by size	MK 150 – 250	Pumpkin leaf	5/14	4 leaf bundle	50 t	Mango fruit		Each		Charcoal	1/4	50kg bag equivalent	MK120–130 →250–300
Mango	1/8	1 large fruit	MK 2	Firewood	1/10	3 wood pieces with 1m	MK 2	Firewood		1 headload (20kg)		Firewood	2/4	3 pieces with 1 m.	MK 2.0
Charcoal, Firewood	2/8	50 kg bag, 3 pieces	MK140 and MK 2	Grass	2/10	1 small bundle	MK 1	Dried grasshopper		Each		Pole	3/4	Each (Eucalyptus)	MK 30 – 50
Beer	1/5	200 – 750 ml (Veta)	MK 7.5 – 50	Charcoal	3/10	1 50kg bag	MK 80 – 150	Homestead chicken		fowl		Beer (Kachasu)	1/5	bottle depending on size	MK 8.5 – 60 (Veta)
Fried fish	2/5	each varying with specie	MK 1 – 5	Goat	4/10	head depending on size	MK 500 – 900	Goat		head		Retail Grocery	2/5	piece (f.ex. salt)	MK 195 → 430
Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems
Borehole committee	included in health comm.			Borehole committee	Active for sanitation			Borehole committee	Active led by men			Borehole committee	Active for cleaning site		
Forestry committee	very active with Kaumbata			Village Police Unit.	Active promoting security			Village Social comm.	VDC exists but inert			Red cross/ Security Comm.	Inactive without network		
Health committee	Active collecting borehole fee			Health committee	Fairly active with drugs			Health committee	Inactive lack of coop.			Health committee	Inactive since head is ill		
Freshwater-slab committee	Inactive, just started			School committee	Active providing shade			School committee	active with more male			School committee (PTA)	Active with uniforms		
Orphanage Committee committee	Inactive due to inequity			Boy's/girl's Advisory committee	Fairly active for girls			Boy's/girl's Advisory committee				Forestry Committee committee	Active opening a nursery		
Stephanos orphanage	Active since initiation			Orphanage committee	Active for assisting orphans			Micro-credit group				Orphans Committee	Active with food service		

5 Nanjiwa				6 Chikoja				7 Manjelo				8 Teula			
Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship
(GVH: Mdala)	Mangani, Kantumbiza	Mdala	Chakana, Teula	(GVH: Lemu)	Teula, M.Ngondo, Manjelo	Lemu, Michongwe	Siyamudima Kaumbata	(GVH: Lemu)	Teula, Lemu, Chikoja	Makanani	Kaumbata, Masangano	(GVH: Lemu)	Manjelo, Chikoja, Chimseu	Masangano, Lemu	Kaumbata, Makonokaya
Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)
Maize Grain	3/17	6	K7 / 0.5kg	Mustard leaf	2/9	4 leaf bundle	50t – MK 2	Pumpkin leaf	1/13	6 leaves	50t – MK1	Mustard leaf	1/17	4 leaves bundle	MK 1
Tomato	6/17	3 pieces	K5	Pigeon pea	1/9	1 plateful (#10)	50t – MK 2	Mustard leaf	2/13	6 leaves	MK 1	Ground;Banbara nut	2/17	1 plateful of #10 plate	MK10; MK1-3
Rape	2/17	3 leaves	K1	Ground nut	3/9	1 plateful (#10)	MK 1 ~ 2	Okra	3/13	4 fruits	MK 1	Pigeon pea	2/17	1 heap, (#10 plate)	MK 5, (MK1.5)
Paprika	4/17	1 ton (one truck-full)	K 5,000 – 5,500	Goat	8/9	head (small local var.)	MK 50 – 100	Tomato	4/13	Basketful (a few kgs)	MK50 – 400	Chilli pepper	2/17	1 plateful of #10 plate	MK3 – 10
Mango fruit	1/17	Each	K 0.5 ~ 2	Firewood	4/9	1 headload (20kg)	MK 30	Firewood	1/7	3 pieces	MK 2	Pampkin leaf	2/17	6 leaf bundle	20 ~ 50 t
Sweet potato	7/17	1 headload (20kg)	K2 ~ 5	Reed Mat / Broom	5/9	Each stick	MK 3 ~ 5	Trees	2/7	1 headload (20kg)	MK10 ~ 50	Firewood	1/4	3~4 pieces (2kg)	MK 3
Groundnut/Pigeon pea	5/17	Each	K1~K3 No.10 plate	Charcoal (Eucaly/Man go)	6/9	50 kg bag	MK150, MK50(Mango)	Homestead chicken	1/9	Adult fowl	MK 30 – 200	Bloom	3/4	Each	MK 5
Homestead chicken	8/17	fowl	K50 ~ 150	Beer	7/9	1 litre Veta (Kammakoyoy)	MK 45 (MK 7)	Goats	2/9	Adult head	MK 800 – 1,200	Dried fish	4/5	1 plateful of #10 plate	MK 5-10
Goat	9/17	head	K500 ~ 1,000	Piece work	9/9	1 man-day	MK 25	Millet (Bamboo basket)	1/8	plateful #10 plate, (nos)	MK 5, (MK 60)	Duck	2/5	adult fowl	MK 80 ~ 100
Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems
Borehole committee	involved in struggling			Borehole committee	Very active for hygiene			Borehole committee	Very active			Village Development C.	Not active without plan		
Village Social comm.	VDC existing			Red Cross committee	Effective for clinic activity			Orphan committee	Inactive (in Lemu)			Agricultural comm.	Active with eager members		
Health committee	no com. but assisted			Health committee	Not active, lack of medicine			Health committee	Dull, since it's new			Health committee	Not effective without well		
School committee	active with PTA			Paprika producer's club	Active for fund-raising			School committee	Active			Funeral committee	Active in coffin making		
Paprika Producer's Club	active for market access			UDF party committee	Active for security keep			Boy's/girl's Advisory committee	Active			Security Police unit	just started, not active		
Micro-credit group	paprika farmers club							Burial Society	Active with many funerals			UDF party committee	very effective to control theft		

9 Chakana				10 Lemu				11 Magombo Ngondo				12 Kammata			
Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship
(GVH: Kuntaja)	Kamangani through funeral	Nanjiwa by creating clinic	Gomonda	(GVH: Lemu)	M. Ngondo	Teula, Manjelo, Chikoja	Kumanda, Mdala, Nanjiwa	(GVH: Lemu)	Lemu	Kumanda	Gomezza	(GVH: Kammata)	Chuma, Tamve Kenji	Daniel Mbeza, Denga	Kumanda, Chinseu
Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)
Peanut(shell ed, unshelled)	1/7	1 plateful (#10)	MK1.5 and MK 5.0	Chicken	1/4	adult fowl (d on size)	MK 50 – 250	Tomato	1/15	50 kg bag (dengu)	MK 40 – 100	Pumpkin leaf	1/12	3 leaf-bundle	MK 1
Sugarcane	2/7	1 piece depending on size	MK 1 – 10	Sweet potato	1/15	6 tuber pieces	MK 5	Mustard leaf	2/15	4 leaf bundle	50t – MK1	Green Maize	2/12	3 ~ 4 cobs (50kg bag)	MK 10 (MK 650)
Pegeon pea	3/7	1 plateful (#10)	MK 1.5	Tomato	2/15	1 heap on #4 plate	MKv2	Pumpkin leaf	3/15	6 leaf bundle	20 ~ 50 t	Pigeon pea	3/12	1 plateful in #10 (d.o.)	MK 2 (MK 700)
Velvetbean (cooked, uncooked)	4/7	1 plateful (#10)	MK 1.0 and MK 1.5	Okra	5/15	4 fruits	MK 1	Onion	4/15	3 pieces	MK 2	Tomato	4/12	1 bag (dengu)	MK 90 – 250
Fermented Cowpea Khobwe	5/7	1 plateful (#10)	MK 1.0	Mustard leaf	4/15	4 fruits	MK 1	Pole for housing	1/3	Each depending on size	MK 10 ~ 30	Poles for housing	1/5	Each depending on size	MK 70 ~ 300
Charcoal	1 / 2 (bought at MK 120-150)	50 kg bag for retail	MK 230 ~ 250	Firewood	1/4	3 pieces (2kg)	MK 2	Firewood	2/3	3 pieces of 1 meter stick	MK 1 ~ 2	Grass	2/5	1 bundle (mphutu)	Mk 1
Firewood	2/2	1 headload (20kg)	MK 15 ~ 50	Tree pole	2/4	Each log	MK 10 ~ 300	Charcoal	3/3	50 kg bagful	MK 180	Bamboo stalk	3/5	Each	Mk 30 ~ 50
Beer	1/2	1 bottle depending on size	MK 9 ~ 60 (Veta)	Charcoal	3/4	per bag of 50 kg	MK 75 ~ 150	Beer	1/6	Kamapewa, gin-bottle, litre	MK 7.5, 15, 50	Firewood	4/5	3 small pieces	MK 2
Maize cakes (Zigumu)	2/2	1 cake depending on size	MK 2 ~ 4	Fish	4/4	each depending on size	MK 5 ~ 25	Paraffin for retail	2/6	100cc cupful	MK 1	Beer	1/7	1 liter bottle	MK 50
Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems
Borehole committee	active for maintenance			Borehole committee	Active maintenance			Borehole committee	Helpful for maintenance			Borehole committee	Very active for repairing		
Health committee	not active without drug			Village Dev. Comm.	Active for administration			Village Development C.	Inert, Just established			Village Dev. Committee	Effective with control		
School committee	very active with solidarity			Health committee	Active help hospital fee			Health committee	Not active without aid			Security Committee	Effective prev. thieves		
				School committee	active			School committee	Useful for settling disputes			School committee	Active for maintenance		
				Security committee	active reducing theft case			Forestry committee	Not active, just established			Orphanage Committee	Very Effective		
				Orphans committee	active							Traditional Birth Attendant	Effective for delivery		

13 Kumanda				14 Tamve Kenji				15 Chilangali				16 Daniel Mbeza			
Relation with neighbor	Good collaboration	Fare without dispute	Poor relation	Relation with neighbor	Good collaboration	Good collaboration	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Fare without dispute
(GVH: Kammata)	Kammata, T.kenji	Chilangali	Mbeza, Lemu	(GVH: Kammata)	Kammata, Chilangali and	Kumanda	D. Mbeza	(GVH: Kammata)	D.Mbeza, Lemu, Kammata	Denga, staying here	Kamwendo, P.Bilila	(GVH: Kammata)	Kumanda	Chilangali, Kammata &	Tamve Kenji
Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)
Mice	5 / 1 Natural resources	Each	50t - 2	Sweet potato tuber	10/2	5 big or 7 small tuber	5 ~ 10 MK	Mustard leaf	1/8	10 leaves bundle	MK 1	Mustard leaf	1/13	4 leaves	MK 0.2 ~ 2.0
Firewood	4/2	3 pieces	2	Leafy vegetables	10/1	7 leaves	50 t	Pumpkin leaf	2/8	4 pieces heap	50 t	Tomato	2/13	4 pieces	MK 2 ~ 5
Mango Fruit	4/2	Each	50t - 1	Ground- (Banbara) nut	10 / 3-4	1 plate-ful (#10)	1 ~ 1.5 MK	Homestead Chicken	3/8	fowl varying with size	MK80 ~ 150	Groundnut	3/13	1 #12 plateful	MK 10 (unshelled)
Tamarind fruit	3/4	Each	0.1 - 1	Sorghum / Millet	10 / 5-6	1 plate-ful (#10)	MK 2	Okra	3/8	6 fruits	MK 1	Pigeon pea/ Bambara bean	4,5 / 13	1 #10 plateful	MK 2
Fried birds	1/5	Each	0.3 - 2	Pegeon-Pea	10/7	1 plate-ful (#10)	MK 1	Ground-nut	4/8	plateful of #10 plate	MK 2	Cassava tubers	5/13	tuber, depending on size	MK 0.5 ~ 10.0
Chickens	15 / 1 Livestock	Each	100 – 250	Mango fruit	2/2	per small / large fruit	20-50t; 1 ~1.5 MK	Firewood	1/4	3 stick pieces	MK 1	Mango fruit	6/13	1 fruit	MK 0.5 ~ 1.0
Goats	10/2	Each	700 – 1,200	Firewood	1/2	1 pieces by 1 meter	MK 2	Timber	2/4	Depending on the size	MK 7 – 25	Chicken	1/4	fowl, depending on size	MK 80 – 150
Fried cakes (Mandasi)	9/1	Piece	2 – 5	Hawking (salt, soap...)	1/3	fowl	MK 500 ~ 1,000 / month	Cake (Mandasi)	1/3	each	MK 1	Goat	2/4	head, depending on size	MK 500 ~ 1,000
Hawker	9/1	N/a	N/a	Papaya fruit	10/10	per fruit	MK 3 ~ 5	Dried fish	2/3	each	MK 1	Grass	3/4	bundle	50t ~ MK 1
Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems
Borehole committee	very active	borehole users	maintenance fee	Borehole committee	Effective collecting fee			Borehole committee	Active with sanitation			No committee has ever	established in this village		
Village Social comm.	very active	almost all families	weak response	Red Cross committee	Not effective just started			Village Develop. comm.	Active to build a well						
Initiation committee	very active	young boys & girls	boys are inactive	School committee	Effective for adult training			Health committee	-						
					but poor failing duties			School committee	-						
								Boy's/girl's Advisory committee	Active, but girls only						
								Micro-credit group	-						

17 Kamwende				18 Peter Bilila				19 Ndemanje				20 Simon Mpombe			
Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Good collaboration	Poor relationship
(GVH: Kumponda)	S.Mpombe, Ndemanje	K.Chigumula, P.Bilila	Maluwa	(GVH: Kumponda)	Kamwendo, S.Mpombe	Zuwanya, Kateya	Bitani	(GVH: Kumponda)	S.Mpombe	Maluwa	Kumponda, Kateya	(GVH: Manganje)	Ndemanje, Maluwa and	Kamwendo	K.Chigumula, P.Bilila
Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)
Mustard leaf	1/14	6 leaves	K1	Mustard leaf	6/1	4 leaves	MK0.2	Honey	9/11	1 bottle of 300cc	100	Pumpkin leaf	9/2	4 leaves	0.5 MK
Tomato	2/14	4 pieces	K5-10	Tomato	6/2	4 nos seasonally variable	MK1 ~ MK10	Tomato & dimba crops	3/11	3 pieces	K5	Mustard leaf	1/13	6 pieces	1.0 MK
Chicken	3/14	Adult fowl	K40 ~ K150	Cooked, unshelled Gnut	6/3	1 small plate #10	MK5	Pigeon pea	1/11	1 heap	K5	Tomato	10/1	1 basket (dengu)	250 ~ 400 MK
Goat and Pig	14 / 4 and 11	Adult head	K800, K450-K1,200	Green Maize	6/4	3 cobs	MK5	Sweet potato	4/11	1 heap	K5	Okra	3/3	6 fruit	1.0 MK
Sand in River-Bed	6/1	10 ton lorry	K250	Velvet Bean	6/5	1 small plate #10	MK1 ~ MK2	Mango fruit	2/11	Each	K1~2	Ground-nut	2/5	1 plate of #12	10 MK
Querry Stone	6/2	8 ~10 ton lorry	K1,200 ~ K,2,200	Charcoal	2/1	50kg bag	MK150 retail MK200	Groundnut	7/11	1 heap	K5	Sweet Potato	2/5	1 heao (of 10 nos)	5 MK
Eucalyptus pole	6/3	Each bundle	K1~2	Firewood	2/2	3 pieces / 1 meter	MK1 ~ MK2	Piece Works	8/11	Each day	K30	Beans	2/5	1 plate of #10	1.0 MK
Grass for feeding	6/4	Each bundle	K1~2	Opaque beer (Kachasu)	3/1	1 teacupful	MK5	Homestead chicken	5/11	fowl	K200	Sugae-cane	2/5	per stalk (winter)	1 ~ (15) MK
Reed Woven Mat	6/5	sheet	K5	Maize-flour cake(zigumu)	3/2	1 nos	MK2 ~ MK3	Goat	6/11	head	K1,700	Cassava	1/10	per tuber	2 ~ 5 MK
Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems
Borehole committee	Very effective			Borehole committee	Not active nor effective	with only four members		Borehole committee	active by women			Borehole committee	Very active		
Village Social comm.	Effective by headman			Security committee	Very effective for crime	prevention		Village Social comm.	no VDC but VNRMC			Security Police comm.	Active for anti-theft		
Health committee	not functioning at all			Health committee	Not active to mention			Health committee	active by agr.extension			Health committee	Active		
Security committee	Not very effective							School committee	active for adj.school			School committee	Active		
UDF committee	Effective to support party							Boy's/girl's Advisory committee				Boy's/girl's Advisory committee	Active		
Orphanage committee	Effective under DAPP aid							Micro-credit group	Malawi Rural Finance Comp.			Orphan's committee	Active		

21 Kateya				22 Maluwa				23 Kumponda				24 Kumisati Chigumula			
Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor	Good collaboration	Fare without dispute	Poor relationship	Relation with neighbor community	Good collaboration	Fare without dispute	Poor relationship
(GVH: Manganje)	K.Chigumula ,Zuwanya	S.Mpombe, Chiwalo	P.Bilila, Ndemanje	(GVH: Manganje)	S. Mpombe, Ndemanje	Kamwendo, Wotala	Kumponda,	(GVH: Kumponda)	K-Chigumula	Kamwendo, Kateya	Peter-Bilila	(GVH: Manganje)	Kateya, Peter Bilila	Gomani	Kumponda
Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)	Income Sources	Evaluated Score/Rank	Unit for Pricing	Price (tambala/ MK)
Tomato	7/1	5 nos	MK10	leafy Vegetables	1/11	6 leaves	50t = 0.5MK	Pumpkin leaf	18/1 Natural resources	6 leaves	1	Mustard (vegetable)	10/ 1 Natural resources	3 leaf-bundle	20t
Mustard leaf	7/2	5 leaves	MK0.5	Potato	3/11	5 pieces	5 MK	Tomato	7/2	3 pieces	2 ~ 5	Grass cut and sale	3/2	3 pieces	2
Green Maize Cob	7/3	3 cobs	MK10	Goats	4/11	head	100 ~ 250 MK	Okra	7/ 3	1 heap	2.5	Firewood	11/5	Each	50t - 1
Sugar Cane	7/4	variable by size of stalk	MK0.2~5.0	Tomato	5/11	1 heap for 4 fruits	1 ~ 10 MK	Quarry stone	10/1	7 ton (one truck-full)	950	Tomato	3/3	heap	2
Firewood	3/1	3 pieces (1kg)	MK2	River Sand	1/3	7 ton (one truck-full)	800 MK	Mango fruit	9/2	Each	1 ~ 5	Onion	1/4	4 pieces = heap	2
Charcoal	3/2	50kg gunny-bag	MK150	Grass (feed for goats)	2/3	1 small bundle	1 ~ 2 MK	Firewood	8/ 3	1 headload (20kg)	50	Fried fish	11/ 1 1	Each	2
Quarry stone	3/3	7 ton lorry	MK 800 ~ MK1,500	Poles (Eucalyptus)	3/3	truckfull 10 ton lorry	1,800 MK	Dried grasshopper	7/4	Each	700 – 1,200	Sugarcane shoot	10/6	Each	5
Home brewed Beer	5/1	depending on bottle size	MK8 ~ MK60	Homestead chicken	2/11	fowl	70 ~ 250 MK	Homestead chicken	6/ 1/ Livestock	fowl	100 – 250	Fried cakes (Mandasi)	9/1	Piece	2 – 5
Fried Cake (Mandasi)	5/2	nos, depending on size	MK2 ~ MK5	Baked Banana(zitu mbwa)	1/5	each	1 MK	Goat	6/ 2	head	5 ~ 10	Hawker	9/1	N/a	N/a
Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems	Group Activities	Current condition	Participation	Problems
Borehole committee	Active without aid			Borehole committee	included in VDC.			Borehole committee	very active			Youth club	very effective		
Microcredit (FINCA)	Already liquidated			Village Social comm.	Effective (=VDC)			Village Social comm.	very active			Village Social comm.	very effective		
				Development committee	Effective			Health committee	ineffective			Home economics	active cooking trials		
				School committee	not active			School committee	Active since school is near			Forestry Committee	not active, lack of leader		
								Boy's/girl's Advisory committee	very active for puberty			School Committee	not very effective		
								Micro-credit group	membership 100MK			Borehole Committee	fee K10/HH per month		

ANNEX A2

Table Socio-Economic Conditions of Target Villages

Village	Population		No. of house hold	Land area ha	Arable Land / HH ha	Wood lot / HH ha	Village Well	PerennialStream flow	Soil-water condition	Annual rainfall mm	Distance to market km
	Femal	Male									
01. Makonokaya	109	121	56	164	1.36	0.32	0	Lunzu	Dry	600	8
02. Siyamudima	118	105	168	119	0.35	0.06	0	Lunzu	Dry	600	8
03. Kaumbata	308	406	112	316	1.54	0.77	1	Lunzu & N	Dry	600	6
04. Mdala	278	454	306	801	0.63	0.21	2	Nkokodzi	Drier	550	3
05. Nanjiwa	116	373	120	234	0.61	0.49	1	Nkokodzi	Medium	650	1
06. Chikoja	246	269	169	233	0.33	0.08	1	Namilango	Dry	650	6
07. Manjelo	76	109	67	69	0.34	0.15	1	Milaladam	Humid	600	7
08. Teula	231	213	142	127	0.22	0.06	0	Milaladam	Humid	600	6
09. Chakana	57	75	50	49	0.29	0.04	0	Nkokodzi	Dry	600	2
10. Lemu	420	578	496	349	0.41	0.27	1	Nkokodzi	Humid	600	3
11. M. Ngondo	109	121	82	107	0.65	0.18	1	Nkokodzi	Humid	600	3
12. Kammata	534	659	244	171	0.12	0.04	1	no	Medium	650	4
13. Kumanda	130	147	46	127	1.15	0.24	0	no	Dry	600	3
14. T. Kenji	116	137	56	36	0.11	0.04	1	no	Medium	600	5
15. Chilangali	70	170	40	51	0.5	0.31	1	Ntenjela	Medium	600	6
16. D. Mbeza	41	71	41	70	0.73	0.34	1	no	Medium	600	6
17. Kamwendo	260	372	59	315	0.99	0.18	1	Ntenjela	Medium	650	5
18. Peter Bilila	195	240	72	129	0.19	0.08	1	Ntenjela	Humid	700	5
19. Ndemanje	127	108	38	144	1.11	0.52	0	Lunzu	Humid	700	5
20. S. Mpombe	119	156	65	45	0.32	0.26	1	Lunzu	Humid	700	5
21. Kateya	21	22	23	15	0.15	0.03	2	Nten-jela	Medium	700	4
22. Maluwa	73	55	62	45	0.32	0.03	1	Lunzu	Medium	700	4
23. Kumponda	102	144	264	190	0.53	0.09	1	no	Dry	700	3
24. K.Chigumura	295	595	160	102	0.09	0.05	1	Ntenjela	Medium	700	2
Total / Mean	4,151	5,700	2,938	4,008	0.49	0.14	0.83	0.9	Medium	635	4.6

Note: Data were collected from Feasibility Study Report 1999. Baseline Survey 2002 for population / household.

ANNEX A3

Population, Land & Village Committees

Population & Land

As of End of September, 2004

		Male	Female	Population	Household	P/H.H	Total Area (ha)	Area/H.H
1	Makonokaya	109	121	230	56	4.1	164	2.9
2	Siyandima	132	118	250	168	1.5	119	0.7
3	Kaumbata	292	430	722	114	6.3	316	2.8
4	Mdala	278	454	732	306	2.4	801	2.6
5	Nanjiwa	116	373	489	160	3.1	234	1.5
6	Chikoja	246	269	515	169	3.0	233	1.4
7	Manjero	76	109	185	67	2.8	69	1.0
8	Teula	353	390	743	250	3.0	127	0.5
9	Chakana	123	133	256	55	4.7	49	0.9
10	Lemu	420	578	998	496	2.0	349	0.7
11	M. Ngondo	195	174	369	80	4.6	107	1.3
12	Kam'mata	696	763	1,459	290	5.0	171	0.6
13	Kumanda	130	147	277	46	6.0	127	2.8
14	Tamvekenji	116	137	253	56	4.5	36	0.6
15	Chilangali	122	257	379	40	9.5	51	1.3
16	Daniel Mbedza	41	71	112	41	2.7	70	1.7
17	Kamwendo	260	372	632	154	4.1	315	2.0
18	Peter Bilila	190	245	435	72	6.0	129	1.8
19	Ndemanje	127	108	235	79	3.0	144	1.8
20	Simon Mponbe	119	156	275	65	4.2	45	0.7
21	Kateya	21	22	43	23	1.9	15	0.7
22	Maluwa	73	55	128	62	2.1	45	0.7
23	Kumponda	100	150	250	43	5.8	190	4.4
24	K. Chigumula	295	595	890	160	5.6	102	0.6
	Total	4,630	6,227	10,857	3,052	3.6	4,008	1.3
	Average	193	259	452	127	3.6	167	1.3

Source: Population data as of September 2004 by Study Team
Land data as of September 2004 by Study Team

Estimated Population

No.	Village Name	As of Master Plan Study at the End of 2000					As of Baseline Survey in May 2002				
		Male	Female	Population	Household	P/H.H	Male	Female	Population	Household	P/H.H
1	Makonokaya			251			109	121	230	56	4.1
2	Siyandima			899			118	105	223	168	1.3
3	Kaumbata			489			308	406	714	112	6.4
4	Mdala			1,289			278	454	732	306	2.4
5	Nanjiwa			714			223	254	477	120	4.0
6	Chikoja			748			246	269	515	169	3.0
7	Manjero			408			76	109	185	67	2.8
8	Teula			493			231	213	444	142	3.1
9	Chakana			200			57	75	132	50	2.6
10	Lemu			2,316			420	578	998	496	2.0
11	M. Ngondo			493			175	154	329	82	4.0
12	Kam'mata			1,513			534	659	1,193	244	4.9
13	Kumanda			258			130	147	277	46	6.0
14	Tamvekenji			501			116	137	253	56	4.5
15	Chilangali			258			122	257	379	40	9.5
16	Daniel Mbedza			154			41	71	112	41	2.7
17	Kamwendo			353			260	372	632	59	10.7
18	Peter Bilila			435			190	245	435	72	6.0
19	Ndemanje			235			110	125	235	38	6.2
20	Simon Mponbe			327			119	156	275	65	4.2
21	Kateya			92			21	22	43	23	1.9
22	Maluwa			376			73	55	128	62	2.1
23	Kumponda			1,584			302	444	746	264	2.8
24	K. Chigumula			782			295	595	890	160	5.6
	Total			15,168			4,554	6,023	10,577	2,938	3.6
	Average			632			190	251	441	122	3.6

No.	Village Name	As of Mid-term Evaluation at End of Dec. 2003					As of September, 2004 (Estimation)				
		Male	Female	Population	Household	P/H.H	Male	Female	Population	Household	P/H.H
1	Makonokaya	109	121	230	56	4.1	109	121	230	56	4.1
2	Siyandima	132	118	250	168	1.5	132	118	250	168	1.5
3	Kaumbata	292	430	722	114	6.3	292	430	722	114	6.3
4	Mdala	278	454	732	306	2.4	278	454	732	306	2.4
5	Nanjiwa	116	373	489	160	3.1	116	373	489	160	3.1
6	Chikoja			467	169	2.8	246	269	515	169	3.0
7	Manjero	76	109	185	67	2.8	76	109	185	67	2.8
8	Teula	353	390	743	250	3.0	353	390	743	250	3.0
9	Chakana	123	133	256	55	4.7	123	133	256	55	4.7
10	Lemu			1,378	350	3.9	420	578	998	496	2.0
11	M. Ngondo	195	174	369	80	4.6	195	174	369	80	4.6
12	Kam'mata	696	763	1,459	290	5.0	696	763	1,459	290	5.0
13	Kumanda			350	33	10.6	130	147	277	46	6.0
14	Tamvekenji	116	137	253	56	4.5	116	137	253	56	4.5
15	Chilangali			244	42	5.8	122	257	379	40	9.5
16	Daniel Mbedza	41	71	112	41	2.7	41	71	112	41	2.7
17	Kamwendo	260	372	632	154	4.1	260	372	632	154	4.1
18	Peter Bilila			422	72	5.9	190	245	435	72	6.0
19	Ndemanje	127	108	235	79	3.0	127	108	235	79	3.0
20	Simon Mponbe			167	65	2.6	119	156	275	65	4.2
21	Kateya			77	33	2.3	21	22	43	23	1.9
22	Maluwa	73	55	128	62	2.1	73	55	128	62	2.1
23	Kumponda	100	150	250	43	5.8	100	150	250	43	5.8
24	K. Chigumula			1,729	167	10.4	295	595	890	160	5.6
	Total			11,879	2,912	4.1	4,630	6,227	10,857	3,052	3.6
	Average			495	121	4.1	193	259	452	127	3.6

Remarks: (1) Source: Baseline survey & Mid-term evaluation by PIU and Study Team
(2) Estimated population: based on Baseline Survey and Mid-term Evaluation

Land Classification

No.	Village Name	As of Master Plan Study				As of September, 2004						
		Total Area (ha)	Woodlot (ha)	Usable Woodlot (ha)	Arable land (ha)	Dimba (ha)	Others (ha)	* Total Area (ha)	Available Woodlot(ha)	* Usable Woodlot (ha)	Arable land (ha)	Dimba (ha)
1	Makonokaya		18		76	4	164	14	4	76	4	66
2	Siyandima		10		58	3	119	7	3	58	3	48
3	Kaumbata		88		176	4	316	66	22	176	4	48
4	Idala		64		192	5	801	48	16	192	5	540
5	Naniwa		78		97	3	234	61	17	97	3	56
6	Chikoja		28		115	3	233	21	7	115	3	87
7	Manjero		10		23	2	69	7	3	23	2	34
8	Teula		15		55	4	127	11	4	55	4	53
9	Chakana		2		16	3	49	0	2	16	3	28
10	Lemu		93		145	4	349	70	23	145	4	107
11	M. Ngondo		14		52	1	107	11	3	52	1	40
12	Kam'mata		12		36	1	171	9	3	36	1	122
13	Kumanda		8		38	3	127	6	2	38	3	78
14	Tamvekenji		2		6	0	36	0	2	6	0	28
15	Chilangali		13		21	0	51	10	3	21	0	17
16	Daniel Mbedza		14		30	0	70	11	3	30	0	26
17	Kamwendo		27		152	1	315	20	7	152	1	135
18	Peter Bilila		6		14	1	129	4	2	14	1	108
19	Ndemanje		41		88	2	144	38	3	88	2	13
20	Simon Mponbe		17		21	2	45	13	4	21	2	5
21	Kateya		1		5	0	15	0	1	5	0	9
22	Maluwa		2		20	1	45	1	1	20	1	22
23	Kumponda		4		23	1	190	2	2	23	1	162
24	K. Chigumula		8		15	1	102	7	1	15	1	78
	Total		575		1,474	49	4,008	437	138	1,474	49	1,910
	Average		24		61	2	167	18	6	61	2	80

Remarks:

- (1) Source: Baseline Survey in 2002; * marked
- (2) Usable woodlot: Estimation during Pilot Study by Study Team
- (3) Available Woodlot = Existing woodlot – Usable woodlot

Mid-term Evaluation Data (2)
Village Committee

C. Village Committee

Item	Name of Village	No.1	No. 2	No. 3	No.4	No. 5	No. 6	No. 7	No. 8
		Makonokaya	Siyamdima	Kaumbata	Mdala	Nanjiwa	Chikoja	Manjero	Teula
1	Village Development Committee (VDC)								
1)	Established year	1998	1998	1993	1998	2000	1999	1998	2001
2)	Whole household are participated? (%)	48 (65%)	50	170	29	40 (80%)	all (85%)	75%	all (75%)
	(1) Number of female	33							
	(2) Number of male	15							
3)	Number of member	9	8	10	9	10	10	10	10
	(1) Number of female					5	5	4	4
	(2) Number of male					5	6	6	6
4)	What is the main activities?	Forest management	Oversea problem in village	Forest management	Sowing		Social development	Social development	Social development
5)	Frequency of meeting	twice/month	twice/month		once/week	once/week	once/month	once/month	once/month
6)	Working hour per member per month	4 hour	2 hours		12 hours	3 hrs	3 hrs/month	4 hrs/day	4 hrs/day
7)	Active or not	not	not	active	active	active	active	not	not very
8)	Reason of above	less benefit	-	-	interest beneficial	good coordination	work continue	not much work	no cordination
2	Village Natural Resources Management Committee (VNRMC)								
1)	Established year	2000	1999	1999	2000	2000	2000	2000	2002
2)	Number of member	10	50	40	30	10	10	10	10
	1) Number of female						6	4	6
	2) Number of male						4	6	4
3)	Number of participant	48	10	12	10	25	83	45	38
	1) Number of female	33					50	30	21
	2) Number of male	15					33	15	17
4)	How many members are in the VDC	all	all	all		10	3	2	4
5)	Composition								
	1) Number of large-scale farmer					-			
	2) Number of medium-scale farmer				10%	10%			
	3) Number of small scale farmer	100	90%	100%	90%	90%	all	all	all
	reason of above	poverty		povery	Different poverty level		Small land Low input use	Small land Low input use	Small land Low input use
5)	What is the main activities?	Forest management	Forest management		Forest management	Forest management	Natural resource management	Forest management	Natural resource management
		Oversee activities			Overseeing forest activities		Forest management	Natural resource management	Forest management
6)	Frequency of meeting	once/month	once/month	once/month	once/week	twice/month	3 times/week	2 times/week	2 times/week
7)	Have the written ruls or regulations	-			-	-	-	-	-
8)	Working hour per member per month	3 hrs	3 hrs/week	2 hrs	6 hrs	2 hrs/week	36 hrs/month	32 hrs/month	32 hrs/month
9)	Active or not	active	active	active	active	not	active	active	active
10)	Reason of above	-	-	interest beneficial	interest beneficial	no interest	good work done	work continue	work continue

Remarks: () = active participant

Mid-term Evaluation Data (2)
Village Committee

C. Village Committee

Date: End of December, 2003

Item	Name of Village	No. 17 Kamwendo	No. 18 Peter Bilila	No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumpomda	No. 24 K Chigumula
1	Village Development Committee (VDC)								
1)	Established year	-	2000	1995	1999	2002	2002	2001	1998
2)	Whole household are participated? (%)	75%	30	all	all	all (50)	all (35)	all (38)	all (70)
	(1) Number of female		66%		70%	28	25	32	60%
	(2) Number of male		34%		30%	22	10	6	40%
3)	Number of member	10	10	10	10	10	10	10	10
	(1) Number of female	3							
	(2) Number of male	7							
4)	What is the main activities?	- School/work - Rehabilitating roads etc		- Moulding bricks - Constructing teacher's house Teaching reading	Gen. develop. Road maintenance Stone collecting bridges, sand collect	Improved mud stove construction Woodlot management	Nursery work/ woodlot management Goat rearing/ construction of enzaro jiko	Treadle pump irrigation Sch. Improved mud stove/ woodlot management	Sch. Develop. Road maintenance Feeder roads borehole works
5)	Frequency of meeting	Irregular		Irregular	Bimonthly	Once/month	Twice/week	Twice/month	Once quarterly
6)	Working hour per member per month	Depends		Depends	12hrs/pers/month	32hours/month	32hours/week	6hours/month	2hr/member operation
7)	Active or not	active	not	active	not	not	active	active	active
8)	Reason of above	Chief is active	do own work	-	-	do own work	-	-	-
2	Village Natural Resources Management Committee (VNRMC)								
1)	Established year	2002	N/A	1998	N/A	2003	2002	2003	2001
2)	Number of member	10	N/A	10	N/A	10	10	10	10
	1) Number of female		N/A	4	N/A	7	8	6	4
	2) Number of male		N/A	6	N/A	3	2	4	6
3)	Number of participant	all		all		22	25	all (38)	all
	1) Number of female		N/A		N/A				
	2) Number of male		N/A		N/A				
4)	How many members are in the VDC	3	N/A	2	N/A	3	3	2	
5)	Composition								
	1) Number of large-scale farmer	None	N/A		N/A				
	2) Number of medium-scale farmer		N/A		N/A	2			
	3) Number of small scale farmer		N/A	all	N/A	6	10	10	
	reason of above					Below poverty line	Below poverty line	Below poverty line	
5)	What is the main activities?	Soliciting participation to the community	N/A	Nursery activities Caring for natural forests	N/A	Nursery work woodlot mgmt Improved mud stove construction	Nursery work improved mud stove Woodlot management	Improved mud stove nursery work Woodlot management	
6)	Frequency of meeting	Depends	N/A	Wednesdays	N/A	Once/week	Twice/week	Twice/month	
7)	Have the written rules or regulations	- Written	N/A	Yes	N/A	No	No	Yes	
8)	Working hour per member per month	Depends	N/A	16 hrs	N/A	8hours/month	32hours/month	6hours/month	
9)	Active or not	active		active		-	active	-	not
10)	Reason of above	members are active		-		-	-	-	very weak

Remarks: () = active participant

Possible Area in VNRMP

A. As of Master Plan Study

No.	Village Name	Current Status by Village					Size of Possible Components in VNRMP							
		Population	Total Area (ha)	Woodlot (ha)	Usable Woodlot (ha)	Arable land (ha)	Dimba (ha)	Others (ha)	Agroforestry (ha)	Expansion of IW (ha)	Village forest (ha)	Expansion of VG (ha)	Regeneration of EW (ha)	Forestry (Sub-total)
1	Makonokaya	251		18		76	4		48	11	11	5	3	30
2	Siyandima	899		10		58	3		34	32	3	0	3	38
3	Kaumbata	489		88		176	4		115	19	20	15	0	54
4	Mdala	1,289		64		192	5		118	52	10	20	25	107
5	Narjiwa	714		78		97	3		62	21	5	5	30	61
6	Chikoja	748		28		115	3		77	30	11	0	8	49
7	Marjero	408		10		23	2		14	16	4	0	2	22
8	Teula	493		15		55	4		34	20	7	5	5	37
9	Chakana	200		2		16	3		10	8	1	1	1	16
10	Lemu	2,316		93		145	4		90	46	12	10	30	98
11	M. Ngondo	493		14		52	1		35	15	3	0	5	23
12	Kam'mata	1,513		12		36	1		21	13	3	0	5	21
13	Kumanda	258		8		38	3		23	10	9	0	2	21
14	Tamvekeriji	501		2		6	0		4	2	0	0	0	2
15	Chilangali	258		13		21	0		13	11	1	2	5	19
16	Daniel Mbedza	154		14		30	0		20	6	0	0	4	10
17	Kamwendo	353		27		152	1		98	14	24	8	10	56
18	Peter Bilila	435		6		14	1		9	9	3	1	0	13
19	Ndemanje	235		41		88	2		58	7	30	0	0	37
20	Simon Mponbe	327		17		21	2		15	6	0	0	3	9
21	Kateya	92		1		5	0		3	4	0	0	0	4
22	Maluwa	376		2		20	1		13	10	2	0	0	12
23	Kumponda	1,584		4		23	1		14	16	1	0	0	17
24	K. Chigumula	782		8		15	1		10	12	0	0	3	15
Total		15,168		575		1,474	49		938	390	165	72	144	771
Average		632		24		61	2		39	16	7	3	6	32

(1) Source; Master Plan Report (Jan. 2001, p 191)

(2) IW = Individual Woodlot, VG = Village Graveyard, EW = Existing Woodlot

Remarks:

Possible Area in VNRMP

B. End of September, 2004

No.	Village Name	Current Status by Village (as of September, 2004)										Size of Possible Components in VNRMP					
		** Population	* Total Area (ha)	* Available Woodlot(ha)	* Usable Woodlot (ha)	Arable land (ha)	Dimba (ha)	* Others	Agroforestry (ha)	Expansion of IW (ha)	Village forest (ha)	Expansion of VG (ha)	Regeneration of EW (ha)	Forestry (Sub-total)			
1	Makonokaya	230	164	14	4	76	4	66	42	25	11	0	4	40			
2	Siyandima	250	119	7	3	58	3	48	32	20	3	0	3	26			
3	Kaumbata	722	316	66	22	176	4	48	92	62	20	0	22	104			
4	Mdala	732	801	48	16	192	5	540	101	218	10	0	16	244			
5	Nanjiwa	489	234	61	17	97	3	56	52	75	5	0	17	97			
6	Chikoja	515	233	21	7	115	3	87	61	39	11	0	7	57			
7	Manjero	185	69	7	3	23	2	34	14	14	4	0	3	21			
8	Teula	743	127	11	4	55	4	53	32	22	7	0	4	33			
9	Chakana	256	49	0	2	16	3	28	11	3	6	0	2	11			
10	Lemu	998	349	70	23	145	4	107	77	94	12	0	23	129			
11	M. Ngondo	369	107	11	3	52	1	40	27	21	3	0	3	27			
12	Kam'mata	1,459	171	9	3	36	1	122	19	47	3	0	3	53			
13	Kumanda	277	127	6	2	38	3	78	22	23	9	0	2	34			
14	Tamvekeriji	253	36	0	2	6	0	28	3	8	1	0	2	11			
15	Chilangali	379	51	10	3	21	0	17	11	15	1	0	3	19			
16	Daniel Mbedza	112	70	11	3	30	0	26	15	19	1	0	3	23			
17	Kamwendo	632	315	20	7	152	1	135	77	41	24	0	7	72			
18	Peter Bilila	435	129	4	2	14	1	108	8	37	3	0	2	42			
19	Ndemanje	235	144	38	3	88	2	13	46	12	30	0	3	45			
20	Simon Mponbe	275	45	13	4	21	2	5	13	14	1	0	4	19			
21	Kateya	43	15	0	1	5	0	9	3	2	1	0	1	4			
22	Maluwa	128	45	1	1	20	1	22	11	6	2	0	1	9			
23	Kumponda	250	190	2	2	23	1	162	13	55	1	0	2	58			
24	K. Chigumula	890	102	7	1	15	1	78	9	32	1	0	1	34			
Total		10,957	4,008	437	138	1,474	49	1,910	786	904	170	0	138	1,212			
Average		452	167	18	6	61	2	80	33	38	7	0	6	50			

Source: (1) Population: Estimated population as of September, 2004 by Study Team

(2) Land: Land Classification as of September, 2004 by Study Team

(1) Agroforestry = (Arable land area)/2 + (Dimba area)

(2) Expansion of IW = (Available woodlot) + (Others)/3 - (Village forest) - (Expansion of VG)

(3) Village forestry = proposed minimum 1.0ha

(3) Expansion of Village Graveyard = not concerned

(4) Regeneration of Existing Woodlot = Available woodlot

Estimated Area Requirement to Sustain Firewood Demand

Village Name	Current Status by Village			Size of Possible Components of VNRMP						Sustain Firewood Demand						Difference between existing and required
	Population	Household	Area (ha)	Agro-forestry (ha)	Expansion of IW (ha)	Village forest (ha)	Expansion of VG (ha)	Re-generation of EW (ha)	Forestry (Sub-total)	Demand Firewood Total (m3)	Supply by Wood (m3)	Supply by Residues (m3)	Supply by Agroforestry (m3)	Required Firewood Area (ha)	Actual required woodland (ha)	
1 Mankanokaya	230	56	164	42	25	11	0	4	40	99	-21	37	83	-5	-9	49
2 Siyamdimma	250	168	119	32	20	3	0	3	26	108	4	40	63	1	-2	28
3 Kaumbata	722	114	316	92	62	20	0	22	104	310	13	116	182	3	-19	123
4 Mdala	732	306	801	101	218	10	0	16	244	315	-2	117	199	-0	-16	260
5 Nanjiwa	489	160	234	52	75	5	0	17	97	210	30	78	102	8	-9	106
6 Chikvoja	515	169	233	61	39	11	0	7	57	221	20	82	119	5	-2	59
7 Manjelo	185	67	69	14	14	4	0	3	21	80	23	30	27	6	3	18
8 Teula	743	250	127	32	22	7	0	4	33	319	138	119	62	35	31	2
9 Chakana	256	55	49	11	3	6	0	2	11	110	47	41	22	12	10	1
10 Lemu	998	496	349	77	94	12	0	23	129	429	118	160	151	30	7	122
11 M. Ngondo	369	80	107	27	21	3	0	3	27	159	46	59	53	12	9	19
12 Kammata	1,459	290	171	19	47	3	0	3	53	627	356	233	38	90	87	-35
13 Kumanda	277	46	127	22	23	9	0	2	34	119	31	44	43	8	6	28
14 Tamvekerji	253	56	36	3	8	1	0	2	11	109	62	40	6	16	14	-2
15 Chilangali	379	40	51	11	15	1	0	3	19	163	82	61	21	21	18	1
16 Daniel Mbedza	112	41	70	15	19	1	0	3	23	48	1	18	30	0	-3	26
17 Kamwendo	632	154	315	77	41	24	0	7	72	272	19	101	152	5	-2	74
18 Peter Bilila	435	72	129	8	37	3	0	2	42	187	102	70	16	26	24	18
19 Ndemanje	235	79	144	46	12	30	0	3	45	101	-27	38	91	-7	-10	55
20 Simon Mpombe	275	65	45	13	14	1	0	4	19	118	50	44	25	13	9	10
21 Kateyo	43	23	15	3	2	1	0	1	4	18	7	7	5	2	1	3
22 Maluwa	128	62	45	11	6	2	0	1	9	55	13	20	22	3	2	7
23 Kumponda	250	43	190	13	55	1	0	2	58	108	43	40	25	11	9	49
24 K. Chigumula	890	160	102	9	32	1	0	1	34	383	224	142	17	57	56	-22
Total	10,857	3,052	4,008	786	904	170	0	138	1,212	4,669	1,379	1,737	1,552	349	211	1,001
Average	452	127	167	33	38	7	0	6	50	195	57	72	65	15	9	42

Remarks:

- (1) Current Status by Village refer to "Estimated population" and "Land Classification" data as of September, 2004
- (2) Size of Possible Components in VNRMP is referred to "Possible Components in VNRMP" as of September 2004
- (3) Demands firewood: 0.43m³; referred to Fuelwood Consumption by Source
- (4) Supply by Residues: 0.18 m³ wood equivalent value from farm residues (0.16 m³) + fallow residues (0.02 m³); referred to Fuel Consumption by Source
- (5) Supply by Agroforestry: Estimated value = half of supply from forestry = (3.95m³/ha)/2 = 1.975 m³/ha
- (6) Required firewood area: 3.95 m³/ha = 0.254 ha/m³ (Master Plan Report, Jan. 2001, p 254)

Fuelwood Consumption by Source

1 Unit consumption: **0.43 m³/year/person**

2 Production by Source

Items	FR	VF	Woodlot/ Grass	Cultivatio n	Fallow	Total
Area of Fuelwood sources (ha)	600	143	4,500	25,500	7,280	
Yield (m ³ /ha/year)	4.40	3.01	0.95	0.57	0.38	
Production (m ³ /year)	2,640	430	4,275	14,535	2,766	
Coefficient for firewood	1	1	1	0.33	0.20	
Firewood (m ³ /year)	2,640	430	4,275	4,845	553	12,744
Percent by sources (%)	20.72	3.38	33.55	38.02	4.34	100

3 Estimated fuelwood consumption by source (m³/year/person)

Fuelwood source by wood:	57.64 %	=	0.25 (m ³)	wood equivalent value
Fuelwood source by farm residues:	38.02 %	=	0.16 (m ³)	wood equivalent value
Fuelwood source by fallow residues:	4.34 %	=	0.02 (m ³)	wood equivalent value
Total:	100 %	=	0.43 (m ³)	wood equivalent value

Source: Master Plan Study, Jan. 2001, pp 49 to 50

Rate of Participation in Pilot Activities

Village	Number of household	No. of Nursery workers	Out-planting Particip.	IGA -1 Activity	IGA -1 Particip. Number	IGA -2 Activity	IGA -2 Particip. Number	Rate of participation			
								Nurs.	Outpl.	IGA1	IGA2
01. Makonokaya	56	30	30	Goat	20	T.pump	45	54%	54%	36%	80%
02. Siyamudima	168	40	85	G.fowl	52	Goat	50	24%	51%	31%	30%
03. Kaumbata	114	73	73	T.pump	43	Goat	20	64%	64%	38%	18%
04. Mdala	306	30	55	Apiary	25	T.pump	27	10%	18%	8%	9%
05. Nanjiwa	160	25	95	Apiary	20	Goat	20	16%	59%	13%	13%
06. Chikoja	350	83	83	T.pump	55	Goat	55	24%	24%	16%	16%
07. Manjelo	67	45	26	T.pump	45	GoatHB	45	67%	39%	67%	67%
08. Teula	250	38	20	T.pump	38	Goat	38	15%	8%	15%	15%
09. Chakana	55	25	15	Apiary	20	Goat	20	45%	27%	36%	36%
10. Lemu	350	35	40	T.pump	42	Goat	28	10%	11%	12%	8%
11. M. Ngondo	80	36	56	G.fowl	22	T.pump	36	45%	70%	28%	45%
12. Kam'mata	290	40	90	T.pump	40	T.pump	40	14%	31%	14%	14%
13. Kumanda	33	33	33	Goat	10	G.fowl	33	100%	100%	30%	100%
14. T. Kenji	56	40	50	Apiary	40	T.pump	40	71%	89%	71%	71%
15. Chilangali	42	23	37	G.fowl	23	Goat	23	55%	88%	55%	55%
16. D. Mbeza	41	35	41	T.pump	35	Goat	35	85%	100%	85%	85%
17. Kamwendo	154	92	92	Apiary	30	Goat	30	60%	60%	19%	19%
18. Peter Bilila	72	72	72	Apiary	10	Goat	10	100%	100%	14%	14%
19. Ndemanje	79	79	79	Apiary	26	Goat	79	100%	100%	33%	100%
20. S.Mpombe	65	65	65	Goat	65	Goat	11	100%	100%	100%	17%
21. Kateya	33	30	33	T.pump	30	Goat	9	91%	100%	91%	27%
22. Maluwa	62	62	62	Goat	62	Goat	62	100%	100%	100%	100%
23. Kumponda	43	38	43	T.pump	38	Goat	11	88%	100%	88%	26%
24. K.Chigumula	167	30	65	T.pump	45	Goat	11	18%	39%	27%	7%
Total 24 villages	3,052	1,089	1,358		838		787	36%	44%	27%	26%

Note: HB; home bakery, Outpl; Out-Planting, IGA; Income Generating Activities, T.Pump; Treadle Pump

ANNEX A7
General Village Situations
As of September 2004

No.	Name of Village	Village Population and Land Area September 2004					Social Characters As of September 2004	Results As of September 2004		
		Male	Femal	Total	House hold	P/hh				
		Area (ha)	Area/ht(ha)							
1	Makonokaya	109	121	230	56	4.1	164	2.9	Half of inputs held by chief, the rest divided by other members. This hampers group activities. Few participate in shifted nursery works led by 3 women members. PIU improved a little equitable input distribution.	Tree planting: (I) 13,097 planted 6,476 survived 49.4 rate (%) (II) 1,710 planted 1,158 survived 67.7 rate (%) Total 14,807 planted 7,634 survived 51.6 rate (%) participants: decreasing Goat Rearing (I): 7 heads lost, but increased up to 14 heads. Treadle pump (II): Vegetable planted 430m ² , but few products. Few participants. Improved cooking stove: Total 35, Usable 35
2	Siyandima	132	118	250	168	1.5	119	0.7	Male chief & committee chairman equitably rule community, leading to more participation in works. Nursery expanded & input go down was constructed, with work plan. Planted Eucalyptus and grilicidia in village woodlot. IGAs become more active.	Tree planting: (I) 9,225 planted 1,865 survived 20.2 rate (%) (II) 5,960 planted 4,470 survived 75.0 rate (%) Total 15,185 planted 6,335 survived 41.7 rate (%) participants: 92, increasing Guinea fowl (I): 260 eggs collected. Fail to hatch because few chicken in village. Eggs were sold at low price. Goat rearing (II): 2 heads lost by disease, but increased up to 16 heads. Improved cooking stove: Total 28, Usable 23
3	Kaumbata	292	430	722	114	6.3	316	2.8	A dictate Moslem chief rules over with his relative members. He constructed go down for input in his house, holding all inputs in it. Though, dozens of families work in shifted and enlarged nursery.	Tree planting: (I) 9,013 planted 4,820 survived 53.5 rate (%) (II) 1,100 planted 560 survived 50.9 rate (%) Total 10,113 planted 5,380 survived 53.2 rate (%) participants: 41, decreasing Treadle pump (I): Production was low, KW2,350. Limited land. Goat rearing (II): 8 heads lost by disease and too much feed, but increased up to 11 heads. Improved cooking stove: Total 18, Usable 15
4	Mdala	278	454	732	306	2.4	801	2.6	Newly succeeded group chief. The chief weakly governs the community. Pros and cons of chief work in nursery with inert outplanting activities, though nursery is far from village center. Planted village woodlot was poor taken care.	Tree planting: (I) 7,300 planted 3,980 survived 54.5 rate (%) (II) 5,050 planted 1,480 survived 29.3 rate (%) Total 12,350 planted 5,460 survived 44.2 rate (%) participants: 80, decreasing Bee-keeping (I): Transfer the installation places, 3 hives were colonized. Treadle pump (II): Limited hire land. Need to be cultivated. Far from participants' house. Improved cooking stove: Total 20, Usable 20
5	Marjiwa	116	373	489	160	3.1	234	1.5	Docile male chief and chairman are eager to plant trees with active devotion to nursery works where villagers rarely participate. Stable participants actively keep nursery, though nursery is located far from houses.	Tree planting: (I) 5,678 planted 3,438 survived 60.5 rate (%) (II) 1,780 planted 1,444 survived 81.1 rate (%) Total 7,458 planted 4,882 survived 65.5 rate (%) participants: 25, decreasing Bee-keeping (I): Transfer the installation places, 2 hives were colonized. Goat rearing (II): 4 head less by theft, but increased up to 17 heads. Improved cooking stove: Total 10, Usable 7
6	Chikoja	246	269	515	169	3.0	233	1.4	Lady chief equitably governs community, increasing nursery into two sites, they were improved. Most villagers participate in nursery works. Active IGAs, with a large go down constructed. Planted village woodlot was under taken care.	Tree planting: (I) 9,671 planted 6,941 survived 71.8 rate (%) (II) 10,799 planted 7,797 survived 72.2 rate (%) Total 20,470 planted 14,738 survived 72.0 rate (%) participants: 66, increasing Treadle pump (I): Dyke constructed, 388m ² planted, KW5,770 profit, drought happened. Goat rearing (II): 4 head less by disease, but increased up to 12 heads. Improved cooking stove: Total 64, Usable 55
7	Manjero	76	109	185	67	2.8	69	1.0	Lady chief well governs, leading to solidarity with active IGAs. Nursery was transferred to more convenient place for water. Treadle pump irrigation plot is located near nursery. Water source for pumps depleted resulted in a poor harvest, but the bakery is well run.	Tree planting: (I) 9,096 planted 7,591 survived 83.5 rate (%) (II) 7,900 planted 6,582 survived 83.3 rate (%) Total 16,996 planted 14,173 survived 83.4 rate (%) participants: 38, increasing Treadle pump (I): Field transferred, 543m ² planted, KW2,800 profit, drought happened. Goat rearing (II): 4 head less by disease & theft, but increased up to 15 heads. Improved cooking stove: Total 18, Usable 17

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									Tree planting: phase	As of September 2004
8	Teula	353	390	743	250	3.0	127	0.5	The chief, husband of lady chief Manjero, has feeble leadership that limits nursery activity, where participants work hard. Nursery shifted to dam side because seed bank grows to a big forest in former nursery. Planted village woodlot has a high survival rate with big pits for seedlings.	<p>Tree planting: phase (I) 8,702 5,476 62.9 (II) 2,147 1,751 81.6 Total 10,849 7,227 66.6 Treadle pump (I): Field transferred, 345m² planted, KW990 profit, drought happened. Goat rearing (II): 1 head less by disease, but increased up to 15 heads. Improved cooking stove: Total 14, Usable 12</p>
9	Chakama	123	133	256	55	4.7	49	0.9	A small village with a mighty chief who had owned part of inputs in small go-down, PIU and TA chief has rectified this to divide and hold inputs for main members. Only members participate in nursery works because nursery is located on along the Nkokoji river far from houses. Planted village woodlot is well taken care.	<p>Tree planting: phase (I) 6,600 36 0.5 (II) 3,126 1,969 63.0 Total 9,726 2,005 20.6 Bee-keeping (I): Tree hives colonized, but no product. Transfer installation places. Technology transferred by expert & PIU. Expect next harvest. Goat rearing (II): 5 head less by disease, but increased up to 18 heads. Improved cooking stove: Total 5, Usable 4</p>
10	Lemu	420	578	998	496	2.0	349	0.7	A group village headman has successfully created good solidarity among villagers. All activities are practiced based on rules. Irrigation plot for pump is hired land. Village forest are inter-planted year by year.	<p>Tree planting: phase (I) 9,200 5,516 60.0 (II) 3,150 2,385 75.7 Total 12,350 7,901 64.0 Treadle pump (I): Limited hire land, 200m², KW2,200 profit. Must transfer land next. Goat rearing (II): 4 head less by disease & theft, but increased up to 13 heads. Improved cooking stove: Total 48, Usable 45</p>
11	Mogombo Ngondo	195	174	369	80	4.6	107	1.3	A young but spiritual chief well governs community, who used to work as a sewer in T.C. Nursery is located near the water source, where irrigation plot are newly developed, participants are working hard to both activities.	<p>Tree planting: phase (I) 7,406 3,072 41.5 (II) 1,350 1,040 77.0 Total 8,756 4,112 47.0 Guinea fowl (I): Attacked by dog, 4 fowl remained, 98 eggs collected. Treadle pump (II): Limited land, 5,000m², KWA,590 profit. Improved cooking stove: Total 22, Usable 22</p>
12	Kam'mata	696	763	1,459	290	5.0	171	0.6	Villagers are well organized under a new lady chief and chairman. Village has an experience to plant eucalyptus under Forest Project. Village owns good forest and irrigable land. Nursery has been repaired where most villagers work under a good plan and relevant regulations. Village forest is inter-planted and well tendered. Production from irrigated village field are nothing because of lack of water source by the limited rainfall in 2003/2004.	<p>Tree planting: phase (I) 28,243 21,160 74.9 (II) 12,043 11,598 96.3 Total 40,286 32,758 81.3 Goat rearing (I): 2 head less by disease, but increased up to 24 heads. Treadle pump (II): Limited land, 320m², no profit by drought. Improved cooking stove: Total 20, Usable 18</p>
13	Kumanda	130	147	277	46	6.0	127	2.8	A chief dictates community with a apparent dull action of chairman. Village lacks water source, affecting nursery works. Nursery is located in end of village but still far from water source of river. Chief and chairman intend to construct new nursery for growing participants. Irrigation field for community prepared by chief was affected by food water. Usage of treadle pump is under consideration such as tent to individuals, small individual group holding, etc.	<p>Tree planting: phase (I) 11,495 8,680 75.6 (II) 5,174 4,248 82.1 Total 16,669 12,937 77.6 Treadle pump (I): Limited land, few product shared, few profit by flood. Under consideration for individual usage. Guinea fowl (II): Started caring and grazing, expect next profit. Improved cooking stove: Total 8, Usable 6</p>
14	Tambekerji	116	137	253	56	4.5	36	0.8	Good solidarity created lady chief and chairman. Village has an experience to plant eucalyptus. Village land developed forests and irrigated plots. Nursery was mended and expanded with a good management. Nursery and irrigation field of IGAs are along the water source, which limits for two activities if rainfall is rare.	<p>Tree planting: phase (I) 15,075 7,302 48.4 (II) 6,598 4,698 71.2 Total 21,673 12,000 55.4 Bee-keeping (I): All 4 hives colonized. Profit KW450 & shared. Technology are obtained. Treadle pump (II): Limited land, no profit by drought. Improved cooking stove: Total 10, Usable 10</p>

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15	Chilangali	122	257	379	40	9.5	51	1.3	A habitual thief chief passed away after less than one year occupation. New chief is former chairman of committee, who is a son of great ex-chief. Almost all inputs are held in store house attached in chief's house, some daily usable inputs are kept by members. Nursery and irrigation field are located near the top of dam, where participants are working hard.	<p>As of September 2004</p> <p>Tree planting: phase (I) 10,121 planted 5,915 survived 58.4 rate (%) (II) 6,496 5,759 88.7 Total 16,617 11,674 70.3 participants: 21, increasing Treadle pump (I): Limited land 403m². Few profit KW 790 & shared. Increased land by little.</p> <p>Goat rearing (II): 2 heads loss by disease, but increased up to 21 heads. Improved cooking stove: Total 14, Usable 13</p> <p>Tree planting: phase (I) 7,556 4,371 57.8 rate (%) (II) 4,611 3,232 70.1 Total 12,167 7,603 62.5 participants: 37, increasing Guinea fowl. Loss by disease and less feed. 4 fowl remains. Transferred fowl shed. Goat rearing (II): 1 head loss by disease, but increased up to 17 heads. Improved cooking stove: Total 2, Usable 2</p> <p>Tree planting: phase (I) 8,470 3,661 43.2 rate (%) (II) 6,679 5,445 81.5 Total 15,149 9,106 60.1 participants: 82, increasing Bee-keeping (I): All 4 hives colonized. New 2 potary hives increased and colonized. Product shared. Technology are transferred by expert & PIU.</p> <p>Goat rearing (II): 1 head loss by disease, but increased up to 17 heads. Improved cooking stove: Total 46, Usable 40</p>
16	Daniel Mbedza	41	71	112	41	2.7	70	1.7	Original chief come back to take over the acting. Nursery was shifted and works by most villagers turn into active. Committee finally moved Guinea fowls to newly constructed fowl shed near chief's house, because some stubborn villagers tend to monopolize fowls.	<p>Tree planting: phase (I) 8,470 3,661 43.2 rate (%) (II) 6,679 5,445 81.5 Total 15,149 9,106 60.1 participants: 82, increasing Bee-keeping (I): All 4 hives colonized. New 2 potary hives increased and colonized. Product shared. Technology are transferred by expert & PIU.</p> <p>Goat rearing (II): 1 head loss by disease, but increased up to 17 heads. Improved cooking stove: Total 46, Usable 40</p>
17	Kamwendo	260	372	632	154	5.1	315	2.0	The chief well governs community with potent committee chair-lady. Nursery & IGAs works are in full swing. Two nurseries were developed and both are active. Participants are increased double. They developed bee-hives from pottery to increase the production of honey.	<p>Tree planting: phase (I) 5,944 4,454 74.9 rate (%) (II) 1,226 983 80.2 Total 7,170 5,437 75.8 participants: 50, increasing Bee-keeping (I): All 4 hives colonized. Product shared. Technology are transferred by expert & PIU.</p> <p>Goat rearing (II): 4 heads loss by disease, but increased up to 12 heads. Improved cooking stove: Total 37, Usable 37</p>
18	Peter Biilla	190	245	435	72	6.0	129	1.8	Lady chief feebly leads but chairman and lady secretary have leadership. Chairman has experience of forest planting. Most villagers participate in nursery and IGA works. Eucalyptus are well grown in village forest, participant are well tending.	<p>Tree planting: phase (I) 1,337 828 61.9 rate (%) (II) 7,000 7,000 100.0 Total 8,337 7,828 93.9 participants: 40, increasing Bee-keeping (I): 3 hives colonized. Product shared. Technology are transferred by expert & PIU.</p> <p>Goat rearing (II): No loss, and increased up to 20 heads. Improved cooking stove: Total 21, Usable 14</p>
19	Ndemanje	127	108	235	79	3.0	144	1.8	Chief well governs community who keep traditional beehives. Nursery was improved and expanded. Most villagers participate in nursery and IGAs. Input storing hut had been built but apt to be monopolized by cadres. Village has a 1.8 experience to plant eucalyptus but they were planted with tubes.	<p>Tree planting: phase (I) 10,382 7,678 74.0 rate (%) (II) 5,981 5,061 84.6 Total 16,363 12,739 77.9 participants: 25, decreasing Goat rearing (II): 5 heads loss by disease, but increased up to 44 heads. Improved cooking stove: Total 22, Usable 10</p>
20	Simon Mpombe	119	156	275	65	4.2	45	0.7	Lady chief has enough leasanship over the community. IGAs are well managed by nursery activity is inert, though most villagers participate in even their house is far from nursery.	<p>Tree planting: phase (I) 12,000 3,111 25.9 rate (%) (II) 2,204 1,683 76.4 Total 14,204 4,794 33.8 participants: 30, decreasing Treadle pump (I): Limited hired land 370m². Land was transferred. Few product shared. Goat rearing (II): 2 heads loss by disease, but increased up to 17 heads. Improved cooking stove: Total 18, Usable 5</p>
21	Kateya	21	22	43	23	1.9	15	0.7	Son of chief with a habit of monopoly is fined for bad behaviour. New lady chief organizes the community. Activities of participants are still dull in nursery and irrigation field. Irrigation field are hired from individual owners. Village forest were attacked by termites and survival rate were very low.	<p>Tree planting: phase (I) 12,000 3,111 25.9 rate (%) (II) 2,204 1,683 76.4 Total 14,204 4,794 33.8 participants: 30, decreasing Treadle pump (I): Limited hired land 370m². Land was transferred. Few product shared. Goat rearing (II): 2 heads loss by disease, but increased up to 17 heads. Improved cooking stove: Total 18, Usable 5</p>

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									Tree planting:	As of September 2004
22	Maluwa	73	55	128	62	2.1	45	0.7	New chief succeeded to former drunkard one, who monopolized the input. Chairman and secretary become well organized the committee under new chief. IGA activities get full swing but nursery works joined by most villagers, are inert with narrow space and poor management.	<p>Tree planting: phase (I) 7,528 survived 4,034 rate (%) 53.6 (II) 1,135 902 79.5 Total 8,663 4,936 57.0 participants: 22, increasing Goat rearing (I): 8 heads loss by disease & theft, but increased up to 29 heads. Improved cooking stove: Total 10, Usable 7</p> <p>Tree planting: phase (I) 6,432 survived 4,382 rate (%) 68.1 (II) 1,621 1,208 74.5 Total 8,053 5,590 69.4 participants: 33, decreasing Treadle pump (I): Limited land 949m². Profit KW35,090. Goat rearing (II): 1 head loss by disease, but increased up to 23 heads. Improved cooking stove: Total 25, Usable 21</p>
23	Kumponda	100	150	250	43	5.8	190	4.4	Group chief well governs community. Most villagers participate in shifted, expanded nursery. Chief keeps input in his house and hegtate to use the individual tree-planting works. Many villagers also participated in well planned IGAs, but number of participants are reducing because of poor management	<p>Tree planting: phase (I) 4,009 survived 2,950 rate (%) 73.6 (II) 8,289 8,132 98.1 Total 12,298 11,082 90.1 participants: 23, decreasing Treadle pump (I): Cultivated land is far. Transferred near nursery 540m². Profit KW395 & shared. Goat rearing (II): 2 heads loss by disease, but increased up to 14 heads. Improved cooking stove: Total 46 Usable 31</p>
24	Kumisati Chigumula	295	595	890	167	5.6	102	0.6	Lady chief initially monopolized inputs for nursery with her kindred, hampering group activities. Chief changed her mind by consultation of PIU and group village chief to increase the number of participants. Nursery are shifted to near water source, but still small for all participants. Irrigation field are cultivated from bush land and bigger than any other villages.	<p>Tree planting: phase (I) 223,580 survived 127,746 rate (%) 57.1 Participants: (II) 113,129 90,585 80.1 increasing: 14 villages Total 336,709 218,331 64.8 decreasing: 10 villages Treadle pump (I) (II): Cultivated lands are far. Limited land. Drought land. Flood land. Goat rearing (I) (II): 58 heads loss by disease and theft, but increased 127 from 242 up to 369 heads. Bee-keeping (I): Profit not yet matured. Technology have been transferred. Expect next profit. Guinea fowl: Heavy loss by disease and wild animals. But eggs are collected 98 – 260. Hutching of eggs by chicken was failed. Incubator hutching are tried but failed because of lack of fuel. Hutching technology has already been transferred. Improved cooking stove: Total 561, Usable 471</p>
Total		4,630	6,227	10,857	3,052	3.6	4,008			
Average		193.0	259.0	452.0	127.2	3.6	167		1.3	

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Cause & Constraints		Effects		Forward
No.	Name of Village	As of September 2004	As of September 2004	Countermeasures
1	Makonokoya	Selfish lady old chief. Chief is unhealthy to cause less interest. Became worse inspite of PIU instructions. Tree planting: Moved nursery to avoid the great many termite. Limited village woodlots. Goat rearing: Big loss by theft at keeping one place. Now take care individually. Treadle pump: Limited hired land. Land is far from center of village, however a few aggressive members are working hard.	Community is not well organized. Selfish chief behavior cause low participant number. Tree planting: Survival rate was increased instead of short rainfall, so planting technology would be obtained. Goat rearing: Continually well increasing. Disease are not found. They well take care individually. Treadle pump: Products are not obtained and only few participants are working hard. Technology was transferred by PIU. Community is vitalized with help of PIU. Good gavanance is applied by chief and chairman. Tree planting: Survival rate was increased, which means villagers obtained the planting technology. Regular meetings were held properly. Guinea fowl: Well take care, but there are less chicken to have been hatched in village. Incubator hatching is last resort, if not, there is no way instead selling of collected eggs. Incubator technology are already transferred, but only one time trying. Goat rearing: Steady increasing by well taking care individually. No theft are found.	Community vitalization is necessary. (1) Democratic re-election of members. (2) Reset the rules. (3) Hold meeting regularly. (4) Former aggressive members are needed to join new committee. Necessary to help by extension staff. Continuous discussions with chief are necessary for community vitalization and afforestation. Increasing of participants is necessary.
2	Siyandima	Tree planting: Established village woodlot, but limited. Participants are increasing. Less planted in (II) by small rainfall. Guinea fowl: Asked Magonbo Ngondo village to hatch eggs by incubator, but it was failed by less fuel. Adult fowls are healthy. Goat rearing: Some goat are initially unhealthy. Treatment was delayed.	Community is not well organized. Only must obey the chief's orders. Tree planting: Less planted and lower survival rate, participants didn't follow PIU instructions. However, participants is not very low. Treadle pump: Profit is lower because of limited field near chief's house. Field is far from other participants. Goat rearing: Initial big loss, but after no loss was happened. Well taken care.	IGAs instructions by extension staff is necessary. Regularly visit by extension staff for giving timely instructions.
3	Kaumbata	Tree planting: Very few participants. Interests would be phase out. Chief and his relatives are powerful but less interest. Treadle pump: Cultivated limited land. chief and his relatives are powerful. Water source is near, but sometimes the field is flooded. Goat rearing: Some goats are initially unhealthy and too much feeded. Instructions were not followed by the members.	Community members are separated by affect of chief's death. Tree planting: Community woodlot are not taken care. No screefing. Bee-keeping: Well taking care by instruction of expert & PIU. Expecting next harvest. However, limited nector source. Treadle pump: Under cultivation of new hired land, 2500m ² .	Democratic way would not be attained in the community, but chief's way. Very difficult to develop the community vitalization and afforestation. Frequent and timely instructions by PIU were failed to increase tree-planting. However, participants are not few. Continuous promotion by extension staff would be helpful.
4	Mdala	Tree planting: Participants are high but community woodlot is not taken care, woodlot is far from center of village. Participants are followed by PIU but still chief's pros and cons remain. Nursery is very far from participants. Bee-keeping: Limited nector source. Inspection and technology transfer was delayed. Treadle pump: Hired land have to be cultivated. Limited land.	Chief & chairman are well understood the awareness of environmental issue. Participants are not surely following them. Tree planting: Survival rate is increased, so technology of tree planting are obtained. Villagers are more interested to go to market than participating nursery activities. Nursery is far from villager's house. Bee-keeping: Taking care by instructions of expert & PIU. Expecting next harvest. However, limited nector source. Goat rearing: Individual keeping is effect against theft. Disease was not found.	Community vitalization is necessary. (1) Democratic re-election of members. (2) Reset the rules. (3) Hold meeting regularly. (4) Former aggressive members are needed to join new committee. (5) Hopefully establish the new nursery because it is vast village, needs good accessibility. Necessary to help by extension staff. Continuous discussions with chief and community with the help of extension staff are necessary for community vitalization and afforestation.
5	Narjiwa	Tree planting: Nursery is very far. Villagers are interesting to go to Monbo and other markets and the tree-planting. Bee-keeping: Limited nector source. Installation places are not suitable. Inspection and harvesting technology were obtained. Goat rearing: Loss by theft initially, but now individually well taken care.	Chief & chairman well understood the awareness of environmental issues. Participants are followed chairman and chief as well as PIU. Best performances are found. Tree planting: Established community woodlot. Survival rate is increased, so technology of tree planting are obtained. Treadle pump: Well used. Expect more profit next. Under expansion of field. Goat rearing: Steady increasing instead of initial losses. Well taken care.	Community vitalization is necessary. (1) Awareness of environmental issues. (2) Holding meeting regularly. (3) Hopefully establish new nursery to accessibility. Necessary to help by extension staff. Increasing of participants is necessary.
6	Chikoja	Very good governance is applied by lady chief and chairman. Tree planting: New nursery was established for good accessibility. Inputs are separated into for two nurseries. Community woodlot is expanded. Participants are many by good governance. Treadle pump: Participants are hard working, but drought in 2004 was happened. Field is limited. New field near new nursery are cultivated and inputs are also separated and used. Goat rearing: Initial loss by weak health. No disease are found.	Community is well organized under lady chief. Better performances are found. Participants are followed chairman and chief as well as PIU. Tree planting: Established community woodlot. Survival rate are very high for applying a good understood technology. Treadle pump: Well develop. Expecting expansion of field and more profit. Goat rearing: Steady increasing instead of initial losses. Well taken care.	Regularly visit by extension staff for giving timely instructions.
7	Manjero	Good governance is applied under lady chief. Tree planting: high survival rate are obtained. Committee members are followed by PIU instructions. Treadle pump: Affected drought in 2004. Field is limited. Expansion is expected. Goat rearing: Initial loss by weak health and disease. Individual keeping is applied now.	Regularly visit by extension staff for giving timely instructions.	Regularly visit by extension staff for giving timely instructions.

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Cause & Constraints		Effects		Forward
No.	Name of Village	As of September 2004	As of September 2004	Countermeasures
8	Teula	Tree planting: delay of preparation of nursery by decreasing participants. But still enough participants are there. Participants are not working well. Treadle pump: Field is hired and limited. Should be transferred. Affected by drought in 2004. Goat rearing: Individual keeping is good for theft protection.	Committee is not organized well under feeble chief. Members are not followed by the instructions of PIU. Tree planting: Participants are decreasing and less planted seedlings. Established community woodlot is not well taken care. Survival rate is high, so technology are obtained. Goat rearing: Steady increasing.	Community vitalization is necessary. (1) Awareness of environmental issues. (2) Holding meeting regularly. (3) Hopefully establish new nursery to accessibility. Necessary to help by extension staff. Increasing of participants is necessary.
9	Chakana	Tree planting: Nursery is very far from most villagers. Participants are only near the nursery and only members. Bee-keeping: Limited nector source. Installation places are not suitable. Inspection and harvesting technology were obtained. Goat rearing: Unhealth initially. No theft was found.	Committee is still weak under powerful chief. But members and chief are gradually followed by PIU instructions. Tree planting: Established woodlot is well taken care. Participants would be expanded to any villagers. Goat rearing: Steady increasing instead of big losses.	Community vitalization is necessary. (1) Awareness of environmental issues. (2) Holding meeting regularly. (3) Hopefully establish new nursery to accessibility. Necessary to help by extension staff. Increasing of participants is necessary.
10	Lemu	Tree planting: Survival rate become high, but participants are decreasing because sharing of profit by treadle pump is lower than expected. Treadle pump: Limited hired field. Attacked by insect. Only maize was planted. Goat rearing: Unhealth initially. Individual keeping but theft was happened.	Committee is weak instead of well working chief and chairman. Tree planting: Used affected seeds, which are not germinated. Woodlot are mixed planted and well taken care. Treadle pump: New field is expected better profit. Goat rearing: Steady increasing instead of big losses. Mutual keeping would be applied for protection of theft.	Community vitalization is necessary. (1) Awareness of environmental issues. (2) Holding meeting regularly. (3) Hopefully establish new nursery to accessibility. Necessary to help by extension staff. Increasing of participants is necessary.
11	Magombo Ngondo	Tree planting: Survival rate become high and participants are increasing because of sharing of profit from treadle pump. Guinea fowl: Adult fowls were suddenly attacked by dog. Try to hutch eggs by incubator, but it was failed by less fuel. Treadle pump: Limited field but fertile.	Community is well organized under lady chief. Better performances are found. Participants are followed chairman and chief as well as PIU. Tree planting: Established community woodlot. Survival rate become high for applying a good understood technology. But the results is very low because of too early preparation of seedlings. They grow around 0.8 meter, it is too late and hard to out-plant. Guinea fowl: There are less chicken to have been hatched in village. Incubator hutching is last resort. Treadle pump: Expect to expensed field for getting more profit next.	IGAs instructions by extension staff is necessary. Regularly visit by extension staff for giving timely instructions.
12	Kam'mata	Tree planting: Quite high survival rate, technology is well understood. Goat rearing: Initial loss by weak health. Well taken care individually. Treadle pump: Limited field affected by drought causes no profit. New field is under searching. Expect next profit.	Community is better organized by chief and chairman with the help of former group village chief. Tree planting: Woodlots are mixed planted and well taken care. Survival rate is quite high, they follows the instructions of PIU. Goat rearing: Steady increasing instead of initial loss. Treadle pump: Expect next profit to move to more better field.	Regularly visit by extension staff for giving timely instructions.
13	Kurmanda	Tree planting: Nursery is very far from water source. They fetch water to nursery. Treadle pump: Flooded field results few profit. Guinea fowl: Construction of fowl shed was delayed.	Community is good organized by chief. Tree planting: Timely planting are conducted. Survival rate are very high. They obtained technology. Expect new nursery. Treadle pump: Flooded field cause few profit. Guinea fowl: Expected next profit.	Regularly visit by extension staff for giving timely instructions.
14	Tambekerjii	Tree planting: Nursery is affected by drought. Watering are done carefully. Bee-keeping: Inspection and harvesting technology transfer were delayed. Treadle pump: Drought in 2004 causes no profit. Water source is used for tree nursery.	Community is well organized by lady chief. Tree planting: Survival rate become high. Technology are obtained. Bee-keeping: Nector source is enough. Expect more profit. Treadle pump: Well take care of field. Expect next profit.	Regularly visit by extension staff for giving timely instructions.

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Cause & Constraints		Effects		Forward
No.	Name of Village	As of September 2004	As of September 2004	Countermeasures
15	Chilangali	<p>Tree planting: Nursery is far from center of village. But near the top of dam. Treadle pump: Field is far place along the nursery and had to be cultivated. Participants was few.</p> <p>Goat rearing: Initial unhealth and theft. Individual taken care.</p> <p>Tree planting: Nursery is far from center of village. They construct water source ponds for nursery. Survival rate is high, so participants are obtained technology.</p> <p>Guinea fowl: Keeping in shed causes fowl's unhealth and weakens. Movement of fowls to new shed causes more death. But some eggs were collected and distributed to the participants.</p> <p>Goat rearing: Initial loss by weakness and disease.</p>	<p>Community becomes well, but participants are still low. Tree planting: Woodlot is well taken care. Survival rate is quite high. They follows the PUJ instructions.</p> <p>Treadle pump: They are expanding field one by one. Expect more profit next.</p> <p>Goat rearing: Well taken care causes quite high increasing.</p> <p>Community becomes well, however, former acting chief's relatives are against. Tree planting: Survival rate becomes high. Communal woodlot were selected and will be planted this season. Villagers follows PUJ instructions.</p> <p>Guinea fowl: Grazing technology is finally obtained. But Hatching of eggs was failed. Incubator hatching with other villages will be expected.</p> <p>Goat rearing: Steady increasing.</p>	<p>Regularly visit by extension staff for giving timely instructions. Increasing of participants is necessary.</p> <p>Community vitalization is necessary. Such issues are: (1) Awareness of environmental issues. (2) IGAs instructions by extension staff (3) Holding meeting regularly for transparency. Necessary to help by extension staff.</p>
16	Daniel Mbedza	<p>Tree planting: Nursery is far from center of village. They construct new nursery to opposite site for another participants.</p> <p>Bee-keeping: Inspection & harveting technology transfer was delayed. Expect more profit next season.</p> <p>Goat rearing: Initially goats were weak.</p>	<p>Community is well organized under chief and chairwoman. Tree planting: Woodlot is well taken care. Survival rate become high. Technology is obtained.</p> <p>Bee-keeping: They expand 2 another hives by themselves. Technology is advanced.</p> <p>Goat rearing: Steady increasing.</p>	<p>Regularly visit by extension staff for giving timely instructions.</p>
17	Kamwendo	<p>Tree planting: Nursery is far from center of village near chairman's house. Chairman's interest is about to phase out because goat rearing of IGAs was not his intension.</p> <p>Bee-keeping: Inspection & harvesting technology transfer was delayed. Expect more profit next season.</p> <p>Goat rearing: Initially goats were weak.</p>	<p>Community is well organized under chief and chairwoman. Tree planting: Woodlot is well taken care. Survival rate become high. Technology is obtained. Damaged seeds were not germinated.</p> <p>Bee-keeping: They expand 2 another hives by themselves. Technology is advanced.</p> <p>Goat rearing: Steady increasing.</p>	<p>Community vitalization is necessary. Such issues are: (1) Awareness of environmental issues. (2) Holding meeting regularly for transparency. Necessary to help by extension staff. Regularly visit by extension staff for giving timely instructions.</p>
18	Peter Biilla	<p>Tree planting: Only grilicidia was planted. Expect other species next season.</p> <p>Bee-keeping: Inspection & harvesting technology transfer was delayed, though chairman had traditional technology.</p> <p>Goat rearing: No disease nor theft were found.</p>	<p>Community is well organized under stubborn chief. Tree planting: Woodlot is not yet established because only grilicidia seedling. Survival rate is quite high. Technology is obtained.</p> <p>Bee-keeping: Move the installation places. Technology is increasing.</p> <p>Goat rearing: Steady increasing.</p>	<p>Community vitalization is necessary. Such issues are: (1) Awareness of environmental issues. (2) Planting diferent species for environment. (3) Holding meeting regularly for transparency. Necessary to help by extension staff. Regularly visit by extension staff for giving timely instructions.</p>
19	Ndemanje	<p>Tree planting: Nursery is far from center of village.</p> <p>Goat rearing: Disease treatment was delayed initially.</p>	<p>Community is well organized under lady chief. Tree planting: Woodlot was inter planted. Technology is obtained.</p> <p>Goat rearing: Steady increasing. Goat inspection fence was established.</p>	<p>Regularly visit by extension staff for giving timely instructions. Increasing of participants is necessary.</p>
20	Simon Mpombe	<p>Tree planting: Termite attack was heavy against eucalyptus in woodlot. Other species are alive.</p> <p>Treadle pump: Limited land should be moved again.</p> <p>Goat rearing: Initially goats were unhealy.</p>	<p>Community was not well organized under son of lady chief. Tree planting: Woodlot was damaged again by termite. Other species were recommended next.</p> <p>Treadle pump: Expected next hired land is not near the tree nursery, but expect more profit.</p> <p>Goat rearing: Steady increasing.</p>	<p>Community vitalization is necessary. Such issues are: (1) Awareness of environmental issues. (2) Holding meeting regularly for transparency. Necessary to help by extension staff. Regularly visit by extension staff for giving timely instructions.</p>
21	Kateya			

General Village Situations
As of September 2004

		Cause & Constraints		Effects		Forward	
No.	Name of Village	As of September 2004	As of September 2004	As of September 2004	As of September 2004	Countermeasures	
22	Maluwa	Tree planting: Woodlot was inter-planted because of termite attack. Goat rearing: Initially goats were weak. Burglarious theft came before X'mas.	Community was not well organized under drunken chief. Tree planting: Woodlot is well taken care. Technology is obtained. Goat rearing: Steady increasing. Night patrol is considered.	Community vitalization is necessary. Such issues are: (1) Awareness of environmental issues, (2) Expanding participants, (3) Holding meeting regularly for transparency. Necessary to help by extension staff. Regularly visit by extension staff for giving timely instructions. Increasing of participants is necessary.			
23	Kumponda	Tree planting: Damaged seeds were used. Woodlot was rocky and hard to plant. Treadle pump: Limited land. Input were not fully used because of strict rules. Goat rearing: Initially goats were weak.	Community is well organized under group village headman. Tree planting: Woodlot is well taken care and expanded. Treadle pump: High land is irrigated 2 stage pumping-up. Well organized and profit was obtained. Technology was obtained. Goat rearing: Steady increasing.	Regularly visit by extension staff for giving timely instructions. Increasing of participants is necessary. Input usage should be eased.			
	Kumisati	Tree planting: Woodlot has heavy bush. Before planting, bush were removed. Treadle pump: Product was not sold because of no demands of that variety. Expect profits next times.	Community was not well organized under chief and her relatives. Now they change their minds for community ones. Tree planting: Survival rate is quite high. Technology is obtained. Goat rearing: Steady increasing.	Regularly visit by extension staff for giving timely instructions. Increasing of participants is necessary.			
24	Chigumula	Tree planting: Damaged seeds caused less seedlings number in 2003/04 season. Termite attack still happened in some villages, which were not used larger holes nor watering protection, because they are heavy works in some places. Treadle pump: Fields are very far from center of villages. Water source were affected by drought in 2003/04 season. Hired field are prevailed. Goat rearing: Initially goats were weak by already affected disease and long transportation. Bee-keeping: Technology transfer was delayed. Nector source is limited in some villages. Guinea fowl: One village grazed in fowl shed instead of the field, it caused fowls' disease and weakness. Another one village attacked by dog caused big loss of adult fowls. Egg hutching was failed, for Chicken of hutching is less in almost villages and incubator was not properly operated. Fuel of incubator was not enough. Improved cooking stove: Some residents could not collected the flat stones, which usually exist on the river sides. Those residents stay far from rivers.	Almost community are well organized. Even other community, some members of which are aggressive and work hard. These participants have understood the environmental issues and were obtained technologies of afforestation and IGAs promoted by this Pilot Study. Tree planting: Number of participants is fractuated on season. However around 40 per village are participated. Almost all villages established communal woodlot and individual woodlot as well as agroforestry in their field. They planted many species not only fast growing ecalyptus. Treadle pump: They can operate by themselves. They selected and got seeds by themselves in 2003/04 using their own money. Goat rearing: Steady increasing in all received villages. Bee-keeping: Inspection and harvesting technologies are obtained. Expect more profit from this season. Guinea fowl: They become to graze fowls in field and collect eggs. Hutch by chicken is difficult because very few chicken are alive in the villages. Incubator hutching are expected successful next time.	Totally: Regular visit by extension staff for giving timely instructions is necessary. For ten participants decreased villages, community vitalization is necessary by extension staff. For four villages having Guinea fowl rearing IGAs, monitoring and inspection is required by extension staff. If any, some technical instruction would be needed.			
Total							
Average							

Table Summary of Replies to the Questionnaire on Villager's Self Evaluation

	Climatic Condition			All Villager's Health Condition						
	drought	ordinary	wetter		many villagers passed away			young villagers are well	all people are healthy	
2002	63	45	11	2002	17			45	30	
2003	69	46	5	2003	15			26	34	
2004	66	5	1	2004	17			38	16	
	Stream Water Flow			Tubewell Water				Firewood		
	scarce	ordinary	enough		scarce	ordinary	enough		scarce	ordinary
2002	31	58	30	2002	27	49	42	2002	97	23
2003	35	49	33	2003	31	37	50	2003	99	21
2004	67	33	24	2004	42	32	38	2004	98	20

Hunger and Food Security

	State of Hunger			famine months		Food Aid		
	serious	as usual	no hunger	started from	up to	nothing	some	to whom
2002	73	42	4	October	February	11	107	not all people
2003	43	69	2	October	February	73	44	not all people
2004	78	31	1	October	February	97	11	not all people

Income sources**Activeness of Village committee**

	Income State, Major Source of income						Participation in village committees			
	piece meal labor	crop sale	wood sale	livestock	itinerant vending	selling beer	name of committees	yes	no	fee/month
fairly big	0	0	0	0	1	0	borehole	78	63	11
some	87	42	29	20	39	23	school	63	60	42
nothing	0	0	0	0	0	0	health	45	64	5
value(K)	7,940	3,830	2,650	1,800	3,560	2,100	Nursery/IGA	95	15	56

Participation to Nursery

	Regular Nursery Participants			Duration and work days/ week			Number of raised seedlings		
	women	men	children	from	to	days / week	yes	number	
2002	56	47	0	July	Dec.	2 per week	9	753	
2003	54	48	0	June	Dec.	2 per week	6	860	
2004	41	56	0	June	Apr.	2 per week	3	63	

Hardship and problems

	Burden of forestry works			Problems and Constraints the participants face		reply	%
	Exhaustive	Ordinary	Not Hard	1. Nursery work overlapping to cropping period			
Nursery	0.20	0.13	1	2. No wage is paid to nursery works		13	54%
Planting	0.13	0.16	1	3. Nursery works coincide with hunger period.		15	63%
I G A s	0.08	0.17	1	4. Mobilization to nursery may affect health.		2	8%

Participation to Out-planting

	Out-planting Participants			Duration and work days/ week			Survival of raised seedlings		
	women	men	children	from	to	frequency	yes	no	
2002	31	23	0	Dec.	Mar.	2 per week	9	0	
2003	26	19	0	Dec.	Mar.	2 per week	6	0	
2004	3	2	0	Dec.		2 per week	3	0	

Practice of Out-Planting How many seedlings are distributed and where were they planted?

	Seedling distribution			Place / site of Seedling Planting					No. of seedlings planted	
	No	Yes	number	homestead	along paths	crop field	woodlot	river bank		village
2002	0%	100%	25	1	0	1	1	0		3,524
2003	4%	96%	23	1	0	1	1	1		3,824
2004	0			0	0	0	0	0		313

Awareness of Environmental Conservation: Why is tree planting necessary?

The reasons that villagers came up with concerning conservation	reply	%
1. Because we cut more trees than those spontaneously grown from fallen seed.	57	46%
2. Because trees give us not only firewood and timber, but water and soil fertility.	119	100%
3. Because planted seedlings will grow to useful wood for charcoal in future.	60	56%
4. Because we'll have to walk longer time to fetch firewood if we don't plant them.	61	57%
5. Not needed because trees naturally grow.	0	0
6. Not needed because planting is heavy work.	0	0
7. Not necessary because we don't have enough land for planting in our village.	0	0
	4	4%

Understanding on Environmental Change: What do you expect towards campaign of tree planting?

	reply	%
1. Planting trees leads to secure more firewood, poles and fruits.	114	96%
2. Planting trees results in less soil erosion, hence keeps fertility.	106	89%
3. Planting trees eventually increases borehole water and stream flow.	78	66%
4. Planting trees enriches useful products such as honey, mushroom.	52	44%
5. Planting agro-forestry trees is equal to applying fertilizers to crops.	6	6%
6. other reply	2	2%

Table Summary on Participation to Income Generating Activities

Rough number of participants in IGA1(2002 / 03)

	Regular Nursery Participants			Duration and work days/ week			Satisfaction of participation		
	women	men	children	from	to	work-days	% of yes	yes	no
2002	49	38	0	Mar.	Jun.	14	86%	56	9
2003	74	55	1	Mar.	Nov.	18	90%	105	12
2004	53	41	0	Mar.	Aug.	17	93%	88	7

Rough number of participants in IGA2 Period of IGA-2

	Regular Nursery Participants			Duration and work days/ week			Satisfaction of participation		
	women	men	children	from	to	work-days	% of yes	yes	no
2002	4	2	0	Jan.	Jan.	16	96%	20	3
2003	67	46	2	May	Oct.	27	86%	107	7
2004	55	38	2	Feb.	Aug.	28	99%	99	2

Participant's impression on IGA-1 2002 / 03 IGA management

	Degree of benefit share			State of input supply to the participants			Actual benefit received	
	well	fairly	poorly	equitable use	short supply	not timely supply	yes	no
2002	42	9	5	34	10	9	32	14
2003	88	17	10	59	35	8	94	24
2004	78	8	1	49	29	2	82	4

Participant's impression on IGA-2 2003 / 04 IGA management

	Degree of benefit share			State of input supply to the participants			Actual benefit received	
	well	fairly	poorly	equitable use	short supply	not timely supply	yes	no
2002	13	1	1	10	6	1	11	1
2003	86	19	8	75	33	4	102	6
2004	87	9	0	68	24	1	92	1

Activity of Related Committee(s)

	committee member		attendance		frequency of meeting		decisions reflected in activities		
	women	men	Good	poor	per week	per month	% of yes	yes	no
2002	4.3	4.1	87	2	0.7	2.9	97%	89	3
2003	5.5	4.9	100	18	0.9	3.9	88%	101	14
2004	5.6	4.9	100	11	1.0	4.1	92%	108	10

Future prospect of Forestry Activities in village : Whether current nursery/ planting continues in future or not

Yes it's sustainable on condition that			No, it'll not be viable because of		
all by self effort without aid	if input supply continues	if extension is actively served	poverty and hunger	no more input supply	no extension support
110 (92%)	11 (9%)	43 (36%)	0	1 (1%)	0

Future prospect of IGAs in village : Whether current nursery/ planting continues in future or not

Yes it's sustainable on condition that			No, it'll not be viable because of		
all by self effort without aid	if input supply continues	if extension is actively served	poverty and hunger	no more input supply	no extension support
109 (91%)	9 (8%)	40 (35%)	0	0	1(1%)

Influence of Forestry Activities to Villager's attitude: What effect was brought on villager's life

Given alternatives to reply as to the inquiry on villager's impression	reply	%
1. Some incentives are given to the villagers.	59	55%
2. No significant / visible effect has been given.	9	9%
3. It's still too early to make evaluations / judgment	9	9%
4. 3 year's term is too short to give positive Influence of IGA Activities to Villager's attitude	51	48%
5. Any other opinion on this question.	5	5%

Future prospect of IGA Activities in your village: Whether current IGAs continue in future or not

Yes it's sustainable on condition that			No, it'll not be viable because of		
all by self effort without aid	if input supply continues	if extension is actively served	poverty and hunger	no more input supply	no extension support
109 (92%)	9 (8%)	40 (33%)	0	0	1 (1%)

Influence of Income Generating Activities to Villager's attitude

Given alternatives to reply as to the inquiry on villager's impression	reply	%
1. Some incentives are given to the villagers.	62	52%
2. No significant / visible effect has been given.	8	8%
3. It's still too early to make evaluations / judgment	13	11%
4. 3 year's term is too short to give positive Influence of IGA Activities to Villager's attitude	33	28%
5. Any other opinion on this question.	5	5%

Changes in villager's understanding brought about by the Nursery/Planting Activities?

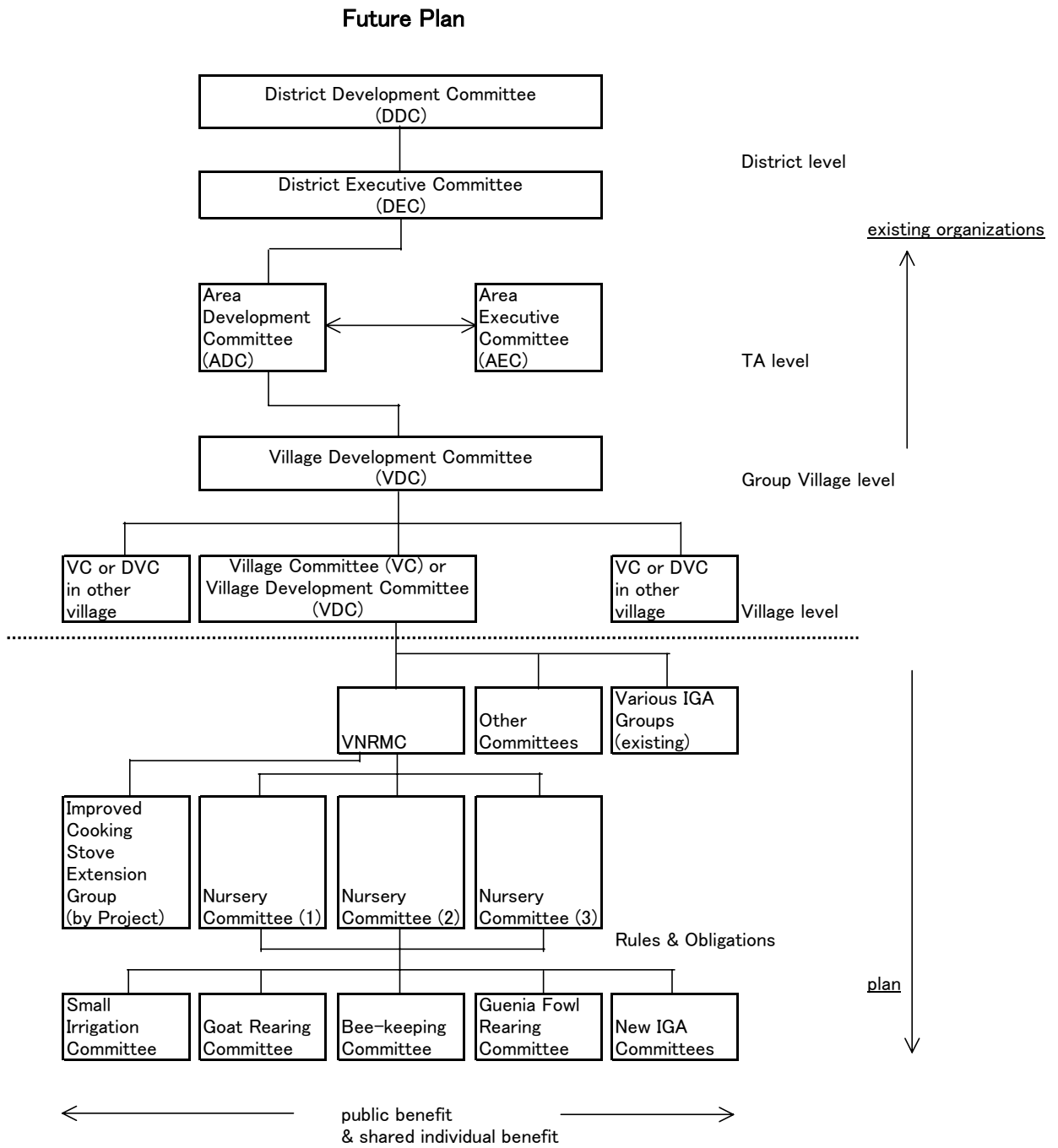
1. We recognized need of planting trees to secure firewood for us in future, without planting trees always decrease.	109	93%
2. We learned that our resources such as honey, livestock, foodcrops and water are sustained by planting trees.	66	56%
3. We will be able to enjoy benefit from planting trees as firewood, poles and other harvests, though it takes long period.	90	77%
4. We have been motivated through intensive training by extension staff and technically and practically	56	48%

empowered.		
5. No particular changes have so far been substantially brought from forestry activities because of slow growth of trees.	4	4%
6. Basically villagers behaviors or way of thinking cannot be radically changed in short time of extension activities.	0	-
7. Villagers have to procure foods /income rather than engaged in forestry activities that give only slow return to our inputs.	1	1%
8. Forestry works are too heavy and exhaustive to continue while benefit is relatively small as compared with other works.	0	-

Changes observed in villager's livelihood possibly brought about by the Income Generating Activities?

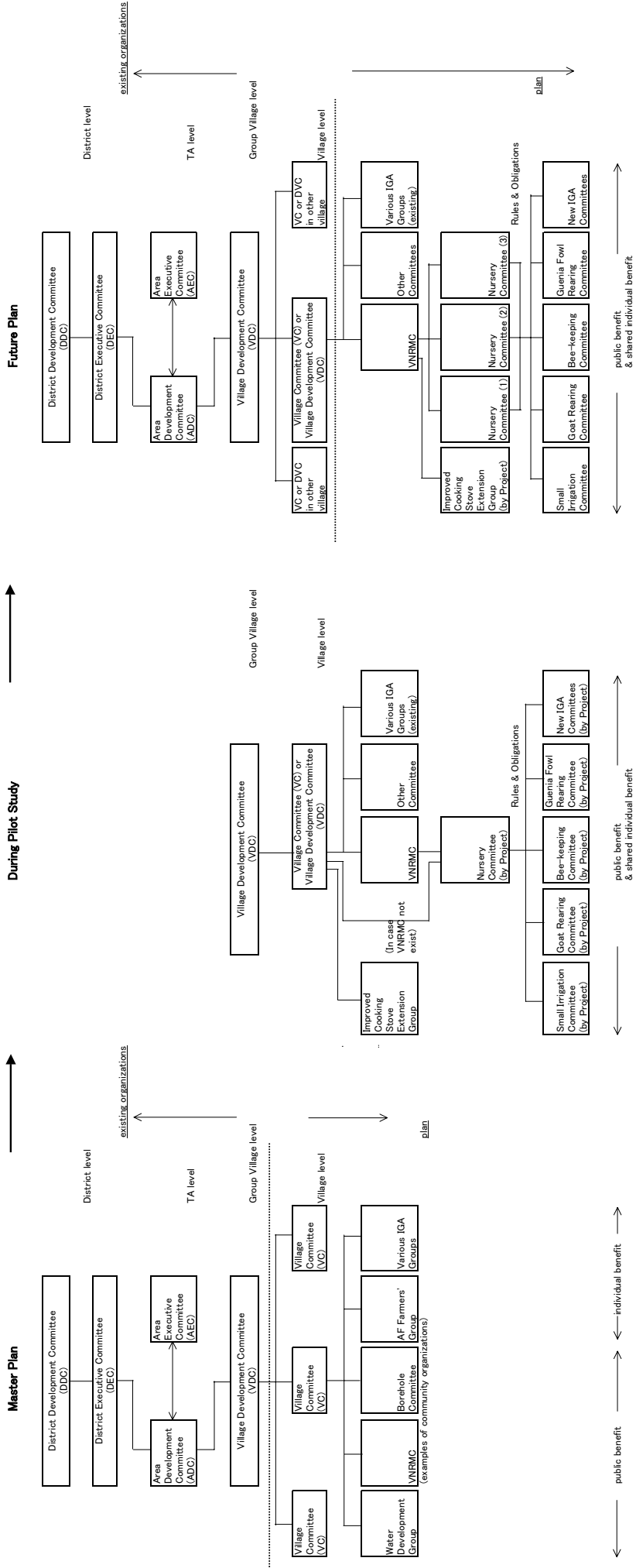
1. We recognized positive effects of IGAs to stabilize future livelihood, otherwise people can't be well mobilized.	111	95%
2. We learned that our village resources can be efficiently converted into earning incomes through IGA practices.	67	57%
3. We can enjoy future benefits arising from our participation in IGA activities matching with our land conditions.	61	52%
4. We have been motivated through intensive training by extension staff and technically and practically empowered.	56	48%
5. No particular changes have so far been substantially brought from IGA activities because of retarded development.	2	2%
6. Basically villagers' behaviors or way of thinking cannot be ly changed in short time of newly introduced activities.	2	2%
7. Villagers have to rely on traditional income than engaged in new IGA activities that do not give stable return to us.	1	1%
8. IGA activities are too risky / exhaustive to continue and benefit is less than expected as compared to other works.	1	1%

Proposed Organization Sctucture



- (1) Accessibility will be increased to be established more small nurseries in the same village.
- (2) IGAs are also increased or separated along with the new nursery.
- (3) Also increasing the accessibility for Improved Cooking Stove by meas of establishing other small groups. Once the its group completely finished to make the stoves in the group, the group will be dissolved.

Organization Structure on Stages

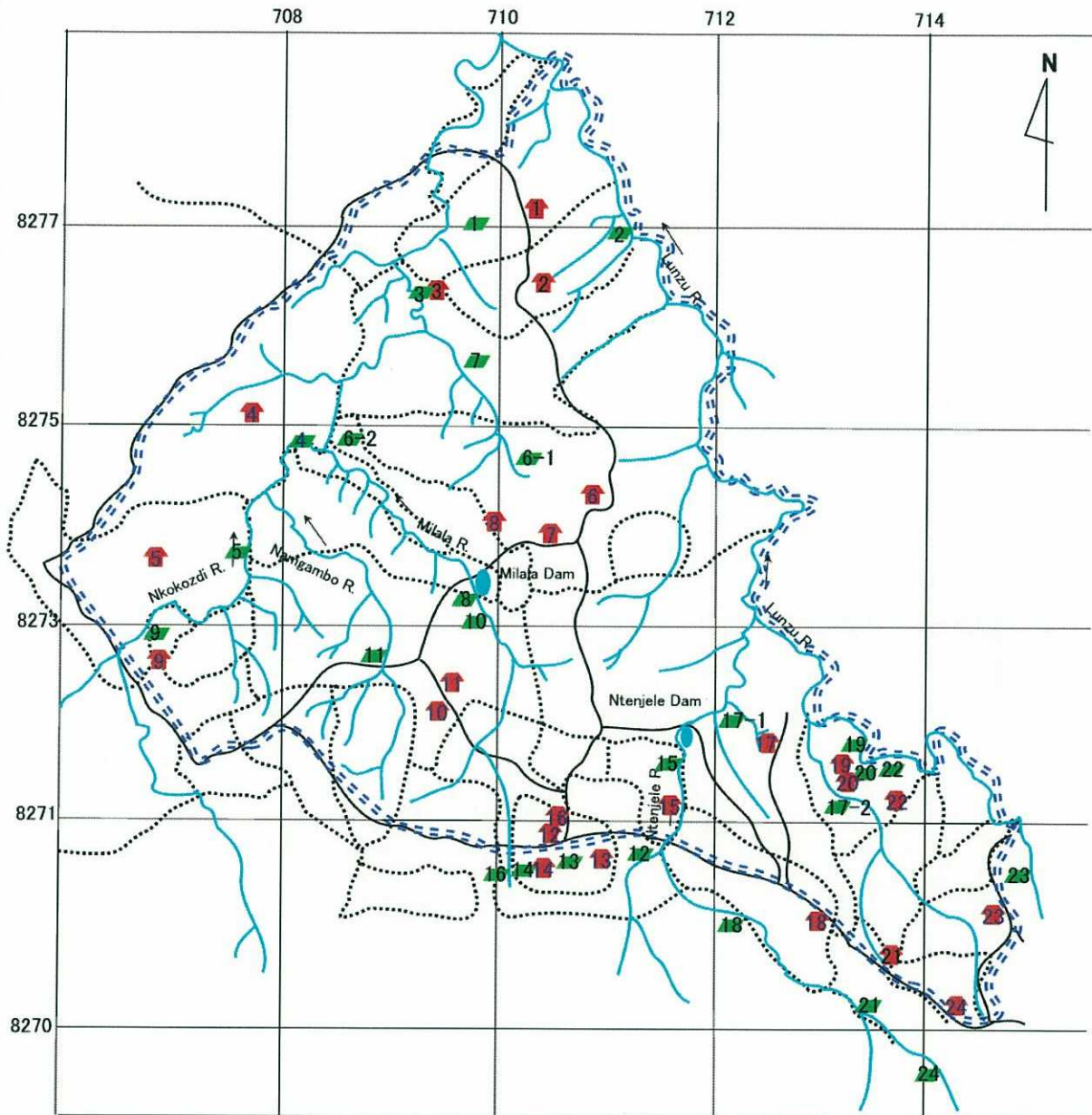


(1) Accessibility will be increased to be established more small nurseries in the same village.
 (2) IGAs are also increased or separated along with the new nursery.
 (3) Also increasing the accessibility for Improved Cooking Stove by means of establishing other small groups. Once the its group completely finished to make the stoves in the group, the group will be dissolved.

(1) Rules and obligations are set in order to strengthen the committee.
 (2) Nursery committee acts on behalf of VNRMC because it is not existed or weak.
 (3) Onkoga and Kainevendo villages had better results having established the second nursery committee.
 (4) Defiance of IGAs does not seem to be effective against the nursery activities. Villagers would expect the profits of IGAs in near future.

ANNEX B. Forestry & Agro-Forestry

Location Map of the Tree Nurseries



Legend	
	Nursery
	Village headman / headwomans house
	Road
	River
	Village Boundaries
	Project Area Boundary

No.	Village Name	No.	Village Name
1	Makonokaya	13	Kumanda
2	Siyamudima	14	TamveKenji
3	Kaumbata	15	Chilangali
4	Mdala	16	Daniel Mbeza
5	Nanjiwa	17	Kamwendo
6	Chikoja	18	Peter Billila
7	Manjelo	19	Ndemanje
8	Teula	20	Simon Mpombe
9	Chakana	21	Kateya
10	Lemu	22	Maluwa
11	Magombo Ngondo	23	Kumponda
12	Kam'mata	24	Kumisati Chigumula

Agroforestry Technology

Planting Spacing and Density

Technology	Direct Sown Seeds		Nursery Seedlings	
	Field Spacing	Plants/ha or /km	Field Spacing	Plants/ha or /km
1 Undersowing				
1 Tephrosia, Cajanus	0.9 x 0.45 m	24,691 /ha	na	na
2 Sesbania	na	na	0.9 x 0.9 m	12,346 /ha
2 Short Term Fallows				
1 Long lived trees	na	na	1.8 x 1.8 m	3,086 /ha
2 Sesbania sesban	na	na	0.9 x 0.9 m	12,346 /ha
3 Tephrosia, Cajanus	0.9 x 0.45 m	24,691 /ha	na	na
3 Dispersed Systematic Interplanting	na	na	10 x 5 m	200 /ha
4 Green Manure Banks				
1 Tephrosia, Cajanus	0.9 x 0.45 m	24,691 /ha	na	na
2 Senna spectabilis	na	na	1.8 x 1.8 m	3,086 /ha
5 Fodder Banks				
1 Leucaena, Gliricidia, Sesbania	na	na	0.9 x 0.9 m	12,346 /ha
6 Alley Cropping				
1 Tephrosia	3.6 x 0.45 m	6,173 /ha	na	na
2 Gliricidia, Leucaena, Senna	na	na	4.5 x 0.9 m	2,469 /ha
7 Mixed Tree Intercropping	1.8 x 0.9 m	6,173 /ha	1.8 x 0.9 m	6,173 /ha
8 Homestead/Farm Boundaries				
1 Small and Midium Trees	na	na	2 m	500 /km
2 Large Trees	na	na	4 m	250 /km
9 Woodlots				
1 for poles	na	na	1 x 2 m	5,000 /ha
2 for fuelwood	na	na	2 x 2 m	2,500 /ha
10 Live Fences				
1 Treee seedlings	na	na	0.4 m	2,500 /km
2 Tree truncheons	na	na	1 m	1,000 /km
3 Sisal	na	na	1 m	1,000 /km
11 Live Farm Sheds				
1 Seedlings and Truncheons	na	na	2 x 2 m	na
12 Tree Seed Orchards	na	na	4 x 4 m	625 /ha
13 Soil and Water Conservation (Contour Strips)				
1 Vetiver slips/Napier cuttings	na	na	0.10 m	10,000 /km
2 Large multipurpose trees	na	na	5 m	200 /km
3 Small trees like Sesbania	na	na	1 m	1,000 /km
4 Tephrosia, Cajanus	0.4 m	2,500 /km	na	na
14 Vetiver Grass Nurseries (pure stand)	na	na	0.45 x 0.45 m	49,383 /ha

Source: MAFE Booklet Series No. 1, Agroforestry Tree Propagation and Outplanting, Publication No. 45

AGROFORESTRY TECHNOLOGY

SOWING METHOD, SEASON & PLACE

Second Phase Pilot Study

Description	Local Name	Germ/Kg	Sowing method	Sowing month	Planting Place																				
					Woodlot		Homestead		Road side	Filed	Garden	River bank													
					Communal	Individual	Homestead	Boundary																	
1 SF (Social Forestry) Seed																									
1 <i>Acacia albida</i>	Nsangu	5,750	Nursery pot	August/Sep.																					
2 <i>Azela quanzensis</i>	Msambamfume	350	Nursery pot	August																					
3 <i>Bauhinia thonningii</i>	Chitimbe	5,000	Nursery pot	July/August																					
4 <i>Eucalyptus camaldulensis</i>	Bulugama	686,670	Seed bed	July/August																					
5 <i>Khaya anthothea</i>	Mbawa	2,300	Nursery pot	August																					
6 <i>Melia azederach</i> (depulped)	Indiya	2,250	Nursery pot	August																					
7 <i>Senna siamea</i>	Kesha	17,240	Nursery pot	July/August																					
8 <i>Senna spectabilis</i>	Kesha	29,880	Nursery pot	July/August																					
9 <i>Terminata sericea</i>	Naphini	2,900	Nursery pot	July/August																					
2 AF (Agroforestry) Seed & Seedling																									
1 <i>Gliricidia sepium</i>	Gililisiya	6,175	Nursery pot	August																					
2 <i>Lanchocarpus capassa</i>	Chimphakasa	3,400	Nursery pot	July/August																					
3 <i>Moringa oleifera</i>	Chamwamba	5,030	Nursery pot	July/August																					
4 <i>Tamarindus indica</i>	Bwemba	2,700	Nursery pot	July/August																					
5 <i>Tephrosia vogelii</i>	Mthutu/Wombwe	14,650	Direct	Nov./Dec.																					
6 <i>Zyzyphus mauritiana</i> (depulped)	Masawo	1,940	Nursery pot	July/August																					

Remarks: ○ = suitable planting place

AGROFORESTRY TECHNOLOGY

TREE USAGES

Second Phase Pilot Study

Description	Local Name	Indigenous/ Exotic	Germ/Kg	Firewood/ Charcoal	Nitrogen/ Manure	Bee nectar /Fodder	Edible fruit	Pole/ Housing	other purpose
1 SF (Social Forestry) Seed									
1 <i>Acacia albida</i>	Msangu	Indigenous	5,750	FI/CH	NI	BE/FO			EC
2 <i>Azela quanzensis</i>	Msambamfume	Indigenous	350	FI/CH		BE		TI	EC
3 <i>Bauhinia thonningii</i>	Chitimbe	Indigenous	5,000	FI/CH	NI	BE/FO	ED	PO	EC
4 <i>Eucalyptus camaldulensis</i>	Bulugama	Exotic	686,670	FI/CH		BE		PO	
5 <i>Khaya anthotheca</i>	Mbawa	Indigenous	2,300	FI/CH		BE		PO/TI	EC
6 <i>Melia azederach</i> (depulped)	Indiya	Exotic	2,250	FI/CH		BE		PO/TI	EC
7 <i>Senna siamea</i>	Kesha	Exotic	17,240	FI/CH	NI	BE		PO/TI	
8 <i>Senna spectabilis</i>	Kesha	Exotic	29,880	FI/CH	NI	BE			
9 <i>Terminalia sericea</i>	Naphini	Indigenous	2,900	FI/CH	NI			PO	
2 AF (Agroforestry) Seed									
1 <i>Gliricidia sepium</i>	Gillisiidiya	Exotic	6,175	FI/CH	NI/MA	BE/FO	ED		EC
2 <i>Lanchocarpus capassa</i>	Chimphakasa	Indigenous	3,400	FI	MA	FO		PO/TI	
3 <i>Moringa oleifera</i>	Chamwamba	Exotic	5,030	FI	MA	BE/FO	ED (leaf)	PO/TI	EC
4 <i>Tamarindus indica</i>	Bwemba	Indigenous	2,700	FI/CH	NI	BE	ED	PO/TI	
5 <i>Tephrosia vogelii</i>	Mthutu/Wombwe	Exotic	14,650		NI				
6 <i>Zyzyphus mauritiana</i> (depulped)	Masawo	Indigenous	1,940	FI/CH	NI	FO	ED	PO/TI	EC

FI: Firewood, CH: charcoal, NI: nitrogen, MA: manure BE: bee nectar, FO: fodder, ED: edible, PO: pole

TI: timber, EC: erosion control

FORESTRY & AGROFORESTRY TECHNOLOGY

Tree Nursery Management & Planting Pattern

Tree Species	Month	January	February	March	April	May	June	July	August	September	October	November	December
SF Acacia albida Eucalyptus camaldulensis	in Nursery bed						Prepare bed Collect soil Collect manure	Sow fast growing seeds Watering bed Weeding bed	Transplant seedlings				
	in Nursery tube	Distribute seedlings				Take care the nursery Maintain fence	Collect pots Collect soil Collect manure	Filling pots with soil Watering bed Weeding bed	Transplant seedlings Watering pots Weeding pots Shading seedlings Root pruning	Harden seedlings Start reducing watering Weeding pots Root pruning	Harden seedlings Select seedlings Root pruning	Distribute seedlings	
	in Field	Out-plant seedlings Fill them with pure soil	Make micro catchment Weeding		Weeding Watering	Weeding Watering	Weeding Watering					Select out-planting place Clear the places Out-plant seedlings Dig temporary pits and fill them Mark the pits	Dig the former pits again Clear the places Out-plant seedlings Fill them with pure soil
SF Afzelia quanzensis Bauhinia thonningii Khaya anthotheca Melia azederach Senna siamea Senna spectabilis Terminalia sericea AF Gliricidia sepium Lanchocarpus capassa Moringa oleefera Tamarindus indica	in Nursery bed						Prepare bed Collect soil Collect manure	Sow fast growing seeds Watering bed Weeding bed	Transplant seedlings				
	in Nursery tube	Take care the nursery Maintain fence	Make micro catchment Weeding			Take care the nursery Maintain fence	Collect pots Collect soil Collect manure	Filling pots with soil Watering bed Weeding bed	Transplant seedlings Watering pots Weeding pots Shading seedlings Root pruning	Harden seedlings Start reducing watering	Harden seedlings Weeding pots Root pruning	Harden seedlings Select seedlings Root pruning	Distribute seedlings
	in Field	Out-plant seedlings Fill them with pure soil	Make micro catchment Weeding		Weeding Watering	Weeding Watering	Weeding Watering					Select out-planting place Clear the places Dig temporary pits and fill them Mark the pits	Dig the former pits again Clear the places Out-plant seedlings Fill them with pure soil
AF Tephrosia vogelii	Direct sowing in Field	Cleanin field & Direct sowing		Weeding	Weeding Watering	Weeding Watering	Weeding Watering				Seed preparation	Select field Clean field	Clean field & Direct sowing

Mid-term Evaluation Data (Seed, Nursery and Out-Planting), 2003

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.				No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
Village Name				Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja	Manjero	Teula	Chakana
No.	Species	Item	Unit									
1	<i>Faldherbia</i>	Remaining seed	kg	1.0	5.0	2.0		2.5	1.5	1.0	1.0	
	<i>albida</i>	Sown in nursery	kg	4.0	5.0	4.0	2.5	2.5	2.0	2.5	1.0	
	Nsangu	Direct sown	kg		-	-						
		Gerninated seed	%		40	80	80	80	73	70	72	
		Nursery seedling	number	2,800	2,500	6,000	3,000	3,000	7,000	7,203	4,228	3,000
		Seedling height	cm		30	20	30	30	21	30	25	
		Out-planting	number	2,800	2,500	6,000	3,000	3,000	7,000	7,203	4,228	3,000
		Planting place		Field	Field Individual	Field	Field	Field	Individual 275 Communal 308 Boundary 425 Field 2640 Garden 3360	Individual 1280 Communal 843 Field 1270 Garden 3810	Field 968 Garden 3260	Communcity Individual
		Planted date		Feb. '03	Feb. '03		Feb. 2003	Jan. Feb. '03	Feb. '03	Feb. '03	Feb. '03	Mar. '03
		Tree height	cm	30-40	15	30-60	15		Individual 40 Communal 37 Boundary 35 Field 39 Garden 38	Individual 45 Communal 37 Field 35 Garden 39	Field 39 Garden 36	
		Survival tree	number	560	125	1,800	300	1,050	Individual 192 Communal 218 Boundary 314 Field 1848 Garden 2452	Individual 1011 Communal 464 Field 1079 Garden 3824	Field 745 Garden 2542	
		Total survival tree		560	125	1,800	300	1,050	5,024	6,378	3,287	0
		Survival rate	%	20	5	30	10	35	Individual 70% Communal 71% Boundary 74% Field 70% Garden 73%	Individual 79% Communal 55% Field 85% Garden 82%	Field 77% Garden 78%	0
2	<i>Gliricidia</i>	Remaining seed	kg	0.5	-	-	1/2	1.0	1.0	1.5		
	<i>sepium</i>	Sown in nursery	kg	0.5	1.5	2.0	1/4	1.0	1/4	1/2		
		Direct sown	kg		-	4						
		Gerninated seed	%		80	100		100	90	95		
		Nursery seedling	number	3,000	4,800	2,400	2,400	2,112	620	600		4,000
		Seedling height	cm	30	20	15	16	10	20	15		
		Out-planting	number	2,700	4,800	2,400	2,400	2,112	620	600		3,600
		Planting place		Field	Field Individual	Field	Field Individual	Field	Field 190 Garden 430	Garden 600		Individual Bank 25
		Planted date		Jan. '03	Feb. '03		Feb. 2003	Jan. Feb. '03	Feb. '03			Mar. '03
		Tree height	cm	30		15	25		Field 27 Garden 28	25		30
		Survival tree	number	2,100	1,500	2,000			Field 163 Garden 378	540		25
		Total survival tree		2,100	1,500	2,000	2,160	1,901	541	540		25
		Survival rate	%	80	30	90	90	90	Field 86% Garden 88%	90		1
3	<i>Acacia</i>	Remaining seed	kg		0.5				1.0		1.0	
	<i>polyacantha</i>	Sown in nursery	kg		2.0				1/4		0.15	
	Mthethe	Direct sown	kg									
		Gerninated seed	%		40				65		70	
		Nursery seedling	number	3,000	1,400				700		100	
		Seedling height	cm	15	30				16		19	
		Out-planting	number	3,000	1,400				700		100	
		Planting place		Woodlot individual	Communal				Individual 330 Field 370		Individual 100	
		Planted date										
		Tree height	cm		30				Individual 27 Field 27		26	
		Survival tree	number						Individual 217 Field 255		68	
		Total survival tree		2,040	70				472		68	
		Survival rate	%	(68%)	5				Individual 66% Field 69%		68	
4	<i>Z. Mauritiana</i>	Remaining seed	kg		4.0	4.5			1.5	1.75	1.0	
		Sown in nursery	kg		0.5	0.5			1/2	1/4	3/4	

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
Village Name			Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja	Manjero	Teula	Chakana
No.	Species	Item	Unit								
	Masau	Direct sown	kg								
		Gerninated seed	%					88	90	80	
	Nursery seedling	number	1,997	225	93			500	200	500	
	Seedling height	cm	15	15	15			13	10	15	
	Out-planting	number	1,997	225	93			500	200	500	
	Planting place		Homestead fruit	Homestead fruit	Boundary			Homestead fruit	Homestead fruit	Homestead	
	Planted date										
	Tree height	cm	20	15	20			19	15	21	
	Survival tree	number						445	184	430	
	Total survival tree		799	90	37			445	184	430	
Survival rate	%	40	40	40			89	92	86		
5	<i>Eucalyptus grandis</i>	Remaining seed	kg				0.5				
		Sown in nursery	kg				1.5		1/8		
	Bluegum	Direct sown	kg								
		Gerninated seed	%					80	60		
(No. 5, 17, 18, 23)	<i>camadulensis</i>	Nursery seedling	number				5,100	345	1,000	3,600	
		Seedling height	cm				60	40	47	38	
		Out-planting	number				5,100	345	1,000	3,600	
	Planting place					Woodlot individual	Individual 200 Communal 145	Individual 660 Communal 340	Individual 2820 Communal 780		
	Planted date					Jan. Feb. '03	Feb. '03	Feb. '03	Feb. '03		
	Tree height	cm				100	Individual 59 Communal 57	Individual 70 Communal 57	Individual 47 Communal 49		
	Survival tree	number					Individual 90 Communal 63	Individual 316 Communal 112	Individual 1156 Communal 312		
	Total survival tree					4,080	153	428	1,468		
	Survival rate	%				80	Individual 45% Communal 44%	Individual 48% Communal 33%	Individual 41% Communal 40%		
6	<i>Senna siamea</i>	Remaining seed	kg	0.2	-						
		Sown in nursery	kg	0.2	-		1/4				
	Kesha wa milimo	Direct sown	kg								
		Gerninated seed	%			80	85				
	Nursery seedling	number	800		520	1,900					
	Seedling height	cm	15		25	15					
	Out-planting	number	800		520	1,900					
	Planting place		Woodlot communal		Individual 300 Communal 220	Boundary					
	Planted date					Feb. 2003					
	Tree height	cm	15		25	20					
	Survival tree	number									
	Total survival tree		400		364	1,520					
	Survival rate	%	50		70	80					
7	<i>Senna spectabilis</i>	Remaining seed	kg	0.25	-	0.25		3/4		3/4	
		Sown in nursery	kg	0.25	2.50	0.25		0.5	1/8	1/8	
	Kesha wa maluwa	Direct sown	kg								
		Gerninated seed	%		90	80			70	72	
	Nursery seedling	number	600	300	520		80	106	16	200	
	Seedling height	cm	30		15-30		15	20	23	18	
	Out-planting	number	600	300	520		66	106	16	200	
	Planting place		Woodlot communal	Individual			Woodlot individual	Field	Field 16	Field 200	
	Planted date					Feb. 2003					
	Tree height	cm	30		30		30	39	42	40	
	Survival tree	number					20	87	13	168	
	Total survival tree		420		364		53	87	13	168	
	Survival rate	%	70		70		80	82	81	84	
8	<i>Moringa oleifera</i>	Remaining seed	kg								
		Sown in nursery	kg								
	Chamwamba	Direct sown	kg	V		V					
		Gerninated seed	%	100		80					
	Nursery seedling	number	50		350						
	Seedling height	cm	30								

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
Village Name			Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja	Manjero	Teula	Chakana
No.	Species	Item	Unit								
		Out-planting	number	50		350					
				Homestead boundary		Individual 300 Communal 50					
		Planted date									
		Tree height	cm	50							
		Survival tree	number								
		Total survival tree		30		140					
		Survival rate	%	60		40					
9	<i>Caryaca</i>	Remaining seed	kg								
	<i>papaya</i>	Sown in nursery	kg								
	Paw-paw	Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number							15	
		Seedling height	cm							21	
		Out-planting	number							15	
		Planting place								Homestead	
		Planted date									
		Tree height	cm							40	
		Survival tree	number							13	
		Total survival tree								13	
		Survival rate	%							87	
10	<i>Albizzia</i>	Remaining seed	kg								
	<i>lebeck</i>	Sown in nursery	kg	1/4							
	Mtangtang	Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number	1,200							
		Seedling height	cm	10							
		Out-planting	number	1,200							
		Planting place		Woodlot individual							
		Planted date									
		Tree height	cm	15							
		Survival tree	number								
		Total survival tree		60							
		Survival rate	%	5							
11	<i>L. carpus</i>	Remaining seed	kg								
	<i>capassa</i>	Sown in nursery	kg								
	Mpakasa	Direct sown	kg								
		Gerninated seed	%						70		
		Nursery seedling	number						8		
		Seedling height	cm						17		
		Out-planting	number						8		
		Planting place							Individual		
		Planted date									
		Tree height	cm						29		
		Survival tree	number						5		
		Total survival tree							5		
		Survival rate	%						62		
12	<i>Terminalia</i>	Remaining seed	kg								
	<i>sericea</i>	Sown in nursery	kg								
	Naphini	Direct sown	kg								
		Gerninated seed	%					55			
		Nursery seedling	number					300			
		Seedling height	cm					17			
		Out-planting	number					300			
		Planting place						Individual 26 Communal 25			
		Planted date									
		Tree height	cm					Individual 127 Communal 23			
		Survival tree	number					150			
		Total survival tree						Individual 51% Communal 46%			
		Survival rate	%								
13	<i>Mangifera</i>	Remaining seed	kg								
	<i>indica</i>	Sown in nursery	kg								

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 1 Makonokaya	No. 2 Siyandima	No. 3 Kaumbata	No. 4 Mdala	No. 5 Nanjiwa	No. 6 Chikoja	No. 7 Manjero	No. 8 Teula	No. 9 Chakana
Village Name											
No.	Species	Item	Unit								
	Mango	Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number								
		Seedling height	cm								
		Out-plnating	number								
		Planting place									
		Planted date									
		Tree height	cm								
		Survival tree	number								
		Total survival tree									
Survival rate	%										
14	<i>A. quanzesis</i>	Remaining seed	kg					1/2	1/4	1/2	
		Sown in nursery	kg					1/2	1/4	1/2	
	Msambafuma	Direct sown	kg								
		Gerninated seed	%					65	80	66	
	Ngongomwa	Nursery seedling	number					100	69	59	
		Seedling height	cm					19	27	20	
		Out-planting	number					100	69	59	
		Planting place						Individual 76 Communal 27	Individual 40 Communal 27	Individual 59	
		Planted date									
		Tree height	cm					Individual 25 Communal 27	Individual 34 Communal 31	29	
		Survival tree	number					Individual 53 Communal 16	Individual 28 Communal 15	42	
		Total survival tree						69	43	42	
		Survival rate	%					Individual 71% Communal 70%	Individual 70% Communal 55%	71	
15	Others	Remaining seed	kg								
		Sown in nursery	kg								
		Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number								
		Seedling height	cm								
		Out-planting	number								
		Planting place									
		Planted date									
		Tree height	cm								
		Survival tree	number								
		Total survival tree									
Survival rate	%										
Total	Nursery seedling		13,447	9,225	9,883	7,300	10,292	9,671	9,096	8,702	7,000
Total	Out-planting		13,147	9,225	9,883	7,300	10,278	9,671	9,096	8,702	6,600
Total	Survival tree		6,409	1,785	4,705	3,980	7,084	6,941	7,591	5,476	25
Percent	Survival/Out-planting		48.7	19.3	47.6	54.5	68.9	71.8	83.5	62.9	0.4

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 10 Lemu	No. 11 Magombo Ngondo	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tambekenji	No. 15 Chilangali	No. 16 Daniel Mbedza	No. 17 Kamwendo	No. 18 Peter Bilila	
Village Name												
No.	Species	Item	Unit									
1	<i>Faldherbia</i>	Remaining seed	kg	5.0	5.0	1.0	2.0	1.0	1/2	2.0	3/4	3/4
	<i>albida</i>	Sown in nursery	kg	2.0	5.0	1.0	1.0	1.0	1.0	1.5		V
	Nsangu	Direct sown	kg		-			1/2				
		Gerninated seed	%	80	80	70	70	75	75	70		100
		Nursery seedling	number	6,700	3,700	5,038	4,739	3,667	6,451	4,296	3,420	4,400
		Seedling height	cm	15	15	30	10	30	28	25		
		Out-planting	number	6,700	3,000	4,838	4,739	3,590	6,401	3,806	3,420	4,400
		Planting place		Field	Field	Individual 638 Field 2232 Garden 1954 Bank 13	Individual 379 Communal 340 Field 1700 Garden 2320	Individual 500 Communal 1600 Boundary 312 Field 2645 Garden 2957	Individual 2000 Communal 1020 Field 1041 Garden 2340	Individual 210 Communal 625 Boundary 300 Field 1250 Garden 1420	Field 3420	Field
		Planted date			Feb. '03	Feb. '03	Dec. '03	Jan. Feb. '03	Jan. '03	Jan. Feb. '03	Jan. '03	Dec. '02
		Tree height	cm	23		Individual 45 Field 45 Garden 49 Bank 52	Individual 34 Communal 36 Field 34 Garden 37	Individual 40 Communal 39 Boundary 44 Field 41 Garden 40	44	Individual 35 Communal 30 Boundary 34 Field 31 Garden 30		
		Survival tree	number			Individual 518 Field 1719 Garden 1446 Bank 11	Individual 265 Communal 244 Field 1207 Garden 1600	Communal 1104 Boundary 230 Field 1904 Garden 2069	Individual 1240 Communal 601 Field 614 Garden 1425	Individual 140 Communal 413 Boundary 207 Field 838 Garden 923	945	
		Total survival tree		3,350	2,100	3,694	3,316	3,758	3,880		945	3,080
		Survival rate	%	50	(70)	Individual 81% Field 77% Garden 74% Bank 85%	Individual 70% Communal 72% Field 71% Garden 69%	Individual 71% Communal 69% Boundary 74% Field 72% Garden 70%	Individual 62% Communal 59% Field 59% Garden 60%	Individual 67% Communal 66% Boundary 69% Field 67% Garden 65%	28%	70%
2	<i>Gilicidia</i>	Remaining seed	kg			1/2	1.5	1.0	1/2		1/2	1/2
	<i>sepium</i>	Sown in nursery	kg	0.5		1.0	1.0	1/2	1.0			V
		Direct sown	kg									
		Gerninated seed	%	100		80	80	80	70			100
		Nursery seedling	number	450	3,000	16,632	5,600	1,995	1,920		3,294	377
		Seedling height	cm	15		20	20	19	17			1.5m
		Out-planting	number	450	3,000	16,632	5,600	1,845	1,920		3,294	377
		Planting place		Field	Field	Individual 1457 Boundary 3225 Field 4700 Garden 5450 Bank 1800	Field 1400 Garden 4200	Field 845 Garden 1000	Field 420 Garden 1500		Boundary 290 Field 3294	
		Planted date				Feb. '03	Dec. '02	Jan. Feb. '03	Jan. '03		Jan. '03	
		Tree height	cm	15	40	Individual 70 Boundary 85 Field 61 Garden 64 Bank 100	Field 39 Garden 38	Field 30 Garden 27	Field 23 Garden 25			
		Survival tree	number			Individual 1209 Boundary 2612 Field 3901 Garden 4414 Bank 1530	Field 1134 Garden 3402	Field 709 Garden 860	Field 264 Garden 900		Boundary 189 Field 2079	
		Total survival tree		441	1,500	13,666	4,536	1,569	1,164		2,268	339
		Survival rate	%	98	50	Individual 83% Boundary 81% Field 83% Garden 80% Bank 85%	Field 81% Garden 81%	Field 84% Garden 86%	Field 63% Garden 60%		Boundary 65% Field 70%	90%
3	<i>Acacia</i>	Remaining seed	kg	4.0								
	<i>polyacantha</i>	Sown in nursery	kg	1/2	1/4							
	Mthethe	Direct sown	kg									
		Gerninated seed	%	100	70							
		Nursery seedling	number	1,000	475							
		Seedling height	cm	30	10							
		Out-planting	number	1,000	475							
		Planting place		Woodlot individual Stream bank	Woodlot communal							
		Planted date										
		Tree height	cm	30	15							
		Survival tree	number									
		Total survival tree		1,000	1							
		Survival rate	%	100%	5%							
4	<i>Z. Mauritiانا</i>	Remaining seed	kg	5.0				1/2				
		Sown in nursery	kg	1/2	1/4			1/2				

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 10 Lemu	No. 11 Magombo Ngondo	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tambekenji	No. 15 Chilangali	No. 16 Daniel Mbedza	No. 17 Kamwendo	No. 18 Peter Bilila
Village Name											
No.	Species	Item	Unit								
	Masau	Direct sown	kg								
		Gerninated seed	%	100	70		55				
		Nursery seedling	number	450	431		130				
		Seedling height	cm	10			10				
		Out-planting	number	450	431		30				
		Planting place		Homestead			Homestead				
		Planted date									
		Tree height	cm	10			19				
		Survival tree	number				30				
		Total survival tree		225	259		30				
		Survival rate	%	50	(60%)		100				
5	<i>Eucalyptus grandis</i>	Remaining seed	kg								-
		Sown in nursery	kg	0.005			1/5	1/8			V
	Bluegum	Direct sown	kg								
		Gerninated seed	%	10				68			90
	<i>camadulensis</i>	Nursery seedling	number	400	200	8,316	4,960	1,800	3,800	2,500	511
	(No. 5, 17, 18, 23)	Seedling height	cm	15	10-15		40		35		
		Out-planting	number	400	200	6,620	4,960	1,800	3,650	1,520	511
		Planting place		Woodlot, communal	Woodlot, individual	Individual 5785 Communal 835	Communal 1960 Boundary 450 Field 1050	Individual 665 Communal 1135	Individual 1800 Communal 1518 Boundary 332	Individual 450 Communal 1070	Communal 300 Individual 211
		Planted date				Feb.-Mar. '03	Jan. Feb. '03	Jan. '03	Jan. Feb. '03	Jan. '03	Dec. '02
		Tree height	cm	20	20	Individual 64 Communal 60	Communal 1960 Boundary 450 Field 1050		Individual 52 Communal 50 Boundary 50		30
		Survival tree	number			Individual 3182 Communal 485	Individual 50 Communal 56 Boundary 60 Field 57	Individual 315 Communal 556	Individual 882 Communal 743 Boundary 149	Individual 390 Communal 701	
		Total survival tree		380	180	3,667	223	871	1,774	1,091	190
		Survival rate	%	95	90	Individual 55% Communal 58%	Individual 49% Communal 47% Boundary 51% Field 50%	Individual 47% Communal 49%	Individual 49% Communal 48% Boundary 45%	Individual 87% Communal 66%	Communal 100% Individual 90%
6	<i>Senna siamea</i>	Remaining seed	kg								
		Sown in nursery	kg								
	Kesha wa milimo	Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number		300						
		Seedling height	cm								
		Out-planting	number		300						
		Planting place			Homestead fruit						
		Planted date									
		Tree height	cm								
		Survival tree	number								
		Total survival tree			210						
		Survival rate	%		(70%)						
7	<i>Senna spectabilis</i>	Remaining seed	kg			1/2				3/4	1/4
		Sown in nursery	kg			1/8				V	V
	Kesha wa maluwa	Direct sown	kg								
		Gerninated seed	%			75					
		Nursery seedling	number	200		150	19			70	45
		Seedling height	cm	15		20	25				
		Out-planting	number	200		150	19			45	45
		Planting place		Woodlot individual		Field 150	Field 19			Communal 45	Boundary
		Planted date									
		Tree height	cm	15		30	37				
		Survival tree	number			130	17			21	
		Total survival tree		120		130	17			21	45
		Survival rate	%	60		82	89			47%	100%
8	<i>Moringa oleifera</i>	Remaining seed	kg								1/4
		Sown in nursery	kg								
	Chamwamba	Direct sown	kg								V
		Gerninated seed	%								95
		Nursery seedling	number				1,000				277
		Seedling height	cm				28				

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 10 Lemu	No. 11 Magombo Ngondo	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tambekenji	No. 15 Chilangali	No. 16 Daniel Mbedza	No. 17 Kamwendo	No. 18 Peter Bilila
Village Name											
No.	Species	Item	Unit								
		Out-planting	number			1,000					277
						Boundary					
		Planted date									
		Tree height	cm			40					
		Survival tree	number			690					
		Total survival tree				690					166
		Survival rate	%			69					60%
9	<i>Caryaca</i>	Remaining seed	kg								-
	<i>papaya</i>	Sown in nursery	kg								V
	Paw-paw	Direct sown	kg								
		Gerninated seed	%				85				90
		Nursery seedling	number		300	96	21			180	334
		Seedling height	cm			23	27				20
		Out-planting	number		300	96	21			180	334
		Planting place			Homestead	Homestead	Homestead			Homestead	Fruit 100 Bank 234
		Planted date									
		Tree height	cm			38	40				
		Survival tree	number			90	20			178	
		Total survival tree				90	20			178	
		Survival rate	%			93	95			99%	100%
10	<i>Albizzia</i>	Remaining seed	kg								
	<i>lebeck</i>	Sown in nursery	kg								
	Mtangtang	Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number								
		Seedling height	cm								
		Out-planting	number								
		Planting place									
		Planted date									
		Tree height	cm								
		Survival tree	number								
		Total survival tree									
		Survival rate	%								
11	<i>L. carpus</i>	Remaining seed	kg								
	<i>capassa</i>	Sown in nursery	kg								
	Mpakasa	Direct sown	kg								
		Gerninated seed	%								
		Nursery seedling	number			100					
		Seedling height	cm			19					
		Out-planting	number			60					
		Planting place				Boundary					
		Planted date									
		Tree height	cm			27					
		Survival tree	number			55					
		Total survival tree				55					
		Survival rate	%			91					
12	<i>Terminalia</i>	Remaining seed	kg								
	<i>sericea</i>	Sown in nursery	kg								
	Naphini	Direct sown	kg								
		Gerninated seed	%		40						
		Nursery seedling	number		48						
		Seedling height	cm								
		Out-planting	number		48						
		Planting place									
		Planted date									
		Tree height	cm								
		Survival tree	number								
		Total survival tree			5						
		Survival rate	%		10						
13	<i>Mangifera</i>	Remaining seed	kg								
	<i>indica</i>	Sown in nursery	kg								

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 10 Lemu	No. 11 Magombo Ngondo	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tambekenji	No. 15 Chilangali	No. 16 Daniel Mbedza	No. 17 Kamwendo	No. 18 Peter Bilila	
Village Name												
No.	Species	Item	Unit									
	Mango	Direct sown	kg									
		Gerninated seed	%									
		Nursery seedling	number			3					11	
		Seedling height	cm			23						
		Out-plnating	number			3					11	
		Planting place				Homestead					Homestead	
		Planted date										
		Tree height	cm			36						
		Survival tree	number			3					9	
		Total survival tree				3					9	
Survival rate	%			100					82%			
14	<i>A. quanzesis</i>	Remaining seed	kg				1/2					
		Sown in nursery	kg				3/4					
	Msambafuma Ngongomwa	Direct sown	kg									
		Gerninated seed	%				60					
		Nursery seedling	number					186		100		
		Seedling height	cm					20		20		
		Out-planting	number					186		100		
		Planting place						Individual 86 Communal 100		Individual 44 Communal 56		
		Planted date										
		Tree height	cm					Individual 27 Communal 27		Individual 27 Communal 29		
		Survival tree	number					Individual 59 Communal 77		Individual 35 Communal 41		
		Total survival tree						136		76		
Survival rate	%					Individual 69% Communal 77%		Individual 79% Communal 73%				
15	Others	Remaining seed	kg									
		Sown in nursery	kg									
		Direct sown	kg									
		Gerninated seed	%									
		Nursery seedling	number									
		Seedling height	cm									
		Out-planting	number									
		Planting place										
		Planted date										
		Tree height	cm									
Survival tree	number											
Total survival tree												
Survival rate	%											
Total	Nursery seedling		9,200	8,454	30,139	11,535	10,978	10,171	8,196	9,475	5,944	
Total	Out-planting		9,200	7,754	28,243	11,495	10,651	10,121	7,556	8,470	5,944	
Total	Survival tree		5,516	4,255	21,160	8,687	5,753	5,915	1,850	4,512	3,820	
Percent	Survival/Out-planting		60.0	54.9	74.9	75.6	54.0	58.4	24.5	53.3	64.3	

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumpomda	No. 24 K. Chigumula	Total
Village Name									
No.	Species	Item	Unit						
1	<i>Faldherbia</i>	Remaining seed	kg	1/2	1/2	1/2	1/4	3/4	3/4
	<i>albida</i>	Sown in nursery	kg	V			1/2		
	Nsangu	Direct sown	kg				-		
		Gerninated seed	%			100	100		
		Nursery seedling	number	850	4,890	7,850	4,820	3,600	3,600
		Seedling height	cm						
		Out-planting	number	850	4,890	7,850	4,820	3,600	3,000
		Planting place		Individual 50 Communal 750 Field 50	Communal 1445 Field 3445	Communal 120 Boundary 50 Garden 7680	Individual 10 Communal 310 Garden 4500	Field	Garden
		Planted date			Feb. '03	Feb.-Mar. '03	Apr. '03	Dec. '03	
		Tree height	cm				20	30	
		Survival tree	number		Field 2000			1,950	
		Total survival tree		510	3,912	1,570	2,410	2,520	1,950
		Survival rate	%	60%	Field 80%	20%	50%	70%	65%
2	<i>Gliricidia</i>	Remaining seed	kg	1/4	1/2	3/4	1/4	0.0	1/4
	<i>sepium</i>	Sown in nursery	kg	V	V				
		Direct sown	kg						
		Gerninated seed	%						
		Nursery seedling	number	100	4,293	1,400	4,000	600	809
		Seedling height	cm						
		Out-planting	number	100	4,293	1,380	2,576	600	809
		Planting place		Individual 50 Field 50	Communal 45 Boundary 248 Field 4000	Boundary 81 Garden 1274 Bank 25	Individual 70 Boundary 6 Garden 2500	Boundary 100 Field 500	Garden
		Planted date			Feb. '03	Feb. '03	Feb.-Mar. '03	Dec. '03	
		Tree height	cm				1.0m	200	
		Survival tree	number					800	
		Total survival tree		80	2,576	138	1,546	540	800
		Survival rate	%	80%	60%	10%	60%	90%	99%
3	<i>Acacia</i>	Remaining seed	kg						
	<i>polyacantha</i>	Sown in nursery	kg						
	Mthethe	Direct sown	kg						
		Gerninated seed	%						
		Nursery seedling	number						6,675
		Seedling height	cm						
		Out-planting	number						6,675
		Planting place							100%
		Planted date							
		Tree height	cm						
		Survival tree	number						
		Total survival tree							3,651
		Survival rate	%						55%
4	<i>Z. Mauritiana</i>	Remaining seed	kg			3/4	1/2		
		Sown in nursery	kg			1/4		V	

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumpomda	No. 24 K. Chigumula	Total
Village Name									
No.	Species	Item	Unit						
	Masau	Direct sown	kg						
		Gerninated seed	%			99			
		Nursery seedling	number			588			5,114
		Seedling height	cm						
		Out-planting	number			220	40	6	4,692
		Planting place				Communal 12 Boundary 18 Fruit 190			92%
		Planted date				Dec. '02			
		Tree height	cm					20	
		Survival tree	number						
		Total survival tree				44	20	6	2,569
Survival rate	%			20%	50%	100%	55%		
5	<i>Eucalyptus</i>	Remaining seed	kg		3/4	–			
	<i>grandis</i>	Sown in nursery	kg	V			V		
	Bluegum	Direct sown	kg						
		Gerninated seed	%		90		98		
	<i>camadulensis</i>	Nursery seedling	number	120	440	1,200	50	2,500	36,842
	(No. 5, 17, 18, 23)	Seedling height	cm						
		Out-planting	number	120	440	1,200	50	1,900	33,416
		Planting place		Individual 60 Boundary 60	Individual 400 Communal 40	Communal 200 Boundary 1000	Communal 10 Bank 40	Communal 1200 Boundary 700	91%
		Planted date			Feb. '03	Feb.-Mar. '03	Apr. '03	Dec. '02	
		Tree height	cm						
		Survival tree	number			Communal 180 Boundary 385			
		Total survival tree		72	431	565	45	1,140	16,758
		Survival rate	%	60%	98%	Communal 90% Boundary 39%	90%	60%	50%
6	<i>Senna</i>	Remaining seed	kg						
	<i>siamea</i>	Sown in nursery	kg						
	Kesha wa	Direct sown	kg						
	milimo	Gerninated seed	%						
		Nursery seedling	number					3,520	
		Seedling height	cm						
		Out-planting	number					3,520	
		Planting place						100%	
		Planted date							
		Tree height	cm						
		Survival tree	number						
		Total survival tree						2,494	
		Survival rate	%					71%	
7	<i>Senna</i>	Remaining seed	kg		3/4	–	0.0		
	<i>spectabilis</i>	Sown in nursery	kg				V		
	Kesha wa	Direct sown	kg						
	maluwa	Gerninated seed	%						
		Nursery seedling	number	230	500		30	300	3,366
		Seedling height	cm						
		Out-planting	number	230	500		30	300	3,327
		Planting place		Communal 70 Boundary 70	Communal 500		Communal 10 Boundary 20	Boundary 100 Field 200	99%
		Planted date							
		Tree height	cm						
		Survival tree	number						
		Total survival tree		161	500		9	150	2,258
		Survival rate	%	70%	100%		30%	50%	68%
8	<i>Moringa</i>	Remaining seed	kg		3/4				
	<i>oleifera</i>	Sown in nursery	kg						
	Chamwamba	Direct sown	kg		V				
		Gerninated seed	%						
		Nursery seedling	number		100				1,777
		Seedling height	cm						

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumpomda	No. 24 K. Chigumula	Total
Village Name									
No.	Species	Item	Unit						
		Out-planting	number		100				1,777
									100%
		Planted date							
		Tree height	cm						
		Survival tree	number		100				
		Total survival tree			100				1,126
		Survival rate	%		100%				63%
9	<i>Caryaca</i>	Remaining seed	kg						
	<i>papaya</i>	Sown in nursery	kg			V		V	
	Paw-paw	Direct sown	kg						
		Gerninated seed	%						
		Nursery seedling	number		74	114	10	26	200
		Seedling height	cm						
		Out-planting	number		74	114	10	26	200
		Planting place			Homestead 55 Bank 19		Homestead		Homestead 120 Bank 80
		Planted date							100%
		Tree height	cm						Homestead 25 Bank 25
		Survival tree	number		Homestead 55 Bank 19				Homestead 120 Bank 80
		Total survival tree			74	103	4	26	200
		Survival rate	%		100%	95%	40%	90%	100%
10	<i>Albizzia</i>	Remaining seed	kg						
	<i>lebeck</i>	Sown in nursery	kg						
	Mtangtang	Direct sown	kg						
		Gerninated seed	%						
		Nursery seedling	number						1,200
		Seedling height	cm						
		Out-planting	number						1,200
		Planting place							100%
		Planted date							
		Tree height	cm						
		Survival tree	number						
		Total survival tree							60
		Survival rate	%						5%
11	<i>L. carpus</i>	Remaining seed	kg			1/4			
	<i>capassa</i>	Sown in nursery	kg	V		V			
	Mpakasa	Direct sown	kg						
		Gerninated seed	%						
		Nursery seedling	number			586			694
		Seedling height	cm						
		Out-planting	number	10		586			664
		Planting place							96%
		Planted date							
		Tree height	cm						
		Survival tree	number			220			
		Total survival tree		1		220			281
		Survival rate	%	10%		38%			42%
12	<i>Terminalia</i>	Remaining seed	kg						
	<i>sericea</i>	Sown in nursery	kg	V		V			
	Naphini	Direct sown	kg						
		Gerninated seed	%						
		Nursery seedling	number	17		630			995
		Seedling height	cm						
		Out-planting	number	17		200			565
		Planting place				180 Boundary 20			57%
		Planted date							
		Tree height	cm						
		Survival tree	number						
		Total survival tree		2		60			217
		Survival rate	%	10%		30%			38%
13	<i>Mangifera</i>	Remaining seed	kg						
	<i>indica</i>	Sown in nursery	kg						

Mid-term Evaluation Data (1)
Seed, Nursery, Out-Planting
June 2003

Village No.			No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumpomda	No. 24 K. Chigumula	Total
Village Name									
No.	Species	Item	Unit						
Mango	Direct sown	kg							
	Gerninated seed	%			100				
	Nursery seedling	number		85	450				549
	Seedling height	cm							
	Out-plnating	number		85	450				549
	Planting place				Individual 75 Field 10				100%
	Planted date								
	Tree height	cm							
	Survival tree	number			85				
	Total survival tree				85	405			502
Survival rate	%			100%	(90%)			91%	
14 <i>A. quanzesis</i>	Remaining seed	kg							
	Sown in nursery	kg							
Msambafuma	Direct sown	kg							
	Gerninated seed	%							
Ngongomwa	Nursery seedling	number	10						524
	Seedling height	cm							
	Out-planting	number	10						524
	Planting place								100%
	Planted date								
	Tree height	cm							
	Survival tree	number							
	Total survival tree		2						368
	Survival rate	%	20%						70%
	15 Others	Remaining seed	kg						
Sown in nursery		kg							
Direct sown		kg							
Gerninated seed		%							
Nursery seedling		number							786
Seedling height		cm							
Out-planting		number							782
Planting place									99%
Planted date									
Tree height		cm							
Survival tree	number								
Total survival tree								576	
Survival rate	%							74%	
								(Number)	
Total	Nursery seedling		1,327	10,382	12,818	8,910	7,026	4,609	234,566
Total	Out-planting		1,337	10,382	12,000	7,526	6,432	4,009	225,804
Total	Survival tree		828	7,678	3,105	4,034	4,382	2,950	129,017
Percent	Survival/Out-planting		61.9	74.0	25.9	53.6	68.1	73.6	

(%) 100.0
96.3
57.1

Mid-term Evaluation Data (2)

Committee

End of December, 2003

A. Nursery Committee

Name of Village		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8
Item		Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja	Manjero	Teula
A. Nursery Committee									
1	Established year	2000	1999	2000	2000	2000	2002	2000	2002
2	Number of member	10	20	12	11	10	20	10	10
1)	Number of female	7	11			5	11	4	4
2)	Number of male	3	9			5	9	6	6
3)	Members increase or decrease	same	increase	same	same	same	increase	same	same
4)	Number of above		10				10	2	4
	reason of above		vote		for other works	interested	other new nursery	other work	laziness
3	Composition of committee								
1)	Number of large-scale farmer								
2)	Number of medium-scale farmer			20%	10%				
3)	Number of small scale farmer	100%	100%	80%	90%	100%	all smalls	all smalls	all small
	reason of above			poverty levels	poverty levels		small land size	low input, low land size	small land size
4	Participant								
1)	Number of participant	30	40	73	30	25	83	45	38
2)	increase or decrease	increase	increase	stagnant	stagnant	decrease	increase	increase	increase
	reason of above	interest	good leadership	reluctant	chief changed	reluctant	more interest	-	-
5	Committee Meeting								
1)	What kinds of rules are established?								
1)	Election of member			No gossiping	everybody go once/week		vote	vote	late come/absentation not liked
2)	Responsibility of member			money for nursery	for absence		All must work equally	Input not used by him	Absents to be fined
3)	Responsibility of participant				no gossiping		come to work	come to work	Participant encouraged
4)	Decision making						consensus	consensus	consensus
5)	Penalty						Fine, Expulsion	fine	fine
6)	Dispute solution						Committee, Chief	Committee, Chief	Committee, Chief
7)									
8)									
9)									
2)	Frequency of meeting	once/week	once/week	twice/week	twice/week	once/week	4/month	once/month	2 time/m
3)	What are the meeting contents?						Work planning monitoring	Planning	condition Solving problems
6	Working hour per member per day or week?	3 hrs/day	1 hr/day/week	5 hrs/day	3 hrs/day/week	9hrs/day/week	3 hrs/day	3 hrs/day	4 hrs/day
7	What is the main works?			Solving problems	Sowing, Rehabilitation		Nursery preparation	Nursery establishment	Nursery establishment
				Working at nursery	Watering, Seedling		Nuresry tendering	Nursery management	Nursery management
				Matters arising	Weeding		Planting trees	Tree planting	Forest establishment
							Caring for trees	Tree tendering	Forest management
8	Active or not	active	active	active	active	not	active	active	active
9	Reason of above	-	-	-	interest, benefit	no interest	good work done	work continue	work continue

Mid-term Evaluation Data (2)

Committee

End of December, 2003

A. Nursery Committee

Name of Village		No. 9 Chakana	No. 10 Lemu	No. 11 Magombo Ngondo	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tambekenji	No. 15 Chilangali	No. 16 Daniel Mbedza
Item									
A. Nursery Committee									
1	Established year	2001	2001	2002	2000	2002	2002	2002	2002
2	Number of member	11	12	10	10	10	10	10	10
	1) Number of female				5	5	4	8	
	2) Number of male				5	5	6	2	
	3) Members increase or decrease	decrease	decrease	decrease	same	same	same	same	decrease
	4) Number of above	4	6	5	1	-		3	5
	reason of above	vote	vote	vote	to Blantyre	-		other work	by vote
3	Composition of committee								
	1) Number of large-scale farmer	100%	4%						
	2) Number of medium-scale farmer		25%	15%					
	3) Number of small scale farmer		41%	85%	all smalls	all small	all smalls	all smalls	all smalls
	reason of above		communal development	low poverty levels	small land size	low input use	low input use	low input low land size	Low input use
4	Participant								
	1) Number of participant	25	40	36	40	42	40	23	35
	2) increase or decrease	stagnant	decrease	increase	increase	increase	increase	decrease	decrease
	reason of above	poor leadership	not willing	inspired	more interest	interest	interest	Chief changed	Chief changed
5	Committee Meeting								
	1) What kinds of rules are establishe								
	1) Election of member	abent pay K10	To meet every Monday		vote	vote	vote	Absentees fined.	Absentees fined.
	2) Responsibility of member	same work volume	Member should pay K10		Set time for meeting	Keep time for work	Absentees cancelled.	equal work	Equal work
	3) Responsibility of participant		Any person is fee to join quit if not follow rules		Contribution fund				
	4) Decision making				consensus	consensus	consensus	consensus	consensus
	5) Penalty				Fine, Expulsion	Fine, Take to Chief	Fine	Fine	Fine, Take to Chief
	6) Dispute solution				Committee, Chief	Committee, Chief	Committee, Chief	Committee, Chief	Committee, Chief
	7)								
	8)								
	9)								
	2) Frequency of meeting	2 times/wk	twice/week	twice/week	4/month	once/month	Irregular meeting	once/month	4/month
	3) What are the meeting contents?		Solving problems	Matters arising	Planning Follow-up	Planning Monitor	Planning Monitoring	cordinating Monitoring	Planning Follow-up
6	Working hour per member per day or week?	4 hr/day	4 hrs/day	3 hrs/day	4 hrs	4 hrs	4 hrs/day	3 hrs	3 hrs/day
7	What is the main works?				Nursery establishment management fo nursery	Putting up nursery			Nursery preparation
			Seeding, Ploughing		Tending nursery	Tending nursery	Tending nursery	preparation	Nursery management
			Nursery soiling		Tree planting	Forest management	Forest management	caring	Forest establishment
			Grass cutting		Tree managemen	Forest establishment	Forest establishment	planting seedling	Forest management
			Poles					caring for tree	
8	Active or not	active	active	active	active	not active	active	a bit active	active
9	Reason of above	-	-	-	work continue	not showing interest	-	a little consious	work continue

Mid-term Evaluation Data (2)
Committee

End of December, 2003

A. Nursery Committee

Date: End of December, 2003

Name of Village		No. 17 Kamwendo	No. 18 Peter Bilila	No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumpomda	No. 24 K Chigumula
A. Nursery Committee									
1	Established year	2002	2002	2000	2002	2002	2002	2002	2002
2	Number of member	30	10	10	10	7 (10)	10	10	10
1)	Number of female		5	4	4	3	5	5	4
2)	Number of male		5	6	6	4	5	5	6
3)	Members increase or decrease	increase	same	Increase	same	same	-	-	Decrease (now 7)
4)	Number of above	15				3	-	-	7
	reason of above	other new nursery	cohesive	Find it useful	cohesive	- 2 married - 1 dropdown	-	-	Backsliding
3	Composition of committee								7
1)	Number of large-scale farmer	-	2	-			-	Nil	None
2)	Number of medium-scale farmer	-	3	-	30%		-	Nil	None
3)	Number of small scale farmer		5	10	70%	7	10	10	7
	reason of above	All villagers	resources dedication variance	All villagers		- Lack of agriculture advice	- Below poverty line	- Below poverty line	Rented gardens lack of interest lack of inputs
4	Participant								
1)	Number of participant	92	all	all	all	30	all	38	all
2)	increase or decrease	increase	increase	increase	increase				
	reason of above								
5	Committee Meeting								
1)	What kinds of rules are established								No rules
1)	Election of member	Those who don't participate	Absentees fined	- Fine those who cut trees	Frequent meetings	Imposed fine to late comers or absentees	Absentees are summoned	late comers fine 5.00	
2)	Responsibility of member	called by the chief	Early reporting	carelessly	Working twice/week	absentisees are summoned to	sat. and Wednesday	Absentisee 10.00	Twice monthly
3)	Responsibility of participant	- Can make money contributions	Shifting roles	form sexual relationships are removed	agards correcte	transplanting of trees from	Displine inforced	Absentisee surmoned	Work planning work reviews
4)	Decision making		Loose norms		Watering roaster	among the committee	Every villager to plant trees	Discipline inforced	
5)	Penalty	- paying money for defaulting		Plant trees every year				trees to everyone	
6)	Dispute solution								
7)									
8)									
9)									
2)	Frequency of meeting		Unspecified	Once/week	Twice monthly	Once a week	Twice a week	Twice a week	2hrs/day
3)	What are the meeting contents?	and encouraging comm.	Not applicable	Topical issues	Work plans	work and next programmes	nursery work and next programmes	work and next programme	Pot filling
6	Working hour per member per day or week?	4hrs/week	Unspecified	16/wk	6hrs/person/ week	8 hours/week	8 hours/week	4 hours/week	seed sowing/ pretreatment/ watering
7	What is the main works?	Constructing the nursery	Pot filling	Constructing nursery	Terrace making	Nursery establishment and management	Shed construction	Shed construction	
			Watering intervention not called for		Nicking		tillage/ploughing	seed sowing	
						installation and site management	Seed sowing	Watering seedlings	The committee promise to work harder
						Woodlot management	tube filling/ transplanting	tube filling	
							Watering management	Woodlot management	
							transplanting Field transplanting		
8	Active or not	active	active	active	active	not	active	not active	active
9	Reason of above	members are active	own work	-	-	do own work	hard working	too much work	-

Evaluation Data
Seed, Nuresery, Out-Planting (2nd phase)
June 2004

Village No.			No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13	
Village Name			Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja (a)	Chikoja (b)	Manjero	Teula	Chakana	Lemu	Magombo Ngondo	Kam'mata	Kumanda	
No.	Species	Item	Unit														
1	<i>Falderbia</i>	Remaining seed	kg														
	<i>albida</i>	Sown in nursery	number	0	900	500	3,000	1,500	800	300	800	260	0	0	500	2,090	1,000
	Msangu	Direct sown	kg														
		Gerninated seed	%			80%			96%	100%	100%	100%			100%	80%	
		Nursery seedling	number	0	0	400	3,000	367	770	300	800	260	0	0	500	2,090	800
		Seedling height	cm			5			30	28	30	20		5	50	27	
		Out-planting	number			400	3,000		770	300	800	260		300	2,090	800	
		Planting place				Garden			Field Woodlot	Woodlot Field	Woodlot Field	Woodlot Field		Field	Woodlot Field	Woodlot Field	
		Planted date				Feb. 04	Feb. 04		Jan. 04	Jan. 04	Jan. 04	Jan. 04		Feb. 04	Jan. 04	Dec. 03	
		Tree height	cm			30	60		32	30	50	100		15	60	33	
		Survival tree	number						Field-370 Woodlot-250	201	woodlot-50 Field-600	200		150	2,075	600	
		Total survival tree				50	600		620	201	650	200		150	2,075	600	
		Survival rate	%			10%	20%		81%	67%	81%	76%		50%	99%	75%	
2	<i>Azelia</i>	Remaining seed	kg														
	<i>quanzensis</i>	Sown in nursery	number	760	900	0	667	450	350	200	1,200	78	670	670	560	500	300
	Msambamfumu	Direct sown	kg														
	Ngongomwa	Gerninated seed	%	80%	100%		90%	90%	82%	50%	100%	100%	90%	90%	90%	100%	
		Nursery seedling	number	600	900	0	600	400	287	100	1,200	78	600	600	500	500	300
		Seedling height	cm	10	12		20	15	15	18	25	25	10	15	25	20	
		Out-planting	number	600	600		550	325	287	100	1,200	78	500	500	500	300	
		Planting place		Homestead Woodlot	Forest		Woodlot	Forest	Boundary Woodlot	Boundary Woodlot	Woodlot	Woodlot Homestead	Woodlot	Forest	Woodlot Field	Homestead Field	Woodlot
		Planted date		Feb. 04	Jan. 04		Jan. 04	Feb. 04	Jan. 04	Jan. 04	Jan. 04	Jan. 04	02 Feb. 04	Jan. 04	Jan. 04	Jan. 04	Dec. 03
		Tree height	cm	15	30		30	25	25	25	32	36	30	30	30	32	28
		Survival tree	number		420		480	240	Boundary-135 Woodlot-50	86	930	65	450	480	450	490	300
		Total survival tree		420	420		480	240	185	86	930	65	450	480	490	300	
		Survival rate	%	70%	70%		80%	74%	64%	86%	76%	83%	95%	96%	90%	98%	100%
3	<i>Bauhinia</i>	Remaining seed	kg		2kg												
	<i>thorningii</i>	Sown in nursery	number	0	100	0	0	300	1,200	500	0	81	0	0	0	0	100
	Chitimbe	Direct sown	kg														
		Gerninated seed	%							20%		100%				100%	
		Nursery seedling	number	0	100	0	0	200	100	100	0	81	0	0	0	0	100
		Seedling height	cm					8		22		20				20	
		Out-planting	number					55		100		81				100	
		Planting place						woodlot		Homestead		Homestead				Woodlot	
		Planted date						Feb. 04		Jan. 04		Jan. 04				Dec. 03	
		Tree height	cm					18		28		28				26	
		Survival tree	number							50		34				80	
		Total survival tree						44		50		34				80	
		Survival rate	%					80%		50%		42%				80%	
4	<i>Eucalyptus</i>	Remaining seed	kg														
	<i>camadulensis</i>	Sown in nursery	number	2,000	360	0	1,250	40	1,000	2,256	1,900	0	550	0	1,375	2,000	108
	Bulugama	Direct sown	kg														
		Gerninated seed	%		70%		40%		80%	100%	100%			40%	100%	100%	
		Nursery seedling	number	600	360	0	500	40	800	2,256	1,900	0	550	0	550	2,000	108
		Seedling height	cm	10	7		6		25	27	30			8	35	25	
		Out-planting	number	450	360		500		800	2,256	1,900		526		550	2,000	108
		Planting place		Woodlot Homestead	Forest Homestead		Homestead		Woodlot	Woodlot	Homestead Woodlot		Woodlot		Woodlot	Field Homestead Woodlot	Woodlot Boundary
		Planted date		Feb. 04	Feb. 04		Feb. 04		Jan. 04	Jan. 04	Jan. 04		Feb. 04		Feb. 04	Jan. 04	Dec. 03
		Tree height	cm	40	60		90		40	36	25		60		80	100	38
		Survival tree	number	405			450		600	1,708	1,045				440	1,750	108
		Total survival tree		405	300		450		600	1,708	1,045		526		440	1,750	108
		Survival rate	%	90%	80%		90%		86%	76%	55%		100%		80%	87%	100%
5	<i>Senna</i>	Remaining seed	kg														
	<i>spectabilis</i>	Sown in nursery	number	0	2,000	1,800	0	400	350		0	0	0	0	1,100	0	
	Kesha wa	Direct sown	kg														
	Maluwa	Gerninated seed	%			80%			86%								
		Nursery seedling	number	0	100	1,500	0	0	300		0	0	0	0	1,100	0	
		Seedling height	cm			13			18								
		Out-planting	number			1,500			300								
		Planting place				Boundary			Homestead								
		Planted date				Feb. 04			Feb. 04								
		Tree height	cm			30			21								
		Survival tree	number			1,200			150								
		Total survival tree				1,200			150								
		Survival rate	%			80%			50%								
6	<i>Senna</i>	Remaining seed	kg														
	<i>siamea</i>	Sown in nursery	number	0	2,500	200	0	670	600	600	0	0	2,500	2,500	1,690	2,500	100
	Kesha wa	Direct sown	kg														
	Milimo	Gerninated seed	%		80%			75%	99%	100%		60%	60%	80%	100%	80%	
		Nursery seedling	number	0	2,000	100	0	500	593	600	0	0	1,500	1,500	1,350	2,500	80
		Seedling height	cm		13			8	25	25		9	5	5	20	25	
		Out-planting	number		1,500			400	593	600		253	1,350	1,350	2,500	80	
		Planting place			Homestead Field Boundary			Homestead Boundary	Woodlot	Woodlot		Woodlot School	Homestead Field	Field woodlot	Woodlot Homestead	Woodlot Homestead	
		Planted date			Feb. 04			Jan. 04	Jan. 04	Jan. 04		Mar. 04	Feb. 04	Feb. 04	Jan. 04	Dec. 03	
		Tree height	cm		75			30	30	27		60	60	60	40	38	
		Survival tree	number		1,200			505	505	362					2,450	60	
		Total survival tree			1,200			360	505	362		76	950	1,080	2,450	60	
		Survival rate	%		80%			80%	85%	60%		30%	70%	80%	98%	75%	
7	<i>Melia</i>	Remaining seed	kg			2kg											
	<i>azedarach</i>	Sown in nursery	number	0	2,220	1,260	400	1,200	1,100		1,200	1,026	1,300	1,670	0	0	600
	Indya	Direct sown	kg														
		Gerninated seed	%		90%	95%	80%		99%		100%	100%		90%		67%	
		Nursery seedling	number	400	2,000	1,200	450	1,000	1,094		1,200	1,026	1,000	1,500	0	0	400
		Seedling height	cm		15	8	8		28		50	30		8		25	
		Out-planting	number		1,500	1,200	450		1,094		1,200	1,026		1,300		400	

Evaluation Data
Seed, Nursery, Out-Planting (2nd phase)
June 2004

Village No.				No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13
Village Name				Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja (a)	Chikoja (b)	Manjero	Teula	Chakana	Lemu	Magombo Ngondo	Kamimata	Kumanda
No.	Species	Item	Unit														
		Planting place			Homestead Garden	Field Homestead	Homestead		Woodlot		Woodlot	Woodlot Field		Garden Church School			Woodlot
		Planted date			Feb. 04	Feb. 04	Jan. 04		Jan. 04		Jan. 04	Jan. 04		Jan. 04			Dec. 03
		Tree height	cm		75	75	30		40		80	40		75			34
		Survival tree	number			960	400		590		1,200	950					240
		Total survival tree			1,350	960	400		590		1,200	950		1,170			240
		Survival rate	%		90%	80%	89%		54%		100%	92%		90%			60%
8	<i>Khaya</i>	Remaining seed	kg														
	<i>anthothea</i>	Sown in nursery	number	0	500	0	100	500	200	1,000	400	0	600	1,075	100	430	100
	Mbawa	Direct sown	kg														
		Gerninated seed	%						80%	10%				20%		100%	
		Nursery seedling	number	0	100	0	50	500	160	100	200	15	0	215	20	430	0
		Seedling height	cm					10	20	20	15			25		25	
		Out-planting	number					200	160	100	200			215		430	
		Planting place						woodlot	Homestead Field	Field Homestead	Homestead Woodlot			Rive bank Field		Boundary	
		Planted date						Feb. 04	Jan. 04	Jan. 04	Jan. 04			Feb. 04		Jan. 04	
		Tree height	cm					15	25	20	30			20		30	
		Survival tree	number					50	Field-50 Home-54	30	160			60		420	
		Total survival tree						50	104	30	160			60		420	
		Survival rate	%					25%	65%	30%	80%			28%		97%	
9	<i>Terminalia sericea</i>	Remaining seed	kg														
		Sown in nursery	number	0	0	0	0	0	0		225	0	0	0	0	0	300
	Napini	Direct sown	kg														
		Gerninated seed	%														100%
		Nursery seedling	number	0	0	0	0	0	0		225	0	0	0	0	0	300
		Seedling height	cm														10
		Out-planting	number														300
		Planting place															Woodlot
		Planted date															Dec. 03
		Tree height	cm														13
		Survival tree	number														240
		Total survival tree															240
		Survival rate	%														80%
10	<i>Giricidia sepium</i>	Remaining seed	kg														
		Sown in nursery	number	1,625	1,750	1,390	1,000	1,375	2,500	800	2,600	470	100	1,875	3,300	4,130	3,130
	Giricidia	Direct sown	kg														
		Gerninated seed	%	80%	80%	90%		80%	68%	56%	100%	90%		80%	90%	100%	83%
		Nursery seedling	number	1,300	1,400	1,250	1,000	1,100	1,702	450	2,600	425	0	1,500	3,000	4,130	2,600
		Seedling height	cm	10	13	10		5	50	45	50	25		40	50	30	
		Out-planting	number	141	1,200	1,200		1,000	1,702	450	2,600	424		1,429	2,800	4,130	2,500
		Planting place		Garden	Field	Garden		garden	Garden Field	Field Garden	Field	Woodlot Field		field	field	Field Garden	Field Garden
		Planted date		Mar. 04	Jan. 04	Feb. 04		Feb. 04	Jan. 04	Jan. 04	Jan. 04	Jan. 04		Jan. 04	Dec. 03	Jan. 04	Dec. 03
		Tree height	cm	20	40	45		60	120	100	100	45		60	30	80	56
		Survival tree	number	141					1,500	380	2,597	280			2,660	4,100	2,100
		Total survival tree		141	1,000	1,080		900	1,500	380	2,597	280		1,000	2,527	4,100	2,100
		Survival rate	%	100%	80%	90%		90%	88%	84%	99%	66%		70%	95%	99%	84%
11	<i>Tephrosia vogelii</i>	Remaining seed	kg														
		Sown in nursery	number	0	0	0	0	0	0		0	0	0	0	0	0	0
	Mthuthu	Direct sown	kg														
		Gerninated seed	%														
		Nursery seedling	number	0	0	0	0	0	0		0	0	0	0	0	0	0
		Seedling height	cm														
		Out-planting	number														
		Planting place															
		Planted date															
		Tree height	cm														
		Survival tree	number														
		Total survival tree															
		Survival rate	%														
12	<i>s capassa</i>	Remaining seed	kg														
		Sown in nursery	number	400	500	0	0	500	200		0	0	0	300	700	0	0
	Mpakasa	Direct sown	kg														
		Gerninated seed	%														
		Nursery seedling	number	0	100	0	0	400	200		0	0	0	25	500	0	0
		Seedling height	cm														
		Out-planting	number														
		Planting place															
		Planted date															
		Tree height	cm														
		Survival tree	number														
		Total survival tree															
		Survival rate	%														
13	<i>Moringa oleifera</i>	Remaining seed	kg														
		Sown in nursery	number	0	0	0	0	0	0		0	0	0	0	100	0	0
	Chamwamba	Direct sown	kg														
		Gerninated seed	%														
		Nursery seedling	number	0	0	0	0	0	0		0	0	0	0	30	0	0
		Seedling height	cm														
		Out-planting	number														
		Planting place															
		Planted date															
		Tree height	cm														
		Survival tree	number														
		Total survival tree															
		Survival rate	%														
14	<i>Ziziphus mauritiana</i>	Remaining seed	kg			5kg	3kg		3kg					2			
		Sown in nursery	number	100	1,750	1,670	1,000	0	150	400	0	320	0	1,250	0	300	125

Evaluation Data
Seed, Nuresery, Out-Planting (2nd phase)
June 2004

Village No.			No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13
Village Name			Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja (a)	Chikoja (b)	Manjero	Teula	Chakana	Lemu	Magombo Ngondo	Kam'mata	Kumanda
No.	Species	Item	Unit													
	Masawo	Direct sown	kg													
		Gerninated seed	%		80%	30%	50%	71%	25%		77%		80%		100%	100%
		Nursery seedling	number	50	1,500	500	500	107	100	0	176	0	1,000	0	300	125
		Seedling height	cm		17	8	8	25	25		50		15		30	25
		Out-planting	number		1,000	500	500	107	100		176		1,000		300	125
		Planting place			Field	Homestead Garden	Garden	Homestead Field	Homestead Field		Homestead		Homestead		Homestead	Homestead
		Planted date			Feb. 04	Feb. 04	Jan. 04	Jan. 04	Jan. 04		Jan. 04		Jan. 04		Jan. 04	Dec. 03
		Tree height	cm		25	60	60	28	27		150		50		70	30
		Survival tree	number			400	400	81	75		170				290	125
		Total survival tree			800	400	400	81	75		170		750		290	125
		Survival rate	%		80%	80%	80%	77%	75%		97%		75%		97%	100%
15	<i>Albizia lebeck</i>	Remaining seed	kg													
	Mtangantanga	Sown in nursery	number	0	0	0	0	0	0	200	300	0	0	0	200	255
		Direct sown	kg													
		Gerninated seed	%													
		Nursery seedling	number	0	0	0	0	0	0	180	120	0	0	0	112	50
		Seedling height	cm													
		Out-planting	number													
		Planting place														
		Planted date														
		Tree height	cm													
		Survival tree	number													
		Total survival tree														
		Survival rate	%													
16	<i>Uapaca kirkiana</i>	Remaining seed	kg													
	Mexhican apple	Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	100	100
		Direct sown	kg													
		Gerninated seed	%													
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	100	100
		Seedling height	cm													
		Out-planting	number													
		Planting place														
		Planted date														
		Tree height	cm													
		Survival tree	number													
		Total survival tree														
		Survival rate	%													
17	<i>Accacia zim</i>	Remaining seed	kg													
	Lunguzi	Sown in nursery	number	0	0	0	0	0	650	3	0	0	0	0	0	25
		Direct sown	kg													
		Gerninated seed	%													
		Nursery seedling	number	0	0	0	0	0	650	3	0	0	0	0	0	25
		Seedling height	cm													
		Out-planting	number													
		Planting place														
		Planted date														
		Tree height	cm													
		Survival tree	number													
		Total survival tree														
		Survival rate	%													
18	<i>Caryaca papaya</i>	Remaining seed	kg													
	Paw-paw	Sown in nursery	number	0	0	225	0	0	0	0	0	0	0	0	0	0
		Direct sown	kg													
		Gerninated seed	%			90%										
		Nursery seedling	number	0	0	200	0	0	0	0	0	0	0	0	0	0
		Seedling height	cm			10										
		Out-planting	number			200										
		Planting place				Homestead Garden										
		Planted date				Feb. 04										
		Tree height	cm			45										
		Survival tree	number			120										
		Total survival tree				120										
		Survival rate	%			75%										
19	<i>Ziziphus mucronata</i>	Remaining seed	kg													
	Khankhanda	Sown in nursery	number	0	0	0	0	0	0	150	0	0	0	0	0	0
		Direct sown	kg													
		Gerninated seed	%													
		Nursery seedling	number	0	0	0	0	0	0	150	0	0	0	0	0	0
		Seedling height	cm													
		Out-planting	number													
		Planting place														
		Planted date														
		Tree height	cm													
		Survival tree	number													
		Total survival tree														
		Survival rate	%													
20		Remaining seed	kg													
	Jacaranda	Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	0	0
		Direct sown	kg													

Evaluation Data
Seed, Nursery, Out-Planting (2nd phase)
June 2004

Village No.		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13
Village Name		Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja (a)	Chikoja (b)	Manjero	Teula	Chakana	Lemu	Magombo Ngondo	Kam'mata	Kumanda
No.	Species	Item	Unit												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	0
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree													
		Survival rate	%												
21	<i>Annona</i>	Remaining seed	kg												
	<i>senegalensis</i>	Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	100
	Mpoza	Direct sown	kg												
		Gerninated seed	%												95%
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	95
		Seedling height	cm												25
		Out-planting	number												95
		Planting place													
		Planted date													Homestead Dec. 03
		Tree height	cm												45
		Survival tree	number												80
		Total survival tree													80
		Survival rate	%												84%
22		Remaining seed	kg												
		Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	0
	Mphando	Direct sown	kg												
		Gerninated seed	%							90%					
		Nursery seedling	number	0	0	0	0	0	0	102	0	0	0	0	0
		Seedling height	cm							35					
		Out-planting	number							102					
		Planting place								Woodlot Homestead					
		Planted date								Jan. 04					
		Tree height	cm							50					
		Survival tree	number							52					
		Total survival tree								52					
		Survival rate	%							51%					
23		Remaining seed	kg												
		Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	120
	Nkunkhu	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	90
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree													
		Survival rate	%												
24	<i>Lueaucaena</i>	Remaining seed	kg												
	<i>leucocephalis</i>	Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	0
	Lukina	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	0
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree													
		Survival rate	%												
25	<i>Accacia</i>	Remaining seed	kg				2kg								
	<i>polyacantha</i>	Sown in nursery	number	0	600	0	0	0	287	596	0	0	0	0	600
	Mthethe	Direct sown	kg												
		Gerninated seed	%												100%
		Nursery seedling	number	0	200	0	0	0	287	596	0	0	0	0	600
		Seedling height	cm												30
		Out-planting	number												600
		Planting place													
		Planted date						Woodlot Jan. 04							Woodlot Dec. 04
		Tree height	cm					30							56
		Survival tree	number					100							360
		Total survival tree						100							360
		Survival rate	%					36%							60%
26	<i>Accacia</i>	Remaining seed	kg												
	<i>galpini</i>	Sown in nursery	number	0	0	0	0	200	350	0	0	0	0	0	0
	Nkunkhu	Direct sown	kg												
		Gerninated seed	%												

Evaluation Data
Seed, Nursery, Out-Planting (2nd phase)
June 2004

Village No.				No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13
Village Name				Makonokaya	Siyandima	Kaumbata	Mdala	Nanjiwa	Chikoja (a)	Chikoja (b)	Manjero	Teula	Chakana	Lemu	Magombo Ngondo	Kamimata	Kumanda
No.	Species	Item	Unit														
		Nursery seedling	number	0	0	0	0	0	200		350	0	0	0	0	0	0
		Seedling height	cm														
		Out-planting	number														
		Planting place															
		Planted date															
		Tree height	cm														
		Survival tree	number														
		Total survival tree															
		Survival rate	%														
27	<i>Acacia sieberiana</i>	Remaining seed	kg														
		Sown in nursery	number	0	0	0	0	0	0		0	0	0	0	0	0	0
	Minganzono	Direct sown	kg														
		Gerninated seed	%														
		Nursery seedling	number	0	0	0	0	0	0		0	0	0	0	0	0	0
		Seedling height	cm														
		Out-planting	number														
		Planting place															
		Planted date															
		Tree height	cm														
		Survival tree	number														
		Total survival tree															
		Survival rate	%														
28		Remaining seed	kg														
	Msolo	Sown in nursery	number	0	0	0	0	123	0		160	150	0	10	0	86	41
		Direct sown	kg														
		Gerninated seed	%														
		Nursery seedling	number	0	0	0	0	123	0		160	150	0	10	0	86	41
		Seedling height	cm														
		Out-planting	number														
		Planting place															
		Planted date															
		Tree height	cm														
		Survival tree	number														
		Total survival tree															
		Survival rate	%														
29	Others	Remaining seed	kg						(Lunguzi)								(Masuku)
		Sown in nursery	number	1,900	0	0	250	0	750		0	0	0	0	0	0	125
		Direct sown	kg														
		Gerninated seed	%						93%								100%
		Nursery seedling	number	1,350	665	580	100	490	700		0	0	0	50	0	0	125
		Seedling height	cm						20								25
		Out-planting	number						700								125
		Planting place							Field Garden Woodlot								Homestead
		Planted date							Jan. 04								Dec. 03
		Tree height	cm						30								38
		Survival tree	number						470								120
		Total survival tree							470								120
		Survival rate	%						67%								96%
Total	Nursery seedling			4,300	9,425	5,730	6,200	5,120	7,943	4,006	9,255	3,029	3,650	6,400	6,450	13,348	5,939
Total	Out-planting			1,191	6,160	5,000	5,000	1,980	6,793	4,006	7,900	2,147	1,279	5,794	5,500	11,950	5,533
Total	Survival tree			966	5,070	3,810	2,330	1,594	4,905	2,892	6,582	1,751	1,052	4,410	4,647	11,575	4,413
Percent	Survival/Out-planting			81.1	82.3	76.2	46.6	80.5	72.2	72.2	83.3	81.6	82.3	76.1	84.5	96.9	79.8

Evaluation Data
Seed, Nursery, Out-Planting (2nd phase)
June 2004

Village No.			No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24	Total
Village Name			Tambekerji	Chilangali	Daniel Mbedza	Kamwendo	Peter Bilila	Ndemanje	Simon Mpombe	Kateya	Maluwa	Kumpomda	K. Chigumula	
No.	Species	Item	Unit											
1	<i>Faltherbia</i>	Remaining seed	kg											
	<i>albida</i>	Sown in nursery	number	20	850	1,005	953	400	600	400	0	0	1,600	200
	Msangu	Direct sown	kg											
		Gerninated seed	%	80%	97%	75%								
		Nursery seedling	number	16	822	754	953	290	600	300	222	0	170	158
		Seedling height	cm	19	15	30								
		Out-planting	number	16	822	754	74	210	0	165	54		130	158
		Planting place		Field Woodlot	Woodlot	Field	Garden	Garden		Garden	Garden		Garden	Garden
		Planted date		Jan. 04	Jan. 04	Feb. 04								
		Tree height	cm	28	23	25								
		Survival tree	number	16	800	360								
		Total survival tree		16	800	360	4	105		83	5		65	137
		Survival rate	%	100%	97%	48%	5%	50%		50%	10%		50%	87%
2	<i>Azelia</i>	Remaining seed	kg											
	<i>quanzensis</i>	Sown in nursery	number	500	500	550	280	200	200	400	600	400	600	500
	Msambamfumu	Direct sown	kg											
	Ngongomwa	Gerninated seed	%	100%		87%								
		Nursery seedling	number	500	500	480	280	164	200	300	600	200	400	421
		Seedling height	cm	15		10								
		Out-planting	number	500		480	74	164	0	300	167	200	400	421
		Planting place		Woodlot		Boundary Homestead		Homestead		Homestead		Homestead Forest		Homestead
		Planted date		Jan. 04		Feb. 04								
		Tree height	cm	20		18								
		Survival tree	number	450		196								
		Total survival tree		450		196	74	100		180	100	190	320	400
		Survival rate	%	90%		41%	100%	61%		60%	60%	95%	80%	95%
3	<i>Bauhinia</i>	Remaining seed	kg											
	<i>thorningii</i>	Sown in nursery	number	100	0	0	0	0	0	0	0	200	0	0
	Chitimbe	Direct sown	kg											
		Gerninated seed	%	22%										
		Nursery seedling	number	22	0	0	0	0	0	0	0	200	0	0
		Seedling height	cm	20										
		Out-planting	number	22										
		Planting place		woodlot										
		Planted date		Jan. 04										
		Tree height	cm	55										
		Survival tree	number	15										
		Total survival tree		15										
		Survival rate	%	68%										
4	<i>Eucalyptus</i>	Remaining seed	kg											
	<i>camadulensis</i>	Sown in nursery	number	800	90	100	1,416	2,264	0	0	1,400	300	0	0
	Bulugama	Direct sown	kg											
		Gerninated seed	%	100%		53%								
		Nursery seedling	number	800	90	53	1,416	2,264	0	0	1,400	300	0	0
		Seedling height	cm	30		30								
		Out-planting	number	800		53	1,416	1,162						
		Planting place		Woodlot		Boundary	Woodlot	Woodlot						
		Planted date		Jan. 04		Feb. 04								
		Tree height	cm	89		71								
		Survival tree	number	700		53								
		Total survival tree		700		53	991	1,046						
		Survival rate	%	90%		100%	70%	90%						
5	<i>Senna</i>	Remaining seed	kg											
	<i>spectabilis</i>	Sown in nursery	number	0	200	0	0	0	0	0	0	0	250	
	Kesha wa Maluwa	Direct sown	kg											
		Gerninated seed	%											
		Nursery seedling	number	0	50	0	0	0	0	0	0	0	250	
		Seedling height	cm											
		Out-planting	number											
		Planting place												
		Planted date												
		Tree height	cm											
		Survival tree	number											
		Total survival tree												
		Survival rate	%											
6	<i>Senna</i>	Remaining seed	kg											
	<i>siamea</i>	Sown in nursery	number	2,890	4,775	2,490	600	200	0	450	200	0	0	300
	Kesha wa Milimo	Direct sown	kg											
		Gerninated seed	%	90%	80%	37%								
		Nursery seedling	number	2,600	3,820	921	510	121	0	450	200	0	0	145
		Seedling height	cm	20	18	25								
		Out-planting	number	2,600	3,820	921		121		450				145
		Planting place		Woodlot	Woodlot	Boundary Woodlot								
		Planted date		Jan. 04	Jan. 04	Feb. 04								
		Tree height	cm	55	32	60								
		Survival tree	number	1,560	3,525	798								
		Total survival tree		1,560	3,525	798		121		113				141
		Survival rate	%	60%	92%	87%		100%		25%				97%
7	<i>Melia</i>	Remaining seed	kg											
	<i>azedarach</i>	Sown in nursery	number	860	1,502	600	2,000	200	0	400	0	600	0	500
	Indya	Direct sown	kg											
		Gerninated seed	%	87%	100%	82%								
		Nursery seedling	number	750	1,502	492	1,600	114	0	400	0	400	0	500
		Seedling height	cm	15	20	25								
		Out-planting	number	750	1,502	492		114		400		300		349

Evaluation Data
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Village No.				No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24	Total
Village Name				Tambekerji	Chilangali	Daniel Mbedza	Kamwendo	Peter Bilila	Ndemanje	Simon Mpombe	Kateya	Maluwa	Kumpomda	K. Chigumula	
No.	Species	Item	Unit												
		Planting place		Boundary Woodlot	Woodlot Field	Boundary Woodlot		Homestead		Woodlot Homestead		Homestead		Homestead Boundary	71%
		Planted date		Jan. 04	Jan. 04	Feb. 04									
		Tree height	cm	20	35	56									
		Survival tree	number	600	1,320	215									
		Total survival tree		600	1,320	215		80		400		300		349	10,124
		Survival rate	%	80%	88%	44%		70%		100%		100%		100%	84%
8	<i>Khaya</i>	Remaining seed	kg												
	<i>anthotheca</i>	Sown in nursery	number	300	186	200	1,000	320	0	200	1,000	400	400	600	9,611
	Mbawa	Direct sown	kg												
		Gerninated seed	%	67%	100%	85%									
		Nursery seedling	number	200	186	169	940	320	0	200	1,000	400	400	600	6,205
		Seedling height	cm	18	20	15									
		Out-planting	number	200	186	169	12				103		100		2,075
		Planting place		Woodlot Homestead	Homestead Woodlot	River bank Boundary Homestead	Homestead								
		Planted date		Jan. 04	Jan. 04	Feb. 04									33%
		Tree height	cm	32	30	22									
		Survival tree	number	160	102	118									
		Total survival tree		160	102	118	12			57			70		1,343
		Survival rate	%	80%	55%	68%	100%			55%			70%		65%
9	<i>Terminalia sericea</i>	Remaining seed	kg												
		Sown in nursery	number	0	150	0	400	200	0	400	0	0	0	250	1,925
	Napini	Direct sown	kg												
		Gerninated seed	%		55%										
		Nursery seedling	number	0	83	0	390	200	0	400	0	0	0	250	1,848
		Seedling height	cm		16										
		Out-planting	number		83										383
		Planting place			Woodlot										21%
		Planted date			Jan. 04										
		Tree height	cm		28										
		Survival tree	number		50										
		Total survival tree			50										290
		Survival rate	%		60%										76%
10	<i>Gliricidia sepium</i>	Remaining seed	kg												
		Sown in nursery	number	2,000	2,326	2,500	3,918	1,442	4,800	2,500	859	600	75	0	47,065
	Gliricidia	Direct sown	kg						2,200						
		Gerninated seed	%	86%	100%	68%									
		Nursery seedling	number	1,710	2,326	1,704	3,918	1,442	4,800	2,500	859	600	75	2,439	44,830
		Seedling height	cm	30	30	30									
		Out-planting	number	1,710	2,326	1,704	3,683	1,442	7,000	1,373	341	600		2,439	42,194
		Planting place		Field	Field	Field	Garden	Garden			Garden	Garden	Garden	Garden	94%
		Planted date		Jan. 04	Jan. 04	Feb. 04									
		Tree height	cm	90	60	150									
		Survival tree	number	1,197	2,300	1,531									
		Total survival tree		1,197	2,300	1,531	3,315	1,442	7,000	1,304	239	552	45	2,439	38,969
		Survival rate	%	70%	98%	90%	90%	100%	100%	95%	70%	92%	60%	100%	92%
11	<i>Tephrosia vogelii</i>	Remaining seed	kg												
		Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	0
	Mthuthu	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	0
		Seedling height	cm												
		Out-planting	number												0
		Planting place													#DIV/0!
		Planted date													
		Tree height	cm												
		Survival tree	number												0
		Total survival tree													0
		Survival rate	%												#DIV/0!
12	<i>s capassa</i>	Remaining seed	kg												
		Sown in nursery	number	0	0	0	0	0	0	0	0	0	0	0	2,600
	Mpakasa	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	1,225
		Seedling height	cm												
		Out-planting	number												0
		Planting place													0%
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree													0
		Survival rate	%												#DIV/0!
13	<i>Moringa oleifera</i>	Remaining seed	kg												
		Sown in nursery	number	0	0	0	800	400	0	50	600	10	400	600	2,960
	Chamwamba	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	720	143	0	50	600	10	400	186	2,139
		Seedling height	cm							50		10			
		Out-planting	number				387	143						186	716
		Planting place						Homestead		Homestead		Homestead		Homestead	33%
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree					194	90		40		8		130	462
		Survival rate	%				50%	63%		80%		80%		70%	65%
14	<i>Ziziphus mauritiana</i>	Remaining seed	kg												
		Sown in nursery	number	0	0	0	800	200	200	0	0	200	400	300	9,165

Evaluation Data
Seed, Nuresery, Out-Planting (2nd phase)
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Village No.			No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24	Total	
Village Name			Tambekerji	Chilangali	Daniel Mbedza	Kamwendo	Peter Bilila	Ndemanje	Simon Mpombe	Kateya	Maluwa	Kumpomda	K. Chigumula		
No.	Species	Item	Unit												
	Masawo	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	38	740	200	200	0	0	200	400	300	6,436
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date	Homestead Feb. 04												
		Tree height	cm												
		Survival tree	number												
		Total survival tree											3,129		
		Survival rate	%												81%
15	<i>Albizia lebeck</i>	Remaining seed	kg												
		Sown in nursery	number	790	0	0	0	0	0	0	400	0	0	2,145	
	Mtangantanga	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	140	0	0	0	0	0	0	400	0	0	1,002	
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree											0		
		Survival rate	%												#DIV/0!
16	<i>Uapaca kirkiana</i>	Remaining seed	kg												
		Sown in nursery	number	200	0	0	150	0	0	0	0	0	0	550	
	Mexhican apple	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	200	0	0	150	0	0	0	0	0	0	550	
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree											0		
		Survival rate	%												#DIV/0!
17	<i>Accacia zim</i>	Remaining seed	kg												
		Sown in nursery	number	72	0	0	0	0	0	0	0	0	0	750	
	Lunguzi	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	72	0	0	0	0	0	0	0	0	0	750	
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree											0		
		Survival rate	%												#DIV/0!
18	<i>Caryaca papaya</i>	Remaining seed	kg												
		Sown in nursery	number	0	14	0	0	0	0	0	0	0	0	239	
	Paw-paw	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	14	0	0	0	0	0	0	0	0	214	
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree											120		
		Survival rate	%												60%
19	<i>Ziziphus mucronata</i>	Remaining seed	kg												
		Sown in nursery	number	200	0	0	0	0	200	0	0	400	0	950	
	Khankhanda	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	200	0	0	0	0	200	0	0	400	0	950	
		Seedling height	cm												
		Out-planting	number												
		Planting place													
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree											0		
		Survival rate	%												#DIV/0!
20		Remaining seed	kg												
		Sown in nursery	number	0	0	0	0	0	400	0	0	0	0	400	
	Jacaranda	Direct sown	kg												

Evaluation Data
Seed, Nuresery, Out-Planting (2nd phase)
June 2004

Village No.		No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24	Total
Village Name		Tambekerji	Chilangali	Daniel Mbedza	Kamwendo	Peter Bilila	Ndemanje	Simon Mpombe	Kateya	Maluwa	Kumpomda	K. Chigumula	
No.	Species	Item	Unit										
		Gerninated seed	%										
		Nursery seedling	number	0	0	0	0	400	0	0	0	0	400
		Seedling height	cm										
		Out-planting	number										0
		Planting place											0%
		Planted date											
		Tree height	cm										
		Survival tree	number										
		Total survival tree											0
		Survival rate	%										#DIV/0!
21	<i>Annona senegalensis</i>	Remaining seed	kg										
		Sown in nursery	number	0	0	0	0	0	0	0	50	0	150
	Mpoza	Direct sown	kg										
		Gerninated seed	%										
		Nursery seedling	number	0	0	0	0	0	0	0	50	0	145
		Seedling height	cm										
		Out-planting	number										95
		Planting place											66%
		Planted date											
		Tree height	cm										
		Survival tree	number										
		Total survival tree											80
		Survival rate	%										84%
22		Remaining seed	kg										
		Sown in nursery	number	0	0	0	200	0	0	600	0	200	1,000
	Mphando	Direct sown	kg										
		Gerninated seed	%										
		Nursery seedling	number	0	0	0	200	0	0	600	0	200	1,102
		Seedling height	cm										
		Out-planting	number				195						297
		Planting place											27%
		Planted date											
		Tree height	cm										
		Survival tree	number										
		Total survival tree					98						150
		Survival rate	%				50%						51%
23		Remaining seed	kg										
		Sown in nursery	number	0	0	0	400	400	0	0	0	0	920
	Nkunkhu	Direct sown	kg										
		Gerninated seed	%										
		Nursery seedling	number	0	0	0	400	340	0	0	0	0	830
		Seedling height	cm										
		Out-planting	number										0
		Planting place											0%
		Planted date											
		Tree height	cm										
		Survival tree	number										
		Total survival tree											0
		Survival rate	%										#DIV/0!
24	<i>Lueaucaena leucocephalis</i>	Remaining seed	kg										
		Sown in nursery	number	0	0	0	0	0	0	500	0	0	500
	Lukina	Direct sown	kg										
		Gerninated seed	%										
		Nursery seedling	number	0	0	0	0	0	0	500	0	0	500
		Seedling height	cm										
		Out-planting	number										0
		Planting place											0%
		Planted date											
		Tree height	cm										
		Survival tree	number										
		Total survival tree											0
		Survival rate	%										#DIV/0!
25	<i>Accacia polyacantha</i>	Remaining seed	kg										
		Sown in nursery	number	118	650	17	0	0	0	0	0	0	2,868
	Mthethe	Direct sown	kg										
		Gerninated seed	%										
		Nursery seedling	number	118	650	17	0	0	0	0	0	0	2,748
		Seedling height	cm										
		Out-planting	number										880
		Planting place											32%
		Planted date											
		Tree height	cm										
		Survival tree	number										
		Total survival tree											460
		Survival rate	%										52%
26	<i>Accacia galpini</i>	Remaining seed	kg										
		Sown in nursery	number	0	0	0	0	0	0	0	0	0	550
	Nkunkhu	Direct sown	kg										
		Gerninated seed	%										

Evaluation Data
Seed, Nursery, Out-Planting (2nd phase)
June 2004

Village No.				No. 14	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24	Total
Village Name				Tambekerji	Chilangali	Daniel Mbedza	Kamwendo	Peter Bilila	Ndemanje	Simon Mpombe	Kateya	Maluwa	Kumpomda	K. Chigumula	
No.	Species	Item	Unit												
		Nursery seedling	number	0	0	0	0	0	0	0	0	0	0	0	550
		Seedling height	cm												
		Out-planting	number												0
		Planting place													0%
		Planted date													
		Tree height	cm												
		Survival tree	number												0
		Total survival tree													0
		Survival rate	%												#DIV/0!
27	<i>Acacia sieberiana</i>	Remaining seed	kg												
		Sown in nursery	number	250	0	0	0	0	0	0	0	0	0	0	250
		Direct sown	kg												
	Minganzono	Gerninated seed	%												
		Nursery seedling	number	250	0	0	0	0	0	0	0	0	0	0	250
		Seedling height	cm												
		Out-planting	number												0
		Planting place													0%
		Planted date													
		Tree height	cm												
		Survival tree	number												0
		Total survival tree													0
		Survival rate	%												#DIV/0!
28		Remaining seed	kg												
		Sown in nursery	number	74	170	0	0	0	0	0	0	0	0	0	814
	Msolo	Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	74	170	0	0	0	0	0	0	0	0	0	814
		Seedling height	cm												
		Out-planting	number												0
		Planting place													0%
		Planted date													
		Tree height	cm												
		Survival tree	number												0
		Total survival tree													0
		Survival rate	%												#DIV/0!
29	Others	Remaining seed	kg												
		Sown in nursery	number	0	0	0	200	400	0	500	0	0	0	0	4,125
		Direct sown	kg												
		Gerninated seed	%												
		Nursery seedling	number	0	0	0	200	0	0	500	0	0	0	0	4,760
		Seedling height	cm												
		Out-planting	number												782
		Planting place													16%
		Planted date													
		Tree height	cm												
		Survival tree	number												
		Total survival tree													576
		Survival rate	%												74%
															(Number)
	Total	Nursery seedling		7,652	10,213	4,628	12,417	5,598	6,000	6,100	5,381	2,910	2,295	5,249	159,238
	Total	Out-planting		6,598	8,739	4,611	5,841	3,356	7,000	2,688	665	1,100	630	3,698	115,116
	Total	Survival tree		4,698	8,097	3,309	4,688	2,984	7,000	2,120	401	1,050	500	3,596	94,426
	Percent	Survival/Out-planting		71.2	92.7	71.8	80.3	88.9	100.0	78.9	60.3	95.5	79.4	97.2	82.0

(%)
100.0
72.3
82.0

Evaluation Data

Committee

A. Nursery Committee

Item	Name of Village	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 6	No. 7	No. 8	No. 9
		Makonokaya	Siyamdima	Kaumbata	Mdala	Nanjiwa	Chikoja(a)	Chikoja (b)	Manjelo	Teula	Chakana
A. Name of Committee											
1	Established year	2002	2000	2000	2000	2000	2002	2003	2002	2002	2002
2	Present Number of member	10	10	41	15	6	10	10	10	10	10
1)	Number of female	7	5	20	10	3	5	7	4	4	5
2)	Number of male	3	5	23	5	3	5	3	6	6	5
3)	Members increase or decrease	Decrease	Increase	Decrease	Decrease	Decrease	Constant	Constant	Constant	Constant	Decrease
4)	Number of above	Leadership		Employed							
	reason of above	No coordination	Profitable		Poor leadership		Good coordination	Good coordination	Good coordination	Good coordination	See no profit in trees
3	Composition of committee										
1)	Number of large-scale farmer	0	0	0	0	0	0	0	0	0	0
2)	Number of medium-scale farmer	0%	0	0	0	0%	0	0	0	0	0%
3)	Number of small scale farmer	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	reason of above	Poverty	Low levels of income	Low levels of income	Low income levels	Low levels of income	Lack of enough inputs	Lack of enough inputs	Small land holding size	Small land holding size	Low levels of income
4	Participant										
1)	Number of participant		92	41	80	25	31	35	38	32	15
2)	increase or decrease		Increasing	Decrease	Decrease	Decreasing	Decrease	Increase	Increase	Decrease	Decreasing
	reason of above	VH controlling everything	Everyone is free to join	Deaths	No coordination	Lack of interest	Due to creation of second nursery	The group is new	They developed interest	Stopped issuing free flour that's why they lost interest	
5	Committee Meeting										
1)	What kinds of rules are established?										
1)	Election of member	working scheme	Elected	once a year		Open term, penalties to absenteeism	Good behaviour, Hard worker, Leadership	Hard work, leadership skills, Good behaviour	Leadership skills, Good behaviour, Hard worker	Good behaviour, Hard worker, Patience	
2)	Responsibility of member		Shared	to be available for work		Contribute a fee, committee to look into disciplinary issues	Help in problem solving, look after the whole group	Leading the whole group	Help in problem solving	Help the committee problem solving	
3)	Responsibility of participant			To follow rules			Encouraging each other	Work together, problem solving	Help in carrying out activities	Carrying out nursery activities	
4)	Decision making		By all	By all			The committee and the whole group	The committee and the group	The committee and the group	The committee	
5)	Penalty		To law breakers	Fines to defaulters			Penalties are there	Available	Available	Available	
6)	Dispute solution		By committee	By committee			Committee and whole group, failing which group village head is consulted	Committee	Committee	Committee	
7)											
8)											
9)											
2)	Frequency of meeting		3/month	2/week	1/week	2/week	once a month	Once a month	Twice a month	8 times a month	2/week
3)	What are the meeting contents?		Matters arising	Matters arising	Matters arising	Matters arising	Nursery activities that arise	Nursery activities	Nursery activities and problem solving	Nursery activities and problem sharing and solving	Matters arising
6	Working hour per member per day	3hrs/day	3hrs/day	4hrs/day	3hrs/day	4hrs/day	10hrs/week	8hrs/week	8hrs/week	8hrs/week	2hrs/day
7	What is the main works?						Nursery activities, land clearing, pot filling, seed sowing, watering	Land clearing, pot filling, seed sowing, weeding the nursery	Nursery activities, land clearing, seed sowing, nursery renovation	Nursery activities, land clearing, tilling, pot filling, seed sowing	
8	Active or not			Active		Active	Active	Active	Active	Not active	Little active
9	Reason of above		Everyone is free to work			Realized the importance	There is good coordination	Good coordination	Good coordination	Committee not effective	Low participation

Evaluation Data

Committee

A. Nursery Committee

Group : Q

Date: June 2004

Name of Village		No. 10 Lemu	No. 11 M. Ngondo	No. 12 Kammata	No. 13 Kumanda	No. 14 Tanvekenji	No. 15 Chilangali	No. 16 D. Mbedza	No. 17 Kamwendo	No. 18 Peter Billila
A. Name of Committee										
1	Established year	2001	2002	2002	2002	2002	2002	2002	2002	2002
2	Present Number of member	10	21	10	10	10	10	10	30	10
1)	Number of female	5	14	5	5	4	7	7	12	5
2)	Number of male	5	7	5	5	6	3	3	18	5
3)	Members increase or decrease	Increase	Increase	Constant	Constant	Constant	Constant	Constant	Decrease	Increase
4)	Number of above							1	15	
	reason of above	Profitable	Good leadership	Good coordination	Good coordination	There is coordination with committees	There is coordination with committees	Health problems	establish new nursery	
3	Composition of committee									
1)	Number of large-scale farmer	0	0	0	0	0	0	0	0	0
2)	Number of medium-scale farmer	10%	0%	0	0	0	0	0	0	0%
3)	Number of small scale farmer	90%	100%	100%	100%	100%	100%	100%	100%	100%
	reason of above	Different levels of income	Low income levels	Small land holding size	Small land holding size	Small land holding size	Small land holding size	Small land holding size		
4	Participant									
1)	Number of participant	24	49	41	42	32	21	37	82	50
2)	increase or decrease	Increasing	Increase	Increase	Increase	Increase	Decrease	Increase	Same	Increased
	reason of above		Interest	others developed interest	Interest	They developed interest	Gone out of the village in search for jobs	They developed interest		Motivated
5	Committee Meeting									
1)	What kinds of rules are established									
1)	Election of member	No absenteeism free to use inputs		Good behaviour, Hard worker, Leadership skills	Hard worker	Hard work, good group behaviour	Hard working person, have leadership	Good behaviour, Hard worker	Voting	Voting
2)	Responsibility of member	free to contribute, non members allowed to use inputs on hire		Help in making group facts	Dedication	Leading the group	Look after the whole group	Leading the group	Working in nursery	Leading others
3)	Responsibility of participant		All participates	Help in carrying out activities	Encouraging others	Participate in all activities, problem solving	Encourage each other to participate in all	Encouraging each other to work hard	Leader	Working
4)	Decision making		Committee members	The whole group	Whole group	The whole group	The whole group	The whole group	Chairman	Chairman
5)	Penalty		Absentism punished	Available	Available	Penalties are there	They have penalties	The group has penalties	K50.00	K20.00
6)	Dispute solution			Discipline Committee	The committee and village headman	The committee resolves	The whole group	The Committee	Talk to the person at committee level and village head	Meeting
7)										
8)										
9)										
2)	Frequency of meeting	once/month	2/week	Twice a month	Twice a month	2/ month	3/ month	4/month	if need be	1/month
3)	What are the meeting contents?	Matters arising	Matters arising	Nursery activities and way forward	Nursery activities	Nursery activities, problem sharing	Nursery activities and solving problems that arise	Nursery activities and problem sharing and solving	Future plans	Planning and review
6	Working hour per member per day	5hrs/day	5hrs/day	8hrs/week	9hrs/week	6hrs/week	9hrs/week	6hrs/week	Once or twice	2-3hrs
7	What is the main works?			Nursery activities, land clearing, pot filling, seed sowing, watering	All nursery works. I.e. Land clearing	Land clearing, pot filling, seed sowing, weeding the nursery	Nursery activities, land clearing, seed sowing, pot filling	Nursery activities, land clearing, pot filling, seed sowing, watering,	Nursery preparation	Nursery work
8	Active or not	Yes		Active	Active	Active	Active	Active	Active	Active
9	Reason of above	Everyone is free to work		The committee is cooperate	Good coordination	They work together	Activities are effective	Activities are done	See benefits in the work	

Evaluation Data

Committee

All villages

A. Nursery Committee

Date: June 2004

Item	Name of Village	No. 19 Ndemanje	No. 20 Simon Mphombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumponda	No. 24 Kumisati Chigmula	Average
A. Name of Committee								
1	Established year	2002	2002	2002	2002	2002	2002	
2	Present Number of member	10	10	10	10	10	10	12.5
1)	Number of female	6	5	5	5	8	4	6.7
2)	Number of male	4	5	5	5	2	6	5.9
3)	Members increase or decrease	Same		Decrease	Same	Same	Same	
4)	Number of above			3				
	reason of above			Transferred				
3	Composition of committee							
1)	Number of large-scale farmer	0		0	0	0	0	0.0%
2)	Number of medium-scale farmer	0%		0	0	0%	0%	0.4%
3)	Number of small scale farmer	100%		100%	100%	100%	100%	99.6%
	reason of above							
4	Participant	1/2 households		All households		3/4 households		
1)	Number of participant	40	25	30	22	33	23	39.2
2)	increase or decrease	Same	Decrease	Decrease	Increase	Decrease	Decreased	
	reason of above	Indifference	Difficult people	Tranfered	To have goats	Lack motivation	Not dedicated	
5	Committee Meeting							
1)	What kinds of rules are established							
	1) Election of member	Voting	Voting	Voting	Voting	Voting	Voting	
	2) Responsibility of member	Supervision	Encouraging others	Working	Leading others	Encouraging others	Caring for tools	
	3) Responsibility of participant	Working	Working in nursery	Encouraging others	Working	Working	Working	
	4) Decision making	VH	Chairman	Chairman	Chairman	GVH	Chairman	
	5) Penalty	K30.00	None	K25.00	K25.00	None	K30.00	
	6) Dispute solution	Discussion	Meeting him/her	Round-table with individual and committee	Meeting	Discussion	Meeting	
	7)							
	8)							
	9)							
2)	Frequency of meeting	1/weekly	Fortnightly	1/week	2/weekly	2/week	1/week	
3)	What are the meeting contents?	Planning	Planning and resolving problems	How to work well	Review work	Planning work	Planning	
6	Working hour per member per day	3hrs/day	2hrs/meeting	2-3hours/week	2-3hrs	3/week	3hrs	
7	What is the main works?		Nursery management	Nursery Irrigation Goat keeping	Nursery management	Nursery work	Nursery work	
8	Active or not	Active	Not active	Active	Active	Active	Active	
9	Reason of above		Lack of understanding	The work to develop ourselves	Have seen advantages	Learn new methods of work		

**ANNEX B6 (1)
Tree Planted & Survival Rate by Village, September 2004**

(1/3)

Summary

Village	1st year		2nd year		Total of 1st and 2nd year				
	planted (number)	survived (number)	survival rate (%)	planted (number)	survived (number)	survival rate (%)	planted (number)	survived (number)	survival rate (%)
01. Makonokaya	13,097	6,476	49.4	1,710	1,158	67.7	14,807	7,634	51.6
02. Siyamudima	9,225	1,865	20.2	5,960	4,470	75.0	15,185	6,335	41.7
03. Kaumbata	9,013	4,820	53.5	1,100	560	50.9	10,113	5,380	53.2
04. Mdala	7,300	3,980	54.5	5,050	1,480	29.3	12,350	5,460	44.2
05. Nanjiwa	5,678	3,438	60.5	1,780	1,444	81.1	7,458	4,882	65.5
06. Chikoja	9,671	6,941	71.8	10,799	7,797	72.2	20,470	14,738	72.0
07. Manjelo	9,096	7,591	83.5	7,900	6,582	83.3	16,996	14,173	83.4
08. Teula	8,702	5,476	62.9	2,147	1,751	81.6	10,849	7,227	66.6
09. Chakana	6,600	36	0.5	3,126	1,969	63.0	9,726	2,005	20.6
10. Lemu	9,200	5,516	60.0	3,150	2,385	75.7	12,350	7,901	64.0
11. M. Ngondo	7,406	3,072	41.5	1,350	1,040	77.0	8,756	4,112	47.0
12. Kam'mata	28,243	21,160	74.9	12,043	11,598	96.3	40,286	32,758	81.3
13. Kumanda	11,495	8,689	75.6	5,174	4,248	82.1	16,669	12,937	77.6
14. T. Kenji	15,075	7,302	48.4	6,598	4,698	71.2	21,673	12,000	55.4
15. Chilangali	10,121	5,915	58.4	6,496	5,759	88.7	16,617	11,674	70.3
16. D. Mbeza	7,556	4,371	57.8	4,611	3,232	70.1	12,167	7,603	62.5
17. Kamwendo	8,470	3,661	43.2	6,679	5,445	81.5	15,149	9,106	60.1
18. Peter Bilila	5,944	4,454	74.9	1,226	983	80.2	7,170	5,437	75.8
19. Ndemanje	1,337	828	61.9	7,000	7,000	100.0	8,337	7,828	93.9
20. S.Mpombe	10,382	7,678	74.0	5,981	5,061	84.6	16,363	12,739	77.9
21. Kateya	12,000	3,111	25.9	2,204	1,683	76.4	14,204	4,794	33.8
22. Maluwa	7,528	4,034	53.6	1,135	902	79.5	8,663	4,936	57.0
23. Kumponda	6,432	4,382	68.1	1,621	1,208	74.5	8,053	5,590	69.4
24. K.Chigumula	4,009	2,950	73.6	8,289	8,132	98.1	12,298	11,082	90.1
Total of 24 villages	223,580	127,746	57.1	113,129	90,585	80.1	336,709	218,331	64.8
Average of 24 villages	9,316	5,323	57.1	4,714	3,774	80.1	14,030	9,097	64.8

Source: Survey by Study Team, September 2004

Planting Number

Unit: number

Villages	Species													Total
	<i>F.albida</i>	<i>G.sepium</i>	<i>A.polyac.</i>	<i>Z.Mauria</i>	<i>S.siamea</i>	<i>S.specta.</i>	<i>L.capassa</i>		<i>E.grandis</i>	<i>T.sericea</i>	<i>M.oleifera</i>	<i>M.azadir</i>	<i>Fruit tree</i>	
							<i>A.rebec.</i>	<i>A.Quanz</i>						
01.Makonokaya	2,800	2,700	3,000	1,997	800	600	1,200							13,097
02. Siyamudima	2,500	4,800	1,400	225		300								9,225
03. Kaumbata	6,000	2,400	93	520										9,013
04. Mdala	3,000	2,400			1,900									7,300
05. Nanjiwa	3,000	2,112	500			66								5,678
06. Chikoja	7,000	620	700	500		106		100	345	300				9,671
07. Manjelo	7,203	600		200		16		69	1,000	8				9,096
08. Teula	4,228		100	500		200		59	3,600				15	8,702
09. Chakana	3,000	3,600												6,600
10. Lemu	6,700	450	1,000	450		200			400					9,200
11. M. Ngondo	3,000	3,000	475	431	300				200					7,406
12. Kam'mata	4,838	16,632				150	3		6,620					28,243
13. Kumanda	4,739	5,600					60				1,000		96	11,495
14.T. Kenji	8,014	1,845		30		19		186	4,960				21	15,075
15. Chilangali	6,401	1,920							1,800					10,121
16. D. Mbeza	3,806							100	3,650					7,556
17. Kamwendo	3,420	3,294				45			1,520			11	180	8,470
18. Peter Bilila	4,400	377				45			511		277		334	5,944
19. Ndemanje	850	100			230			10	120	27				1,337
20. S.Mpombe	4,890	4,293				500			440		100	85	74	10,382
21. Kateya	7,850	1,380		220			586		1,200	200		450	114	12,000
22. Maluwa	4,820	2,578		40		30			50				10	7,528
23. Kumponda	3,600	600		6		300			1,900				26	6,432
24. K.Chigumula	3,000	809											200	4,009
Total 24 villages	109,059	62,110	7,268	5,119	3,230	2,577	1,849	524	28,316	535	1,377	546	1,070	223,580

Survival Number

Unit: number

Villages	Species													Total
	<i>F.albida</i>	<i>G.sepium</i>	<i>A.polyac.</i>	<i>Z.Mauria</i>	<i>S.siamea</i>	<i>S.specta.</i>	<i>A.rebec.</i>	<i>A.Quanz</i>	<i>E.grandis</i>	<i>T.sericea</i>	<i>M.oleifera</i>	<i>M.azadir</i>	<i>Fruit tree</i>	
01.Makonokaya	560	2,160	2,080	796	400	420	60							6,476
02. Siyamudima	25	1,440	70	90		240								1,865
03. Kaumbata	4,200	400	56	164										4,820
04. Mdala	300	2,160			1,520									3,980
05. Nanjiwa	1,050	1,900	440	0		48								3,438
06. Chikoja	5,024	541	472	445		87		69	153	150				6,941
07. Manjelo	6,378	540		184		13		43	428	5				7,591
08. Teula	3,287		68	430		168		42	1,468				13	5,476
09. Chakana		36												36
10. Lemu	3,350	441	1,000	225		120			380					5,516
11. M. Ngondo	900	1,500	24	258	210	180								3,072
12. Kam'mata	3,694	13,666				130	3		3,667					21,160
13. Kumanda	3,316	4,538					55				690		90	8,689
14.T. Kenji	5,307	1,569		30		17		136	223				20	7,302
15. Chilangali	3,880	1,164							871					5,915
16. D. Mbeza	2,521							76	1,774					4,371
17. Kamwendo	945	2,079				21			429			9	178	3,661
18. Peter Bilila	3,080	339				45			490		166		334	4,454
19. Ndemanje	510	80			1	161		2	72	2				828
20. S.Mpombe	3,912	2,576				500			431		100	85	74	7,678
21. Kateya	1,576	138		44		220			565	60		405	103	3,111
22. Maluwa	2,410	1,546		20		9			45				4	4,034
23. Kumponda	2,520	540		6		150			1,140				26	4,382
24. K.Chigumula	1,950	800											200	2,950
Total 24 villages	60,695	40,153	4,210	2,692	2,131	2,309	338	368	12,136	217	956	499	1,042	127,746

Survival Rate

Unit: %

Villages	Species													Total
	<i>F.albida</i>	<i>G.sepium</i>	<i>A.polyac.</i>	<i>Z.Mauria</i>	<i>S.siamea</i>	<i>S.specta.</i>	<i>A.rebec.</i>	<i>A.Quanz</i>	<i>E.grandis</i>	<i>T.sericea</i>	<i>M.oleifera</i>	<i>M.azadir</i>	<i>Fruit tree</i>	
01.Makonokaya	20.0	80.0	69.3	39.9	50.0	70.0	5.0							49.4
02. Siyamudima	1.0	30.0	5.0	40.0		80.0								20.2
03. Kaumbata	70.0	16.7	60.2	31.5										53.5
04. Mdala	10.0	90.0			80.0									54.5
05. Nanjiwa	35.0	90.0	88.0			72.7								60.5
06. Chikoja	71.8	87.3	67.4	89.0		82.1		69.0	44.3	50.0				71.8
07. Manjelo	88.5	90.0		92.0		81.3		62.3	42.8	62.5				83.5
08. Teula	77.7		68.0	86.0		84.0		71.2	40.8				86.7	62.9
09. Chakana	0.0	1.0												0.5
10. Lemu	50.0	98.0	100.0	50.0		60.0			95.0					60.0
11. M. Ngondo	30.0	50.0	5.1	59.9	70.0				0.0					41.5
12. Kam'mata	76.4	82.2				86.7	100.0		55.4					74.9
13. Kumanda	70.0	81.0					91.7				69.0		93.8	75.6
14.T. Kenji	66.2	85.0		100.0		89.5		73.1	4.5				95.2	48.4
15. Chilangali	60.6	60.6							48.4					58.4
16. D. Mbeza	66.2							76.0	48.6					57.8
17. Kamwendo	27.6	63.1				46.7			28.2			81.8	98.9	43.2
18. Peter Bilila	70.0	89.9				100.0			95.9		59.9		100.0	74.9
19. Ndemanje	60.0	80.0			0.4			20.0	60.0	7.4				61.9
20. S.Mpombe	80.0	60.0				100.0			98.0		100.0	100.0	100.0	74.0
21. Kateya	20.1	10.0		20.0			37.5		47.1	30.0		100.0	90.0	25.9
22. Maluwa	50.0	60.0		50.0		30.0			90.0				40.0	53.6
23. Kumponda	70.0	90.0		100.0		50.0			60.0				100.0	68.1
24. K.Chigumula	65.0	98.9											100.0	73.6
Total 24 villages	55.7	64.6	57.9	52.6	66.0	89.6	18.3	70.2	42.9	40.6	69.4	91.4	97.4	57.1

Planting number

Unit: number

Villages	Species														total
	<i>E.camadu</i>	<i>A.quanz</i>	<i>F.albida</i>	<i>G.sepium</i>	<i>M.azadir</i>	<i>P.thonni</i>	<i>S.siamea</i>	<i>Z.maulit</i>	<i>E.grandis</i>	fruit tree	<i>K.antho</i>	<i>A.Polyac</i>	<i>T.sericea</i>	<i>S.specta</i>	
01. Makonokaya	900	600		210											1,710
02. Siyamudima	360	600	1,000		1,500			1,500	1,000						5,960
03. Kaumbata			400						500	200					1,100
04. Mdala	500	600	3,000		450				500						5,050
05. Nanjiwa		325			1,000	55	400								1,780
06. Chikoja	2,256	387	1,070	2,152	1,094	100	1,193	207	300	700	260	280		800	10,799
07. Manjelo		1,200	800	2,600	1,200				1,900		200				7,900
08. Teula		78	260	424	1,026	81		176		102					2,147
09. Chakana	526	500			600			1,500							3,126
10. Lemu		500			1,300			1,350							3,150
11. M. Ngondo	550	500	300												1,350
12. Kam'mata	2,000	500	2,090	4,100				2,623	300		430				12,043
13. Kumanda	108	300	970	1,900	400	100	110	125		261		600	300		5,174
14. T. Kenji		500	16	1,710	750	22				800	200			2,600	6,598
15. Chilangali		772			1,552					83	186		83	3,820	6,496
16. D. Mbeza		480	754	1,704	492			921	38	53	169				4,611
17. Kamwendo	1,416	74	74	3,683				266	239		835	12		80	6,679
18. Peter Bilila	370	114	121					123	128		123	100	147		1,226
19. Ndemanje				7,000											7,000
20. S.Mpombe	1,416	400	450	3,703							12				5,981
21. Kateya	1,162	167	54	341	307			70			103				2,204
22. Maluwa	581	150		170			8	75	100		51				1,135
23. Kumponda		400	130		300			250	191		100	100		150	1,621
24. K. Chigumula	540	349	145	7,000			55	52	128					20	8,289
Total 24 villages	12,685	9,496	11,634	36,697	11,971	421	10,433	3,632	3,053	2,404	1,823	1,027	403	7,450	113,129

Survival number

Unit: number

Villages	Species														Total
	<i>E.camadu</i>	<i>A.quanz</i>	<i>F.albida</i>	<i>G.sepium</i>	<i>M.azadir</i>	<i>P.thonni</i>	<i>S.siamea</i>	<i>Z.maulit</i>	<i>E.grandis</i>	fruit tree	<i>K.antho</i>	<i>A.Polyac</i>	<i>T.sericea</i>	<i>S.specta</i>	
01. Makonokaya	630	360		168											1,158
02. Siyamudima	300	420	600		1,350			1,200	600						4,470
03. Kaumbata			40						400	120					560
04. Mdala	450		600		180				250						1,480
05. Nanjiwa		240			800	44	360								1,444
06. Chikoja	1,708	271	821	1,880	590	50	867	156	150	470	134	100		600	7,797
07. Manjelo		930	650	2,597	1,200				1,045		160				6,582
08. Teula		65	200	280	950	34		170		52					1,751
09. Chakana	499	450			570			450							1,969
10. Lemu		400			1,040			945							2,385
11. M. Ngondo	440	450	150												1,040
12. Kam'mata	1,750	490	2,075	4,000				2,573	290		420				11,598
13. Kumanda	108	300	800	1,700	240	80	60	125		235		360	240		4,248
14. T. Kenji		450	16	1,197	600	15				700	160			1,560	4,698
15. Chilangali		700			1,302					80	102		50	3,525	5,759
16. D. Mbeza		123	360	1,531	196			798	18	53	153				3,232
17. Kamwendo	991	74	4	3,315				160	191		618	12		80	5,445
18. Peter Bilila	370	80	121					123	77		62	70	80		983
19. Ndemanje				7,000											7,000
20. S.Mpombe	992	400	337	3,320	0						12				5,061
21. Kateya	1,052	100	10	239	184			42			56				1,683
22. Maluwa	523	150		119			5	51	25		29				902
23. Kumponda		320	65		150			200	153		100	70		150	1,208
24. K. Chigumula	432	332	141	7,000			39	40	128					20	8,132
Total 24 villages	10,245	7,105	6,990	34,346	9,352	267	7,869	2,583	1,948	1,737	1,378	540	310	5,915	90,585

Survival rate

Unit: %

Villages	Species														Total
	<i>E.camadu</i>	<i>A.quanz</i>	<i>F.albida</i>	<i>G.sepium</i>	<i>M.azadir</i>	<i>P.thonni</i>	<i>S.siamea</i>	<i>Z.maulit</i>	<i>E.grandis</i>	fruit tree	<i>K.antho</i>	<i>A.Polyac</i>	<i>T.sericea</i>	<i>S.specta</i>	
01. Makonokaya	70.0	60.0		80.0											67.7
02. Siyamudima	83.3	70.0	60.0		90.0			80.0	60.0						75.0
03. Kaumbata			10.0						80.0	60.0					50.9
04. Mdala	90.0	0.0	20.0		40.0				50.0						29.3
05. Nanjiwa		73.8			80.0	80.0	90.0								81.1
06. Chikoja	75.7	70.0	76.7	87.4	53.9	50.0	72.7	75.4	50.0	67.1	51.5	35.7		75.0	72.2
07. Manjelo		77.5	81.3	99.9	100.0				55.0		80.0				83.3
08. Teula		83.3	76.9	66.0	92.6	42.0		96.6		51.0					81.6
09. Chakana	94.9	90.0			95.0			30.0							63.0
10. Lemu		80.0			80.0			70.0							75.7
11. M. Ngondo	80.0	90.0	50.0												77.0
12. Kam'mata	87.5	98.0	99.3	97.6				98.1	96.7		97.7				96.3
13. Kumanda	100.0	100.0	82.5	89.5	60.0	80.0	54.5	100.0		90.0		60.0	80.0		82.1
14. T. Kenji		90.0	100.0	70.0	80.0	68.2				87.5	80.0			60.0	71.2
15. Chilangali		90.7			83.9					96.4	54.8		60.2	92.3	88.7
16. D. Mbeza		25.6	47.7	89.8	39.8			86.6	47.4	100.0	90.5				70.1
17. Kamwendo	70.0	100.0	5.4	90.0				60.2	79.9		74.0	100.0		100.0	81.5
18. Peter Bilila	100.0	70.2	100.0					100.0	60.2		50.4	70.0	54.4		80.2
19. Ndemanje				100.0											100.0
20. S.Mpombe	70.1	100.0	74.9	89.7							100.0				84.6
21. Kateya	90.5	59.9	18.5	70.1	59.9			60.0			54.4				76.4
22. Maluwa	90.0	100.0		70.0			62.5	68.0	25.0		56.9				79.5
23. Kumponda		80.0	50.0		50.0			80.0	80.1		100.0	70.0		100.0	74.5
24. K. Chigumula	80.0	95.1	97.2	100.0			70.9	76.9	100.0					100.0	98.1
Total 24 villages	80.8	74.8	60.1	93.6	78.1	63.4	75.4	71.1	63.8	72.3	75.6	52.6	76.9	79.4	80.1

ANNEX B6 (2)

(1/2)

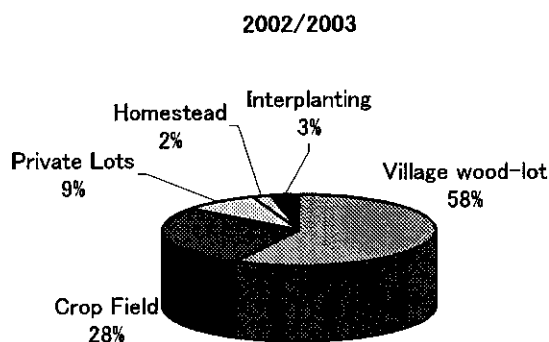
Planting Sites of Nursery Seedlings by Village

Y E A R	2002/03					2003/04				
	Planted Site	Village wood-lot	Private Lots	Crop Field	Homestead	Interplanting	Village wood-lot	Private Lots	Crop Field	Homestead
Major Specie	<i>E. camald</i>	<i>A. indica</i>	<i>G. sepium</i>	Fruit Trees	Indigenous	<i>E. grandis</i>	<i>S. siamea</i>	<i>G. sepium</i>	Fruit Trees	Indigenous
01. Makonokaya	5,280	4,321	2,700	796	0	704	0	210	796	0
02. Siyamudima	3,435	900	4,800	90	0	4,549	1,321	0	90	0
03. Kaumbata	6,449	0	2,400	164	0	736	0	0	364	0
04. Mdala	4,900	0	2,400	0	0	3,368	1,682	0	0	0
05. Nanjiwa	3,566	0	2,112	0	0	1,780	0	0	0	0
06. Chikoja	7,169	1,437	620	445	0	4,420	632	2,152	1,145	2,450
07. Manjelo	8,162	0	600	184	150	2,616	0	2,600	184	2,500
08. Teula	6,401	1,858	0	443	0	1,178	0	424	545	0
09. Chakana	3,000	0	3,600	0	0	2,586	540	0	0	0
10. Lemu	5,379	2,896	450	225	250	2,075	0	0	225	850
11. M. Ngondo	3,458	0	3,000	948	0	402	0	0	948	0
12. Kam'mata	5,735	2,176	16,632	0	3,700	3,743	750	4,100	0	3,450
13. Kumanda	4,405	1,400	5,600	90	0	2,703	0	1,900	351	220
14. T. Kenji	7,330	2,450	1,845	50	3,400	2,988	350	1,710	50	1,500
15. Chilangali	6,831	1,370	1,920	0	0	5,451	962	0	83	0
16. D. Mbeza	6,281	1,109	0	166	0	2,741	0	1,704	166	0
17. Kamwendo	4,998	0	3,294	178	0	1,983	0	3,683	1,013	0
18. Peter Bilila	5,133	0	377	434	0	669	0	0	557	0
19. Ndemanje	1,237	0	100	0	0	0	0	7,000	0	0
20. S.Mpombe	6,015	0	4,293	74	0	2,204	0	3,703	74	0
21. Kateya	10,473	0	1,380	147	0	1,716	0	341	147	0
22. Maluwa	4,926	0	2,578	24	0	941	0	170	24	0
23. Kumponda	5,800	0	600	32	0	1,489	0	0	132	0
24. Chigumula	3,000	0	809	200	0	1,089	0	7,000	200	0
Total	129,363	19,917	62,110	4,690	7,500	52,131	6,237	36,697	7,094	10,970
percentage	58%	9%	28%	2%	3%	46%	6%	32%	6%	10%

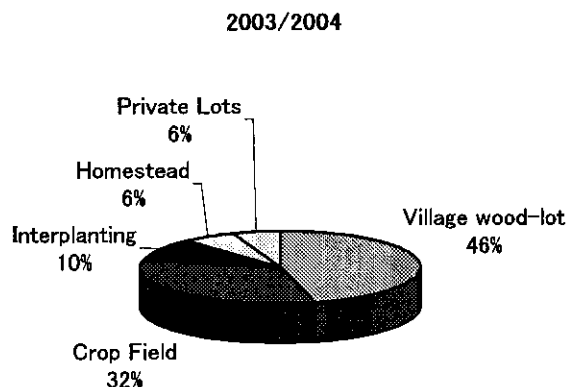
Note: (1) Committees allocated the seedlings to the participants and villagers to plant their homestead and private wood-lots as well as crop field.

(2) Indigenous tree species includes *T.sericea*, *A. quanzensis*, *K. anotheca*, *A. polyacantha* etc.

2002/03					2003/04				
Village wood-lot	Crop Field	Private Lots	Homestead	Interplanting	Village wood-lot	Crop Field	Interplanting	Homestead	Private Lots
129,363	62,110	19,917	4,690	7,500	52,131	36,697	10,970	7,094	6,237
223,580					113,129				



Total 223,580 seedlings



Total 112,496 seedling

(2/2)

Number and Area of Planting Sites by Village		2002/03 (unit: square meter, number)					2003/04 (unit: square meter, number)				
Y E A R	Planted Site	Total VWL* (m2)	Private Lots/person (m2)**	Crop Field/person (m2)	Number of VWL*	Number of PL***	Total VWL* (m2)	Private Lots/person (m2)**	Crop Field/person (m2)	Number of VWL*	Number of PL***
	01. Makonokaya	594	38	18	2	30	79	6	5	2	30
	02. Siyamudima	386	11	48	2	20	512	4	11	3	85
	03. Kaumbata	484	2	22	3	22	55	1	2	3	73
	04. Mdala	551	0	7	2	65	253	6	10	3	65
	05. Nanjiwa	267	0	14	3	30	134	0	4	4	95
	06. Chikoja	1,613	3	1	1	150	995	3	6	2	150
	07. Manjelo	1,837	2	5	1	25	589	1	12	2	45
	08. Teula	1,440	26	0	1	20	265	3	6	1	38
	09. Chakana	338	0	51	2	14	291	5	21	3	25
	10. Lenu	303	23	3	4	31	117	1	10	4	40
	11. M. Ngondo	195	10	29	4	21	23	6	2	4	36
	12. Kam'mata	430	18	123	3	27	168	2	8	5	90
	13. Kumanda	991	18	59	1	19	304	2	16	2	33
	14. T. Kenji	825	43	28	2	13	224	2	15	3	40
	15. Chilangali	512	17	21	3	18	307	6	27	4	40
	16. D. Mbeza	1,413	18	0	1	16	617	1	16	1	35
	17. Kamwendo	375	1	11	3	61	112	2	4	4	92
	18. Peter Bilila	1,155	6	5	1	16	151	2	2	1	72
	19. Ndemanje	139	0	1	2	20	0	0	0	2	79
	20. S.Mpombe	1,354	2	86	1	10	248	0	7	2	65
	21. Kateya	2,357	3	21	1	13	193	1	11	2	30
	22. Maluwa	1,108	0	26	1	20	212	0	3	1	65
	23. Kumponda	1,305	0	7	1	18	168	1	7	2	43
	24. Chigumula	675	4	15	1	11	245	1	3	1	65
	Average	860m ²	10 m ²	25 m ²	2	29	261 m ²	2 m ²	9 m ²	2.5	60

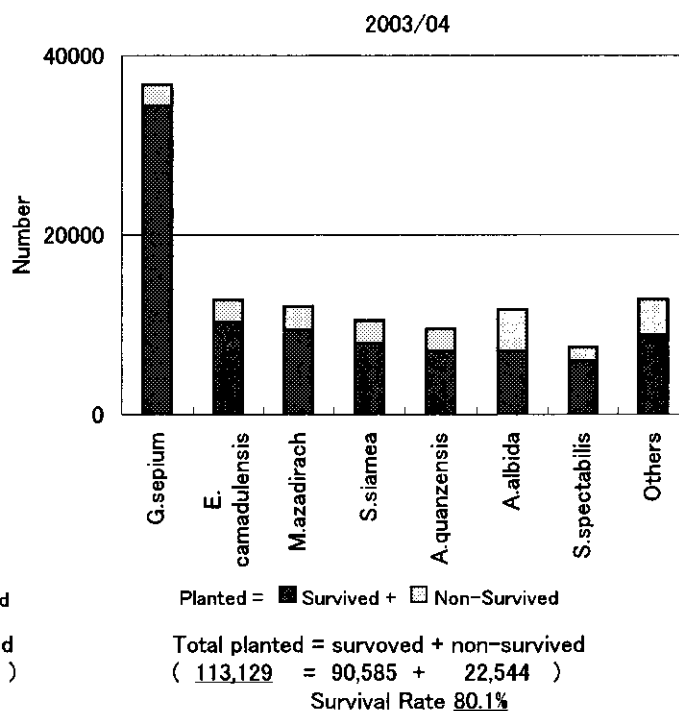
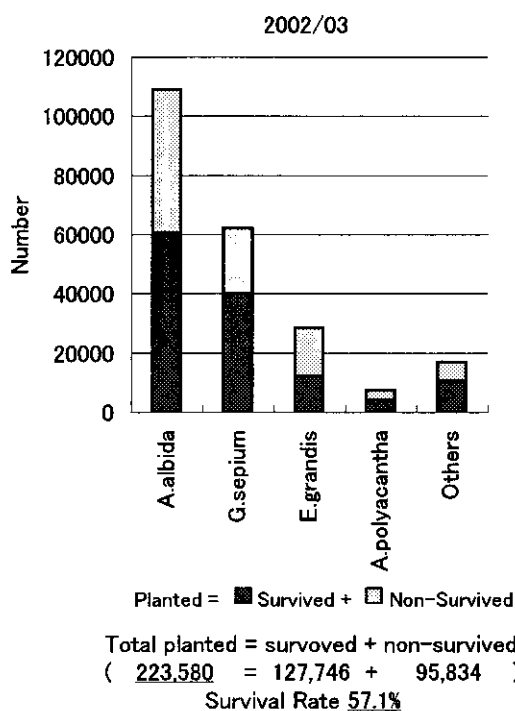
Note: * VWL, village wood-lots, ** including homestead, ***PL, private wood lots including homestead

ANNEX B6 (3)

Survival Rates by Tree Species

specie	2002 / 03 planting				village
	planted	survived	non-survived	survived%	
A.albida	109,059	60695	48364	55.7	24
G.sepium	62,110	40153	21957	64.6	22
E.grandis	28,316	12136	16180	42.9	16
A.polyacantha	7,268	4210	3058	57.9	8
Others	16,827	10,552	6,275	62.7	
Z.mauritiana	5,119	2692	2427	52.6	12
S.spectabilis	2,577	2309	268	89.6	14
S.siamea	3,230	2131	1099	66.0	4
Fruit tree	1,070	1042	28	97.4	10
M.oleifera	1,377	956	421	69.4	3
M.azadirach	546	499	47	91.4	3
A.quanzensis	524	368	156	70.2	6
A.rebecc	1,849	338	1511	18.3	4
T.sericea	535	217	318	40.6	4
Total	223,580	127,746	95834	57.1	24
Overall germination ratio					67.30%

specie	2003 / 04 planting				Village
	planted	survive	non-survived	survived%	
G.sepium	36,697	34346	2351	93.6	14
E. camadulensis	12,685	10245	2440	80.8	14
M.azadirach	11,971	9352	2619	78.1	14
S.siamea	10,433	7869	2564	75.4	10
A.quanzensis	9,496	7105	2391	74.8	22
A.albida	11,634	6990	4644	60.1	17
S.spectabilis	7,450	5915	1535	79.4	5
Others	12,763	8,763	4,000	68.7	50
Z.mauritiana	3,632	2583	1049	71.1	13
E.grandis	3,053	1948	1105	63.8	4
Fruit tree	2,404	1737	667	72.3	8
K. anthotica	1,823	1378	445	75.6	12
T.sericea	403	310	93	76.9	3
A.polyacantha	1,027	540	487	52.6	3
P. thonningii	421	267	154	63.4	7
Total	113,129	90585	22544	80.1	24
Overall germination ratio					85.50%



Survival Rates of Out-planted Seedlings by Specie and by Month in 2002/03

specie	<i>Fatdhe. albida</i>	<i>Glirici. Sepium</i>	<i>A. polyaca ntha</i>	<i>Zizipus Maurit</i>	<i>Senna siamea</i>	<i>Senna specta</i>	<i>Albizzi rebeca</i>	<i>Afzelia quanze</i>	<i>Eucaly. Grandis</i>	<i>Termi. nsericea</i>	<i>Moring oleifer</i>	<i>Melia azadir</i>	Fruit trees
Dec.02		3.80%	0.30%										
Jan. 03	18.20%	12.30%	1.60%						2.90%				
Feb.03	9.80%	5.60%		0.90%	0.80%				4.80%				
Mar.03	17.80%	6.10%	1.40%	1.40%	0.60%	1.10%	0.80%	0.20%	4.90%	0.20%	0.60%	0.30%	0.50%
Apr.03	3.00%												
	48.80%	27.80%	3.30%	2.30%	1.40%	1.20%	0.80%	0.20%	12.70%	0.20%	0.60%	0.20%	0.50%
Dec.02		8,493	700										
Jan. 03	40,626	27,475	3,475						6,555				
Feb.03	21,918	12,606		1,997	1,900				10,731				
Mar.03	39,709	13,536	3,093	3,086	1,330	2,542	1,786	386	11,030	500	1,377	586	1,024
Apr.03	6,806												

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Survival Rates of Out-planted Seedlings by Specie and by Month in 2003/04

	<i>E.camad ulensis</i>	<i>A. quanz ensis</i>	<i>F. albida</i>	<i>G. sepium</i>	<i>M. azadir</i>	<i>P. thonni</i>	<i>S. siamea</i>	<i>Z. maurlit</i>	<i>Eucaly grandis</i>	<i>fruit trees</i>	<i>Kaya anthoth nth</i>	<i>A. polyaca nth</i>	<i>S.specta bilis</i>
Dec.03			0.10%		1.10%	1.10%	0.20%	0.20%	0.30%				0.80%
Jan. 04	38.70%	25.70%	3.20%		0.30%	0.50%		0.10%	6.60%				
Feb.04	3.40%	4.40%	0.80%	1.40%					0.80%	0.10%			
Mar.04	3.50%	0.60%		0.70%	0.10%	0.10%	0.00%		1.40%	0.00%	0.70%		
Apr.04	2.00%				0.20%				0.40%			0.40%	
	47.50%	31.40%	3.30%	2.10%	1.70%	1.80%	0.30%	0.30%	9.50%	0.20%	0.70%	0.40%	0.80%
Dec.03			92		1,349	1,495	270	230	429				1,042
Jan. 04	49,472	33,622	4,118		400	659	0	136	8,399				
Feb.04	4,281	5,731		1,760					1,031	157			
Mar.04	4,422	800		932	184	155	68		1,774	60	956		
Apr.04	2,520				197				503			499	

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Survival Rates of Out-planted Seedlings in Sampled Woodlots

YEAR	2002 / 03 (overall survival : 57.1%)				2003 / 04 (overall survival : 80.1%)						
	Planted month	Dec	Jan	Feb	Mar	Apr	Dec	Jan	Feb	Mar	Apr
rainfall (mm)*	111	184	149	215	1		46	300	47	107	73
drought spell**	10	-	10	-	31		14	-	10	-	31
01. Makonokaya											
02. Siyamdima			5%						5%		
03. Kaumbata		32%	17%					32%	17%		
04. Mdala		68%			55%			68%			31%
05. Nanjiwa			35%	76%					35%	76%	
06. M.Ngondo			68%						68%		
07. Chakana					1%						
08. Lemu		50%					28%	50%			
09. Chikoja	44%		64%		88%				64%	88%	
10. Manjero		43%						43%			
11. Teula	41%										
12. Kam'mata		55%						86%			
13. Kumanda					78%			78%			
14. Tamvekenji	4%	66%						94%			
15. Chilangali		61%	80%		81%			85%			
16. D. Mbedza		36%					29%	72%	58%		
17. Kamwendo			28%					71%			
18. Peter Bilila					92%			98%	63%		
19. Ndemanje			11%								
20. S. Mpombe			22%								
21. Kateya			47%						41%	57%	
22. Maluwa					72%						
23. Kumponda					72%						
24. K.		65%							48%		
Total in woodlot	30%	53%	38%	80%	28%		68%	84%	52%	41%	31%
planted rate	4%	35%	22%	36%	3%		4%	75%	11%	7%	3%

Note: * data at Chilika airport, 10-25 km away from the Study Area

** consecutive days without effective rainfall

3

ANNEX B6 (4)

Result of Nursery Seedling Production in 2002/03

(1/2)

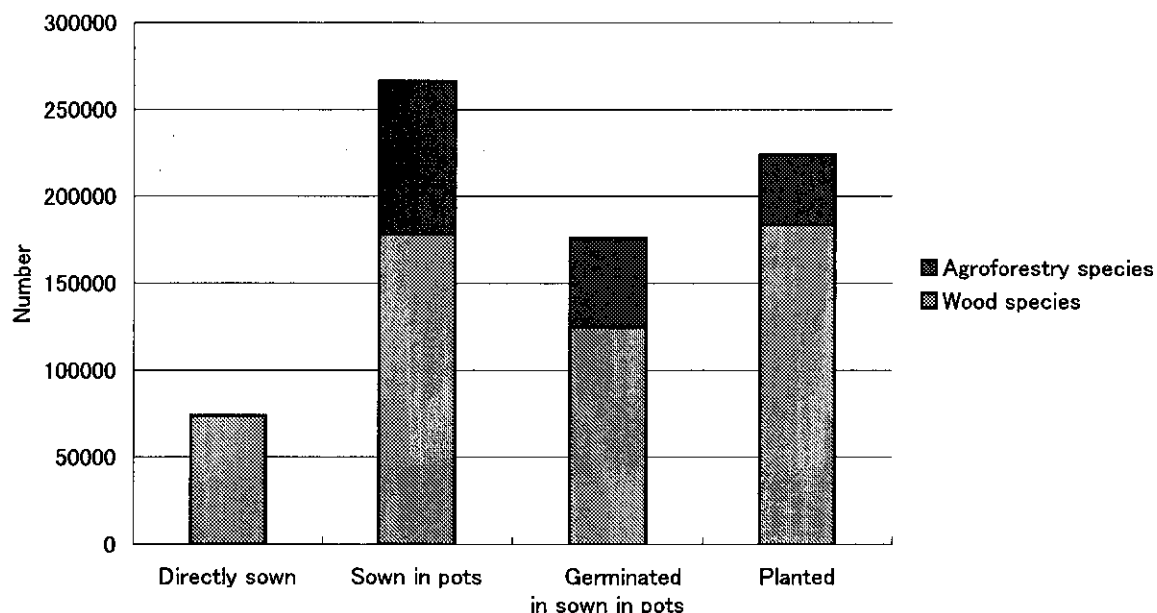
target village	number of pots filled	Total				Wood species				Agroforestry species		
		Directly sown**	Sown in pots	Germinated	Planted	Directly sown**	Sown in pots	Germinated	Planted	Sown in pots	Germinated	Planted**
01. Makonokaya	10,020	9,600	10,020	3,500	13,097	9,600	7,220	1,000	10,937	2,800	2,500	2,160
02. Siyamdima	12,000	3,600	12,000	5,714	9,225	3,600	5,200	4,214	7,785	6,800	1,500	1,440
03. Kaumbata	12,000	1,900	12,000	7,400	9,013	1,900	4,600	6,800	8,613	7,400	600	400
04. Mdala	11,600	0	11,600	7,500	7,300	0	6,200	5,300	5,140	5,400	2,200	2,160
05. Nanjiwa	12,000	0	12,000	6,500	5,678	0	10,040	4,540	3,778	1,960	1,960	1,900
06. Chikoja *	22,000	0	22,000	11,872	9,671	0	21,180	11,274	9,130	820	598	541
07. Manjelo	12,000	400	12,000	8,782	9,096	400	11,300	8,205	8,556	700	577	540
08. Teula	12,000	0	12,000	9,807	8,702	0	11,600	9,451	8,702	400	356	0
09. Chakana	4,000	3,000	4,000	3,800	6,600	3,000	3,850	3,700	6,564	150	100	36
10. Lemu	12,000	3,300	12,000	6,000	9,200	3,300	11,500	5,559	8,759	500	441	441
11. M. Ngondo	11,200	3,300	11,200	4,200	7,406	3,300	5,200	2,700	5,906	6,000	1,500	1,500
12. Kam'mata	15,000	18,000	15,000	14,390	28,243	18,000	0	0	14,577	15,000	14,390	13,666
13. Kumanda	12,000	6,000	12,000	5,670	11,495	6,000	240	1,000	6,957	11,760	4,670	4,538
14.T. Kenji	12,000	8,000	12,000	7,547	15,075	8,000	10,155	5,880	13,506	1,845	1,667	1,569
15. Chilangali	12,000	3,000	12,000	7,376	10,121	3,000	10,699	6,206	8,957	1,301	1,170	1,164
16. D. Mbeza	12,000	3,000	12,000	5,047	7,556	3,000	9,100	4,897	7,556	2,900	150	0
17. Kamwendo	11,400	0	11,400	8,883	8,470	0	9,006	6,513	6,391	2,394	2,370	2,079
18. Peter Bilila	6,740	0	6,740	6,633	5,944	0	5,907	6,283	5,605	833	350	339
19. Ndemanje	12,000	500	12,000	10,060	1,337	500	10,000	9,910	1,257	2,000	150	80
20. S. Mpombe	8,080	5,000	8,080	5,800	10,382	5,000	5,280	3,221	7,806	2,800	2,579	2,576
21. Kateya	10,300	3,600	10,300	8,500	12,000	3,600	1,920	2,060	11,862	8,380	6,440	138
22. Maluwa	10,003	600	10,003	7,000	7,528	600	8,403	5,450	5,982	1,600	1,550	1,546
23. Kumponda	5,700	800	5,700	5,700	6,432	800	5,100	5,150	5,892	600	550	540
24. K. Chigumula	8,000	0	8,000	8,000	4,009	0	4,200	5,120	3,209	3,800	2,880	800
Total 24 villages	266,043	73,600	266,043	175,681	223,580	73,600	177,900	124,433	183,427	88,143	51,248	40,153

Note: * Nursery of Chikoja Village was burnt and again pots were supplied.

** wood species sown to the nursery beds

*** including distributed seedlings of *Gliricidia sepium*, half of *Acacia albida*

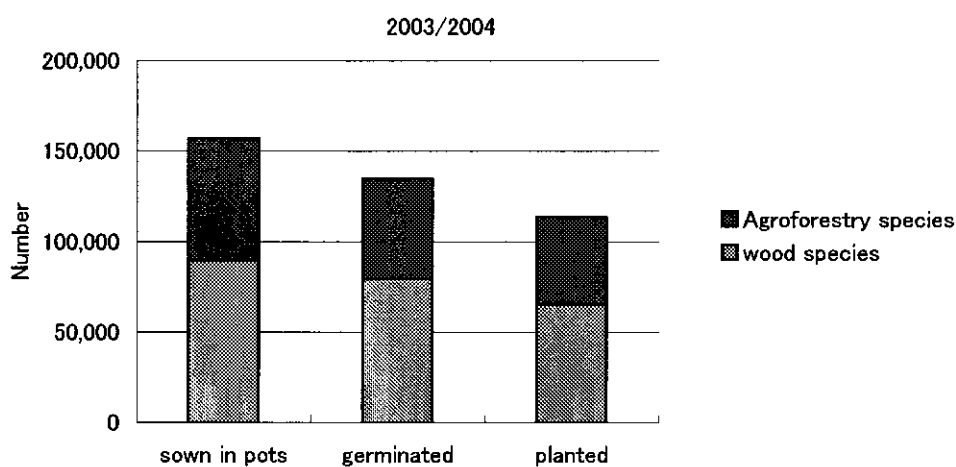
2002/2003



Result of Nursery Seedling Production in 2003/04

(2/2)

target village	number of pots filled	Total			wood species			Agroforestry species		
		sown in pots	germinated	planted	sown in pots	germinated	planted	sown in pots	germinated	planted
01. Makonokaya	7,000	6,300	4,300	1,710	4,500	4,050	1,500	1,800	250	210
02. Siyamdima	12,000	11,160	6,375	5,960	6,560	4,725	4,960	4,600	1,650	1,000
03. Kaumbata	6,450	5,450	5,250	4,100	2,000	1,800	700	3,450	3450	3,400
04. Mdala	6,000	5,550	5,050	5,050	2,350	2,050	2,050	3,200	3,000	3,000
05. Nanjiwa	5,300	5,063	4,950	4,080	3,840	3,750	3,380	1,223	1200	700
06. Chikoja	14,500	12,453	12,385	10,799	8,164	8,149	7,577	4,289	4,236	3,222
07. Manjelo	9,050	8,627	8,496	7,900	4,871	4,823	4,500	3,756	3,673	3,400
08. Teula	4,000	3,200	2,205	2,147	1,870	1,505	1,463	1,330	700	684
09. Chakana	3,700	3,650	3,450	3,126	3,550	3,450	3,126	100	0	0
10. Lemu	5,300	4,610	3,385	3,150	4,310	3,210	3,150	300	175	0
11. M. Ngondo	5,470	4,800	2,150	1,350	2,000	1,720	1,050	2,800	430	300
12. Kam'mata	13,100	12,369	12,069	12,043	5,923	5,869	5,853	6,446	6,200	6,190
13. Kumanda	9,700	8,866	8,024	6,174	4,250	3,818	2,304	4,616	4,206	3,870
14. T. Kenji	7,700	6,999	6,418	5,598	5,394	5,364	4,872	1,605	1,054	726
15. Chilangali	6,800	6,359	4,957	4,496	5,825	4,957	4,496	534	0	0
16. D. Mbeza	9,600	8,854	6,901	6,611	3,687	2,398	2,153	5,167	4,503	4,458
17. Kamwendo	14,000	10,950	9,560	6,679	5,390	4,750	2,842	5,560	4,810	3,837
18. Peter Bilila	5,000	4,320	3,800	3,226	1,920	1,920	1,605	2,400	1,880	1,621
19. Ndemanje	9,000	6,300	5,900	4,000	1,100	755	0	5,200	5,145	4,000
20. S. Mpombe	6,000	4,800	4,736	3,981	2,200	2,236	1,828	2,600	2,500	2,153
21. Kateya	6,000	4,500	4,428	2,204	3,200	3,178	1,809	1,300	1,250	395
22. Maluwa	3,600	3,300	2,300	1,835	2,440	1,450	1,035	860	850	800
23. Kumponda	6,600	4,925	3,925	3,621	2,200	1,625	1,341	2,725	2,300	2,280
24. K. Chigumula	5,700	3,500	3,400	3,289	1,600	1,570	1,524	1,900	1,830	1,765
Total 24 villages	181,570	156,905	134,414	113,129	89,144	79,122	65,118	67,761	55,292	48,011



ANNEX B6 (5)

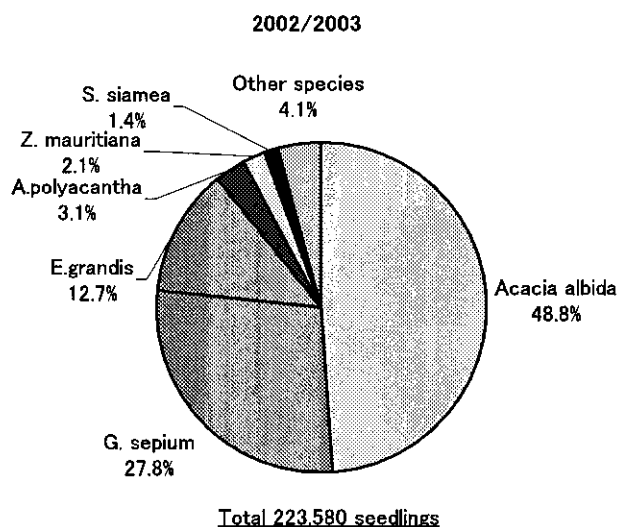
Major Species of Tree Seedlings Planted in the planting season 2002/03

(1/2)

Village	Acacia albida	G. sepium	E.grandis	A.polyacantha	Z. mauritiana	S. siamea	S.spectabilis	A.quanzensis	L. capassa	B.thonnigii	Other species	Total
01. Makonokaya	2,800	2,700	0	3,000	1,997	800	600	0	0	0	1,200	13,097
02. Siyamudima	2,500	4,800	0	1,320	225	0	300	0	80	0	0	9,225
03. Kaumbata	6,000	2,400	0	93	520	0	0	0	0	0	0	9,013
04. Mdala	3,000	2,400	0	0	0	1,900	0	0	0	0	0	7,300
05. Nanjiwa	3,000	2,112	0	500	0	0	66	0	0	0	0	5,678
06. Chikoja	7,000	620	345	700	500	0	106	0	0	70	330	9,671
07. Manjelo	7,203	600	1,900	0	200	0	16	50	0	0	27	9,096
08. Teula	4,228	0	3,600	24	500	0	200	80	0	70	0	8,702
09. Chakana	3,000	3,600	0	0	0	0	0	0	0	0	0	6,600
10. Lemu	6,700	450	400	983	450	0	200	17	0	0	0	9,200
11. M. Ngondo	3,000	3,000	200	0	106	300	0	800	0	0	0	7,406
12. Kamata	4,838	6,632	6,620	0	0	0	150	0	0	0	3	18,243
13. Kumanda	4,739	5,600	0	0	0	0	0	0	40	0	1,116	11,495
14. T. Kenji	8,014	1,845	4,960	0	30	0	19	130	0	0	77	15,075
15. Chilangali	6,401	1,920	1,800	0	0	0	0	0	0	0	0	10,121
16. D. Mbeza	3,806	0	3,650	0	0	0	0	0	0	0	100	7,556
17. Kamwendo	3,420	3,294	1,520	0	0	0	45	0	153	38	0	8,470
18. Peter Bilila	4,400	377	511	0	0	0	45	18	22	13	558	5,944
19. Ndemanje	850	10,100	120	0	0	230	0	18	9	10	0	11,337
20. S. Mpombe	4,890	4,293	440	0	0	0	498	0	0	0	261	10,382
21. Kateya	7,850	1,380	1,200	0	220	0	0	300	400	26	624	12,000
22. Maluwa	4,820	2,578	50	0	20	0	30	0	10	20	0	7,528
23. Kumponda	3,600	600	1,900	0	6	0	176	20	0	130	0	6,432
24. K.Chigumura	3,000	809	0	200	0	0	0	0	0	0	0	4,009
Total	109,059	62,110	28,316	6,820	4,774	3,230	2,451	1,433	714	377	4,296	223,580

Note: (1) E; Eucalyptus, S; Senna, Z; zizipus, A; Afzelia, B; Bauhinia, G; Gliricidia

(2) Other species include minor ones like *Tephrosia vogelii*, *L. leucocephala* and *S. sesban*.

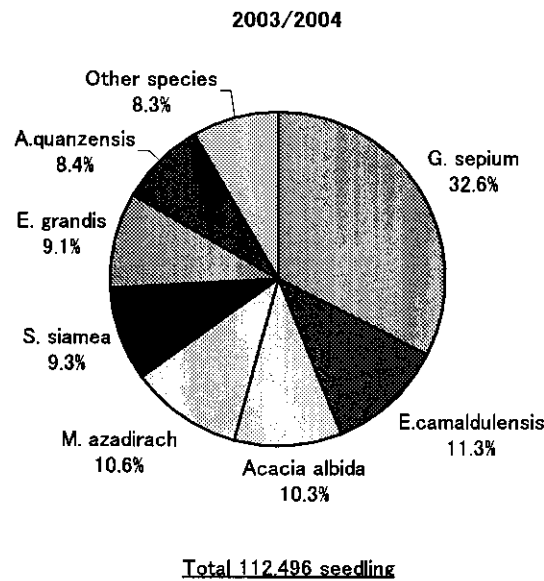


Major Species of Tree Seedlings Planted in the Planting Season 2003/04

(2/2)

Village	G. sepium	E.camaldulensis	Acacia albida	M. azadirach	S. siamea	E. grandis	A.quanzensis	Z. mauritiana	Fruit trees	K. anthotheca	A.polyacantha	B.thonnigii	Total
01. Makonokaya	210	900	0	0	0	0	600	0	0	0	0	0	1,710
02. Siyamudima	0	360	1,000	1,500	1,500	0	600	1,000	0	0	0	0	5,960
03. Kaumbata	0	0	400	0	0	0	0	500	200	0	0	0	1,100
04. Mdala	0	500	3,000	450	0	0	600	500	0	0	0	0	5,050
05. Nanjiwa	0	0	0	1,000	400	0	325	0	0	0	0	55	1,780
06. Chikoja	2,152	2,256	1,070	1,094	1,193	1,100	387	207	700	260	280	100	10,799
07. Manjelo	2,600	0	800	1,200	0	1,900	1,200	0	0	200	0	0	7,900
08. Teula	424	0	260	1,026	0	0	78	176	102	0	0	81	2,147
09. Chakana	0	526	0	600	1,500	0	500	0	0	0	0	0	3,126
10. Lemu	0	0	0	1,300	1,350	0	500	0	0	0	0	0	3,150
11. M. Ngondo	0	550	300	0	0	0	500	0	0	0	0	0	1,350
12. Kamata	4,100	2,000	2,090	0	2,623	0	500	300	0	430	0	0	12,043
13. Kumanda	1,900	108	970	400	110	0	300	125	261	0	600	100	4,874
14. T. Kenji	1,710	0	16	750	0	3,400	500	0	0	200	0	22	6,598
15. Chilangali	0	0	0	1,552	0	3,820	772	0	83	186	0	0	6,413
16. D. Mbeza	1,704	0	754	492	921	53	480	38	0	169	0	0	4,611
17. Kamwendo	3,683	1,416	74	0	266	0	74	239	835	12	0	0	6,599
18. Peter Bilila	0	370	121	0	123	0	114	128	123	100	147	0	1,226
19. Ndemanje	7,000	0	0	0	0	0	0	0	0	0	0	0	7,000
20. S. Mpombe	3,703	1,416	450	0	0	0	400	0	0	12	0	0	5,981
21. Kateya	341	1,162	54	307	70	0	167	0	0	103	0	0	2,204
22. Maluwa	170	581	0	0	75	0	150	100	0	51	0	8	1,135
23. Kumponda	0	0	130	300	250	0	400	191	100	100	0	0	1,471
24. K.Chigumura	7,000	540	145	0	52	0	349	128	0	0	0	55	8,269
Total	36,697	12,685	11,634	11,971	10,433	10,273	9,496	3,632	2,404	1,823	1,027	421	112,496

- Note: (1) Including only pot-sown seedlings.
 (2) The totals by village are equal to those planted in 2003/04 in the fifth column of the antecedent table.
 (3) *S.spectabilis* is included in *E. grandis* (800 in Chikoja 1,100, 2,600 in Tamve Kenji 3,400, and 3,800 in Chilangali).
 (4) Other minor species planted include *T. sericea* (Kumanda 300, Chilangali 83, K.Chigumula 20).



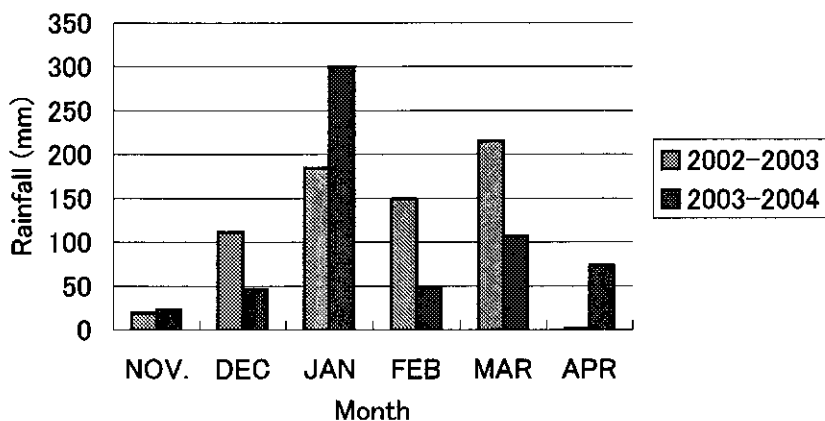
ANNEX B7

Rainfall Data 2002/03, 2003/04 & Relation between Survival Rate

(1/4)

Daily Rainfall in Chileka Airport

month Year	NOV. 2002-	DEC 2002-	JAN 2003-	FEB 2003-	MAR 2003-	APR 2003-	month Year	NOV. 2003-	DEC 2003-	JAN 2004-	FEB 2004-	MAR 2004-	APR 2004-
Day							Day						
1	0.8	0	9	6.6	0	0	1	0	4.7	0	0	59.1	1.3
2	0	0	27.1	26	0	0	2	14.1	0	0	0	0	3.1
3	0	0	11.1	1.6	16.4	0	3	0	0	0	9.6	0.6	0
4	0	0	1.3	22.2	0.7	0	4	1	6.1	0	0	0	0
5	0	22.1	5.5	9.3	0	0.7	5	0	0	0	0	11	4.1
6	10.8	0	0	2.9	7.9	0	6	0.2	0	0	0	18.3	3.1
7	0	0	0	3.8	2.9	0	7	0	0	0	0	0	11
8	0	0	0.2	0	11	0	8	0	0	11.2	0	0	16.3
9	0	0	15.3	1.1	5.6	0	9	0	0	0	0	0	0
10	0	10	11.6	16.5	0	0	10	0	0	0	0	0	0
11	0	6.8	17.3	0.1	0	0.5	11	0	0	0	0	0	0
12	0	2.5	0	0	0	0	12	0	1.8	15.8	0	0	0
13	0	4.1	0	0	0	0	13	0	0	0	10.2	0	0
14	0	1.2	0	0	0	0	14	0	0	0	4.6	3	0
15	0.2	0.6	0	0	0	0	15	0	0	0	1.1	0	0
16	0	2.8	0	0	28.1	0	16	2.7	0	0	0.5	0	13.6
17	0	0	0	0	14.5	0	17	0	0	0	0.9	0	0
18	0	0	0	0	11.4	0	18	1.4	0	26.1	1.4	0	4
19	0	7.5	3.4	0	0.5	0	19	0	12.6	1.7	0.6	0	0
20	0	17.5	5.5	0	29.9	0	20	0	0	75.6	1.7	0	0
21	1.2	12.9	1.7	26.2	0.3	0	21	0	0	41.8	0.3	0	0
22	1.1	0	2.2	13.7	0	0	22	0	0	13.7	0	0	15.9
23	0	0	0	0.2	0	0	23	0	0	0	0	0	0
24	5.1	20.1	0	18.8	0	0	24	0	0.6	0	0	0	0
25	0	0	0	0	6.4	0	25	0	5.7	18.1	3.2	0	0
26	0	2.8	0	0	44	0	26	0	0	33.5	11.4	0	0
27	0	0	0	0	17.3	0	27	1.2	14.5	3.8	0.7	0	0.6
28	0	0	43	0	11.9	0	28	0.8	0	20.1	0.3	0	0
29	0	0	0.2		0.6	0	29	1	0	7.4	0	0	0
30	0	0	0		5.6	0	30	0	0	24.9		2.5	0
31			29.4		0		31		0	6.1		12.3	
total	19.2	110.9	183.8	149	215	1.2	total	22.4	46	299.8	46.5	106.8	73
				total of 6 months		679.1					total of 6 months		594.5



Monthly Rainfall in 2003/04 at the stations in Kuntaja

Station	altitude (m)	Rainfall (mm)							
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	Total
Chileka Airport	767	4.2	22.4	46.0	299.8	46.5	106.8	73.0	598.7
Chileka Dip-Tank	640	0.5	0.0	51.0	320.9	71.1	0.0	95.2	538.7
Chilangoma Agriculture Sattion	801	0.0	11.0	37.8	221.5	183.2	114.4	83.9	651.8
Khungulu Agriculture Sattion	886	9.0	4.0	78.0	331.0	114.5	100.0	54.5	691.0
Kanjedza Agriculture Sattion	790	10.0	11.0	109.0	247.5	124.0	0.0	105.5	607.0

Note:

- (1) It is the safest to plant trees in January, judging from rainfall pattern for these two years.
- (2) The rain falls from strip of the clouds at a type of orogenic rainstorm.
- (3) This gives large variances among the sites but the trend shows that the higher the altitude is, the more rain falls. In this term, Chileka pineplain receives least rainfall in Kuntaja T.A.
- (4) Altitude of the Study Area ranges 550 to 600m, indicating that data in Chileka dip tank are most akin to the Area's locality.

Annual Rainfall at Chileka Airport

Year	89 / 90	91 / 92	92 / 93	93 / 94	94 / 95	5 year average
Rainfall(mm)	778.1	833.5	652.5	743.5	695.5	740.6

Year	95 / 96	96 / 97	97 / 98	98 / 99	99 / 00	5 year average
Rainfall(mm)	546.0	969.2	1431.2	986.3	954.8	977.5

*4 year average except for 97/98 = 864.1

Year	00 / 01	01 / 02	02 / 03	03 / 04	-	4 year average
Rainfall(mm)	706.3	884.9	679.1	594.5	-	716.2

Monthly Rainfall at Chileka Airport

period	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
1989 to 98	84.3	164.1	236.1	180.8	98.2	44.7
2002/03	19.2	110.9	183.8	149.1	215.1	1.2
2003/04	22.4	45.9	299.8	46.5	106.8	72.9
comp.	low	low	equiv.	low	high	equiv.

Note:

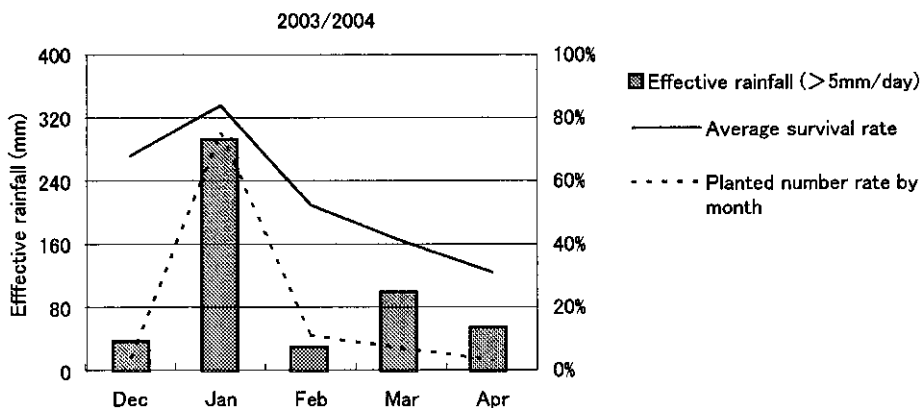
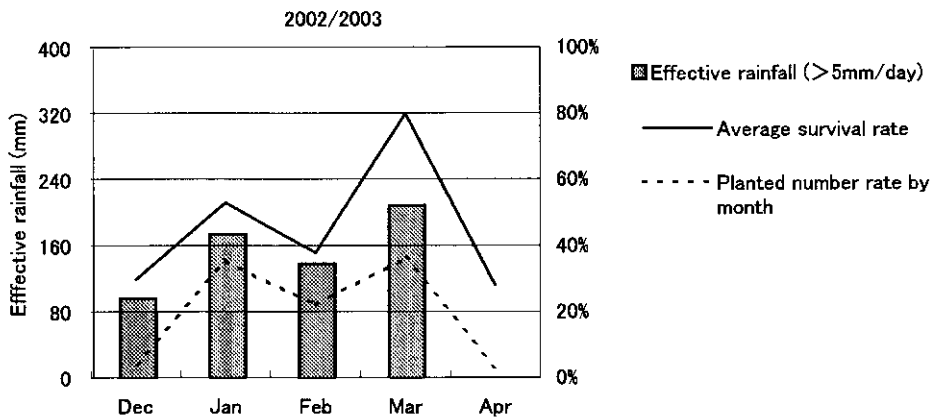
- (1) Average, with monthly comparison showing lower trend except January, March and April.

Survival Rate of Seedlings and Drought Spells

(3/4)

Year	2002					2003				
	Dec	Jan	Feb	Mar	Apr	Dec	Jan	Feb	Mar	Apr
Planted month										
rainfall (mm)*	96.9	174.8	139.3	210.0	0.0	38.9	294.3	31.2	101.3	56.8
drought spell**	10	-	10	-	31	14	11	12	22	-
01.Makonokaya								65% w-lot		
02.Siyamdima			5% w-lot							
03.Kaumbata		32% field	17% w-lot				100% field	62% w-lot		
04.Mdala		68% w-lot			55% w-lot					33% w-lot
05.Nanjiwa			35% w-lot	76% w-lot			83% w-lot		61% field	
06.Chikoja	44% w-lot		64% w-lot	88% w-lot						29% w-lot
07.Manjero		43% w-lot							41% w-lot	
08.Tcula	41% w-lot						82% w-lot			
09.Chakana					1% w-lot					
10.Lemu		50% w-lot				28% w-lot		30% w-lot		
11.M.Ngondo			68% w-lot				87% w-lot			
12.Kam'mata		55% w-lot					86% w-lot			
13.Kumanda				78% field			78% field			
14.Tambekenji	4% w-lot	66% w-lot				90% field	94% w-lot			
15.Chilangali		61% w-lot	80% field	81% w-lot			85% field			
16.D. Mbedza		36% w-lot				29% w-lot	72% field	58% w-lot		
17.Kamwendo			28% w-lot				71% field			
18.Peter Bilila				92% w-lot			98% field	63% w-lot		
19.Ndemanje			11% w-lot			92% field				
20.S. Mpombe			22% w-lot				72% w-lot			
21.Kateya			47% w-lot					41% w-lot	57% field	
22.Maluwa				72% w-lot						
23.Kumponda				72% w-lot						
24.K. Chigumula		65% w-lot						48% w-lot		
Average survival rate above (A)	30%	53%	38%	80%	28%	68%	84%	52%	41%	31%
Planted number rate by month (B)	4%	35%	22%	36%	3%	4%	75%	11%	7%	3%
A x B	1%	19%	8%	29%	1%	3%	63%	6%	3%	1%

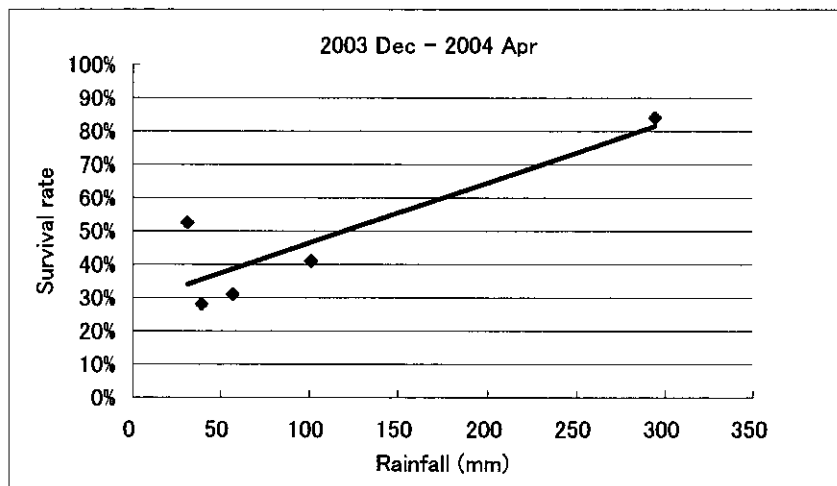
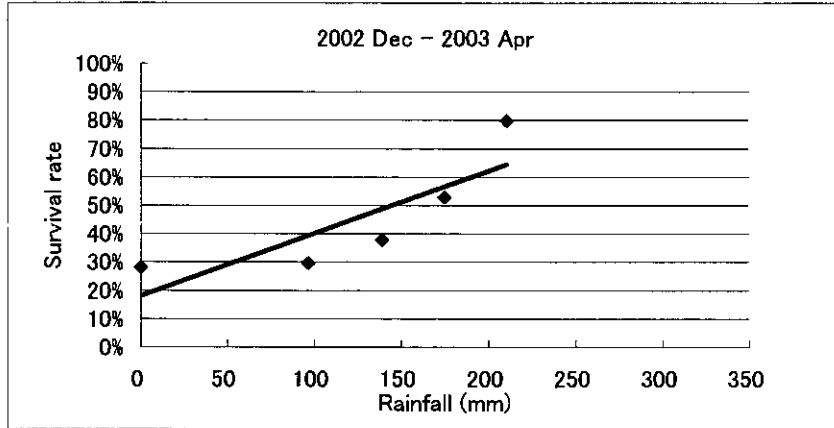
Note; * monthly, effective rainfall (> 5mm),
 ** number of days in a dry spell continued for more than 10 days of rainfall.
 ***w-lot = woodlot



Relation between Survival Rate of Out-planting and Monthly Rainfall

Year	2002	2003	2003	2003	2003	2003	2004	2004	2004	2004
Month	Dec	Jan	Feb	Mar	Apr	Dec	Jan	Feb	Mar	Apr
Rainfall (mm)	97	175	139	210	0	39	294	31	101	57
Survival Rate	30%	53%	38%	80%	28%	28%	84%	52%	41%	31%

Correlation coefficient	
2002 Dec - 2003 Apr	0.83
2003 Dec - 2004 Apr	0.87



ANNEX B8

Growth of selected Species of Seedlings

(1/2)

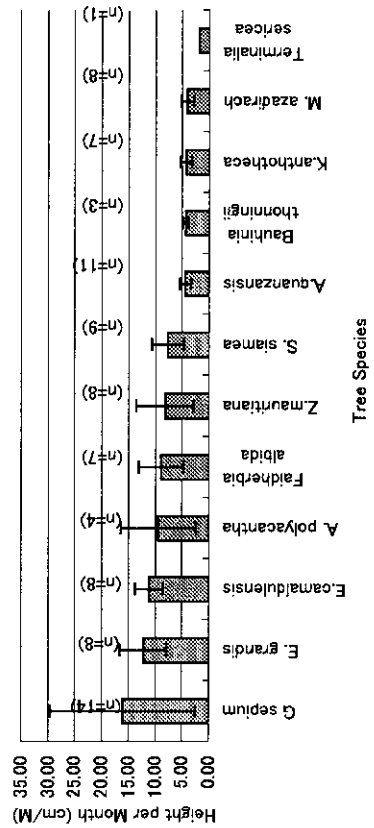
Growth data	<i>G. septium</i>				<i>S. siamea</i>				<i>K. antholheca</i>				<i>E. camaldulensis</i>					
	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M
Village																		
01. Makonokay	dimba	4	20	0.4	5.0	1.0	forest	17	235	13.8	2.0	1.2	woodl.	5	40	0.7	8.0	1.4
02. Sivanudin	dimba	7	40	0.9	5.7	1.3	forest											
03. Kauribata	dimba	17	80	1.1	4.7	0.6	field	5	30	6.0	0.4	0.8						
04. Mdala	field	15	100	1.4	6.7	0.9	woodl.						woodl.	6	15	0.4	2.5	0.7
05. Nanjiwa	dimba	5	60	1.0	12.0	2.0	forest						field	6	25	0.5	4.2	0.8
06. Chikvoja							forest	5	40	8.0	0.5	1.0						
07. Manjelo	dimba	17	600	4.3	35.3	2.5												
08. Teula																		
09. Chakana																		
10. Lemu	field	5	60	1.1	12.0	2.2							Lbank	5	20	0.5	4.0	1.0
11. M. Ngondo	field	6	30	0.6	5.0	1.0							field	6	30	0.6	5.0	1.0
12. Kam'mata	dimba	6	80	1.2	13.3	2.0	forest	6	35	5.8	1.2	2.0	field	6	80	1.5	13.3	2.5
13. Kumarda	dimba	6	56	1.0	9.3	1.7	woodl.	6	38	6.3	0.5	0.8						
14. Tamvekeriji	Hstead	5	90	1.3	18.0	2.6	forest	6	55	9.2	1.2	1.2	Hstead	6	32	0.6	5.3	1.0
15. Chilangali							forest	6	20	3.3	0.3	0.3						
16. D. Mbeza	Hstead	5	150	1.7	30.0	3.4	Hstead	6	60	10.0	1.2	1.2	field	6	22	0.5	3.7	0.8
17. Kamwendo																		
18. Peter Billia	field	16	280	2.5	17.5	1.6	forest											
20. S. Mpombe							forest	6	40	6.7	0.5	0.8						
21. Kateya	Hstead		230	1.2														
22. Maluwa																		
23. Kumponda	Hstead	7	350	2.0	50.0	2.9							Hstead	7	35		5.0	
24. K. Chigumiri		8.6			16.0	1.8		7.0		7.7	1.0			6.0			4.2	0.9
Average		5.1			13.5	0.8		3.8		3.0	0.4			0.6			1.0	0.1
S.D		1.4			14	1.4		9		9	0.9			7			7	6

Growth data	<i>Z. mauritiana</i>				<i>A. guanzensis</i>				<i>M. azadirach</i>				<i>E. grandis</i>					
	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M
Village																		
01. Makonokay							Hstead	5	15	3.0	0.3	0.6						
02. Sivanudin																		
03. Kaumbata	Hstead	16	25	0.4	1.6	0.3												
04. Mdala													woodl.	6	15	0.4	2.5	0.7
05. Nanjiwa							woodl.	6	25	4.2	0.5	0.8	field	6	25	0.5	4.2	0.8
06. Chikvoja	Hstead	6	28	0.4	4.7	0.7	woodl.	6	32	5.3	0.5	0.8	Lbank	6	15	0.3	2.5	0.5
07. Manjelo							forest	6	36	6.0	0.7	1.2						
08. Teula																		
09. Chakana													Lbank	5	20	0.5	4.0	1.0
10. Lemu	Hstead	5	50	1.0	10.0	2.0												
11. M. Ngondo																		
12. Kam'mata	Hstead	6	70	1.1	11.7	1.8	Hstead	6	32	5.3	0.6	1.0	field	6	30	0.6	5.0	1.0
13. Kumarda	Hstead	6	30	0.4	5.0	0.7	forest	7	28	4.0	0.7	0.7						
14. Tamvekeriji	field	16	225	2.8	14.1	1.8	woodl.	6	20	3.3	0.3	0.5	Hstead	6	32	0.6	5.3	1.0
15. Chilangali							forest	6	30	5.0	0.5	0.8						
16. D. Mbeza	Hstead	5	15	0.3	3.0	0.6	field	5	18	3.6	0.3	0.6	field	6	22	0.5	3.7	0.8
17. Kamwendo																		
18. Peter Billia																		
19. Ndemiaoje																		
20. S. Mpombe	Hstead	15	235	1.9	15.7	1.3	field	6	30	5.0	0.5	0.8	field	6	30	0.6	5.0	1.0
21. Kateya																		
22. Maluwa							field	13	45	3.5	0.6	0.5						
23. Kumponda																		
24. K. Chigumiri																		
Average		9.4			8.2	1.1		6.5		4.4	0.3			5.9			4.0	0.9
S.D		5.2			5.3	0.7		2.2		1.1	0.2			0.4			1.1	0.2
		8			8	8		11		11	1.1			8			8	8

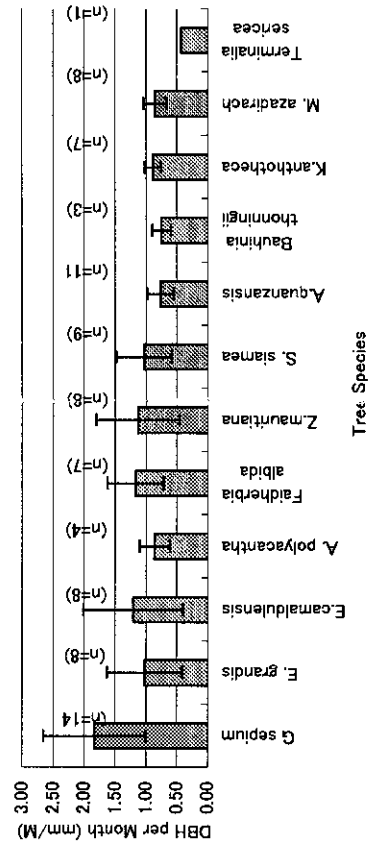
Growth of selected Species of Seedlings

Growth data		<i>A. polyacantha</i>				<i>Faidherbia albida</i>				<i>Bauhinia thonningii</i>				<i>Terminalia sericea</i>											
Village	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M	location	months after o.	height in cm	DBH in cm	height cm/M	DBH mm/M							
01. Makonokoy																									
02. Siyamudim																									
03. Kaumbata	field		30	0.5			field	15	75	0.9	5.0	0.6													
04. Mbala																									
05. Nanjiwa																									
06. Chikoya	forest	5	30	0.5	6.0	1.0	woodl. forest	5	32	0.5	6.4	1.0	Hstead	6	28	0.5	4.7	0.8							
07. Manjielo																									
08. Teula	Hstead	17	150	1.6	8.8	0.9	forest	6	100	1.2	16.7	2.0	Hstead	6	28	0.5	4.7	0.8							
09. Chakana																									
10. Lemu																									
11. M.Ngondo																									
12. Kam'mala							forest	5	60	0.7	12.0	1.4													
13. Kumanda	forest	16	56	0.8	3.5	0.5	field	6	33	0.5	5.5	0.8	forest	7	26	0.4	3.7	0.6	13	0.3	1.9	0.4			
14. Tamvelenji																									
15. Chilaqali																									
16. D. Mbeza							field	15	120	2.0	8.0	1.3													
17. Kamwendo	dimba	15	290	1.5	19.3	1.0																			
18. Peter Bilila																									
19. Ndemanje																									
20. S. Mpombe																									
21. Kateya																									
22. Maluwa																									
23. Kumponda																									
24. K. Chiguanu																									
Average		13.3			9.4	0.9		8.3			8.8	1.2		6.3			4.3	0.7		7.0			1.9	0.4	
S.D.		5.6			7.0	0.2		4.6			4.2	0.5		0.6			0.5	0.2		#DIV/0!			-	-	
		4			4	4		7			7	2		3			3	3		1			1	1	

*months after o. = months after outplanting, DBH = diameter at breast height, Hstead = Homestead



Note: The trees 5-17 months after out-planting were surveyed.



Note: The trees 5-17 months after out-planting were surveyed.

**INPUT CONDITIONS BY MATERIALS
(1ST PHASE & 2ND PHASE)**

Description	Unit	No. 19 Nidemanje			No. 20 Simon Mpoomba			No. 21 Katsaya			No. 22 Malawa			No. 23 Kumponda			No. 24 Kumasi: Ohigamula			Quantity			Remarks						
		Quantity		Condi- tions	Quantity		Condi- tions	Quantity		Condi- tions	Quantity		Condi- tions	Quantity		Condi- tions	Quantity		Condi- tions	Quantity		1st		2nd	Total				
		1st	2nd	Total	1st	2nd	Total	1st	2nd	Total	1st	2nd	Total	1st	2nd	Total	1st	2nd	Total										
1 Materials for working																													
1 Wheel burrows	unit	3	2	5	△	3	2	5	△	3	2	5	△	3	3	3	3	3	3	3	3	3	3	3	3	72	16	88	Some of 1st phase are deteriorated. Well used. Wheel axle quality is poor.
2 Hoes and Rakes	unit	5	14	19	○	5	14	19	△	5	8	13	△	5	15	20	△	5	15	20	△	5	15	20	△	120	326	446	Some of 1st phase are deteriorated. Well used. Handle and hoe blade quality are poor.
3 Measuring tapes	roll	2		2		2		2		2		2		2		2		2		2		2		2		48	0	48	Well used.
4 Trowels	pc	10	9	19	△	10	9	19	△	10	10	10	○	10	10	10	○	10	10	10	○	10	10	10	○	240	72	312	Well used.
5 Shovel	pc	10	18	28	△	10	18	28	△	10	10	20	○	10	15	25	○	10	15	25	○	10	15	25	○	240	374	614	Well used.
6 Watering tins	pc	10	14	24	△	10	14	24	△	10	8	18	△	10	15	25	○	10	15	25	○	10	15	25	○	240	326	566	Some of 1st phase are deteriorated. Well used. Seal portion is poor, and thin plate is used.
7 Drum container	pc	2	6	8	○	2	6	8	○	2	2	4	○	2	4	6	○	2	4	6	○	2	4	6	○	48	104	152	Some are used. Watering tins and buckets are directly used for nursery.
8 Stone picks	unit	5	18	23	○	5	18	23	○	5	12	17	○	5	12	17	○	5	12	17	○	5	12	17	○	120	360	480	Some are used. Attendants hesitate to plant seedlings in stony field.
9 Water bucket	unit	6	16	22	○	6	16	22	○	6	10	16	△	6	12	18	○	6	12	18	○	6	12	18	○	144	328	472	Some of 1st phase are deteriorated. Well used. Seal portion is poor, and thin plate is used.
10 Sickles and handles	pc	20	15	35	○	20	15	35	△	20	5	25	△	20	15	35	△	20	15	35	△	20	15	35	△	480	310	790	Quality of handle and iron portion are poor.
11 Hatchet	pc	10	18	28	△	10	18	28	○	10	12	22	△	10	11	21	△	10	11	21	△	10	11	21	△	240	350	590	Some of 1st phase are deteriorated. Well used. Handle and blade quality are poor.
12 Handaws and handles	pc	5	11	16	○	5	11	16	△	5	5	10	△	5	6	11	○	5	6	11	○	5	6	11	○	120	188	308	Some are used. Not always necessary to use.
13 Oil painting and brush	set	1	4	5	○	1	4	5	○	1	2	3	○	1	2	3	○	1	2	3	○	1	2	3	○	24	68	92	Some are used. Others don't construct storehouses for taking another way to keep input.
14 Bicycle	unit	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	24	0	24	Well used.
2 Nursery																													
1 Screen shade	sheet	10	10	10	○	10	10	10	○	10	10	10	○	10	10	10	○	10	10	10	○	10	10	10	○	240	0	240	Already used.
2 Wooden poles for shade/roof	nos	12	12	12	○	12	12	12	○	12	12	12	○	12	12	12	○	12	12	12	○	12	12	12	○	288	0	288	Already used. But Alive poles are recommended from 2nd phase for permanent nursery.
3 Hedge windbreaker	sheet	4	4	4	○	4	4	4	○	4	4	4	○	4	4	4	○	4	4	4	○	4	4	4	○	96	0	96	Already used.
4 Cement	50kg/bag	1	10	11	△	1	10	11	△	1	5	6	○	1	5	6	○	1	5	6	○	1	5	6	○	24	170	194	Some are used. Other nurseries have naturally flat floor.
5 Door hinges	pc	6	12	18	△	6	12	18	△	6	6	12	○	6	6	12	○	6	6	12	○	6	6	12	○	144	204	348	Some are used. Other doors of nursery are made of reeds.
6 Nail	pc	20	40	60	○	20	40	60	△	20	20	40	○	20	20	40	○	20	20	40	○	20	20	40	○	480	680	1,160	Already used. Some are remaining.
7 Key	pc	1	2	3	○	1	2	3	○	1	1	2	○	1	1	2	○	1	1	2	○	1	1	2	○	24	34	58	Already used. Other are not used for reed doors.
8 Bricks for nursery bed	360nos/set	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	24	0	24	Already used, but not well used. Quality was poor.
9 Bricks for storage hut	1200nos/set	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	1	1	1	○	24	0	24	Already used, but not well used. Quality was poor.
10 Galvanized plate for hut door	sheet	4	18	22	○	4	18	22	○	4	10	14	○	4	8	12	○	4	8	12	○	4	8	12	○	96	304	400	Already used. Some are remaining.
11 Door	door	2	2	2	△	2	2	2	○	2	1	1	○	2	1	1	○	2	1	1	○	2	1	1	○	34	34	68	Already used. Some are not used. Constructed reed doors.
12 Polyethylene pots	6000 pcs	12	4	16	○	12	4	16	○	12	2	14	○	12	2	14	○	12	2	14	○	12	2	14	○	288	68	356	Well used.
13 Phosphorous manure	50kg/bag	10	20	30	○	10	20	30	○	10	10	20	○	10	10	20	○	10	10	20	○	10	10	20	○	240	340	580	Well used.
3 Seeds and Seedlings																													
1 SF seed	kg	8.8	8.6	8.6	○	8.6	8.6	8.6	○	8.6	8.6	8.6	○	8.6	8.6	8.6	○	8.6	8.6	8.6	○	8.6	8.6	8.6	○	0	0	0	Well used.
2 AF seed	kg	20.0	8.0	28.0	○	20.0	8.0	28.0	○	20.0	8.0	28.0	○	20.0	8.0	28.0	○	20.0	8.0	28.0	○	20.0	8.0	28.0	○	480	208	688	Well used.
3 Seed bank seedlings	seedlings	20		20		20		20		20		20		20		20		20		20		20		20		480	0	480	Well used. Some are distributed to individual households.
4 Fruit seedlings	seedlings	120	120	120		120	120	120		120	120	120		120	120	120		120	120	120		120	120	120		2,040	2,040	4,080	Well used. Almost all are distributed to individual households.
Note:		○ = 13	△ = 3	△ = 7	○ = 11	△ = 7	△ = 7	○ = 11	△ = 7	△ = 6	△ = 6	○ = 14	○ = 16	○ = 16	△ = 3	△ = 3	△ = 3	○ = 11	△ = 8	△ = 8	○ = 11	○ = 11							
		x = 0	x = 0	x = 0	x = 0	x = 0	x = 0	x = 0	x = 0	x = 0	x = 0	x = 0	x = 1	x = 1	x = 1	x = 1	x = 1	x = 0	x = 0	x = 0	x = 0	x = 0	x = 0						
		not mention= 15	not mention= 15	not mention= 9	not mention= 15	not mention= 9	not mention= 15	not mention= 15	not mention= 9	not mention= 11	not mention= 11	not mention= 14	not mention= 9	not mention= 16	not mention= 3	not mention= 3	not mention= 3	not mention= 11	not mention= 8	not mention= 8	not mention= 11	not mention= 11							
		Comments: Wheel burrows are in bad conditions. Some of watering tins, buckets are missing. Storeroom is constructed. Inputs are totally fairly used.	Comments: Some of trowels, buckets, hachets, shovels, sickles are missing. Inputs are totally fairly used.	Comments: Some of almost input are missing. Inputs are totally poorly used and stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.	Comments: Some of hoes, watering tins, buckets, hachets, sickles are missing. Inputs are totally fairly used, but poorly stored.		

Remarks:
 ○ = Good, well used
 △ = Fairly used
 x = Poorly used

ANNEX B10

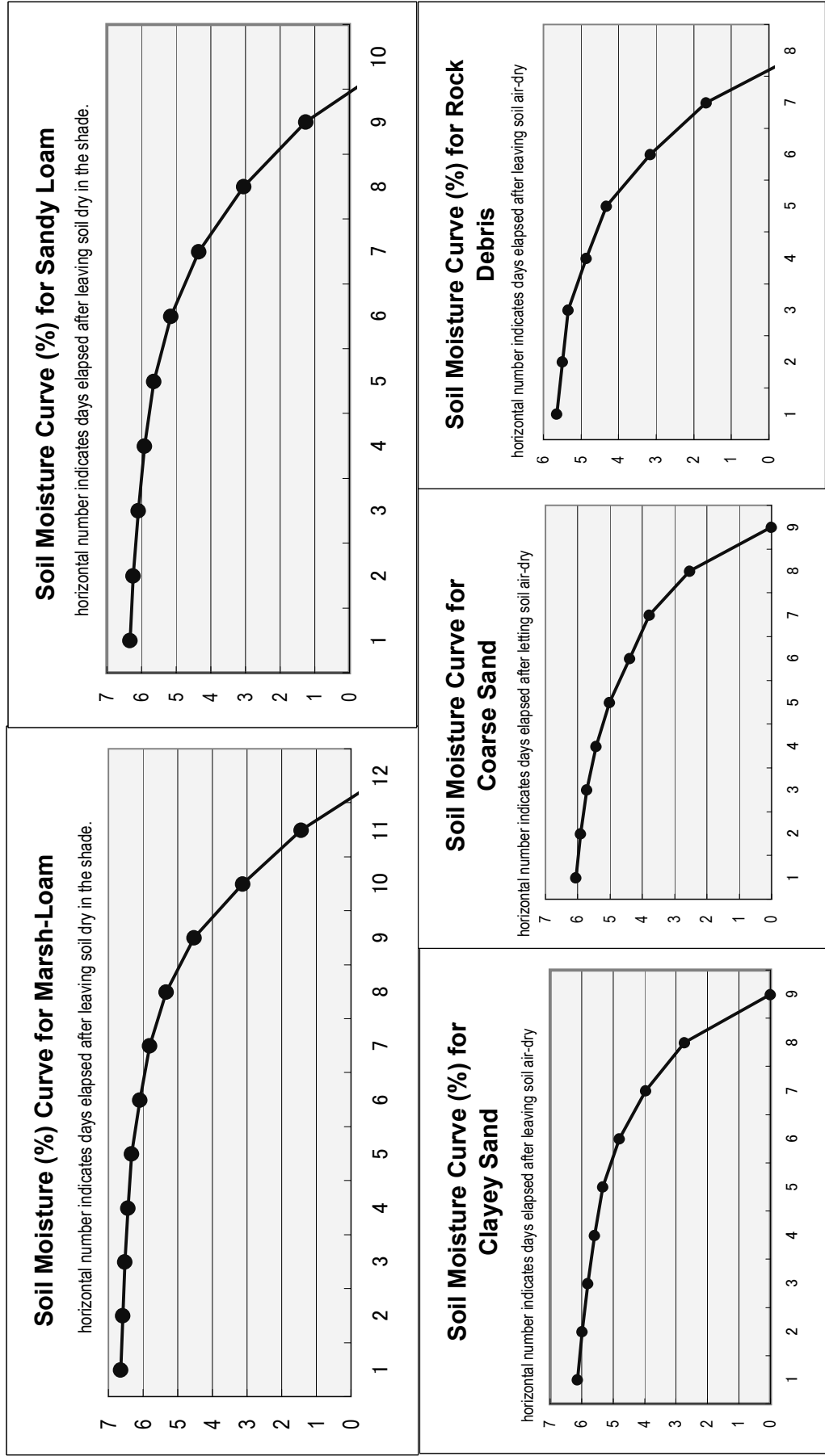
INPUT MATERIALS SUPPLIED

Nursery Input

Description	Unit	1st phase (24 villages)		2nd phase (24 villages)		3rd phase		Total
		per village	Q'ty	per village	Q'ty	per village	Q'ty	Q'ty
1 Materials for working								
1 Wheel burrows	unit	3	72		16		29	117
2 Hoes and Rakes	unit	5	120		326		430	876
3 Measuring tapes	roll	2	48		0		0	48
4 Trowels	pc	10	240		72		0	312
5 Shovel	pc	10	240		374		90	704
6 Watering tins	pc	10	240		326		270	836
7 Drum container	pc	2	48		104		7	159
8 Stone picks	unit	5	120		360		15	495
9 Water bucket	unit	6	144		328		140	612
10 Sickles and handles	pc	20	480		310		115	905
11 Hatchet	pc	10	240		350		75	665
12 Handsaws and handles	pc	5	120		188		2	310
13 Oil painting and brush	set	1	24		68		4	96
14 Bicycle	unit	1	24		0		0	24
15 Axes	pc		0		0		85	85
16 Slashers	pc		0	(for sickle)			42	42
2 Nursery								
1 Screen shade	sheet	10	240		0		0	240
2 Wooden poles for shade/roof	nos	12	288		0		0	288
3 Hedge windbreaker	sheet	4	96		0		0	96
4 Cement	50kg/bag	1	24		170		0	194
5 Door hinges	pc	6	144		204		0	348
6 Nail	pc	20	480		680		0	1,160
7 Key	pc	1	24		34		0	58
8 Bricks for nursery bed	360nos/seq	1	24		0		0	24
9 Bricks for storage hut	1200nos/seq	1	24		0		0	24
10 Galvanized plate for hut	sheet	4	96		304		0	400
11 Door	door		0		34		0	34
12 Polyethylene pots	6000 pcs	12	288		68		5	361
13 Phosphorous manure	50kg/bag	10	240		340		265	845
3 Seeds and Seedlings								
SF seed	kg				224		65	289
AF seed	kg	20	480		208		4	692
Seed bank seedlings	seedlings	20	480		0		0	480
Fruit seedlings	seedlings				2,040		0	2,040

Fig. B11-1 Patterns of Soil Moisture Retention Measured by Gypsum Blocks
 (vertical axis shows observed order of m-mho, reversal of resistance)

Five ranking for statistical analysis: point 5 for Marsh-Loam, point 4 for Sandy Loam point 3 for Clayey Sand, point 2 for Coarse Sand and point 1 for Rock Debris.



Illustrative Map of Soil Distribution

related to Fig B11-1 Pattern of Soil Moisture Retention

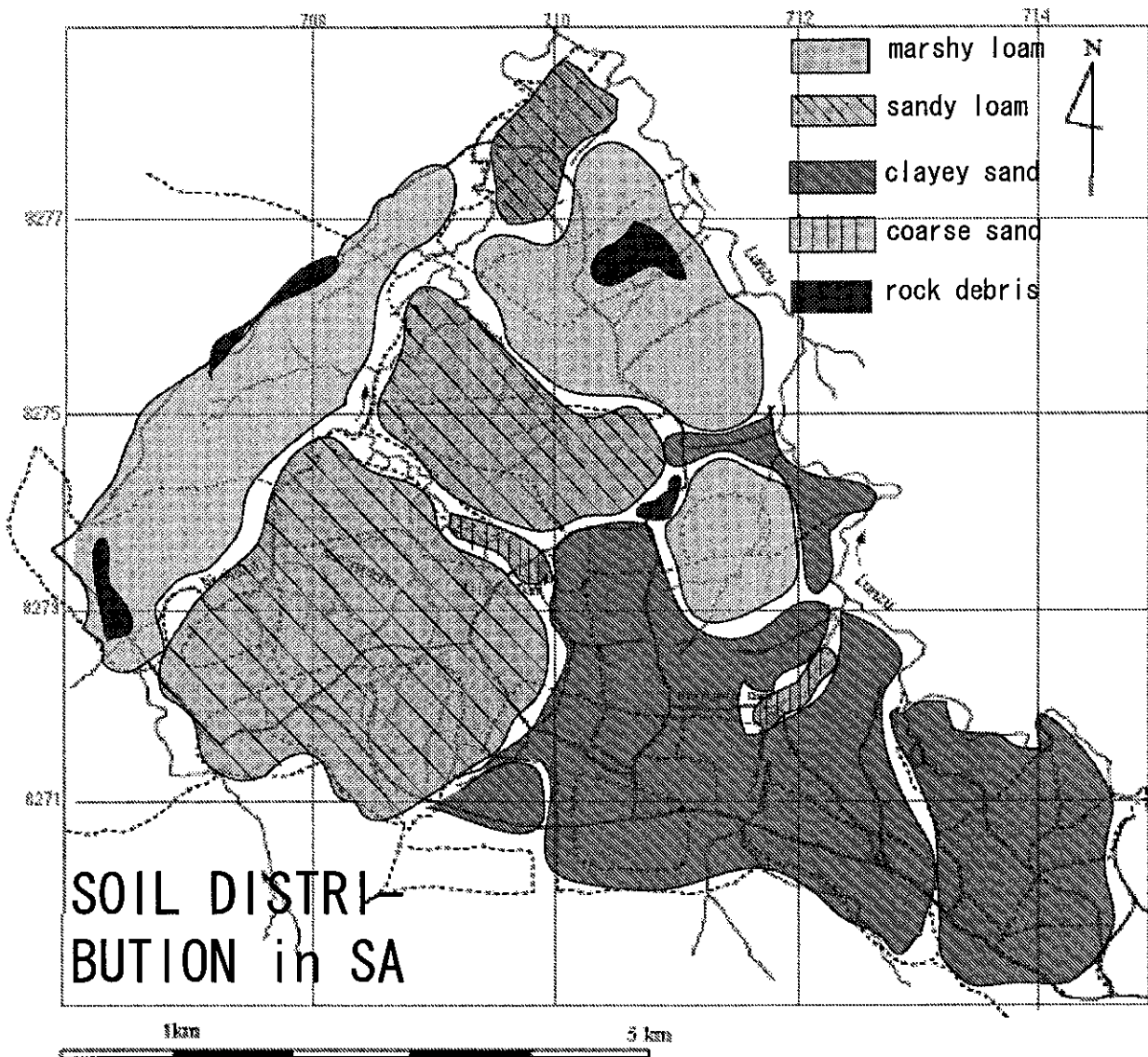


Fig. B-11.2 Illustrated Results of Qualitative Analysis

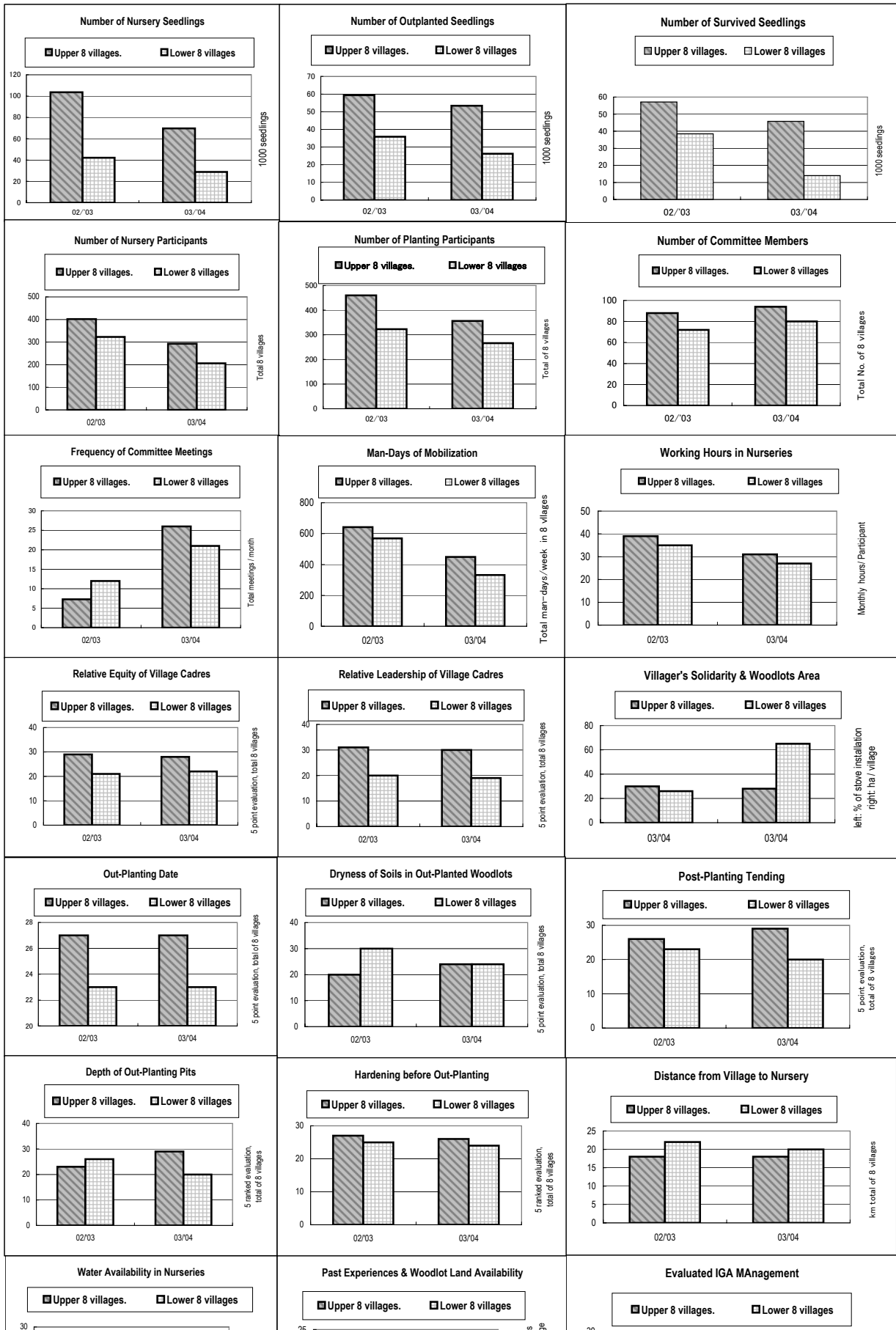


Fig. B-11.3 Multiple Regressions between Survival Rate and Technical / Environmental Factors

2003 $S = 1.768H + 999P + 379T - 4.108$ $R_h = 0.662$, $R_p = 0.293$, $R_t = 0.128$ $S = 2.222D + 384W + 134M - 2.830$ $R_d = 0.766$, $R_w = 0.122$, $R_m = 0.048$

2004 $S = 266H + 967P + 1,347T - 3.980$ $R_h = 0.097$, $R_p = 0.324$, $R_t = 0.608$ $S = 88D + 1,696W - 75M - 1,345$ $R_d = 0.023$, $R_w = 0.766$, $R_m = -0.037$

2002 $Y = 5.06x + 16.1$ $R = 0.515$ $Y = 252x + 5.711$ $R = 0.753$ $Y = 0.31x + 6.28$ $R = 0.684$
 nursery participants chief leadership outplanting paicpants cumulative work-hour outplanting paicpants villager's solidarity
 2003 $Y = 1,957X + 3,779$ $R = 0.444$ $Y = 1,113X + 2,708$ $R = 0.628$ $Y = 5.06x + 16.1$ $R = 0.515$
 nursery seedlings firewood scarcity outplanting paicpants chief leadership outplanting paicpants chief leadership
 2004 $Y = 4.5X + 17.4$ $R = 0.512$ $Y = 148x + 1,589$ $R = 0.610$
 outplanted seedlings chief leadership nursery seedlings nursery participants

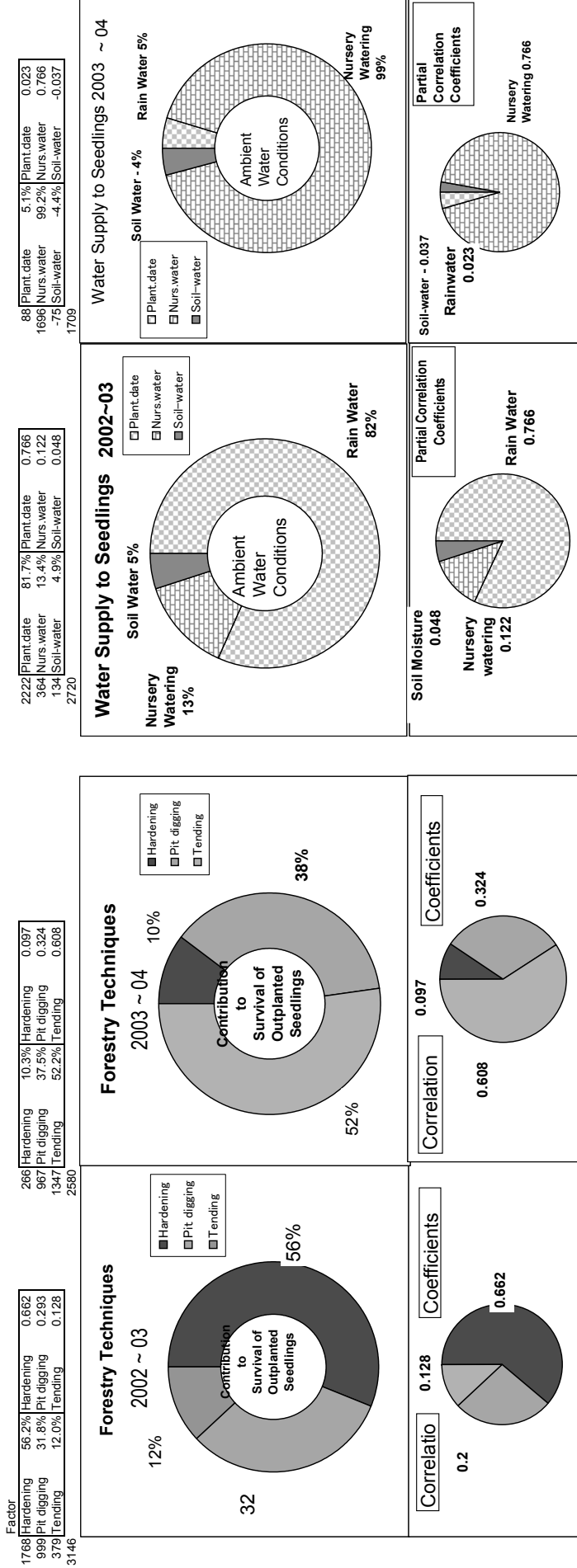
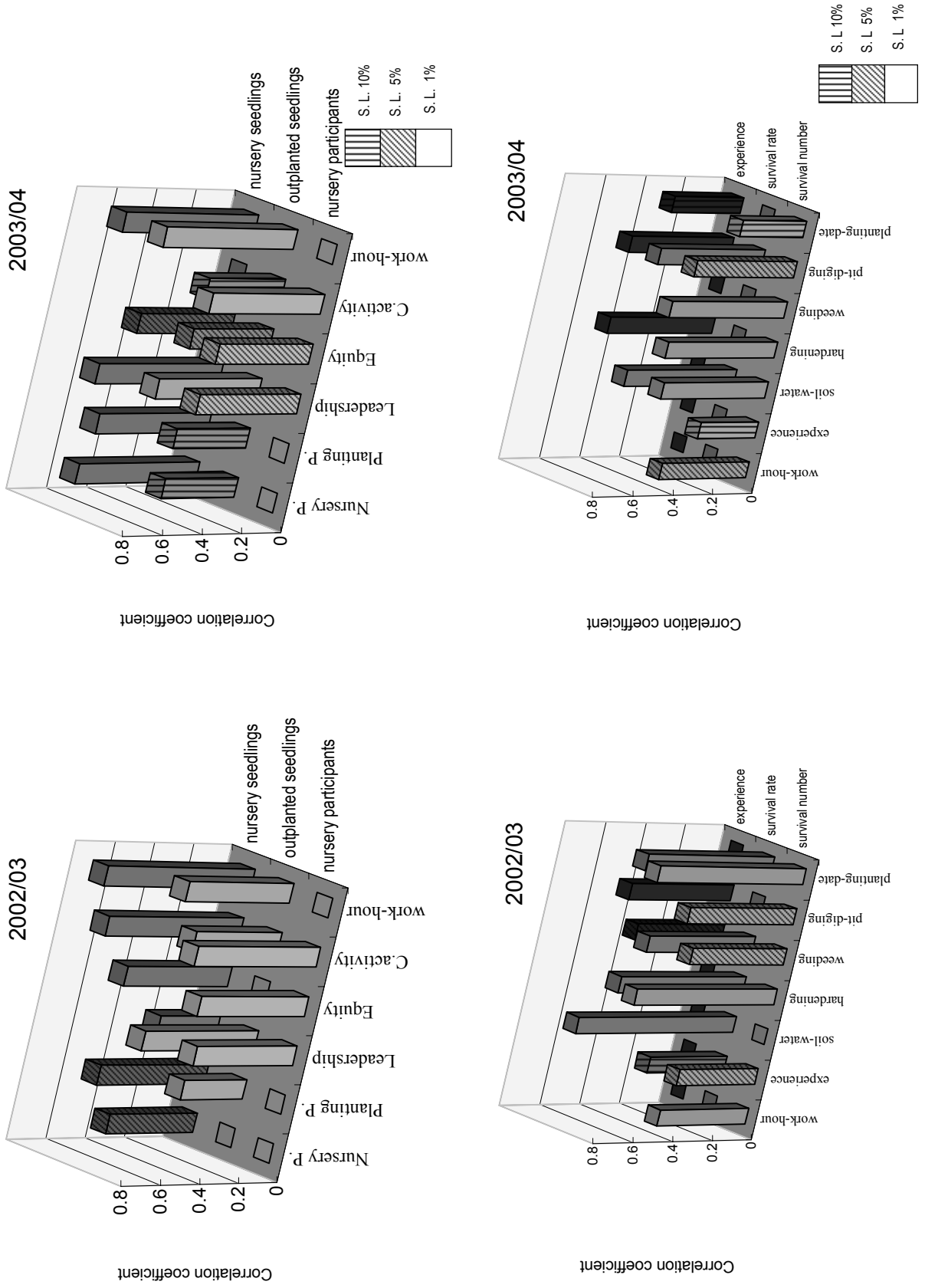


Fig.11-4 Correlation among Social Indicators and Forestry Performances



Analysis of the Forestry Data

Final Report 4.5.3 No.1 page 89 paragraph 1 Forestry Results and Related Social Factors in 2002/03

Name of Village	Forestry Activities			Organizational and Administrative Factors							
	Nursery raised seedlings	Planted seedlings in the village	Survived stand in the lots	administrative character in the village	Com-mittee member	Meeting activity meeting frequency /month	Parti-cipants in nursery works	Partici-pants in out-planting works	Plant-ing experi-ence of villagers	mobi-lized days / year	nursery works hr/wk
Makonokaya	8,550	8,400	49.4	monopoly = 2	7	1	30	30	0.5	84	3
Siyamdima	9,035	4,200	20.2	chief too old = 3	10	1	40	85	0.3	60	1
Kaumbata	8,050	7,040	53.5	monopoly = 2	8	2	73	73	1.5	75	5
Mdala	4,800	3,900	54.5	monopoly = 2	10	2	30	55	0.3	82	3
Nanjiwa	7,087	6,466	60.5	transparency = 4	5	1	25	95	5.5	76	9
Chikoja	20,534	8,251	71.8	equitable = 5	20	1	83	83	2.5	105	3
Manjero	8,319	8,288	83.5	transparency = 4	10	1	45	26	2	88	3
Teula	3,260	3,187	62.9	absence = 5	10	2	38	20	1	73	4
Chakana	6,900	3,000	0.5	monopoly = 2	4	2	25	15	0	55	4
Lemu	4,795	4,300	60	ordinary = 3	6	2	35	40	1.5	69	4
M. Ngondo	8,770	4,023	41.5	transparency = 4	9	2	36	56	0.5	73	3
Kam'mata	16,496	11,608	74.9	equitable = 1	10	1	40	90	3.8	92	4
Kumanda	11,842	4,739	75.6	ordinary = 3	10	1	33	33	1	80	4
Tamvekenji	9,782	8,755	48.4	transparency = 4	10	1	35	50	2.5	77	4
Chilangali	8,634	8,201	58.4	absence = 1	10	1	23	37	1.5	84	3
D. Mbedza	11,999	7,556	57.8	ordinary = 3	10	0.8	35	41	1	68	3
Kamwendo	14,310	4,985	43.2	transparency = 4	10	0.5	31	92	1.8	70	4
Peter Bilila	5,720	4,976	74.9	ordinary = 3	10	0.5	33	72	2.5	81	5
Ndemanje	7,400	1,227	61.9	transparency = 4	10	1	25	79	1.8	74	18
S. Mpombe	6,334	5,830	74	equitable = 5	10	0.5	20	65	1.2	64	6
Kateya	9,628	9,250	25.9	monopoly = 2	8	1	30	33	2.2	90	8
Maluwa	5,200	4,900	53.6	absence = 1	10	2	17	62	0	57	8
Kumponda	6,125	5,800	68.1	transparency = 4	10	2	35	43	1.5	60	4
K.Chigumula	5,900	3,000	73.6	monopoly = 2	6	1	30	65	0.5	83	4

Note: absence; absence of chief in the village, ordinary; under ordinary administrative state, equitable; under equitable governance, experience is evaluated at existing tree-planted area in villages

Final Report 4.5.3 No.2 Correlation among Results and Factors in the Figures 2002 / 03

indicators checked	Administr-ative equity	Com-mittee member	Meeting Frequency	Nursery Particip-ants	Planting Particip-ant	Planted days	Nursery worked hours.
Number of Seedling							
correlation Coefficient	0.455	0.61	0.587	0.186	0.378	0.532	0.075
significance level 8x%)	5% signif.	1% signif.	5% signif.			5% signif.	
Kendoll's rank Coefficient	0.1	0.25	-0.1	0.1	0.15	0.3	0
Number of outplanted							
correlation Coefficient	0.22	-0.288	0.376	0.075	0	0.538	0.213
Kendoll's rank Coefficient						1% signif.	
Kendoll's rank Coefficient	0.2	0.35	-0.35	0.2	-0.05	0.2	-0.05
Number of Survived							
correlation Coefficient	0.24	-0.326	0.265	0.3	0.052	0.433	-0.011
Kendoll's rank Coefficient						5% signif.	
Kendoll's rank Coefficient	0.25	0.5	0.05	0.3	0.1	0.45	0.05

Relationship between Administrative Equity and other Social Indicators in 2002 / 03

	Meeting Frequency	Nursery participants	Outplanting participants	Nursery workhours	Tending
correlation Coefficient	-0.224	0.465	0.489	0.032	0.346
significance level	1%	5%	1%	-	5%
Kendoll's rank coefficient	-0.45	0.45	0.50	-0.05	0.05

Final Report 4.5.3 No.3 Forestry Results and Technical / Practical Factors 2002/03

Final Report page 88 ~ page 89 2nd paragraph

Village	Planting* experience	Woodlot dryness	Nursery damages	Post-plant tending	Termite Damages	Dibble dig-ging size	Availability nursery water
Makonokaya	0.5	coarse sd.	no damage	goat brouse	nesting	shallow	Perennial flow
Siyamdima	0.3	granite rks	insect dmg	weeds	drought	standard	normal supply
Kaumbata	1.5	coarse sd.	termite	scorched	heavy attack	shallow	very scarce
Mdala	0.3	sandy clay	termite	goat brouse	heavy attack	shallow	very scarce
Nanjiwa	5.5	sandy loam	scorched	goat brouse	heavy attack	standard	normal supply
Chikoja	2.5	sandy loam	burned	basined	drought	standard	ample all season
Manjero	2	loam	no damage	basined	no damage	wider	ample all season
Teula	1	loam	no damage	goat brouse	slight dmg	standard	ample all season
Chakana	0	granite rks	hardening	weeds	slight dmg	narrow	barely meeting
Lemu	1.5	sandy loam	scorched	scorched	nesting	shallow	normal supply
M. Ngondo	0.5	coarse sd.	hardening	goat brouse	nesting	narrow	barely meeting
Kam'mata	3.8	sandy loam	insect dmg	basined	no damage	deep dibble	normal supply
Kumanda	1	loam	hardening	goat brouse	nesting	standard	very scarce
Tamvekenji	2.5	coarse sd.	termite	scorched	slight dmg	standard	normal supply
Chilangali	1.5	sandy clay	no damage	goat brouse	slight dmg	standard	perennial flow
D. Mbedza	1	coarse sd.	hardening	weeded	nesting	deep dibble	very scarce
Kamwendo	1.8	granite rks	hardening	scorched	drought	shallow	barely meeting
Peter Bilila	2.5	sandy loam	termite	weeded	heavy attack	wider	normal supply
Ndemanje	1.8	sandy clay	hardening	goat brouse	drought	standard	barely meeting
S. Mpombe	1.2	sandy loam	scorched	goat brouse	slight dmg	deep dibble	ample all season
Kateya	2.2	granite rks	scorched	weeded	slight dmg	standard	perennial flow
Maluwa	0	sandy clay	no damage	weeds	slight dmg	wider	perennial flow
Kumponda	1.5	sandy clay	no damage	goat brouse	heavy atk	standard	perennial flow
K. Chigumula	0.5	sandy loam	termite	weeded	no damage	standard	barely meeting

Note: * villager's planting experience was judged from the existing planted area (hectare).

Final Report page 88 ~ page 89 2nd paragraph

Final Report 4.5.3 No.4 Correlation among Forestry Results and Technical Factors 2002/03

Factors checked	Water avail.	Experience	Soil Moist.	Tending	Hardening	Dibble size
Number of Survived						
correlation coefficient	0.138	0.345	0.792	0.612	0.574	0.538
Significance level (%)			1%	1%	1%	1%
Kendoll's rank coeff.	0.15	0.35	0.9	0.65	0.1	0.6
Number of Raised						
correlation coefficient	-0.212	0.334				
Significance level (%)						
Kendoll's rank coeff.	-0.1	0.45				
Number of Outplanted						
correlation coefficient	0.355	0.49				
Significance level (%)		5%				
Kendoll's rank coeff.	0.5	0.45				
Administrative Equity	Water avail.	Related Factors		Tending	Termite	Dibble size
correlation coefficient	0.212	correlation Coefficient		0.589	0.224	0.408
Significance level (%)	-	significance level (%)		5%	-	5%
Kendoll's rank coeff.	0.35	Kendoll's rank coef.		0.45	0.25	0.4

Analysis of Multiple Regression on Survival & Growth Related Factors

Relative contributions of technical and environmental factors on the survival of out-planted seedlings by specie are tabulated here. In many cases (6 out of 10) soil moisture plays limiting role towards survival. Also, right selection of planting period mostly contributed to the survival. Likewise, hardening practice gave positive contribution in the ordinary year but negative effect in heavy drought year except deciduous specie. In half of the selected species, depth of out-planting pits gave better survival in both years. Tending of planted seedlings by weeding and applying basin showed mixed results, because in some cases clearing weeding of planted lots fostered invasion of goats that browsed, leaving fatal damages on the out-planted seedlings.

If the conditions on mere survival is sought, it would not be absolutely necessary to deal with different species separately, because in most cases mixed planting of indigenous and fast growing species have been practiced in the same woodlots, though some differences in survival rates by specie were observed as already mentioned.

Final Report 4.5.3 No.7

Relative Contribution of Selected Factors by Specie and by year to the Survival and Growth of each Specie

Specie	Year	Regression Formula	Partial
F.albida	Mar-02	$S = 0.114M + 0.069H - 0.012P + 0.001$	M:0.619,
F.albida	Apr-03	$S = 0.139M - 0.033H + 0.089P + 0.029$	M:0.612,
G.sepium	Mar-02	$S = 0.098M + 0.043H + 0.098P + 0.095$	M:0.462,
G.sepium	Apr-03	$S = 0.047M - 0.024H + 0.071T + 0.570$	M:0.515,
E.grandis	Mar-02	$S = 0.067M + 0.129C + 0.118N - 0.406$	N:0.613,
E.camaldulensis	Apr-03	$S = 0.073H + 0.122T + 0.035N - 0.122$	T:0.565,
A.quanzensis	Apr-03	$S = 0.173P + 0.059M + 0.045C - 0.142$	P:0.517,
S.siamea	Apr-03	$S = 0.063C + 0.070H + 0.015N + 0.167$	H:0.381,
M.azadirach	Apr-03	$S = 0.072P + 0.054C - 0.115T + 0.689$	P:0.611,
S.spectabilis	Mar-02	$S = 0.008P + 0.053C - 0.055T + 0.376$	P:0.062,
F.albida	Mar-02	$G = 0.110M + 0.083T - 0.201P + 1.307$	M:0.420,
G.sepium	Mar-02	$G = 0.236M + 0.668C + 0.734T - 2.323$	M:0.193,
E.grandis	Mar-02	$G = -0.236P + 0.172N + 0.163M + 0.920$	P:-0.642,
E.camaldulensis	Apr-03	$G = 0.123T + 0.077H + 0.540P - 1.364$	T:0.115,
M.azadirach	Apr-03	$G = -0.161P + 0.091H + 0.085C + 0.246$	P:-0.598,
S.spectabilis	Mar-02	$G = 0.099M + 0.019N + 0.014T - 0.015$	M:0.953,

abbreviation: S: Survival rate (%) of the specified specie, G: Growth(m) of the specified specie, M:soil moisture
H:hardening practice, P:planting period, T:tending of out-planted seedlings, N: availability of nursery water,
C: depth of planting pits (dibbles), Negative coefficients show negative contribution in the specified year.

Note: Species and years with too few planting number or planted villages were omitted. Meaning of negative contribution; for example. -T indicates damages by goat browsing due to clear-weeding., -H only shows relative minor contribution by error.

Final Report 4.5.3 No.5 Correlation among the Results /Related Technical Indicators 2003/04

Forestry Performance	Nursery water	past experience	Soil moisture retention	Planted date	Tending	Hardening	Dibble Depth
Number of Survived							
correlation coefficient	0.596	0.294	0.526	0.284	0.529	0.552	0.528
Significance level (%)	1%		1%		1%	1%	1%
Kendoll's rank coeff.	0.21	0.28	0.38	0.17	0.5	0.5	0.38
Number of Raised							
correlation coefficient	0.469	0.527					
Significance level (%)	5%	5%					
Kendoll's rank coeff.	0.33	0.42					
Number of Planted							
correlation coefficient	0.469	0.527					
Significance level (%)	5%	5%					
Kendoll's rank coeff.	0.33	0.42					

See Annex B4 as to specie wise data on these factors
Final Report page 88 second-third paragraph page 87~88

Final Report page 88 second-third paragraph

Final Report 4.5.3 No6 Correlation among the Results and Related Indicators 2004

Ordinary Correlation	Pot filled	Pot sown	Participation to nursery	Leadership of cadres	Nursery water	Land Area	IGA income	Distance to nursery
Pot filled	-	0.73	0.602	0.609	0.385	0.258	0.472	0.34
Pot sown		-	0.648	0.385	0.158	0.385	0.485	0.285
Participation			-	0.632	0.158	0.026	0.396	-0.034
Leadership				-	0.226	0.18	0.487	0.425
Nursery water					-	-0.091	0.354	0.241
Land Area						-	-0.065	0
IGA income							-	0
Distance to N.								-
Kendol's coeff.								
Pot filled	-	0.46	0.5	0.5	0.38	0.25	0.33	0.33
Pot sown		-	0.33	0.46	0.25	0.33	0.5	0.29
Participation			-	0.29	0.29	0	0.41	-0.08
Leadership				-	0.21	0.13	0.38	0.29
Nursery water					-	0.17	0.5	0.17
Land Area						-	0.17	0
IGA income							-	0.02

Final Report 4.5.3 No.8 Correlation with Social factors and IGA Achievements

Evaluation	Equity in A.	Leadership	Planting – 02/03	Planting – 03/04
IGA – 02/03	0.303	0.257	0.385	0.251
IGA – 03/04	0.369	0.383	0.331	0.408
IGA – 02/04	0.409	0.387	Planting 02 / 04	0.542

Final Report 4.5.3 No.9 Relation between IGA and Resource

Final Report page 89~90

	Number of planted trees	Mean IGA performance	Administrative Equity	Cadre's leadership
IGA participants	-0.282	-0.358	-0.266	-0.241
No. of planted	-	0.44	0.22	0.177
Mean IGA per.	-	-	0.409	0.387
Admin.equity	-	-	-	0.989

Final Report 4.5.3 No.10 Relation between IGA and Resource

IGA performance	Resources for IGA 2002/03	Resources for IGA 2003/04
Resources for IGA 2002/03	0.645	0.082
Resources for IGA 2003/04	0.289	0.502

Analysis of Multiple Regression on Survival & Growth Related Factors

This table corresponds to page 86–87, quantitative analysis by major tree specie

Relative contributions of technical and environmental factors on the survival of out-planted seedlings by specie are tabulated here. In many cases (6 out of 10) soil moisture plays limiting role towards survival. Also, right selection of planting period mostly contributed to the survival. Likewise, hardening practice gave positive contribution in the ordinary year but negative effect in heavy drought year except deciduous specie. In half of the selected species, depth of out-planting pits gave better survival in both years. Tending of planted seedlings by weeding and applying basin showed mixed results, because in some cases clearing weeding of planted lots fostered invasion of goats that browsed, leaving fatal damages on the out-planted seedlings.

If the conditions on mere survival is sought, it would not be absolutely necessary to deal with different species separately, because in most cases mixed planting of indigenous and fast growing species have been practiced in the same woodlots, though some differences in survival rates by specie were observed as already mentioned.

Final Report 4.5.3 No.7

Relative Contribution of Selected Factors by Specie and by year to the Survival and Growth of each Specie

Specie	Year	Regression Formula	Partial Correlation Coefficient
F.albida	Mar-02	$S = 0.114M + 0.069H - 0.012P + 0.001$	M:0.619, H:0.392, P:-0.061
F.albida	Apr-03	$S = 0.139M - 0.033H + 0.089P + 0.029$	M:0.612, H:-0.167, P:0.501
G.sepium	Mar-02	$S = 0.098M + 0.043H + 0.098P + 0.095$	M:0.462, P:0.247, H:0.182
G.sepium	Apr-03	$S = 0.047M - 0.024H + 0.071T + 0.570$	M:0.515, T:0.766, H:-0.274
E.grandis	Mar-02	$S = 0.067M + 0.129C + 0.118N - 0.406$	N:0.613, C:0.448, M:0.327
E.camaldulensis	Apr-03	$S = 0.073H + 0.122T + 0.035N - 0.122$	T:0.565, H:0.209, N:0.113
A.quanzensis	Apr-03	$S = 0.173P + 0.059M + 0.045C - 0.142$	P:0.517, M:0.251, C:0.133
S.siamea	Apr-03	$S = 0.063C + 0.070H + 0.015N + 0.167$	H:0.381, N:0.073, C:0.342
M.azadirach	Apr-03	$S = 0.072P + 0.054C - 0.115T + 0.689$	P:0.611, T:-0.658, C:0.355
S.spectabilis	Mar-02	$S = 0.008P + 0.053C - 0.055T + 0.376$	P:0.062, T:0.357, C:0.299
F.albida	Mar-02	$G = 0.110M + 0.083T - 0.201P + 1.307$	M:0.420, T:0.229, P:-0.592
G.sepium	Mar-02	$G = 0.236M + 0.668C + 0.734T - 2.323$	M:0.193, C:0.450, T:0.493
E.grandis	Mar-02	$G = -0.236P + 0.172N + 0.163M + 0.920$	P:-0.642, N:0.329, M:0.558
E.camaldulensis	Apr-03	$G = 0.123T + 0.077H + 0.540P - 1.364$	T:0.115, H:0.066, P:0.459
M.azadirach	Apr-03	$G = -0.161P + 0.091H + 0.085C + 0.246$	P:-0.598, H:0.703, C:0.671
S.spectabilis	Mar-02	$G = 0.099M + 0.019N + 0.014T - 0.015$	M:0.953, N:0.165, T:0.101

abbreviation: S: Survival rate (%) of the specified specie, G: Growth(m) of the specified specie, M:soil moisture

H:hardening practice, P:planting period, T:tending of out-planted seedlings, N: availability of nursery water, C: depth of planting pits (dibbles), Negative coefficients show negative contribution in the specified year.

Note: Species and years with too few planting number or planted villages were omitted. Meaning

of negative contribution; for example. -T indicates damages by goat

browsing due to clear-weeding., -H only shows relative minor contribution by error.

Final Report 4.5.3 No.5 Correlation among Forestry

Results and Social Factors 2003/04

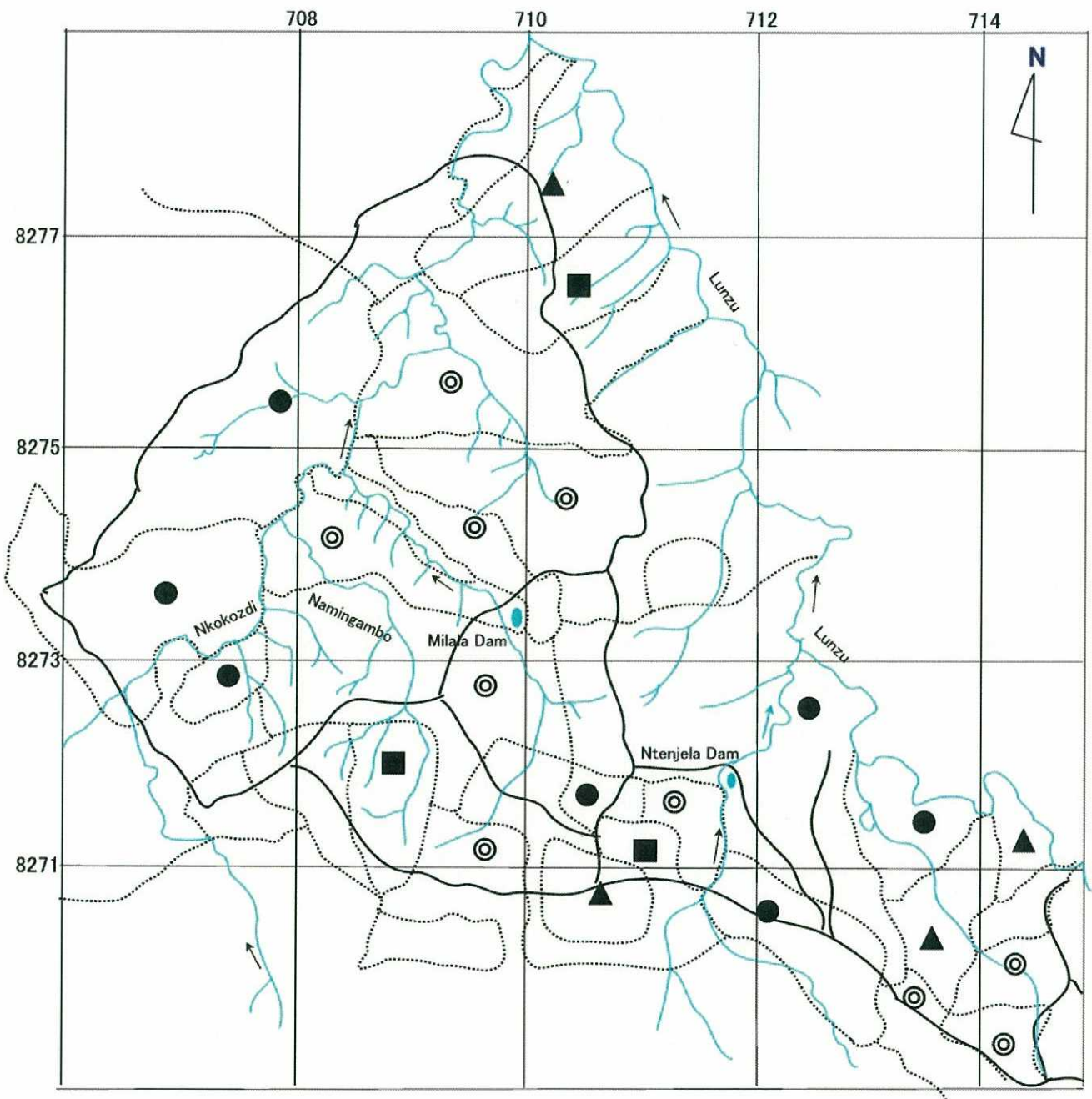
Seedlings	Number	Leader-ship	Administr-atie equity	number of participants	Food availability	Committee Function
Number of raised						
correlation	coefficient	0.644	0.478	0.534	0.173	0.126
Significance	level (%)	1%	5%	1%		
Kendoll's	rank coeff.	0.28	0.33	0.45	0.1	0.15
Number of planted						
correlation	coefficient	0.522	0.409	0.373	-0.071	0.27
Significance	level (%)	1%	5%			
Kendoll's	rank coeff.	0.38	0.33	0.33	0.15	0.35
Number of survived						
correlation	coefficient	0.126	0.156	0.487	0.229	0.426
Significance	level (%)			5%		5%
Kendoll's	rank coeff.	0.28	0.25	0.4	0.15	0.25

Effects of Biomass Green Manure on Yields of White Maize (Salima ADD 1995)

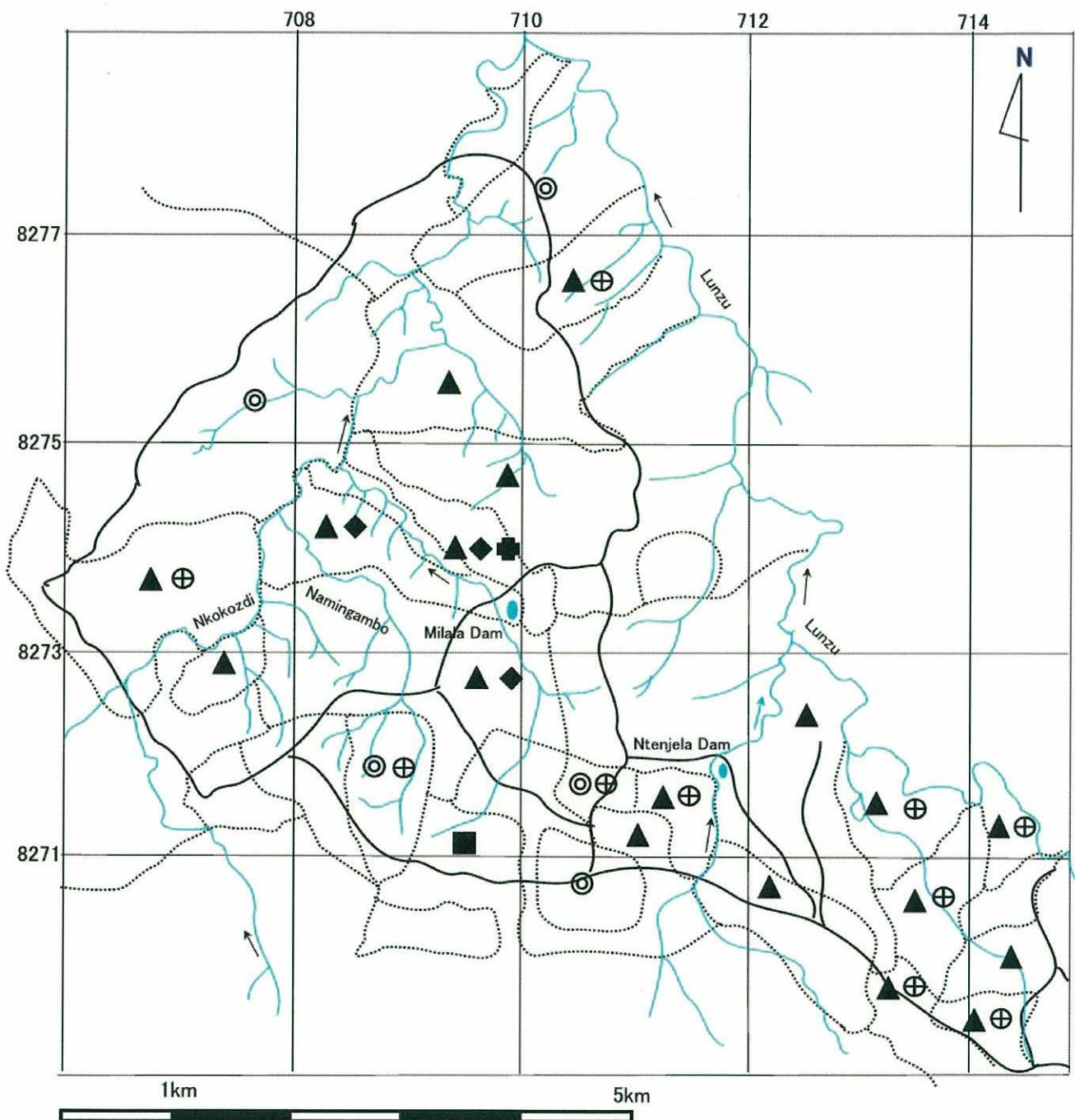
Period:	1990 ~1995	Exp.sites:	Farmer's maize plots				
Place:	Salima, Malawi		6 sites, 3 for Leucaena, 3 for Senna				
Climate:	Nov~Apr. annual rainfall 500 ~ 2,100 mm	System:	Alley cropping (Hedgerow planting)				
Soil:	Psamment~Ustox	Plot size :	10 m X 10 m bordered by alleys				
Biomass Specie:and standard spacing		Treatment:	Control no application				
	<i>L. leucocephala</i> hedge: 1.2m x 0.6m		500kg /ha <i>C.spectabilis</i> dry leaf				
	<i>C. spectabilis (senna)</i> hedge: 1.8m x 0.9m		500kg /ha <i>L. leucocephala</i> dry leaf				
Crop Specie:and spacing	regenerating every 3~4 years		1,000kg /ha <i>C.spectabilis</i> dry leaf				
	<i>Zea mais indentata</i> row 0.6m x 0.6m		1,000kg /ha <i>L. leucocephala</i> dry leaf				
	(hybrid and local) same for hybrid varieties		1,500kg /ha <i>C.spectabilis</i> dry leaf				
	continuous single cropping dry / raw rate: 1 / 4.5		1,500kg /ha <i>L. leucocephala</i> dry leaf				
	3~4 stands / hill sown.	Replication:	normally 4 plots replicated				
Crop Management:	Same sowing date, weeding was applied to test plots.						
Harvest of Manure:	leaf N-content: 4.38% in Leucaena and 3.90% in Senna leaves.on oven-dry basis						
	2~3 times pruned leaves and dry-stored to prepare 500~1,500kg per hectare.						
	Biomass was weighed at the harvest and cumulative dry-matter equivalent was applied to.						
Harvest of Maize:	Cob with moisture content 12.5% was weighed as the yield (late March).						
Expected Effects:	Enrichment of soil O.M., Improving cob yields, Avoiding hazard in dry spells.						
Results 1	Cob yields by level of biomass application unit: kg / ha F-stat.=1.41 S = 16%						
Place:	No. of sites	rain/year mm	biomass sp.	Control	500kg /ha	1,000kg /ha	1,500kg /ha
Zidyana	13	1,397	<i>Luucaena</i>	677	853	960	818
Chadewa	15	998	<i>Senna</i>	833	1,244	1,680	1,872
Mgoni	15	868	<i>Luucaena</i>	986	1,478	1,684	2,004
Namwini	14	843	<i>Senna</i>	816	628	791	949
Thekerani	12	1,060	<i>Senna</i>	727	718	873	1,099
Mean	14	1,033	-	819	1,004	1,225	1,380
Results 2	Yields from Biomass Treatments by Maize Variety & Hedgerow Species						
Treatment	satandard yield oventrykg/ha	replication	Control	500kg /ha	1,000kg /ha	1,500kg /ha	
Local maize	728	30	787	963	1,186	1,363	
Hybrid one	925	39	845	1,039	1,254	1,393	
Leucaena	345	0.1x 3 x 1,150	9	1,097	1,358	1,611	1,711
Senna	305	0.2x 3 x 509	60	783	852	1,167	1,330
Result 3	Biomass Production from Hedgerow			Result 4	Yield Response to Biomass Nitrogen		
Place:	Bio./tree *	Tree/ha	Bio.kg /ha	maize kg/N	500kg /ha	1,000kg /ha	1,500kg /ha
Zidyana	0.44	966	405	Case of Senna applied to Local maize base:728kg/ ha			
Chadewa	0.20	609	89	Equiv.N3.9% 20 39 59			
Mgoni	0.61	1,635	848	Yield increm. 132 334 541			
Namwini	0.27	503	125	Response/N 6.8 8.6 9.2			
Thekerani	0.20	953	171	Yield kg/ha 860 1,062 1,269			
Chididi	0.10	1,150	184	Case of Senna applied to Hybrid maize base:925kg/ ha			
Mean	0.30	953	304	Equiv.N3.9% 20 39 59			
Note: *	Harvest depended on growth, age of stands. Kg/stand			Yield increm. 211 524 777			
	It was observed that response to N is not as sharp as the case of inorganic fertilizers, but residual effect lingers longer period, showing slow acting.			Response/N 10.8 13.8 13.3			
				Yield kg/ha 1,136 1,449 1,702			
				Note: Senna leafcontains 3.9% N. base yield set for variety.			
Summary:	PAPPPA was a part of UN. Assisted Trials. Positive yield results were statistically significant for all biomass levels of treatments. Against 0.8t /ha of control yield, increment of 200kg/ha was obtained from every 500kg/ha dose incement of applied biomass. As to specie material, Leucaena outperformed Senna by 30% on yield base, though the latter was practiced by fewer (9) farmers on better land. Yield increase by biomass application is only comparable to that by chemical fertizers at the rate of 1,000kg/ha or more. Leaf harvest from each pruning comes to 0.3kg per tree of senna, and most farmers apply biomass less that 500kg/ha due to insufficient stands.						
Comment:	Level of phosphorous unknown, Why attack of Striga reduced, role of water retention.						

ANNEX C. Income Generating Activities (IGAs)

Location Map of the Income Generating Activities (Phase I)



Location Map of the Income Generating Activities (Phase II)



ANNEX C1

Selected IGA Component

Phase I & II

No.	Name of Village	Phase I				Selected Components (Phase II)						
		Treadle Pump	Goat Rearing	Bee Keeping	Guinea Fowl Rearing	Treadle Pump	Goat Rearing	Bee Keeping	Guinea Fowl Rearing	Sweet Potato	Aqua-culture	Home Bakery
1	Makanokaya		○			○						
2	Siyamdima				○		○			○		
3	Kaumbata	○					○					
4	Mdala			○		○						
5	Namnjiwa			○			○			○		
6	Chikoja	○					○					
7	Manjero	○					○				○ Milala	○
8	Teula	○					○				○ Milala	
9	Chakana			○			○					
10	Lemu	○					○				○ Milala	
11	Magombo Ngondo				○	○				○		
12	Kam'mata		○			○						
13	Kumanda	○							○			
14	Tambekenji			○		○				○		
15	Chilangali	○					○			○		
16	Daniel Mbedza				○		○					
17	Kamwendo			○			○					
18	Peter Bilila			○			○					
19	Ndemanje			○			○			○		
20	Simon Mpombe		○				○			○		
21	Kateya	○					○			○		
22	Maluwa		○				○			○		
23	Kumponda	○					○					
24	Kumisati Chigumula	○					○			○		
	Total Villages	10	4	7	3	5	18	0	1	10	1 (3)	1

Mid-term Evaluation Data (2)
IGAs (1/3)

Irrigation (Treadle Pump)

Species		No. 1 Makono kaya	No. 3 Kaum bata	No. 4 Mdala	No. 6 Chikoja	No. 7 Manjero	No. 8 Teula	No. 10 Lemu	No. 11 M. Ngondo	
Maize	Area (m3)		150		130	187	65	200	50	
	Plant date		18 Jul. '03		Jun. '03	Jun. '03	Jun. '03	25 Jun. '03	2 Oct. '03	
	Harvest(kg)				200	225	145			
	Har. Date		26 Sep. '03		Sep. '03	Sep. '03	Sep. '03	29 Sep. '03	17 Dec., '03	
	Share(KW)				50	60	100			
	Sold(kg)				150	165	45			
	Profit(KW)		1,100		1,090	1,330	210	2,200	1,415	
Tomato	Area (m3)	300	40	30	130	140	83		30	
	Plant date	15 Nov. '03	22 Jul. '03	21 Oct. '03	Jun. '03	Jun. '03	Jun. '03		18 Oct. '03	
	Harvest(kg)	not yet		not yet	420	180	150		not yet	
	Har. Date		5 Nov. '03		Sep. '03	Sep. '03	Sep. '03			
	Share(kg)				60	75	75			
	Sold(kg)				360	105	75			
	Profit(KW)		600		4,270	1,470	750			
Cabbage	Area (m3)					216	133			
	Plant date					Jul. '03	Aug. '03			
	Harvest(kg)					90	40			
	Har. Date					Sep. '03	Sep. '03			
	Share(KW)					90	40			
	Sold(kg)									
	Profit(KW)									
Onion	Area (m3)	30	16		108		14			
	Plant date	4 Nov. '03	5 Jul. '03		Aug. '03		Aug. '03			
	Harvest(kg)	not yet			150		12			
	Har. Date		5 Nov. '03		Oct. '03		Sep. '03			
	Share(kg)				50		12			
	Sold(kg)				100					
	Profit(KW)		100		410					
Pepper	Area (m3)						50			
	Plant date						Aug. '03			
	Harvest(kg)						9			
	Har. Date						Sep. '03			
	Share(kg)						9			
	Sold(kg)									
	Profit(KW)									
Total	Area (m3)	330	206	30	367	544	346	200	80	
	Harvest(kg)		0		770	495	356	0		
	Share(KW)	0	0	0	160	225	236	0	0	
	Sold(kg)	0	0	0	610	270	120	0	0	
		Profit(KW)	0	1,800	0	5,770	2,800	960	2,200	1,415

Mid-term Evaluation Data (2)
IGAs (1/3)

Irrigation (Treadle Pump)

Date: End of December, 2003

Species	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tamve kenji	No. 15 Chilan gali	No. 21 Kateya	No. 23 Kumponda	No. 24 Kumisati Chigmula	Total (15 villages)
Maize	Area (m3) 216		108		100	433		1,639
	Plant date Sep. '03		Sep. '03		8 Sep. '03	Jul. '03		
	Harvest(kg)	little	little		not yet			570
	Har. Date					10 Oct. '03		
	Share(KW)	shared	shared			1,500		1,710
	Sold(kg)							360
	Profit(KW)					5,650		12,995
Tomato	Area (m3) 72		119	245	215		150	1,553
	Plant date Sep. '03		Sep. '03	Jul. '03	12 Sep. '03		21 Jul. '03	
	Harvest(kg)	little	little	135	not yet		12 baskets	885
	Har. Date			Oct. '03			Oct. '03	
	Share(kg)	shared	shared	75				285
	Sold(kg)			60				600
	Profit(KW)			690				7,780
Cabbage	Area (m3)			61		302	270	982
	Plant date			Jul. '03			25 Jul. '03	
	Harvest(kg)			70			1 wheelbarro	200
	Har. Date			Sep. '03			Nov. '03	0
	Share(KW)			70		800		1,000
	Sold(kg)							0
	Profit(KW)					4,200	35	4,235
Onion	Area (m3) 32			14	60	140	120	536
	Plant date			Jul. '03	14 Oct. '03		22 Aug. '03	
	Harvest(kg)	little		20	not yet			182
	Har. Date			Sep. '03			Oct. '03	
	Share(kg)	shared		20				82
	Sold(kg)							100
	Profit(KW)							510
Pepper	Area (m3)			83		72	270	475
	Plant date			Jul. '03			1 Sep. '03	
	Harvest(kg)			10				19
	Har. Date			Sep. '03				
	Share(kg)							9
	Sold(kg)			10				10
	Profit(KW)			100			50	150
	Area (m3)							0
	Plant date							
	Harvest(kg)							0
	Har. Date							
	Share(kg)							0
	Sold(kg)							0
	Profit(KW)							0
Total	Area (m3) 320	0	227	403	375	947	810	5,185
	Harvest(kg) 0	0	0	235				1,856
	Share(KW) 0	0	0	165	0	2,300	0	3,086
	Sold(kg) 0	0	0	70	0	0	0	1,070
	Profit(KW) 0	0	0	790	0	9,850	85	25,670

Mid-term Evaluation Data (2)
IGAs (2/3)

Goat Rearing

		No. 1	No. 2	No. 3	No.5	No. 6	No. 7	No. 8	No. 9
Species		Makono kaya	Siyandima	Kaumbata	Nanjiwa	Chikoja	Manjero	Teula	Chakana
1 Received	Male	2	1	3	3	4	4	4	3
	Female	9	10	8	8	7	7	7	8
	Sub-total	11	11	11	11	11	11	11	11
	Date	Junly 2002	Aug. 2003	Aug. 2003	Aug. 2003	Aug.. '03	Aug.. '03	Aug.. '03	Aug. 2003
2 Birth	Male	2	1	2	0	1	1	1	2
	Female	6	1	2	1	0	0	0	2
	Sub-total	8	2	4	1	1	1	1	4
3 Death	Male	2	1	2	0	0	1	1	0
	Female	0	0	2	0	1	0	0	0
	Sub-total	2	1	4	0	1	1	1	0
	reason	unknown	disease	unknown	na	illness	illness	illness	na
4 Loss	Male	0	0	0	0	0	0	0	0
	Female	5	0	0	0	0	0	0	0
	Sub-total	5	0	0	0	0	0	0	0
	reason	na	na	na	na	na	na	na	na
5 Pregnant		3	5	4	4	2	2	3	2
7 Total to date									
	Male	2	1	3	3	5	4	4	5
	Female	10	11	8	9	6	7	7	10
	Total	12	12	11	12	11	11	11	15
	Increment	1	1	0	1	0	0	0	4

Bee-keeping

		No. 4		No. 5		No. 9		No. 14	
Species		Mdala		Nanjiwa		Chakana		Tanvekenji	
Bee-hive 1		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2
Installtion	date	24 Oct. '02	24 Oct. '02	15 May '02	15 May '02	15 May '02	15 May '02	Aug. '02	Aug. '02
Colonized	date	10 Jun. '03	20 Jun. '03					Oct. '02	Dec. '02
Inspection	date	24 Jun. '03	24 Jun. '03	20 May '02	20 May '02	28 Nov. '02	28 Nov. '02	25 Jun. '03	16 Sep. '03
	date	2 Aug. '03	2 Aug. '03	30 May '02	30 May '02	10 Dec. '02	10 Dec. '02	16 Sep. '03	
Havest	date	4 Aug. '03	4 Aug. '03						16 Sep. '03
	bottle	4							6
Share	bottle	3							2
Selling	bottle	1							4
Profit	KW	70							300
	reason	local selling	no honey						
Bee-hive 3		No. 3	No. 4	No. 3	No. 4	No. 3	No. 4	No. 3	No. 4
Installtion	date	24 Oct. '02	24 Oct. '02	15 May '02	15 May '02	15 May '02	15 May '02	Aug. '02	Aug. '02
Colonized	date							Oct. '02	Dec. '02
Inspection	date	11 Jun. '03	11 Jun. '03	20 May '02	20 May '02	28 Nov. '02	28 Nov. '02	16 Sep. '03	16 Sep. '03
	date	2 Aug. '03	2 Aug. '03	30 May '02	30 May '02	10 Dec. '02	10 Dec. '02		
Havest	date								16 Sep. '03
	bottle								4
Share	bottle								1
Selling	bottle								3
Profit	KW								225
	reason	not colonized	not colnized						
Total									
Havest	bottle	4		0		0		10	
Share	bottle	3		0		0		3	
Selling	bottle	1		0		0		7	
Profit	KW	70		0		0		525	

Mid-term Evaluation Data (2
IGAs (2/3)

Goat Rearing

		No. 10	No. 12	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20
Species		Lemu	Kam'mata	Chilangali	Daniel Mbedza	Kamwe ndo	Peter Bilila	Ndemanje	Simon Mponbe
1 Received	Male	4	3	2	5	2	7	1	2
	Female	7	8	9	6	9	4	10	20
	Sub-total	11	11	11	11	11	11	11	22
	Date	Aug. 2003	Aug.. '02	Aug.. '03	Aug.. '03	Aug. 2003	Aug. 2003	Aug. 2003	Jul. 2002 Aug. 2003
2 Birth	Male	0	2	1	0	1	0	1	4
	Female	3	2	5	2	1	0	1	9
	Sub-total	3	4	6	2	2	0	2	13
3 Death	Male	1	0	0	0	1	2	0	2
	Female	1	0	0	0	0	0	0	0
	Sub-total	2	0	0	0	1	2	0	2
	reason	desease	na	na	na	sick	sick	na	0
4 Loss	Male	0	0	0	0	0	0	0	0
	Female	0	0	0	0	0	0	0	0
	Sub-total	0	0	0	0	0	0	0	0
	reason	na	na	na	na	na	na	na	na
5 Pregnant		4	5	2	4	2	2	10	0
7 Total to date									
	Male	3	5	3	5	2	5	2	4
	Female	9	10	14	8	10	4	11	29
	Total	12	15	17	13	12	9	13	33
	Increment	1	4	6	2	1	-2	2	11

Bee-keeping

Date: End of December, 2003

Species		No. 17 Kamwe ndo		No. 18 Peter Bilila		No. 19 Ndema nje		Total
Bee-hive 1		No. 1	No. 2	No. 1	No. 2	No. 1	No. 2	
Installtion	date	May '02	May '02	May '02	May '02	May '02	May '02	
Colonized	date							
Inspection	date							
	date	Oct. '03	Oct. '03	Jul. '03	Jul., 03	Jul. '03	Jul. '03	
Havest	date	none	-		-	-		
	bottle							10
Share	bottle			6				11
Selling	bottle							5
Profit	KW							370
	reason							
Bee-hive 3		No. 3	No. 4	No. 3	No. 4	No. 3	No. 4	
Installtion	date	May '02	May '02	May '02	May '02	May '02	Jan. '04	
Colonized	date							
Inspection	date							
	date	Nov. '03	Nov. '03	Jul. '03	Jul., 03	Jul. '03		
Havest	date	none	none	none				
	bottle							4
Share	bottle							1
Selling	bottle							3
Profit	KW							225
	reason				no bees			
Total								
Havest	bottle	0		0		0		14
Share	bottle	0		6		0		12
Selling	bottle	0		0		0		8
Profit	KW	0		0		0		595

Mid-term Evaluation Data (2
IGAs (2/3)

Goat Rearing

Date: End of December, 2003

Species		No. 21	No. 22	No. 23	No. 24	Total (20 villages)
		Kateya	Maluwa	Kumpo nda	K. Chigu mula	
1 Received	Male	3	6	3	3	65
	Female	8	16	8	8	177
	Sub-total	11	22	11	11	242
	Date	Aug. 2003	Jul. 2002 Aug. 2003	Aug. 2003	Aug. 2003	
2 Birth	Male	1	4	3	2	29
	Female	2	12	4	4	57
	Sub-total	3	16	7	6	86
3 Death	Male	0	0	0	0	13
	Female	2	0	0	0	6
	Sub-total	2	0	0	0	19
	reason	sick	sick	na	na	
4 Loss	Male	0	1	1	0	2
	Female	0	3	0	0	8
	Sub-total	0	4	1	0	10
	reason	na	na	stolen	na	
5 Pregnant		4	2	5	3	68
7 Total to date						
	Male	4	9	5	5	79
	Female	8	25	12	12	220
	Total	12	34	17	17	299
	Increment	1	12	6	6	57

Bee-keeping

Species	
Bee-hive 1	
Installtion	date
Colonized	date
Inspection	date
	date
Havest	date
	bottle
Share	bottle
Selling	bottle
Profit	KW
reason	
Bee-hive 3	
Installtion	date
Colonized	date
Inspection	date
	date
Havest	date
	bottle
Share	bottle
Selling	bottle
Profit	KW
reason	
Total	
Havest	bottle
Share	bottle
Selling	bottle
Profit	KW

Mid-term Evaluation Data (2)

IGAs (3/3)

Others

Species		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
		Makono kaya	Siyam dima	Kaum bata	Mdala	Nanjiwa	Chikoja	Manjero	Teula	Chakana
1 Guinea Fowl Rearing										
Received	Male		5							
	Female		15							
	date		Apr. '03							
Death	Male		none							
	Female		none							
	reason									
Loss	Male									
	Female		1							
	reason		caught by predators							
Egg collected	number		54							
	date		27 Nov.							
Egg hatched	number		none							
	date		none							
Total fowl	Male		5							
	Female		14							
			19							
2 Sweet Potato Nursery										
Area planted	(plot)	4	16	16	-	-	30	23	15	18
Conditions		poor	well	good	poor	poor	bad	fair	fair	well
Individual shared no.		10	10	7	10	10				6
3 Improved Cooking Stove										
Total number		35	25	18	20	10	64	18	14	5
Usable number			25	18	20	7	58	17	12	4
(two-hole stove)		5	none	none	4	none				none
(usable number		5	none	none	4	none				none
4 Maker Ridge		3	2	2	1	4	14	4	1	none
5 Aquaculture	(Milala dam: village; Manjero, Teula, Lemu)									
Harvest	date							Aug. Sep. '03		
	Kg							300		
Shared	kg							50		
Sold	kg							250		
Income	KW							31,445		
Deposit in Bank	KW							25,000		
6 Home bakery	(Manjero village)									
Making	date						Oct' 03, 3 days			
	pcs							676		
Sold	pcs							676		
Income	KW							3,380		
Deposit	KW							-		

Mid-term Evaluation Data (2)
IGAs (3/3)
Others

Species		No. 10	No. 11	No. 12	No. 13	No. 14	No. 15	No. 16	No. 17	No.18
		Lemu	Magomb o	Kam'mat a	Kumanda Kumanda	Tamve kenji	Chilan gali	Daniel Mbedza	Kamwe ndo	Peter Bilila
1 Guinea Fowl Rearing										
Received	Male		10					6		
	Female		10					14		
	date		Apr. '03					Apr. '03		
Death	Male		none					1		
	Female		none					3		
	reason							illness		
Loss	Male		7							
	Female		3							
	reason		predators							
Egg collected	numbe		52							
	date		31 Dec.							
Egg hatched	numbe		none							
	date		none							
Total fowl	Male		3					5		
	Female		7					11		
			10							
2 Sweet Potato Nursery										
Area planted	(plot)	na	8	19	15	15	15	15	1	3
Conditions		well	well	good	fair	fair	fair	fair	good	good
Individual shared no.		15	10						all	30
3 Improved Cooking Stove										
Total number		48	22	20	8	10	14	2	46	36
Usable number		45	22	18	6	10	13	2		
(two-hole stove)		5	none							
(usable number		5	none							
4 Maker Ridge		5	1	13	2	1	2	2	4	-
5 Aquaculture Harvest	(Milala									
	date									
	Kg									
Shared	kg									
Sold	kg									
Income	KW									
Deposit in Bank	KW									
6 Home bakery Making	(Manje									
	date									
	pcs									
Sold	pcs									
Income	KW									
Deposit	KW									

Mid-term Evaluation Data (2)

Committee

B. IGAs Committee

Village Item	Name of	No. 1 Makonokaya	No. 2 Siyandima	No. 3 Kaumbata	No. 4 Mdala	No. 5 Nanjiwa	No. 6 Chikoja	No. 7 Manjero	No. 8 Teula	No. 9 Chakana
B. IGAs Committee				same Nursery C	same Nursery C	same Nursery C	same Nursery C	same Nursery C	same Nursery C	same Nursery C
IGAs Name		Goat rearing	Guinea fowl	Treadle pump	Bee keeping	Bee keeping	Treadle pump	Treadle pump	Treadle pump	Bee keeping
Established year		2001	2002	2002	2002	2000	2002	2002	2002	2002
1) Number of member		12	12	10	12	10	20	10	10	10
1) Number of female		33								
2) Number of male		15								
3) Members increase or decrease		increase	same	decrease	same	same				decrease
4) Number of above				vote						vote
reason of above		interested	Interest increasing							
5) Number of nursery members in IGA members										
2) Composition of committee										
1) Number of large-scale farmer										
2) Number of medium-scale farmer										
3) Number of small scale farmer		100%	100%							
reason of above		poverty level								
3) Participant										
1) Number of participant		20	52	43	25	20	55	45	38	20
2) increase or decrease			same	same	same	same				same
3) reason of above										
4) Committee Meeting										
1) What kinds of rules are established?										
1) Election of member, term		feeding	Schedule for feeding							
2) Responsibility of member		Lost goat should be replaced	Contribution for buying feed.							
3) Responsibility of participant		Sick goat should be reported to VA								
4) Decision making										
5) Penalty										
6) Dispute solution										
7)										
8)										
9)										
2) Frequency of meeting		once/week	twice/month							
3) What are the meeting contents?			matters arising							
5) Working hour per member per day or week?		4 hrs/day x 7 days/week	3 hrs feeding, cleaning							
6) What is the main works?										
7) Active or not		active	active	active	active	active	active	active	inactive	active
8) Reason of above		-	-	-	interest benefit	interest	work continue	work continue	poor results	-

Mid-term Evaluation Data (2)

Committee

B. IGAs Committee

Village Item	Name of	No. 10 Lemu	No. 11 Magombo Ngondo	No. 12 Kam'mata	No. 13 Kumanda	No. 14 Tambekenji	No. 15 Chilangali	No. 16 Daniel Mbedza	No. 17 Kamwendo	No. 18 Peter Billia
B. IGAs Committee		same Nursery C		same Nursery C	same Nursery C	same Nursery C	same Nursery C		same as nursery	
IGAs Name		Treadle pump	Guinea fowl	Goat rearing	Treadle pump	Bee keeping	Treadle pump	Guinea fowl	Bee keeping	Bee- keeping
Established year		2002	2002	2002	2002	2002	2002	2002	2002	2002
1) Number of member		10	10	10	10	10	10	10	30	10
1) Number of female			6						6	5
2) Number of male			4						4	5
3) Members increase or decrease		decrease	same					same	increase	same
4) Number of above		vote						-	15	
reason of above			interesting						member increase	
5) Number of nursery members in IGA member										
2) Composition of committee										10
1) Number of large-scale farmer			-						-	2
2) Number of medium-scale farmer			10%					all smalls		1
3) Number of small scale farmer			90%						10	7
reason of above			poverty level						Village	less land. Less money more initially intermittent currently
3) Participant										
1) Number of participant		28	22	40	42	40	23	35	30	10
2) increase or decrease		decrease	increase			decrease	decrease	decrease	same	same
3) reason of above						limit benefit	limit benefit	limit benefit		
4) Committee Meeting										
1) What kinds of rules are established										
1) Election of member, term			management by all members.					All member work	- To attend all	membership fee per person per annum
2) Responsibility of member			Should quit if he break rules.					Absentes fined.	meetings/work	
3) Responsibility of participant									- To pay fine	
4) Decision making									if not participate	
5) Penalty									- Can be removed	
6) Dispute solution										
7)										
8)										
9)										
2) Frequency of meeting			twice/week					not meet	(2 months)	Intermittent
3) What are the meeting contents?			matters arising					management	How to care for bees	Hive check reports
Working hour per member per 5 day or week?			3 hrs/day feeding, cleaning					2 hrs/day feeding, cleaning	1/week	Unspecified Bee hives checks
6) What is the main works?									Clearing the surroundings	Apiary suits not yet supplied
7) Active or not		active	active	active	not active	active	a bit active	active		not
8) Reason of above		-	benefit sharing	work continue	lack of land		a little conscious	work continue		bees absconding

Mid-term Evaluation Data (2)

Committee

B. IGAs Committee

Date: Endo fo December, 2003

Village Item	Name of	No. 19 Ndemanje	No. 20 Simon Mpombe	No. 21 Kateya	No. 22 Maluwa	No. 23 Kumponda	No. 24 K. Chigumla
B. IGAs Committee							
	IGAs Name	Bee keeping	Goat rearing	Irrigation	Goat rearing	Irrigation	Irrigation
	Established year	2000	2002	2002	2002	2002	2002
1	Number of member	10	10	10	10	10	5
	1) Number of female	4	4		4		
	2) Number of male	6	6		6		
	3) Members increase or discrease	same	same	decrease	same	same	same
	4) Number of above			17			
	reason of above			combined committee members			
	5) Number of nursery members in IGA member						
2	Composition of committee		10				10
	1) Number of large-scale farmer	-	none	Nil	Nil	Nil	none
	2) Number of medium-scale farmer	-	5	2	Nil	Nil	4
	3) Number of small scale farmer	All	5	20	38	10	6%
	reason of above	Villagers/not much money	Yes	due to poverty	below poverty line	below poverty line	Scarce /expensive input
3	Participant						
	1) Number of participant	all	30	30	all	38	45
	2) increase or decrease	same	same	increase	same	same	same
	3) reason of above			do own work			
4	Committee Meeting						
	1) What kinds of rules are established						Removal from group if twice absent
	1) Election of member, term	-G/p to harvest					Permission of leave granted on genuine reason
	2) Responsibility of member	- Belong to group	Goats pooled together daily	Membership fee K20/m for maintenance of equipment	Any sick or death to report to the committee	Non member not use T.P.	No child participation
	3) Responsibility of participant		Browsing of crops prohibited	Care of Treadle pump after use	Shared to the villagers and others if it has kids	Membership fee K10 per month	Time keeping
	4) Decision making		Reporting births sickness	The members work together	Everyone to bring feeds to the khola to feed the goats	To work fully as a group	
	5) Penalty			half of monies will be members and other for group funds		Members will be shared plots to work effectively	
	6) Dispute solusion						
	7)						
	8)						
	9)						
2)	Frequency of meeting	Depends		2 days/week	once a week	3 days/week	Once weekly
3)	What are the meeting contents?		Fundraising strategies work plans	Encourage each other for the work	Proper care of the goat	Encourage each other for the work	Evaluation planning
5	Working hour per member per day or week?	Depends	3hrs/person/dy	10hrs/week	2hours/week	6hours/week	9hrs/member/week
6	What is the main works?	- Clearing bush	Security	Tillage, weeding	feeding of goats	Tilling	Watering
				Planting	Khola construction	Ploughing	Ploughing
			Goat manure benefit	Watering	dipping of goats	Plot layout	Bed preparation
7	Active or not	active	active	not	active	active	active
8	Reason of above	useful work	-	do own work	hard working	-	-

ANNEX C4 B/C Ratio of some IGAs

B/C Ratio of Aquaculture Annex Economic Viability of Aquaculture

Dam: Milala Dam
Village: Manjero, Teula, Lemu

No.	Description	Specifications	Q'ty	Unit	Unit Cost	Amount	Remarks
1 Fish net materials							
1	Nylon net	9-ply, 1", 50M	6	pcs	4,579.66	27,477.97	Study Team
2	Nylon net	9-ply, 1/2", 50M	4	pcs	4,337.30	17,349.18	Study Team
3	Rope	PP, 10mm dia, 200M	1	roll	1,658.87	1,658.87	Study Team
4	Rope	PP, 14mm dia, 100M	1	roll	1,658.87	1,658.87	Study Team
5	Twine string	9-ply, 500g/roll	4	roll	524.00	2,095.98	Study Team
6	Float	cork, buoyancy 150g/pc	100	pcs	(28)	(2,800)	by committee
7	Sinker	moulding	40	pcs			by committee
8	Labor cost	Kasinthula, FD, Mr. W. Chirwa	1	lot	(6,000)	(6,000)	by committee
	sub-total					50,240.86	
2 Net repairing materials							
1	Twine string	9-ply, 500g/roll	2	roll	478.52	957.04	Study Team
2	Needle	bamboo	10	pc		957.04	by committee
	sub-total						
3 Raft materials							
1	Bamboo	3M,	15	pole			by committee
2	Tube	rubber tube	6	pcs	650.00	(3,900)	by committee
3	Hand air pump	for tube	1	unit	600.00	(600)	by committee
4	Wood plank	1" x 2" x 2M	4	pcs	32.50	(130)	by committee
5	Rope	PP, 10mm dia, 100M	1	roll	765.63	(765.63)	by committee
	sub-total					(5,395.63)	by committee
	Total by committee					(14,195.63)	
	Total					51,197.90	
	Grand total					65,393.53	

Cost 13,079 **Selling** 20,192 **Benefit** 7,113 **B/C ratio (%)** 54.38 (excl. labor cost)

Depreciation cost
 Total 65,394 **Selling** 44.87 KW/kg **Other Beneficiaries benefit** 150 KW/kg - 44.87 KW/kg
 Duration (year) 5 450kg/year '= 105.13 KW/kg
 Yearly depreciation 13,079 = 20,191.5 KW/year '= 47,308.5 KW/year

Economic Viability of Home Bakery

B/C Ratio of Home Bakery

Village: Manjero

Unit: KW

No.	Description	Q'ty	Unit	Unit Price	Amount
1 Furnice materials					
1	Furnace with chimney	1	Unit	5,200.00	5,200.00
2	Brick	150	pc	1.00	150.00
3	Labor	5	man	200.00	1,000.00
sub-total					6,350.00
2 Tools					
1	Plasti pail	2	pc	40.00	80.00
2	Large basin	1	pc	235.00	235.00
	Large basin	1	pc	295.00	295.00
3	Medium basin	1	pc	195.00	195.00
	Medium basin	1	pc	175.00	175.00
4	Small basin	2	pc	105.00	210.00
5	Large cup	2	pc	15.00	30.00
6	Small cup	2	pc	15.00	30.00
7	Plasti lichero	1	pc	95.00	95.00
8	Baking trays	2	pc	350.00	700.00
9	Table spoon	3	pc	33.17	99.50
10	Tea spoon	3	pc	20.00	60.00
11	Pot (large)	1	pc	1,315.00	1,315.00
12	Pot (medium)	1	pc	1,000.00	1,000.00
13	Plastic sheet	1	pc	50.00	50.00
14	Lichero for cooling	4	pc	65.00	260.00
15	Sieve	1	pc	70.00	70.00
sub-total					4,899.50
3 Consumed Materials					
1	Wheat flour (50kg bag)	1	bag	2,450.00	2,450.00
2	Cooking oil (5 litre)	1	bottle	900.00	900.00
3	Sugar	1	pack	1,050.00	1,050.00
4	Yeast	2	pack	250.00	500.00
5	Bread improver	1	pack	850.00	850.00
6	Food colour	1	bottle	99.50	99.50
7	Salt	1	pack	25.00	25.00
8	Firewood	1	bundle	(villager supply)	
sub-total					5,874.50
Total					17,124.00

5kg = 85 scones baked

50kg bag = 850 scones baked

One day (time) = 15kg baked

50kg = consumed 3.3 days

Wheat flour

Cooking oil

Sugar

Yeast

Labor

Sub-total

Sub-total (incl. firewood & labor

Cost

(for 50kg bag)

2,450

225

263

125

(70x3px3.3d)

3,306

4,199

Selling

(pcs xKW5)

850

Bread improver

Food colour

Salt

Firewood

4,250

4,250

Benefit

944

944

51

51

28,602

28,602

26,352

5,088

2,838

B/C ratio (%)

213

25

6

(200)

28.55

1.21

2 days per week =

yearly cost and benefit:

less depreciation cost benefit:

yearly cost and benefit(incl. oth

less depreciation cost benefit(incl. others):

Depreciation cost

Construction cost (KW)

Duration (years)

yearly depreciation (KW)

ANNEX C5

Evaluation Data (IGAs), June 2004

Evaluation Data

IGAs (1/4)

As of June 2004

Irrigation (Treadle Pump)

Species	Name of Village	No. 1	No. 3	No. 4	No. 6	No. 7	No. 8	No. 10	No. 11
		Makonokaya	Kaumbata	Mdala	Chikoja (a + b)	Manjero	Teula	Lemu	Magombo Ngondo
Phase		II	I	II	I	I	I	I	II
1 Maize									
	Area (m3)		150	2,500	130	187	65	200	2,500
	Plant date		18 Jul, 03		27 June, 03	Jun, 03	Jun, 03	Jun, 03	26 Oct, 03
	Harvest(kg)				200	225	145		300
	Har. Date		26 Sep, 03		Oct, 03	Sep, 03	Sep, 03	Sep, 03	31 Dec, 03
	Share(KW)				50	60	100		
	Sold(kg)				150	165	45		
	Profit(KW)		1,100		1,090	1,330	210	2,200	1,790
2 Tomato									
	Area (m3)	400	40	30	130	140	83		2,500
	Plant date	Nov. 03	22 Jul, 03	21 Oct, 03	Jun. 03	Jun, 03	Jun, 03		10 Oct, 03
	Harvest(kg)				420	180	150		70
	Har. Date		5 Nov. 03		Sep. 03	Sep, 03	Sep, 03		1
	Share(kg)	shared		no product	60	75	75		
	Sold(kg)				360	105	75		
	Profit(KW)		600		4,270	1,470	750		2,800
3 Cabbage									
	Area (m3)					216	133		
	Plant date					Jul, 03	Aug, 03		
	Harvest(kg)					90	40		
	Har. Date					Sep, 03	Sep, 03		
	Share(KW)					90	40		
	Sold(kg)								
	Profit(KW)								
4 Onion			16						
	Area (m3)	80			108		14		
	Plant date	Nov. 03	5 Jul, 03		Aug. 03		Aug, 03		
	Harvest(kg)				150		12		
	Har. Date		5 Nov, 03		Oct, 03		Sep, 03		
	Share(kg)	no product			50		12		
	Sold(kg)				100		1		
	Profit(KW)		100		410		30		
5 Pepper									
	Area (m3)						50		
	Plant date						Aug, 03		
	Harvest(kg)						9		
	Har. Date						Sep, 03		
	Share(kg)						9		
	Sold(kg)								
	Profit(KW)								
6 Others									
	Area (m3)								
	Plant date		June, 2003						
	Harvest(kg)								
	Har. Date		July, 2003						
	Share(kg)								
	Sold(kg)								
	Profit(KW)		550						
Total	Area (m3)	480	190	2,530	368	543	345	200	5,000
	Harvest(kg)	0	0	0	770	495	356	0	370
	Share(KW)	#VALUE!	0	#VALUE!	160	225	236	0	0
	Sold(kg)	0	0	0	610	270	121	0	0
	Profit(KW)	0	2,350	0	5,770	2,800	990	2,200	4,590

Evaluation Data

IGAs (1/4)

As of June 2004

Irrigation (Treadle Pump)

All Villages

Date: June 2004

Species	Name of Village	No. 12	No. 13	No. 14	No. 15	No. 21	No. 23	No. 24	Total (15 villages)
		Kammata	Kumanda	Tamvekenji	Chilangali	Kateya	Kumponda	Kumisati Chigumula	
Phase		II	I	II	I	I	I	I	
1 Maize									
	Area (m3)	216		108		100	435		6,591
	Plant date	Sep, 03		Sep, 03		Sep, 03	Jul, 03		
	Harvest(kg)		little	little					870
	Har. Date						Oct, 03		
	Share(KW)	no product	shared	shared		shared	1,500		1,710
	Sold(kg)								360
	Profit(KW)						13,750		21,470
2 Tomato									
	Area (m3)	72		119	245	210		150	4,119
	Plant date	Sep, 03		Sep, 03	Jul, 03	Sep, 03		Jul, 03	
	Harvest(kg)		little	little	135			12 basket	955
	Har. Date				Oct, 03			Oct, 03	
	Share(kg)	no product	shared	shared	75	shared			285
	Sold(kg)				60				600
	Profit(KW)				690			245	10,825
3 Cabbage									
	Area (m3)				61		302	120	832
	Plant date				Jul, 03			Jul, 03	
	Harvest(kg)				70			1 wheel barr	200
	Har. Date				Sep, 03			Nov, 03	
	Share(KW)				70		800		1,000
	Sold(kg)								0
	Profit(KW)						7,700	100	7,800
4 Onion									
	Area (m3)	32			14	60	140	270	718
	Plant date	Sep, 03			Jul, 03	Oct, 03		Aug, 03	
	Harvest(kg)		little		20				182
	Har. Date				Sep, 03			Oct, 03	
	Share(kg)	no product	shared		20	shared			82
	Sold(kg)								101
	Profit(KW)						13,640	50	14,230
5 Pepper									
	Area (m3)				83		72		205
	Plant date				Jul, 03				
	Harvest(kg)				10				19
	Har. Date				Sep, 03				
	Share(kg)								9
	Sold(kg)				10				10
	Profit(KW)				100				100
6 Others									
	Area (m3)								0
	Plant date								
	Harvest(kg)								0
	Har. Date								
	Share(kg)								0
	Sold(kg)								0
	Profit(KW)								550
Total	Area (m3)	320	0	227	403	370	949	540	12,465
	Harvest(kg)	0			235	0	0		2,226
	Share(KW)				165		2,300	0	3,086
	Sold(kg)	0	0	0	70	0	0	0	1,071
	Profit(KW)	0	0	0	790	0	35,090	395	54,975

Evaluation Data
IGAs (2/4)
As of June 2004
Goat Rearing

Total 20 villages

Species	Name of Village	No. 1	No. 2	No. 3	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 12
		Makonokaya	Siyamdima	Kaumbata	Nanjiwa	Chikoja	Manjero	Teula	Chakana	Lemu	Kammata
Phase		I	II	II	II	II	II	II	II	II	I
1 Received	Male	5	5	4	3	4	4	4	4	4	5
	Female	6	6	7	8	7	7	7	7	7	6
	Sub-total	11	11	11	11	11	11	11	11	11	11
	Date	Jul. 02	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Jul. 02
2 Birth	Male	9	3	4	4	3	4	1	6	3	10
	Female		4	4	6	2	4	4	6	3	5
	Sub-total	9	7	8	10	5	8	5	12	6	15
3 Death	Male		1	5		2	1	1	1	1	2
	Female		1	3		2	1		4	1	
	Sub-total		2	8		4	2	1	5	2	2
	reason			Diseases		Diarrhoea	Diarrhoea	Injured	Disease	Diseases	Diarrhoea
4 Loss	Male	7						1			1
	Female							1			1
	Sub-total	7			4			2			2
	reason	Theft			Theft		Theft			Theft	
5 Pregnant											
7 Total to date	Male		8	3	2	5	6	4	9	6	13
	Female		8	8	15	7	9	11	9	7	11
	Total	14	16	11	17	12	15	15	18	13	24
	Increment	2	4	0	6	1	4	4	7	2	13

Goat Rearing

Species	Name of Village	No. 15	No. 16	No. 17	No. 18	No. 19	No. 20	No. 21	No. 22	No. 23	No. 24	Total
		Chilangali	Daniel Mbedza	Kamwendu	Peter Bilila	Ndemanje	Mpombe	Kateya	Maluwa	Kumponda	Chigumula	
Phase		II	II	II	II	II	I & II	II	I & II	II	II	I & II
1 Received	Male	3	4	4	4	3	8	5	6	3	3	86
	Female	8	7	7	7	8	14	6	16	8	8	156
	Sub-total	11	11	11	11	11	22	11	22	11	11	242
	Date	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	Aug. 03	
2 Birth	Male	4	3	3	3	7		5	4	6	3	85
	Female	8	4	4	2	2		3	11	7	2	81
	Sub-total	12	7	7	5	9		8	15	13	5	166
3 Death	Male	0	1	1	3	0	3	0	2	0	1	18
	Female	2	0	0	1	0	2	2	5	1	1	19
	Sub-total	2	1	1	4	0	5	2	7	1	2	42
	reason	Diarrhoea	Disease	Disease	Sick		Sick		Worms	Sick	Diseased	
4 Loss	Male								0			9
	Female								1			3
	Sub-total								1			16
	reason								Too much food			
5 Pregnant			3	3	1	3		2	2	2	13	29
7 Total to date	Male	7	7	6	4	10		10	8	9	5	122
	Female	14	9	11	8	10		7	21	14	9	188
	Total	21	17	17	12	20	44	17	29	23	14	369
	Increment	10	6	6	1	9	22	6	7	12	3	127

Mid-term Evaluation Data
IGAs (3/4)
As of June 2004
Bee-keeping

Total 7 villages

Species	Name of Village	No. 4	No. 5	No. 9	No. 14	No. 17	No. 18	No. 19
		Mdala	Nanjiwa	Chakana	Tamvekenji	Kamwendo	Peter Bilila	Ndemanje
Phase		I	I	I	I	I	I	I
No. 1 Bee-hive								
Installtion	date	Oct. 02		16.05.03	12.09.02			
Colonized	date			5.06.03	Dec. 02	Yes	Yes	Yes
Last three	date			1.06.04				
inspection	date				May. 03	31/5/04		
	date				June. 03			
Havest	date	August			14.06.04		Once	Early June
	bottle	3			3		1	2
Share	bottle							
Selling	bottle				3			
Profit	KW				450			
reason					Sold at cheaper price		Late harvest	
No. 2 Bee-hive								
Installtion	date			16.5.03	12.09.02			
Colonized	date			4.01.04	Dec. 02	Yes	Yes	
Last three	date			1.06.04				
inspection	date				May. 03	31/5/04		
	date				June. 03			
Havest	date				015.06.04		Once	
	bottle				3		1	
Share	bottle							
Selling	bottle				3			
Profit	KW							
reason							Late harvest	
No. 3 Bee-hive								
Installtion	date			15.06.03	12.09.02			
Colonized	date	June, 03			Feb. 03	Yes	Yes	
Last three	date							
inspection	date				May. 03	31/5/04		
	date				June. 03			
Havest	date	Absconded			16.06.04		Once	
	bottle					1		
Share	bottle					1		
Selling	bottle							
Profit	KW							
reason							Late harvest	
No. 4 Bee-hive								
Installtion	date				12.09.02			
Colonized	date				Feb. 03	Yes	Yes	
Last three	date							
inspection	date				May. 03	31/5/04		
	date				June. 03			
Havest	date						Once	
	bottle							
Share	bottle							
Selling	bottle							
Profit	KW							
reason								
Total								
Havest	bottle	3	0	0	7	0	2	2
Share	bottle	0	0	0	1	0	0	0
Selling	bottle	0	0	0	6	0	0	0
Profit	KW	0	0	0	450	0	0	0

Evaluation Data
IGAs (4/4)
As of June 2004
Others

Species	Name of Village	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
		Makonokaya	Siyamdima	Kaumbata	Mdala	Nanjiwa	Chikoja (a&b)	Manjero	Teula	Chakana
1 Guinea Fowl Rearing (4 villages)										
Received	Male		10							
	Female		10							
Death	Male									
	Female									
Loss	Male		2							
	Female									
Egg collected	number		260							
	date		Oct – Apr							
Egg hatched	number									
	date									
Total fowl	Male		12							
	Female		7							
	Total		18							
2 Sweet Potato Nursery										
Area planted	(m2)						0		2,000	
Conditions		Dried up	Not good	Dried	Planted & harvested	Dried up	Good		Good	Dried up drought
Individual shared no.		10	10	41	15	10	46		10	6
3 Improved Cooking Stove										
Total number		35	28	18	20	10	64	18	14	5
Usable number		35	25	15	20	7	55	17	12	4
(two-hole stove)		5	3	0	4	0	6	0	2	0
(usable number)		5	3	0	4	0	6	0	2	0
4 Maker Ridge										
		3	2	6	3	4	31	4	2	0
5 Others										
Check dam										
Aquaculture	(Milala dam)							no harvest, waiting growth		
Home bakery	(Manjero village)							2 times/weekly		

ANNEX C6

Evaluation Data (IGA Committee), June 2004

Mid-term Evaluation Data
Committee

B. IGAs Committee (1st Phase)

Name of Village Item		No. 1 Makonokaya	No. 2 Siyamdima	No. 3 Kaumbata	No. 4 Mdala	No. 5 Nanjiwa	No. 6 Chikoja (a)	No. 7 Manjelo	No. 8 Teula	No. 9 Chakana	No. 10 Lemu
IGAs Name		Goats	Guinea fowl	Irrigation	Bee-keeping	Bee-keeping	Irrigation	Irrigation	Irrigation	Bee-keeping	Irrigation
1	Present Number of member	10	14	8	10		10	10	10	10	20
1)	Number of female	5	7	4	7		5	5	4	5	11
2)	Number of male	5	7	4	3		5	5	6	5	9
3)	discrease	Constant	Constant	Decrease	Constant		Constant	Constant	Constant	Constant	Increasing
4)	Number of above			Death							
	reason of above		No profit seen	Employment	Profitable		There is coordination	Committee is co-operative		Village Head controlling everything	Use of pumps
5)	Number of nursery members in IGA members	10	14	8	10		10	6	7	10	20
2	Composition of committee										
1)	Number of large-scale farmer	0	0	0	0		0	0	0	0	0
2)	Number of medium-scale farmer	0	0	0	0		0	0	0	0	10%
3)	Number of small scale farmer	100%	100%	100%	100%		100%	100%	100%	100%	90%
	reason of above	Low income	Income levels	Low income	Low level of income		Lack of inputs	Small land holding size	Small land holding size	Low income levels	Different levels of income
3	Participant										
1)	Number of participant	20		41			31	38	32		40
2)	increase or decrease	Decrease		Decrease			Decrease	Increase	Decrease		Increase
	reason of above	Lack interest		Seek employment			transfer to 2nd nursery	Interest development	Lost interest because starter pack ceased		Interest
4	Present Committee Rules										
1)	What kinds of rules are established? (please mention details)										
1)	Election of member and/or term	Not specific	Open term	No term of office			2 years	1 year	3 years		Open term
2)	Responsibility of member		Feeding fowls	Work on site			Look after the whole group, help in problem solving	Leading the whole group in all activities	Leading the group		Watering
3)	Responsibility of participant		Cleaning khola, fines for absentism				Participate in all irrigation activities	Encourage others to work together	Help all activities		
4)	Decision making		Committee members	All			The whole group	The Committee	The whole group		
5)	Penalty			Fines to be paid			Available	Available	Available		Fines
6)	Dispute solution		Committee	Committee			The whole group an the whole committee	The Committee	Committee		Committee Members
7)								failing which			
8)								the chief			
9)								resolves			
2)	Frequency of meeting		once/month	3 days/week			once a month	once a week	8/month	2/week	4/month
3)	Reason of change or not change?			N/A			The term over	No change term is not over	No change term still on		
5	Working hour per member per day or week?		1hr	4hrs/member	45mins		10hrs/week	12hrs/week	4hrs/week	2hrs/day	3-5hr/day
6	What is the main works?							Irrigation	Irrigation		Fertilizer application
							Land clear	Land clearing	land clearing		Watering
							Tilling basin making, manure application and all irrigation practices		watering		Tilling
7	Active or not			Active	Not active		Active	Active	Active		Active
8	Reason of above						Committee cooperate	Committee is cooperative	Good cordination		Profitable

**Mid-term Evaluation Data
Committee
B. IGAs Committee (1st Phase)**

Name of Village Item		No. 11 M. Ngondo	No. 12 Kammata	No. 13 Kumanda	No. 14 Tamvekerjji	No. 15 Chilangali	No. 16 D. Mbedza	No. 17 Kamwendo	No. 18 Peter Bilila	No. 19 Ndemanje	No. 20 Simon Mphombe
IGAs Name		G. Fowls	Goat	Irrigation	Bee-keeping	Irrigation	G. fowl	Bee-keeping	Bee-keeping	Bee-keeping	Goats
1	Present Number of member	19	10	10	10	10	10	9	10		
1)	Number of female	13	5	5	4	7	7	5	3		
2)	Number of male	6	5	5	6	3	3	4	7		
3)	discrease	Decreasing	Constant	Constant	Constant	Constant	Constant	Decrease	Constant	(as nursery)	(as nursery)
4)	Number of above							1 died			
	reason of above	No profit	Good coordination	Good coordination	The committee has interest	The committee is effective	the committee is effective but its sick	died			
5)	Number of nursery members in IGA members	19	10	10	10	10	10	0	3		
2	Composition of committee										
1)	Number of large-scale farmer	0	0	0	0	0	0	0	0		
2)	Number of medium-scale farmer	0	0	0	0	0	0	0	0		
3)	Number of small scale farmer	100%	100%	100%	100%	100%	100%	100%	100%		
	reason of above	Low level of income	Small land holding size	Small land holding	Small land	Small land	Small land				
3	Participant										
1)	Number of participant	42	41	42	32	21	37	9	10		
2)	increase or decrease	Decrease	Increase	Increase	Increase	Decrease	Increase	Constant	Constant		
3)	reason of above		Interest development	Interest	Interest	Healthy	Interest				
4	Present Committee Rules	No									
1)	What kinds of rules are established? (please mention details)	Rules									
1)	Election of member and/or term		3 years	3 years	2 years	2 years	1 year	voting	voting		
2)	Responsibility of member		Leading the whole group in goat activities	Lead the group	Look after the hives, leading the whole group	Look after the whole group	Lead the whole group on what to do	Inspecting and clearing	checking of bee-hives		
3)	Responsibility of participant		Work together with others	Work	Harvesting and processing honey	Encouraging each other so that activities are carried out timely	Cleaning the kraal, feeding fowls, egg collecting	Assisting	-		
4)	Decision making		The whole group	Whole group	The whole group	The whole group	The whole group and the committee	Chairman	Chairman		
5)	Penalty		Available	No penalties	Available	Available	Available	None	None		
6)	Dispute solution		Displine	Committee and	The committee solves	The whole group	The whole group	Committee	meeting		
7)			committee	Village Head				Discusses			
8)											
9)											
2)	Frequency of meeting	2/month	2/week	No meetings	2/week	3/week	once a month	As needs	2/week		
3)	Reason of change or not change?		Term still on	Overstay	The term is over	The term is over	Term over		-		
5	Working hour per member per day or week?	45mins	35hrs/week	6hrs/week	12hrs/year	9hrs/week	7hrs/week	As needed	2-3 hours		
6	What is the main works?		Feeding goats	All irrigation	Smoking bees	Land clearing		Inspecting	inspecting		
		Cleaning khola	cleaning khola	activities	harvesting	Tilling	Clear kraal	and clearing			
		Feeding	Medical care		sieving honey	plot laying out, manure application	Feeding the fowls, clearing as feeding materials				
7	Active or not		Active	Active	Active	Active	Active	Active	Active		
8	Reason of above	Seen no profit brooding was bad	There is coordination	Co-operate	Work done	Coordination	No coordination	Season determining availability			

Mid-term Evaluation Data
Committee
B. IGAs Committee (1st Phase)

All villages

Date: June 2004

Name of Village Item		No. 21 Kateya	No. 22 Maluwa	No. 23 Kumponda	No. 24 Kumisati Chigumula	Average
IGAs Name		Treadle Pump	Goats	Treadle Pump	Treadle Pump	
1	Present Number of member		10	10		11.1
1)	Number of female		5	6		5.9
2)	Number of male		5	4		5.1
3)	discrese	(as nursery)	Constant	Constant	(as nursery)	
4)	Number of above					
	reason of above					
5)	Number of nursery members in IGA members		5	10		9.6
2	Composition of committee					
1)	Number of large-scale farmer		0	0		0.0%
2)	Number of medium-scale farmer		0	0		0.5%
3)	Number of small scale farmer		100%	100%		99.5%
	reason of above					
3	Participant					
1)	Number of participant		30	26		30.8
2)	increase or decrease		Increase	increase		
3)	reason of above		increase of goats	new interest		
4	Present Committee Rules					
1)	What kinds of rules are established? (please mension details)					
1)	Election of member and/or term		voting	voting		
2)	Responsibility of member		checking of goats	Encouraging others		
3)	Responsibility of participant		care for goats	Working in plot		
4)	Decision making		committee	Chairman		
5)	Penalty		snatch back goats	None		
6)	Dispute solusion		meeting	Discussion		
7)						
8)						
9)						
2)	Frequency of meeting		None	2/week		
3)	Reason of change or not change?		no need	Work frequency		
5	Working hour per member per day or week?		-	3 hours		
6	What is the main works?		distribution of goats	making beds		
				watering plants		
7	Active or not		Active	Active		
8	Reason of above		More births of goats	Found benefits		

Mid-term Evaluation Data
Committee
B. IGAs Committee (2nd Phase)

Item	Name of Village	No. 1 Makonokaya	No. 2 Siyamdima	No. 3 Kaumbata	No. 4 Mdala	No. 5 Narjiwa	No. 6 Chikoja	No. 7 Marjelo	No. 7 Marjelo	No. 8 Teula	No. 9 Chakana
	IGAs Name	Irrigation	Goat rearing	Goat rearing	Treadle pump	Goats	Goat	Goat	Bakery	Goat	Goats
1	Present Number of member	10		7	10	6	10	10	10	10	10
	1) Number of female	6		4	5	3	5	6	7	3	5
	2) Number of male	4		3	5	3	5	4	3	7	5
	3) Members increase or discrease	Constant		Decrease	Constant		Constant	Constant	Constant	Constant	
	4) Number of above										
	reason of above						Good coordination	Committee is effective	Committee is effective	Good coordination	
	5) Number of nursery members in IGA members	10		7	10	6	6	3	5	7	10
2	Composition of committee										
	1) Number of large-scale farmer	0	0	0		0	0	0	0	0	0
	2) Number of medium-scale farmer	0	0	0		0	0	0	0	0	0
	3) Number of small scale farmer	100%	100%	100%		100%	100%	100%	100%	100%	100%
	reason of above	Low income levels		Low income levels			Lack of enough inputs	Small land holding size	Small land holding size	Small land holding size	
3	Participant										
	1) Number of participant			41			11	21	12	32	
	2) increase or decrease	Decrease		Decrease			Constant	Increase	Constant	Decrease	
	3) reason of above	Decrease Committee has not authority over Village Headwoman hence there are no rules					Not yet sharing	The committee and the group work together	The work is done accordingly	Because starter pack ceased	
4	Present Committee Rules										
	1) What kinds of rules are established? (please mention details)										
	1) Election of member, term						2 years	1 year	1 year	3 years	
	2) Responsibility of member						Making sure goats are well cared	Leading the group	Leading the group on each activity	Leading the group in all activities	
	3) Responsibility of participant						Participate in goat rearing, problem solving	Help in problem solving	Problem solving, and selling	Carrying all activities for the goats	
	4) Decision making			By all			The whole committee	The whole group	The whole group	The whole group	
	5) Penalty			N/A			Available	Available	Available	Available	
	6) Dispute solution			By the committee			The whole group	The committee	The committee	The committee	
	7) Siblings to be shared										
	8)										
	9)										
	2) Frequency of meeting			N/A			2/week	2/week	3/month	Once a month	
	3) Reason of change or not change?						The term is over	No change term is not over	No change the term is still on	No change the term is over	
	5) Working hour per member per day or week?			1hr/day			4hrs/day	8hrs/week	12hrs/day	6hrs/day	
	6) What is the main works?						feed goats	Cleaning the khola	Baking	Feeding the goats	
							report sickness	Feeding the goats	wood fetching	Cleaning khola	
							clean khola	clean khola	Sell scones	Medical care	
7	Active or not		Active	Active			Active	Active	Active	Active	
8	Reason of above						Committee look after the goats	Committee is corporate	Committee works together	There is coordination	

Mid-term Evaluation Data
Committee
B. IGAs Committee (2nd Phase)

Item	Name of Village	No. 10 Lemu	No. 11 M. Ngondo	No. 12 Kammata	No. 13 Kumanda	No. 14 Tamvekenji	No. 15 Chilangali	No. 16 D. Mbedza	No. 17 Kamwendo	No. 18 Peter Bilila	No. 19 Ndemanje
	IGAs Name	Goats	Treadle pump	Irrigation	Guinea fowl	Irrigation	Goat	Goat	Goat rearing	Goat rearing	Goat rearing
1	Present Number of member	20	23	10		6	10	10	15	10	10
	1) Number of female	10	15	6		3	7	7	6	4	6
	2) Number of male	10	8	4		3	3	3	9	6	4
	3) Members increase or decrease	Increasing	Increase	Constant		Constant	Constant	Constant	Constant	Constant	Constant
	4) Number of above										-
	reason of above		Profitable	Good coordination		They formed a committee of 6 people the other 4 will be added	Good coordination	Good coordination			
	5) Number of nursery members in IGA members	20	23	10		6	10	10	15	6	
2	Composition of committee										
	1) Number of large-scale farmer	0	0	0		0	0	0	0	0	0
	2) Number of medium-scale farmer	50%	0	0		0	0	0	0	0	0
	3) Number of small scale farmer	50%	100%	100%		100%	100%	100%	100%	100%	100%
	reason of above			Small land holding size		Small land holding size	Small land holding size	Small land holding size			
3	Participant							None			
	1) Number of participant			41		32	11	11	15	10	6
	2) increase or decrease			Decrease		Increase		Constant		Constant	Constant
	3) reason of above			Interest development		Developed interest		They have not yet shared			Indifference
4	Present Committee Rules									Transferred	
	1) What kinds of rules are established? (please mention details)										
	1) Election of member, term		Open term	3 years		1 year	2 years	3 years	Voting	Voting	Voting
	2) Responsibility of member		Present on working day	Leading the whole group		Making sure the equipment is well used	Making sure youngones are shared properly	Leading the whole group	Village committees leadership	check goat	Supervision
	3) Responsibility of participant		Decisions made by committee	Finding out whether work is done effectively		Participating in all irrigation activities	Problem solving, caring for his goats	Problem solving	Any jobs to be done	feed goat	Working
	4) Decision making		Penalties to all defaulters	The whole group		The whole committee	The whole committee	The whole committee	Chairman	Chairman	Village Head
	5) Penalty		solved by Committee and sometimes	Available		Available	Available	Available	None	KW5.00	K30.00
	6) Dispute solution			Discipline committee		The whole group	The whole group	The whole group	Meeting	Meeting	Discussion
	7) Siblings to be shared										
	8)										
	9)										
	2) Frequency of meeting		3/week	2/month		2/week	2/week	once a week	2/months	2/month	1/weekly
	3) Reason of change or not change?		No	No change term is not over		Giving a chance to others	Giving a chance to others	The term is still on		same	
	5) Working hour per member per day or week?		3hrs/day	8hrs/1 week		8hrs/week	8hrs/week	2hrs/day	As required	2-3hrs	3hrs/day
6	What is the main works?		Cultivation	Irrigation		Land clearing	All activities	Feeding goats	Organising	care and distribution of goats, etc.	
			Watering	activities		Tilling, manure	Land clearing,	sweeping	distribution of goats, etc.	goats, etc.	
			Fertilizer	seed sowing		Basin making		khola			
7	Active or not	Active	Active- seen	Active		Active	Active	Active	Active	Active	Active
8	Reason of above		Seen profit on the activities	Committee is corporate		There is coordination	Activities carried out	Protect, care for goats			

Mid-term Evaluation Data
Committee
B. IGAs Committee (2nd Phase)

All villages
Date: June, 2004

Item	Name of Village	No. 20	No. 21	No. 22	No. 23	No. 24	Average
		Simon Mphombe	Kateya	Maluwa	Kumponda	Kumisati Chigumula	
	IGAs Name	Goat rearing	Goat keeping	Goat rearing	Goat rearing	Goat rearing	
1	Present Number of member		5		10	6	10.4
	1) Number of female		2		5	2	5.6
	2) Number of male		3		5	4	4.8
	3) Members increase or decrease	(as 1st phase)	decrease	(as 1st phase)	Constant	decrease	
	4) Number of above		1		-	4	
	reason of above						
	5) Number of nursery members in IGA members		1		4	1	8.5
2	Composition of committee						
	1) Number of large-scale farmer		0		0	0	0.0%
	2) Number of medium-scale farmer		0		0	0	2.4%
	3) Number of small scale farmer		100%		100%	100%	97.6%
	reason of above						
3	Participant						
	1) Number of participant		11		22	16	19.5
	2) increase or decrease		decrease		increase	increase	
	3) reason of above		died		new births	new births	
4	Present Committee Rules						
	1) What kinds of rules are established? (please mention details)						
	1) Election of member, term		Voting		Voting	Voting	
	2) Responsibility of member		Ensuring that goats are being cared for		Inspection	checking goat	
	3) Responsibility of participant		Keep a goat		Caring	working nursery	
	4) Decision making		Chairman		Chairman	Chairman	
	5) Penalty		None		None	take a way goat	
	6) Dispute solution		Meeting		Meeting	Meeting	
	7) Siblings to be shared						
	8)						
	9)						
	2) Frequency of meeting		1/week		1/weekly	Once/week	
	3) Reason of change or not change?					same	
	5) Working hour per member per day or week?		As required		As required	2-3 hrs	
	6) What is the main works?		Organisation		Sharing of goats	goat distribution	
			distribution of goats, etc.				
	7) Active or not		Active		Active	Active	
	8) Reason of above						
			See benefits		Have goats	Meet frequently	

ANNEX C7

INPUT MATERIALS SUPPLIED

(1ST PHASE & 2ND PHASE)

Small Scale Irrigation (Treadle Pump)

Description	Unit	1st Phase (10 villages)		2nd Phase (5 villages)		3rd Phase		Total
		per village	Q'ty	per village	Q'ty	per village	Q'ty	Q'ty
1 Dimba Development								
1 Input								
1 Seeds	pack	5	50	5	25		0	75
2 Maize Seeds	2kg		0	2	10		0	10
3 Fertilizer	10kg/bag	1	10	1	5		0	15
4 Fertilizer	10kg/bag	1	10	1	5		0	15
5 Fertilizer	10kg/bag	1	10	1	5		0	15
6 Chemicals	500ml/bottle	2	20	2	10		0	30
7 Ridge protection sheet	roll		0	1	5		0	5
2 Agricultural tools								
1 Hoe		6	60	6	30		0	90
2 Sickle		6	60	6	30		0	90
3 Treadle pump		3	30	3	15		0	45
4 Hose of treadle pump			0	3	15		0	15
5 Watering can		6	60	6	30		0	90
6 Handi chemical sprayer	1.5 lit	6	60	3	15		0	75
7 Grease	1 litre	3	30	3	15		53	98
3 Dyke construction								
1 Cement	50kg/bag	10	100	10	50		0	150
2 Wheel burrow	unit	1	10	1	5		0	15
3 Shovel	unit	2	20	2	10		0	30
4 Water bucket	pc	2	20	2	10		0	30
4	Hose of treadle pump	2 pc/10 villages			20		20	40
5	Line level	2 pc/24 villages			48		0	48
6	Cement	50kg/bag, Kumponda			6		0	6
7	Wheel burrow	unit, (Kamwendo)			2		0	2
8	Poly tube	x 8 packs (8 packs/24 villages)	0		24		0	24

**INPUT MATERIALS SUPPLIED
(1ST PHASE & 2ND PHASE)**

Guinea Fowl Rearing

Description	Unit	1st Phase (3 villages)		2nd Phase (1 village)		2nd Phase (0)		Total
		per Village	Q'ty	per Village	Q'ty	per Village	Q'ty	Q'ty
1 Input								
1 Guinea Fowl	head	20	60	20	20		23	103
2 Feed	50kg/bag	10	30	5	5			35
3 Feed	50kg/bag		0	5	5		20	25
4 Watering pots	unit	2	6	2	2			8
5 Feeding troughs	unit	2	6	2	2			8
6 Seed of Thombozi	kg	1	3	1	1			4
7 Fertile eggs of Guinea Fowl	pc	50	150		0			150
8 Starter chick feed	50kg/bag	10	30		0			30
2 Fowl Shed								
1 Roof	sheet		0	12	12			12
2 Net for window	sheet	2	6	2	2			8
3 Door	unit		0	1	1			1
4 Wood for door frame	unit	8	24	2	2			26
5 Door hinges	pc		0	2	2			2
6 Key	pc		0	1	1			1
7 Nail	kg		0	2	2			2
8 Nail	kg		0	0.5	1			1
9 Termite protection	can		0	1	1			1
10 Plastic basket	pc		0	2	2			2
3 Others								
1 Pamphlets	sets	500	500		0		0	500
2 Reports with photos	sets	1	1		0		0	1
3 Professional fees Team Leader	days	10	10		0		0	10
4 Trainers Extension Agent	manday	36	36		0		0	36
5 Mobilization awareness agent	manday	15	15		0		0	15
6 Drivers	manday	9	9		0		0	9
7 Vehicles to & from the sites	days	16	16		0		0	16
8 Clerical miscellaneous cost	sets	1	1		0		0	1

INPUT MATERIALS SUPPLIED

(1ST PHASE & 2ND PHASE)

Goat Rearing

Description	Unit	1st Phase (4 villages)		2nd Phase (18 villages)		3rd Phase		Total
		per village	Q'ty	per village	Q'ty	per village	Q'ty	Q'ty
Goat Rearing								
1 Input								
1 Boa goat	head	6	24	3	54		2	80
	head	7	28	8	144		5	177
3 Feed	50kg/bag	10	40	2	36		0	76

Description	Unit	1st Phase (4 villages)		2nd Phase (18 villages)		3rd Phase		Total
		per village	Q'ty	per village	Q'ty	per village	Q'ty	Q'ty
2 Medicene and tools								
LEVISAN, 500ml	bottle	5	5	20	20	5	5	30
HI-TET, 100ml	bottle	5	5	20	20	5	5	30
DIP (20lit)	container	1	1	1	1	1	1	3
STOCHOLMTAR	bottle	5	5	5	5	5	5	15
Ear tag (10 pcs)	set			20	20			20
String for handling	roll			3	3			3

**INPUT MATERIALS SUPPLIED
(1ST PHASE & 2ND PHASE)**

Bee-keeping

Description	Unit	1st Phase (7 villages)		2nd Phase (none)		3rd Phase (none)		Total
		per village	Sub-total	per village	Sub-total	per village	Sub-total	Q'ty
1 Input								
1 Improved beehive	unit	4	28		0		0	28
2 Protection mask & suits	set	2	14		0		0	14
3 Smoke sprayer	unit	2	14		0		0	14
4 Gloves	pair	2	14		0		0	14
5 Honey collecting tins	unit	8	56		0		0	56
6 Honey bottles	pc	300	2,100		0		0	2,100
7 Mutton cloth	pc	7	49		0		0	49
8 Honey extraction jar & spoon	set	4	28		0		0	28
2 Others								
1 Booklet	pc	500	500		0		0	500
2 Trainers fee (1)	lot	7	7		0		0	7
3 Trainers fee (2)	lot	15	15		0		0	15
4 Report with photos	booklet	1	1		0		0	1

INPUT MATERIALS SUPPLIED

(1ST PHASE & 2ND PHASE)

Sweet Potato Processing

Description	Unit	1st Phase (none)		2nd Phase (10 villages)		3rd Phase (none)		Total
		per village	sub- total	per village	sub- total	per village	sub- total	Q'ty
Sweet Potatoes								
1 Input								
1 Seed potato	ton (1 ton= 20 bags)		0	0.5	5		0	5
2 Tools for digging	pc (hoe with handle)		0	2	20		0	20
	pc (sickle)		0	2	20		0	20
	pc (shovel)		0	2	20		0	20
3 Processing tools	pc (mat)		0	2	20		0	20
	pc (peeling knife)		0	2	20			20
	pc (kettle)		0	2	20		0	20
	pc (kettle)		0	2	20		0	20
4 Product container	pc (vinyl bag)		0	100	1,000		0	1,000
	pc (PVC container)		0	2	20		0	20