Appendices

1. Field Facilitators Manual
2. List of Sustainability Indicators
3. Debriefing Document, outline
4. Case studies
5. 1999-2000 Starter Pack extension leaflets

Appendix 1

SPS2 EVALUATION MODULE 4

MAIN STUDY

FIELD FACILITATORS MANUAL

MARCH 2000

NAME : _____

Acknowledgements

This Manual has been developed by KWERA Development Centre[1] based on a preliminary study in 3 villages[2]. KWERA acknowledges the support provided by the Malawi Government and the UK Department for International Development (DFID) through Dr Harry Potter at the British High Commission. KWERA appreciates valuable assistance received from Elizabeth Cromwell of Overseas Development Institute, London; Carlos Barahona of University of Reading Statistical Services Centre; Dr Rowland Chirwa of Government of Malawi Dept of Agricultural Research; Richard Mwanza of Concern Universal; and Dr Patrick Kambewa of University of Malawi Chancellor College. KWERA would also like to thank all PJOs in the three EPAs that participated in the preliminary study, and their staff, as well as the village headmen and their subjects for the co-operation they rendered without which the Manual could not have taken the current shape.

Abbreviations used in this Manual

FGD	-	Focus Group Discussion
FHH	-	Female-headed household
FPG	-	Farming Practice Group
HH	-	Household
KI	-	Key Informant
MHH	-	Male-headed household
NTFP	-	Non-Timber Forest Products
SI	-	Sustainability Indicator

INTRODUCTION

Purpose of study

This study is part of the Malawi Government evaluation of the 1999–2000 Starter Pack

[1] At the time the Manual was being developed the centre had the following consultants Stuart Ligomeka (MA Rural Development), Max Lawson (MA Rural Development), Fiona Chambers (MA Rural Development), Bright Sibale (MSc Animal Science), Francis Lwanda (MA Economics)
[2] Mataka village, Mombezi EPA, Chiradzula; Nkhwani 1 village, Bwanje Valley EPA, Ntcheu; Kabaza village, Mbawa EPA, Mzimba.

campaign. The purpose of the study is to understand the impact of Starter Pack on sustainable agriculture in Malawi. Has Starter Pack helped sustainable agriculture or caused problems? Are there any changes that could be made to Starter Pack that would help it to support sustainable agriculture better in Malawi?

'Sustainable agriculture' means farming practices which ensure food security and the productivity of the land in the long-run, e.g. applying manure, soil and water conservation measures, crop diversification, etc. In a preliminary study in February this year, we asked smallholder farmers to tell us how they judge whether farming is 'sustainable' or not and they told us 15 different ways. We are calling these 15 different ways 'Indicators of Sustainability'. You have been given a list of these (**List of Indicators of Sustainable Farming**) and you must keep this safely because you will need it during the village visits.

The study will be done by visiting 30 different EPAs all over Malawi. There is a **Map** of these EPAs pinned at the back of this Manual. You will be divided into 3 teams of Field Facilitators, each team containing 4 people. In each EPA, one team will visit one village for 3 days to carry out participatory exercises on sustainable agriculture. This means each team will visit 10 EPAs each, 8 of these on your own and 2 of these whilst undergoing training with Mr Richard Mwanza.

All the exercises you will do during these village visits are explained step-by-step in this Manual. You have also been given a **Debriefing Document** in which you should record the results of the participatory exercises. You will be trained how to fill in this Debriefing Document.

Village visits

Although we want to find out about sustainable agriculture in this study, we do not want to make farmers feel ashamed if they are not practising sustainable agriculture in their fields. Therefore, when you are talking with farmers during the village visits you must talk about 'farming practices' NOT about 'sustainable agriculture'. **This is very important**.

DO NOT use the words 'Starter Pack' at all until the Focus Group Discussions on Day 2 of the village visit. **This is very important** because we need to know a lot of background about sustainable agriculture in the village first before we start talking about Starter Pack.

During the Field Exercises, let farmers (NOT you) do the writing – preferably using symbols not words – so that those who can't read can also join in the Exercise. Do not fill in the Debriefing Documents during the Field Exercises, because this is off-putting for the farmers – rather wait until the evening or when you have free time.

Approximate times for each Field Exercise have been given in this Manual, but you should

use your best judgement to fit in the Field Exercises according to convenient times with the village.

Equipment

These are the documents you will be given to help you do the study. Take them with you on the village visits and keep them in a safe place all the time:

- this **Field Facilitators Manual**
- **Guidance Notes on Debriefing Document**
- **List of Indicators of Sustainable Farming**

This is the equipment you will be given for carrying out the Field Exercises in each village:

- **flip chart** for transcribing maps, and **marker pens**
- **notebooks** for making additional notes about Field Exercises, and **ballpoints**
- **small cards** for social mapping
- different coloured **cards** and **sticky papers** for institutional mapping
- two **Debriefing Documents** for each village, for recording results of Field Exercises
- sheets of **A3 paper** for transcribing maps to pin to Debriefing Documents

Your team leader is Mr Richard Mwanza.

You must hand over the Debriefing Documents to Mr Richard Mwanza as soon as you have filled them in. You must hand over your Field Notebooks to Mr Richard Mwanza at the end of the study.

Please write the EPA number clearly on all Debriefing Documents and A3 papers.

Please write your name clearly on all your Field Notebooks.

WHAT TO DO	GUIDANCE
DAY ONE **1.0 ENTERING THE VILLAGE** **1.1 MEETING VILLAGE LEADERS** **Objective** To clarify the purpose of the team's visit and the Field Exercises they are to carry out in the village. **Who** Village leaders All Field Facilitators **Time** 20–30 minutes **Materials** Field notebooks **Process** Do not mention evaluation of Starter Pack but rather say that purpose is to discuss with the village on farming practices[3]. Also mention how long the visit will last; how meeting times will be arranged; who the team will be meeting with and talking to. Also emphasise that the participation of the village is the key approach of the visit. Explain that all the flip charts and one copy of the Debriefing Document will be left with the village at the end of the visit	***MORNING*** The team may be accompanied by the ADD staff such as PjO, DO or FA at this point. This exercise should be done on the day of arrival before the village meeting
1.2 VILLAGE MEETING **Objective** To introduce the team and discuss expectations. **Who** Open meeting of whole village. All Field Facilitators **Time**	If possible, the team should NOT be accompanied by any officials from now on. The purpose of addressing peoples' expectations is to

[3] It is feared that if you mention starter pack at the very beginning of the exercise, there are a lot of expectations from the people i.e. people think there is another starter pack coming so you get biased information. Also do not mention sustainable agriculture for fear of excluding those who are not sustainable; rather talk about 'farming practices'.

1 hour **Materials** Field notebooks **Process** Introduce the team to all village members. Take this opportunity to discuss peoples' expectations of your visit. Introduce the objective and purpose of the visit to village members as done in 1.0 above, mentioning working logistics and approach. Relate the objectives and the peoples' expectations and clarify which ones of the expectations will be addressed and which ones not and why?	clear any expectations that may not be addressed so that people's participation is ensured. These tools are a good point to begin from as they initiate dialogue and continue to set a conducive climate and build trust.
2.0 GETTING TO KNOW THE VILLAGE Objective To get the village to tell you more about their village. **2.1 RESOURCE MAPPING** **Who** One group of villagers Two Field Facilitators: facilitator and note-taker **Time** 1 hour 30 minutes at the same time as Field Exercise 2.2 **Materials** Large, open space preferably just close to where the village meeting is taking place. Coloured chalk, locally available materials (pebbles, leaves, etc) as symbols on the map. Flip chart and marker pens for transcribing map to paper. Field notebooks Start by asking where are the boundaries of the village and ask the village if they can show that on the ground. Then ask them to show the rest of major features and resources in the village in relation to the boundaries. Use any locally available materials as symbols to represent the existing features. Throughout the process, the facilitators should prompt deeply on issues and locations concerning: infrastructure (roads, important buildings, etc.), water sites and sources, soil slopes and elevations, grazing areas, settlement and farm areas,	2.1 and 2.2 are best done concurrently by splitting into two groups and can be handled by two facilitators. The main purpose of resource mapping is not to make an accurate map but to get useful information about local perceptions of resources Do not forget to map out farm plots outside village boundaries. See example in Appendix 1

common property resources Ask village members to transfer the map onto flip chart paper.	
2.2 SOCIAL MAPPING **Who** A mixed group of men and women from different social groups. Two Field Facilitators: facilitator and note-taker. **Time** 1 hour 30 minutes at the same time as Field Exercise 2.1 **Materials** Cards of same colour and shape. Flip charts and marker pens for transcribing map to paper. Field notebooks. **Process** Start by placing a card on the floor to represent the house of a village head or any key person in the group or village. Using other cards, let the group locate the rest of the households (HH) in relation to some guiding features like roads or foot paths When all HH are shown on the map, ask some key persons in the group to write down the names of the HH on each card. While they do that, the facilitator should make sure that the status of the HH is known and indicated on the cards: male-headed HH; female-headed HH. Transfer the map to flip chart paper. Collect the cards and keep them.	Make sure that each card represents one farm-family/ household[4] These should be names that the HH are commonly known by in the village These are the cards that will be used for sorting the HH into sustainable farming categories later. In the evening when work is finished, make a second set of these cards ready for Field Exercise 3 tomorrow.
2.3 INSTITUTIONAL ANALYSIS **Objective** To find out how different institutions have negatively or positively contributed to farming practices. **Who** Mixed group of men and women from different social groups. Two Field Facilitators: one facilitator and one note-taker.	***AFTERNOON*** Field Exercises 2.3 and 2.4 can be done concurrently by splitting into two groups, each handled by two facilitators.

[4] Define a farm family or house hold as a group of people that eats from same pot or granary and not each and every building in the village, nor all members of the same clan.

Time ??????? **Materials** Circular cards of different sizes and sticky paper. Flip chart and marker pens. Field notebooks. **Process** Ask the group to list all the institutions that have an influence on their farming system and practices. Using a Venn diagram, analyse the institutions looking at their roles and importance in farming practices to the group members Make notes in your field notebook. Transfer the map to flip chart paper	Remember to cut out the circles for the Venn diagram before the Exercise starts. Often communities look at institutions as only those coming from government or the NGO sector. Take care to structure the discussion to include also indigenous institutions which have an influence on the farming system.
2.4 TRANSECT WALK To refine information gathered from the resource map on farming practices **Who** Key informants: those who demonstrated knowledge of the village during mapping. KIs should be gender balanced. Two Field Facilitators: one facilitator, one note-taker. **Time** **3** hrs: • Two hours for on site analysis • One hour for off site analysis. **Materials** Resource map from Field Exercise 2.1. Flip charts and market pens for putting map on paper Field notebooks. **Process** Brief the key informants that the purpose of the walk is to let them show the team around the village and discuss some issues on farming that may arise/be seen on the walk. Revisit the resource map to find how best the walk may be conducted to cover different ecological zones as they appear on the resource map.	Collect as much information as possible. Draw a transect line using the information collected. Process using a

While on the walk, do an on-site analysis by observing and asking questions relating to issues of soils, crops, forestry, NTFPs and vegetation, water resources, land husbandry, livestock. Be sure to include problems/threats, potentials/opportunities, limitations to exploitation of the opportunities. All through the process, record the findings and issues arising from discussions. At the end, identify key informants for categorisation of farming practice groups (Field Exercise 3), balanced between men and women as much as possible.	transect map noting each element in each topographical zone See example of transect map in Appendix 4. Make sure that the walk is analysed the same afternoon.
DAY TWO **3.0 SUSTAINABLE FARMING CATEGORIES** To categorise HH into high, medium or low sustainable farming groups. To gather information about the number of HH falling into different levels of agricultural sustainability by indicator. **Who** Two groups of Key Informants, one of men and one of women. Two Field Facilitators for each group of KIs: one facilitator and one note-taker. **Time** 3 hours **Materials** Two sets of HH cards from Field Exercise 2.2. List of Sustainability Indicators Flip charts and marker pens. Field notebooks. **Process** For each group of Key Informants: **Step 1** Get the **List of Sustainability Indicators**. Introduce the Indicators. Have the groups develop their own symbols to represent each Indicator. **Step 2** Make a Table of Indicators and ask the group to tell you which Indicators are applicable to this village and which	***MORNING*** Note that the Farming Practise Groups are deliberately in mixed order (FPG 2 then 3 then 1). This is so that farmers don't realise we are ranking them by the sustainability of their farming practises. See example Table in Appendix 6.

are not, and why. Note down the reasons why in your field notebooks. **Step 3** Using the HH cards from the social mapping, take each of the selected Sustainability Indicators in turn and ask the KI group to put each HH card in the square on the Table that best describes its farming practices for that Indicator. Write down the number of HHs in each square for each Indicator, separately for male-headed and female-headed households. Repeat this until you finish all selected Indicators. **Step 4 A**sk the group to think about the overall farming practices of each HH (i.e. putting all the selected sustainability indicators together), and to place each HH card in the square on the Table that best describes its overall farming practices. Again, count separately male-headed households and female-headed households. A Facilitator should take the piles of cards in each square and mark on the back of each one, three dots for HH doing Practise 3, two dots for HH doing Practise 2 and one dot for HH doing Practise 1. **Step 5** The facilitators on their own should compare/ triangulate the dots on the cards given by the two KI groups. Select those cards which are matching between the two KI groups and leave out those with conflicting dots. **Step 6** Bring the selected cards back to the village. Ask the village head or any other capable member to sift out cards of those HH that did not receive Starter Pack in both years, i.e. 1998-99 and 1999-2000. If possible, also sift out the cards of those Key Informants participating in the sorting exercise above. You now remain with cards of HH that received SP, that are well categorised according to the three farming practices groups ready for Focus Group Discussions (Field Exercise 4).	Make sure the marking is done behind cards and done only by the facilitator. Use a different coloured marker pen for the two groups of key informants. This will assist to remove miscategorisation biases. This should not be done in the presence of village members. Facilitators should find their own convenient time for this. The objective for doing this is to get only those names that received Starter Pack. This should be made clear to the one doing the sifting before the sifting process other wise it might be misinterpreted as a way of registering those who were missed to be given a next SPS .

4.0 FOCUS GROUP DISCUSSIONS

AFTERNOON

Objective
To understand how Starter Pack has impacted on HH in different farming practice groups.

Who
8 – 10 HHs from each Farming Practice Group identified in Field Exercise 3 above. Split the HHs in Farming Practice Group 3 by gender (men and women) so that you have two groups for this Practice. So altogether you will have 4 Focus Groups each of up to 8-10 people, as follows:

1. Focus Group 1 = men and women in Farming Practise Group 1
2. Focus Group 2 = men and women in Farming Practise Group 2
3. Focus Group 3 = men in Farming Practise Group 3
4. Focus Group 4 = women in Farming Practise Group 3

Two Field Facilitators for each FGD: one facilitator and one note-taker.

We may combine Focus Groups 3 and 4 after the first 6 sites have been completed – Richard Mwanza will decide on this.

If you are running out of time to complete the village visit at this point, you can put only one Field Facilitator with each FGD, so that all 4 FGDs can be done simultaneously.

Make sure each Focus Group understands that they are to answer for themselves only, not for the whole village (because afterwards we want to compare the different answers from different farming practice groups).

Time
Take the afternoon to complete Field Exercises 4.1 and 4.2.

Conduct the following Field Exercises separately for each Focus Group.

4.1 RANKING OF SUSTAINABILITY INDICATORS

Materials
Flip chart and marker pens.
Field notebooks.
List of SIs identified as important for this village in Field Exercise 3 above.

Process
Ask the Focus Group to pair-wise rank the total list of Sustainability Indicators chosen as important for this village in Field Exercise 3 above. They should rank them according to which are most important to the people in this Focus Group, NOT the whole village.

See example of Pairwise Ranking in Appendix 5a.

Add up the number of times each indicator was identified as more important than the rest and arrange them in an appropriate order.

In your field notebooks, note down the reasons people give for the ranking.

4.2 TREND ANALYSIS **Materials** Flip chart and marker pens Field notebooks **Process** Identify which are the 5 most important sustainability indicators according to the pair-wise ranking above. Do a Trend Analysis with the Focus Group to identify what are the past and present REASONS for them being in their particular farming practise group. It may be easiest to explain this Field Exercise to the Focus Group by saying "What prevents you from doing more sustainable farming practices" (for Focus Groups 2, 3 and 4) and "What enables you to do such sustainable farming?" (for Focus Group 1). What have been the main factors in the 1970s, the 1980s and the 1990s.	The trend analysis should start in the 1970s and then cover the 1980s and 1990s and capture major impacts on sustainable farming. See example of trend analysis in Appendix 7. Some of the types of reasons that may come up are given in Checklist 1 in Appendix 8 but there may be others Involving the elderly in analysing trends is essential because they know more about past events. It is important to plot the trends on graphs as it is easier to observe and compare major changes on different trends.
4.3 INTRODUCE CONTENTS OF STARTER PACK **Time** Take the whole morning to complete Field Exercises 4.3 – 4.5 **Materials** Flip chart and marker pens Field notebooks List of Starter Pack contents in 1998-99 and 1999-2000 Mother Bag leaflets 1999-2000 **Process** Ask the Focus Group to recall the contents of Starter Pack in 1998-99 and 1999-2000. Draw a pie chart showing the exact contents of the packs received at this particular site (i.e. including the kind of basal and top-dressing fertiliser, maize/rice seed, legume seed received). Also explain to them what extension advice they should have received about Starter Pack. Repeat to them the extension message about one seed per hole, plant spacing, etc exactly as it was written on the Mother Bag leaflet. Show them the Mother Bag leaflets if necessary.	***DAY THREE*** ***MORNING*** You will need to find out in advance exactly which type of pack was distributed in each of the 30 sites. i.e. leaflet in Mother Bag, poster at EPA Centre, demonstration plots and supervision visits by FAs, radio announcements

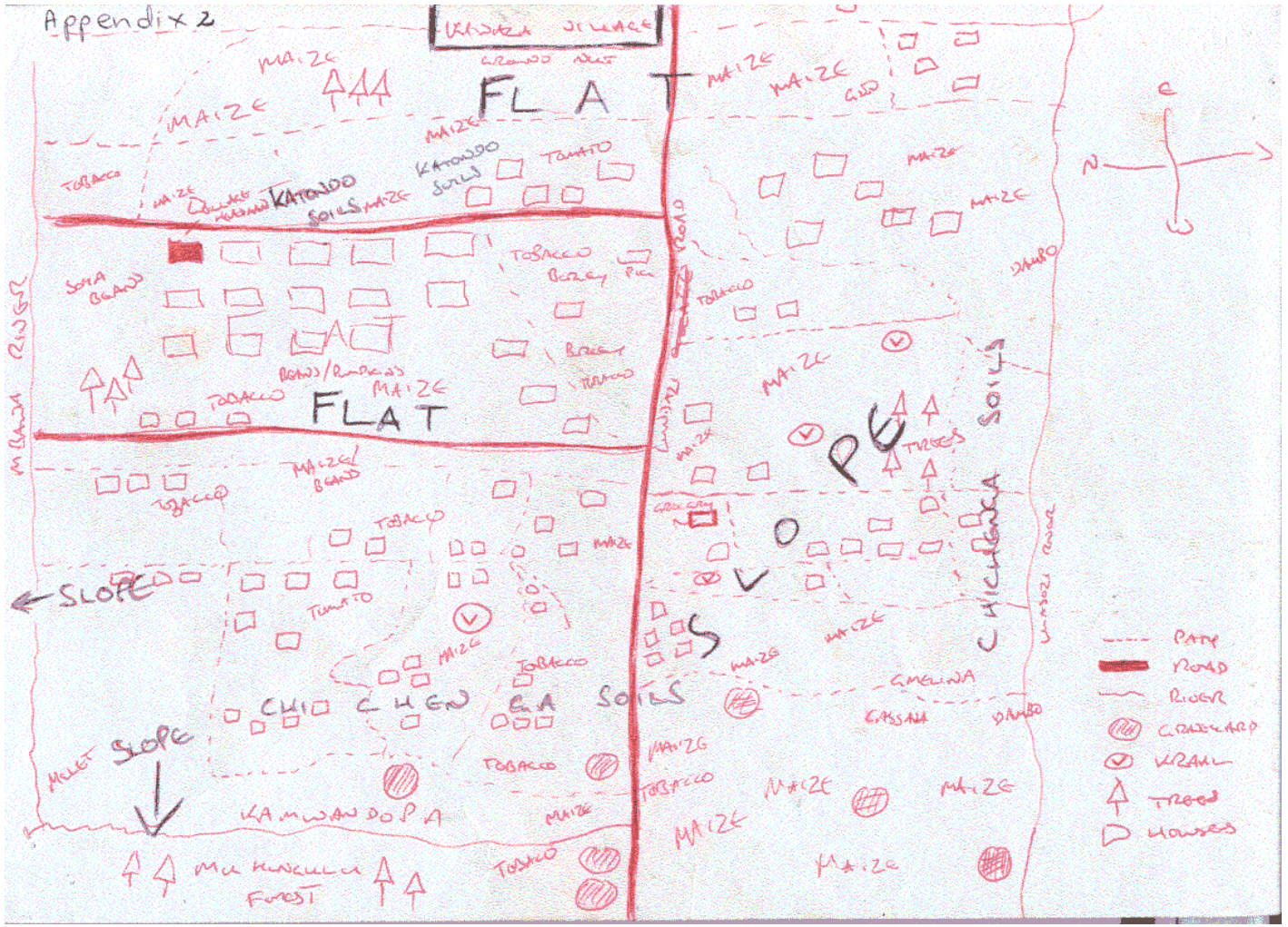
4.4 IMPACT OF STARTER PACK ON FARMING PERFORMANCES **Materials** Flip chart and marker pens Field notebooks **Process** Ask the Focus Group to say what impact Starter Pack had on each of the top 5 sustainability indicators that they identified in 4.1 above – positive, negative, zero. Record this in the form of a table. Also ask the Focus Group to give reasons WHY: was it because of the contents of the pack, or the extension advice that came with it, or the logistics of the SP distribution? Write down as much detail as possible about what the Focus Group says in your field notebooks.	
4.5 CHANGES TO STARTER PACK THAT COULD HELP IMPROVE SUSTAINABLE FARMING **Materials** Flip chart and marker pens Field notebooks **Process** Use pie charts to initiate discussion on what contents the Focus Group would like in their Dream Pack. Especially discuss on what kind of varieties of seed the Focus Group would like in their Dream Pack. Write the reasons the Focus Group give in bubbles on the pie chart. Conduct a Focus Group on changes to extension that could be made that would help impact of Starter Pack on sustainable farming. The changes could be on the form of the advice (leaflet, demonstration, etc) or on the message itself (one plant per station, plant spacing, or advice on other farming issues e.g. agro-forestry, compost-making). Conduct a Focus Group on changes to logistics that could be made that would help impact of Starter Pack on sustainable farming. If time, ask the Focus Group to pair-wise rank what changes to Starter Pack they would most value to help with sustainable farming.	Make clear Dream Pack should have same total kg as Starter Pack, and same value, but can have different contents as long as they are agricultural inputs.

5. CASE STUDIES Richard Mwanza and the Field Facilitators will write up short descriptions of any farmers' experiences that seem to be particularly good or bad in relation to the impact of SP on sustainable farming. These will be used as illustrative boxes in the final report on the study. If possible, 5 farmers will be purposefully selected each to represent a different FEWS area of influence; the EPAs falling under each different FEWS category in handwriting at the side of the Module 4 Site map. **6. LEAVING THE VILLAGE** Fill in two copies of the Debriefing Document and transcribe the maps from the flip charts onto A3 paper and pin them to your copy of the Debriefing Document. Give the other copy of the Debriefing Document and the flip charts with maps on to the village before you leave.	***AFTERNOON*** If there is not enough time to do this, take someone's address and arrange to post the village's copies of the Debriefing Document and the flip charts to them later.

Appendices to Field Facilitators Manual

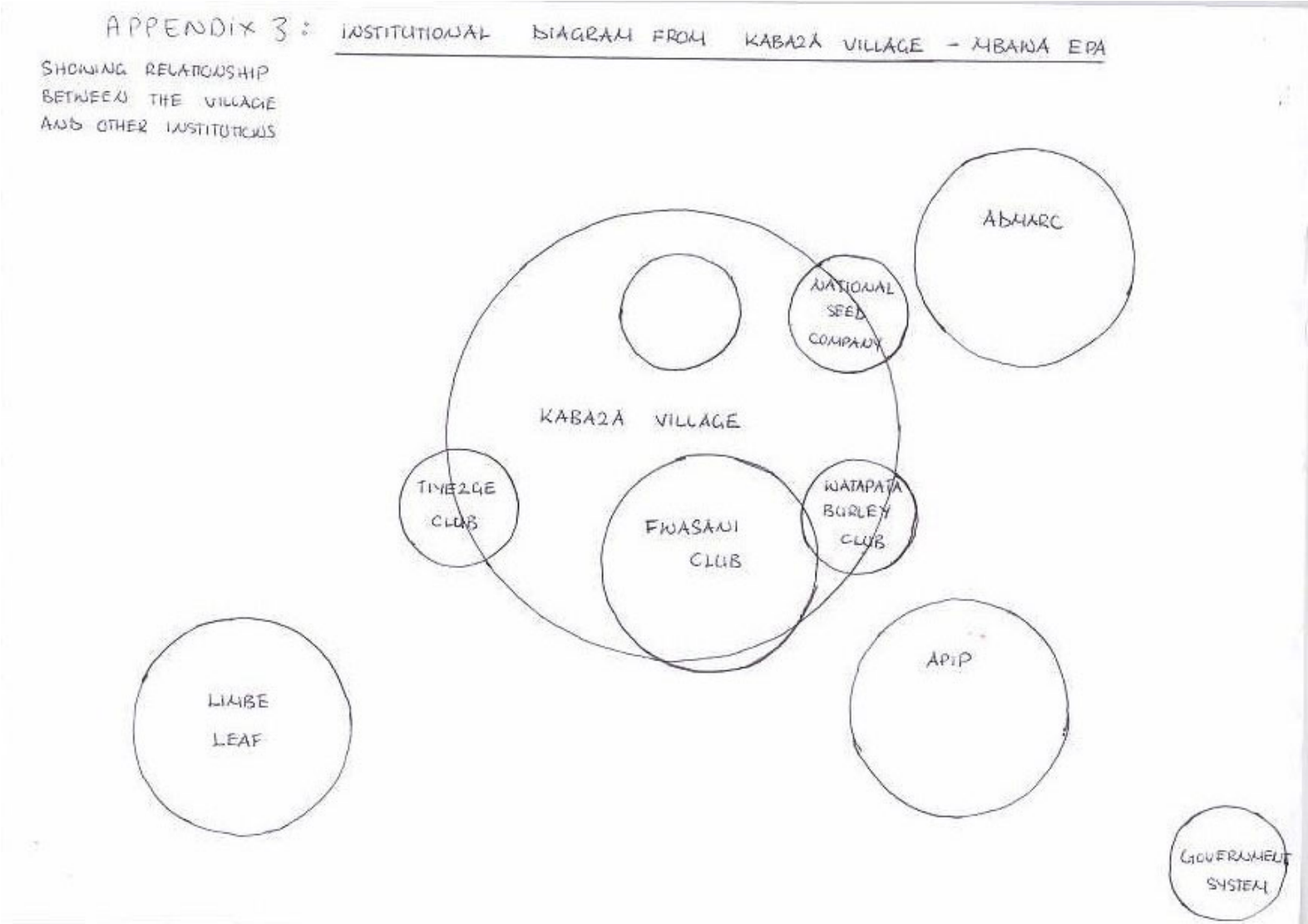
Map EPAs (Not included)
1. Resource Map
3. Institutional Diagram
4. Transect Map
5a. & 5b Pair wise ranking of Sustainability Indicators
6. Sustainable Indicator Table (list)
7. Trend analysis
8. Checklist of reasons given in trend analysis
9. Pie chart of Starter Pack Contents

Appendix 2: Resource Map



APPENDIX 3: INSTITUTIONAL DIAGRAM FROM KABAZA VILLAGE - MBANA EPA

SHOWING RELATIONSHIP BETWEEN THE VILLAGE AND OTHER INSTITUTIONS

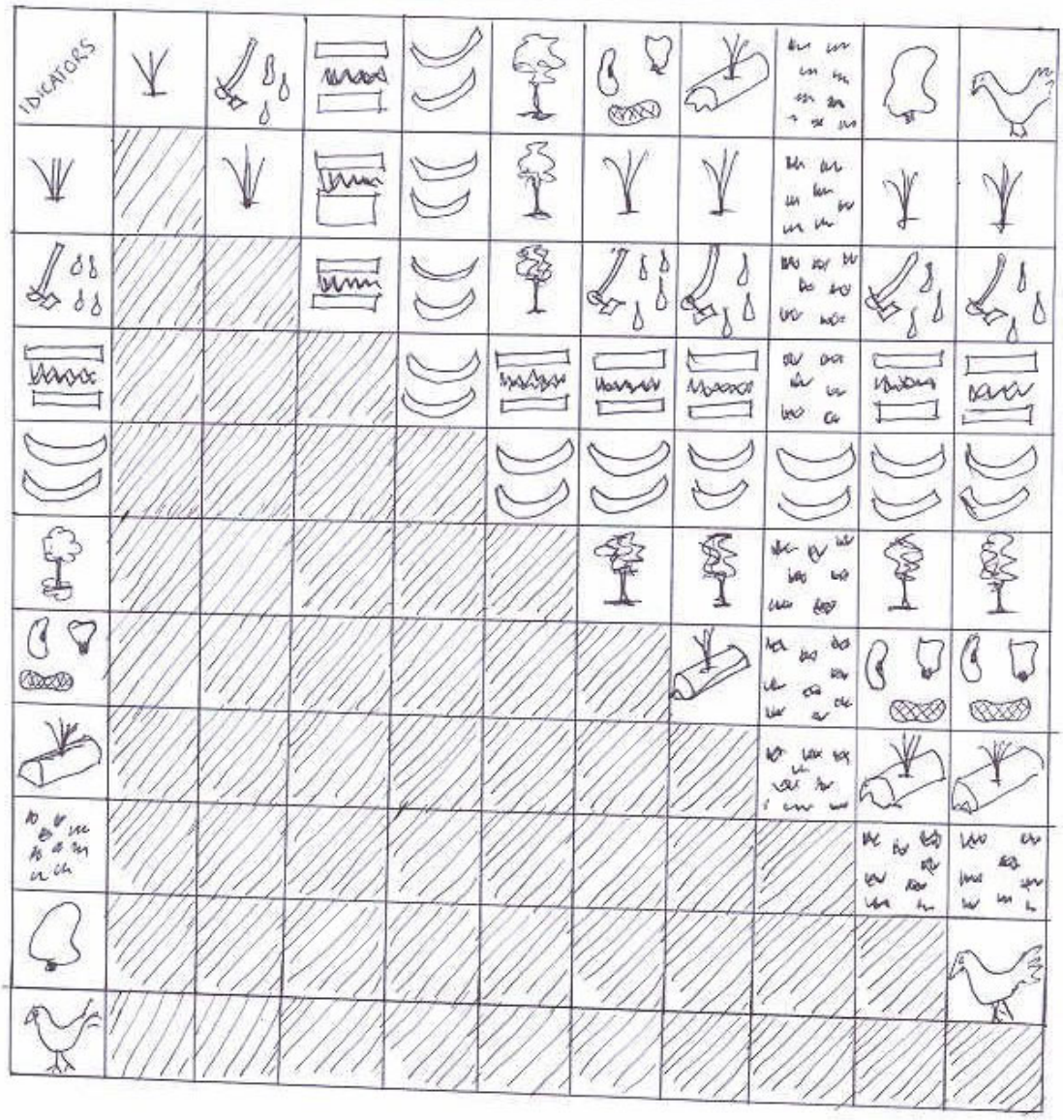


Appendix 4: TRANSECT THROUGH MATARA VILLAGE

SOILS	DARK SAND AND CLAY	LOOSE GRAY SOIL	LOOSE GRAY SOILS	LOOSE GRAY DARK SANDY TOWARDS RIVER	DARK SANDY	BLAC LOAM SOIL
CROPS	SUGARCANE ONIONS, BEANS	MAIZE, BEANS, CASSAVA, GARDEN PEAS, PIGION PEAS, POMPKINS, CUCUMBA, GROUND NUTS, SWEET POTATOES			SUGAR CANE	
FORESTRY VEGETATION	BAMBO GRASS	MANGOES, EUCALYPTUS,	MANGOES, EUCALYPTUS SWEET PEARS, AVOCADO PEARS PAPAYA, PEACHES GUAVA	EUCALYPTOS MANGOES BAMBOOS		EUCALYPTOS GUAVAS LOCAL/INDIGENOUS FOREST CONSTRUCTION TREES.
LIVE-STOCK			CHICKENS AND FEW GOATS			
PROBLEMS AND THREATS	PLOTS TOO SMALL FOR COMMERCIAL IRRIGATION	PESTS - GRASS-HOPPERS, CATE-PILLARS, LAND SHORTAGE LOW WATER HOLDING	BANANA DISEASES LAND SHORTAGE LOW ORGANIC MATTER PRODUCTION WATER SHORTAGE LOW H_2O HOLDING CAPACITY	PESTS LIKE GRASSHOPPERS, SNAILS, GULLY EROSION, EUCALYPTUS CLOSE TO FARMS	GULLY EROSION DEFORESTRATION LOW WATER LEVELS IN RIVERS DUE TO EUCALYPTUS SCRUB	GULLY EROSION EUCALYPTUS DRYING UP FARM LANDS
THREATS & PROBLEMS				LAND SHORTAGE	FAST RUN OFF OF WATER	
POTENTIALS	IRRIGATION		DIVERSIFIED ANIMAL FARMING			

APPENDIX 5a) PAIRWISE RANKING OF INDICATORS OF SUSTAINABLE FARMING

NKHWANI VILLAGE - SHAPEVALLEY EPA.



Appendix 5b)

	INDICATOR	NUMBER OF TIMES PREFERED	RANK
1.	SEEDLINGS	5	5
2	WEEDING	4	6
3	RETENTION OF WEEDS AND CROP RESIDUES	7	3
4	PROPER	9	1
5	AGROFORESTRY PRACTICE	6	4
6	CROP DIVERSITY	2	8
7.	BANKING	3	7
8.	ORGANIC MANURE	8	2
9.	FRUIT GROWING	0	10
10.	LIVESTOCK FARMING	1	9

Appendix 6

Record how many households in each Farming Practice Group are tnale-headed (MHH) and female-headed (FHH). NOTE that the Farming Practice groups are del berately NOT in numerical order

Example:

Indicator	Practice group 2		Practice group 3		Practice group 1		
	MHH	FHH	MHH	FHH	MHH	FHH	Total
1	25	15	20	30	7	3	100
2	10	33	20	30	4	3	100
3	30	10	15	20	10	15	100
15	22	13	13	30	15	5	100
All indicators	20	15	20	30	10	5	100

Appendix 7: TREND LINES FROM MATAKA VILLAGE

LAND PRODUCTIVITY

1949 - 49 FAMINE

1950 - RELOCATION OF PEOPLES' GARDENS FROM HIGHER ALTITUDE, FERTILE AREA TO LOWER LESS FERTILE DRY LAND.

1972 - INCREASE IN YIELDS DUE TO: APPLICATION OF FERTILIZERS AND CHEMICALS FROM INTRODUCTION OF FARM CLUBS

1981 - REDUCED HARVEST DUE TO LESS RAIN. RAINFALL HAS SINCE THEN BEEN LESSER AND LESSER

1992 - INCREASES IN PRICES OF FERTILIZES FROM REMOVAL OF FERTILIZER SUBSIDIES

Appendix 8

ATTACHMENT 8: CHECKLIST OF POSSIBLE REASONS FOR SUSTAINABILITY CATEGORIES

Environmental

Location of farm: hillside, dambo; type of soil; distance to fields;
Access to common property resources (grazing land, trees and NTFPs, rivers and dambos)

Socio-economic

Size of farm
Access to labour (amount, quality re: sickness, laziness)
Access to transport
Wealth
Access to livestock
Access to knowledge, including IK
Literacy level
Age
Gender

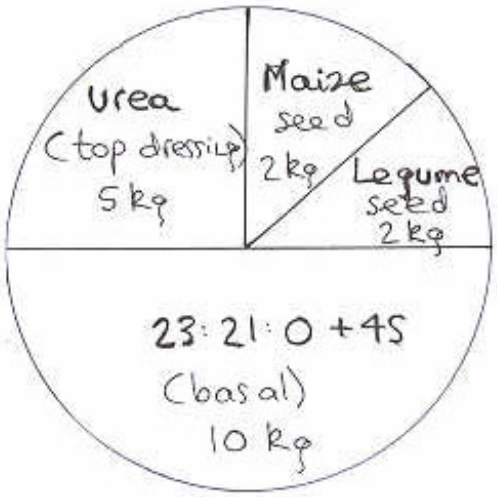
Insitutional

Availability of institutions for knowledge and financial support
Credit terms and conditions

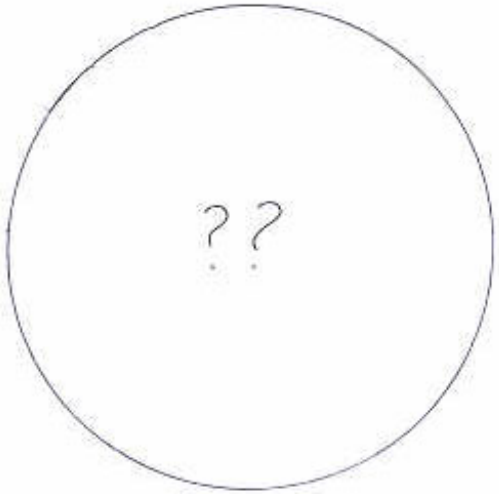
Policy and incentives

Prices
Markets
Land law
etc

Appendix 9: pie charts of Starter Pack contents



Starter Pack



Dream Pack

Appendix 2

LIST OF INDICATORS OF SUSTAINABLE FARMING

SPS EVALUATION MODULE 4

Indicator	High	Medium	Low
1. Tilling or weeding by retaining weeds and crop residues in soil	Retain maize leaves and stalks. Also do bury in weeds while weeding. (Vundira or kugaula, kuojeka). Done immediately after pile up maize for harvesting, if using hands this means ridging at this time else if using cattle this means tilling during this time. Usually it is between June and July.	This group mostly does the same in terms of retaining weeds and crop residues but does so a bit latter than the first group. Usually does so in august or September. This, it was said does not give enough time for the residues to decompose. In other areas late retention means trouble with termites and poor germination rate.	This group usually gathers stalks and weeds in piles and burns them (kusosa). Or set the garden on fire to clear it before ridging. Others in this category wait until the first rains when the soils are wet and just goes straight to ridging though retain residues in soil there is no time for the residues to decompose
2. Application of organic manure (animal and compost)	Able to apply manure to whole fields. Usually they have means of transporting to their farmlands (ngolo) most of these do also apply fertiliser because it is less laborious. Done in good time, just before the rains in November	Put manure on each plant station to economise. May not have enough to apply to all farm plots/ area. Usually just apply to farmplots near homesteads for lack of transport to carry manure to distant farm plots and for limited access to animal manure	Do not apply any manure because they can not have any as usually do not own any animals. They may also not be able to purchase any. Therefore these rely on starterpack to a great deal as only source of improving on soil fertility.
3. Livestock farming	Keep a diverse type of livestock e.g. chickens, goats, pigs, and cattle. These help in production of animal manure, and animal power in terms of transport and farming. Also they help as source of income to buy fertiliser	Keep some live stock, but only chickens, goats and pigs.	Only keep a few chickens.
4. Agroforestry trees	Plant agroforestry trees like rantana, pigeon peas (nandolo), - planted in systematic spacing. Other trees mentioned include msangu, tifonia	Scattered agroforestry trees in garden/ farm plots	No agroforestry trees planted in farmland. Also plant trees like gmelina and or eucalyptus in farmland, which disturb crop growth.

Indicator	High	Medium	Low
5. Land husbandry practices	Use SWC measures including contour bunds, storm drains, and contour ridges where their gardens are on slope. Make ridges well across slope following contours and make box ridges in the right manner. Ridges are well spaced, 90cm apart.	Have contour bunds where their gardens are on slope. Have ridges across some slopes but may not necessarily follow contours. And there are no box ridges. Ridges may also be too close or far apart.	No contour bunds even where garden is on slope. Ridging along slope. Improper spacing of ridges, too close together or too far apart.
6. Farm implements and tools.	Have tools and implements like a plough, ridger, an oxcart, and enough suitable tools like hoes, sickles, axes	Own a few but suitable farm tools like an axe, hoes, a sickle, panga knife	Own just some basic tools like a few hoes and an axe. They borrow most of the other tools from other people
7. Seed availability	Save enough seeds for all crops but can also buy. Can also ably follow recommended planting methods per plant station and spacing.	Save enough seeds for 1 or 2 crops only. Plant following recommended methods per plant station and spacing	Rarely save any seed and rely on ganyu or Starter Pack. Characterised by late planting because waste time hunting for seed. May not always follow recommended planting methods
8. Farmland size	Has enough land size to plant all crops they need to feed family. Also able to lend out some land.	Don't have all land need but some can afford to get land on rent to expand their farm area	Have small land size, limiting cultivation area
9. Application of fertiliser	Manage to buy own fertiliser to apply on all farmland helping them to harvest extra which enables them to sell extra and be able to buy more fertiliser in subsequent years. Do not have much trouble to repay fertiliser loans	Only manage to buy some bags. Have some trouble to repay loans	Cannot afford to buy any fertiliser. Rely on Starter Pack as a source of fertiliser.
10. Crop diversification	Grow a number of staple crops.	Grow 1 – 2 staple crops only.	Grow only one staple crop.

Indicator	High	Medium	Low
11. Mixed cropping (inter-cropping, relay cropping)	Proper mix of crops usually has maize and beans mixed with tree legume crops grown just around the edges of the field. They will not mix more than two different crops but rather may make division in plots within the garden for different mixtures.	Mix crops better by making sure that the crops grown in same garden relate well by mixing nitrogen fixing like beans and pigeon peas and maize. However you will also find some complementary crops in the garden like pumpkins, and different types of the beans mixed in the garden.	Improper mixing of crops. Like mixing cassava, pigeon peas, maize and beans in the same garden. Overloading the garden with many crops beyond capacity. just grow crops that they access at the planting time
12. Fallowing	Manage to leave land fallow for three or more years with total control of animal grazing in the field. Which ensures that the purpose of leaving land fallow is not defeated by overgrazing and hardening the soil with hoof stamping of animals.	These will leave land fallow for maybe just a period of 1-2 growing seasons. Through that period there may be just some controlled grazing in the fallow fields	Cannot willingly leave any land fallow. They will only leave land fallow when they can not farm the land for some reasons like illness during farming season.
13. Applications of chemicals	Apply recommended measures and types of chemicals to their fields like SMITHION mixed with SEVEN for termites, caterpillars and borers. Use Integrated Pest Management.	Apply recommended measures and types of chemicals to their fields like SMITHION mixed with SEVEN for termites, caterpillars and borers.	Apply bad chemicals to fields like DUAL for weed control instead of keeping weeds as green manure. They also use Sulphate of ammonia fertilisers to their fields.
14. Crop rotation	Practice proper rotation: maize followed by groundnuts or tobacco. The other year tobacco follows maize or groundnuts. While groundnuts may then follow where had millet	There is much change, rotation between two crops like maize and tobacco and plant millet on fallow land	Plant same types of crops on same pieces of land every year. Or if there are changes then the crops that follow each other are not proper like maize plot followed by cassava or vice versa

Indicator	High	Medium	Low
15.Institutions[5]	Farmers are members of farmers clubs for both cash and food crops and the family has access to a range of credit sources for the purchase of inputs. They have access and are able to act on good extension advice.	Farmers receive some credit, often from some within the village and not outside institutions. They are members of some farmers clubs and receive some extension advice.	Farmers do not have access to extension services and advice. Farmers do not have access to any credit schemes for inputs, either for cash or food crops.

[5] Extension, credit, community organisations, NGO projects, seed supply, marketing, agricultural research.

Appendix 3

MAIN STUDY DEBRIEFING DOCUMENT
SPS2 EVALUATION MODULE 4

- **BACKGROUND INFORMATION**

Village name

Section name

EPA name

Dates of the village visit

Names of all Field Facilitators involved in the village visit

FEWS sphere of influence (**leave this blank**)

Distance of village to nearest road with public transport (kms)

Total number of households (HH) in village

Altitude

Tick boxes if you have attached these Maps:
- ❑ Resource map
- ❑ Social map
- ❑ Institutional map
- ❑ Transect walk map
- ❑ Trend analysis chart
- ❑ Pie charts of Dream Pack

Tick box if you have handed over village copy of Debriefing Document and flip charts:
- ❑ Debriefing Document and flip charts handed over to village

- **VILLAGE ENTRY**

Problems or good things that came up during the Village Entry (Field Exercise 1) and Village Meeting (Field Exercise 1.2) that may affect the study, and how

- **RESOURCE MAPPING**

Copy out the Resource Map (Field Exercise 2.1) onto A3 paper and pin it to the back of this Debriefing Document

Notes to explain any parts of the Resource Map

# participants in Resource Mapping	Notes
Men	
Women	
Youths	

Any problems experienced doing this Field Exercise.

- SOCIAL MAPPING

Copy out the Social Map (Field Exercise 2.2) onto A3 paper and pin it to the Debriefing Document.

Type of households in village	Number of households
Male-headed	
Female-headed	

# participants in Social Mapping	Notes
Men	
Women	
Youths	

Any problems experienced doing this Field Exercise.

- **INSTITUTIONAL MAPPING**

Copy out the Institutional Map (Field Exercise 2.3) onto A3 paper and pin it to the Debriefing Document.

Type of institution		Information/service provided
Government		
NGO/donor		
Village		

Other (private sector)		

Notes on any institutions mentioned that are not well known: which villages they cover, what is their aim, how long they have existed, what is their target group.

# participants in Institutional Mapping	Notes
Men	
Women	
Youths	

Any problems experienced doing this Field Exercise.

- **TRANSECT WALK**

Draw a map of the transect walk on A3 paper, complete the Table underneath the map, and pin it to this De-briefing Document.

# participants in Transect Walk	Notes
Men	
Women	
Youths	

Any problems experienced doing this Field Exercise.

- **FARMING PRACTICES GROUPS**

Gender of KI group (tick) : male female

Participants in Practices Group	Notes
Men	
Women	
Youths	

Any problems experienced doing this Field Exercise.

Indicator	Reason

Indicator	Practice group 2		Practice group 3		Practice group 1	
	MHH	FHH	MHH	FHH	MHH	FHH
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
All indicators						

Received SP both years	Practice group 2	Practice group 3	Practice group 1
MHH			
FHH			
Total			

- **FOCUS GROUP DISCUSSIONS**

Name of Focus Group (tick): Farming Practise Group 1, 2, 3, 4

# participants in Practices Group	Notes
Men	
Women	
Youths	

Any problems experienced doing this Field Exercise.

	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Indicator 8	Indicator 9	Indicator 10	Indicator 11	Indicator 12	Indicator 13	Indicator 14	Indicator 15	Total
Indicator 1	x															
Indicator 2	x	x														
Indicator 3	x	x	x													
Indicator 4	x	x	x	x												
Indicator 5	x	x	x	x	x											
Indicator 6	x	x	x	x	x	x										
Indicator 7	x	x	x	x	x	x	x									
Indicator 8	x	x	x	x	x	x	x	x								
Indicator 9	x	x	x	x	x	x	x	x	x							
Indicator 10	x	x	x	x	x	x	x	x	x	x						
Indicator 11	x	x	x	x	x	x	x	x	x	x	x					
Indicator 12	x	x	x	x	x	x	x	x	x	x	x	x				
Indicator 13	x	x	x	x	x	x	x	x	x	x	x	x	x			
Indicator 14	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Indicator 15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	

Indicator	Pair-wise ranking total	Position	Rank	AdjustedRank
Indicator				
Indicator				
Indicator				
Indicator				
Indicator				
Indicator				
Indicator				
Indicator				
Indicator				
Indicator				

Indicator				
Indicator				
Indicator				
Indicator				
Indicator				

Sustainability Indicators	Reasons
1	
2	
3	
4	
5	

Write out the Trend Analysis chart from Field Exercise 4.2, and pin it to the back of this Debriefing Document.

Indicator number	Impact	Reasons for impact

Copy out the pie charts showing the Focus Group's Dream Starter Pack (from Field Exercise 4.5) onto A3 paper and pin it to the back of this Debriefing Document.

Notes on changes in form and type of extension advice

Notes on changes Focus Group would like in logistics of SP

Pairwise ranking of preferred changes to Starter Pack:

Preferred change	1.	2.	3.	4.	5.	6.	7.
1.	x						
2.	x	x					
3.	x	x	x				
4.	x	x	x	x			
5.	x	x	x	x	x		
6.	x	x	x	x	x	x	
7.	x	x	x	x	x	x	x

Appendix 4: CASE STUDIES

CASE STUDY FOR MR. LUKE NJOVUYALEMA (FPG3)

Mr. Njovuyalema said that he has no money to hire labour. He is always busy with cultivating his dimba that is another source of income for his household. He has no livestock because he lacks cash. He uses the money to support children who go to school. He does not practice agro-forestry because he had not heard about it. He has no large farm implements because he has no access to loans from lending institutions.

He relies on on-farm saved seed. The household has enough land to meets his farming requirements. However he does not apply fertiliser to his garden since he can not afford to buy it at the current prices. He grows a diversity of crops, which he mixes on his garden. However, despite having enough land, he does not practice fallowing. He applies some chemicals to his crops, especially vegetables.

CASE STUDY FOR MR. MABONZO

Mr. Mabonzo tills his land early. He does not practice agro-forestry because he has no access to seed. He has goats and chickens but he does not apply manure to his garden. He has enough tools and implements, which he bought after selling his produce. He has enough seed but sometimes he buys hybrid seed. He grows crops such as maize, cassava, vegetables, pigeon peas, and cotton. He does not apply fertiliser to his crops because he thinks his land is fertile enough.

He mixes maize with velvet beans and maize and pigeon peas. Since he has a large farmland, he practices some fallowing. Normally he leaves his land for 4 years. He applies chemicals to his cotton and vegetables. He rotates maize and his cotton.

CASE STUDY FOR MR. SANIEL MPOTA IN DETE VILLAGE IN DEDZA (FPG3)

Mr. Mpota is married with one wife and four children (all boys). He does not have enough land such that he supplements it by renting some more land. He normally keeps enough seed of maize especially NSCM 41. In the past weevils attacked his seed since he did not apply actellic.

He constructed plot boundaries and box ridges following advice from the extension workers. He rotates maize, tobacco, and groundnuts. Further he applies compost manure and pig manure in the whole garden.

He said that the Starter Pack program has increased his production in maize. Without fertiliser, he normally got 5 x 50 kg bags. With Starter Pack, he got 9 x 50 kg bags. The increase in the production of maize has enabled him to keep some maize seed. He belongs to an APIP club that enables him get a credit. He keeps livestock such as pigs, pigeons, and chickens. These provide him with cash and manure. In the past, his pigs were attacked by African Swine Fever.

The major problem he has faced in recent years is the poor agricultural prices. He has few agricultural implements. He would appreciate getting some implements (wheelbarrow and plough) on loan. The extension workers seldom come to see him to give him advice. He would have loved to use his dimba but can not do so because his land is permanently waterlogged. He needs an advanced irrigation technology such as a motorised pump in order to succeed.

CASE STUDY FOR MR. ERNEST MNDALA OF ZUZE VILLAGE, KANDEU EPA IN NTCHEU (FPG3)

Mr. Mndala is married with one wife and six children. He has enough land to grow crops such as maize, groundnuts, soybeans and cassava. Part of his land is waterlogged such that his crops are always stunted and he gets a low yield. The other part of his garden is too dry such that when the rainfall season is short, his crops suffer. He alternates maize with groundnuts/soybeans in rotation. Sometimes he mixes these. This practice improves his soil fertility. He also incorporates crop residues from maize stalks, soybeans and groundnut haulms.

Among the problems he faces are the availability of fertiliser which is too expensive for him. Although he joined a club, he has never been successful with getting a loan for his inputs.

CASE STUDY FOR MR. ABUDULA MUWIRA OF MARKO MWENICHILANGA IN KARONGA (FPG1)

Mr. Chilanga has two wives. His farming career started making progress in the 1970s. He has farm implements such as ploughs, ridges, hoes, pangas, sickles, and watering cans. In livestock he rears cattle, pigs, and chickens. He grows the following crops; cassava, groundnuts, maize (MH18 and NSCM 41), rice, bananas, sweet potatoes, millet, burley and NDDF tobacco. He gets more money from selling maize, groundnuts, tobacco and millet. He uses his cattle in ploughing, also gets manure, and in some cases he sells them for cash. He uses pigs for buying labour.

His farmland is 11.5 acres. The highest sustainable farming indicators which he thinks contributes a lot to his farming are use of implements and tools that help him carry out most operations faster, use of fertiliser to increase his yields, use of hired labour for all operations in his garden, the use of other inputs such as fertiliser, and the application of manure.

He thinks the following can improve his farming further:

1. He wants a market to be nearby his village so that he can sell his produce nearby. He singled out two crops which have marketing problems. Tobacco is sold in Mzuzu Aucton Holding such that he spends a lot money on transport. He has no reliable market for his maize. At the time of the interview, he had about 200 50-kg bags waiting to be sold (The interview took place in April 2000).
2. He wants access to the scheme of hiring tractors in order to improve his farming.

CLUBS

He first joined a farmers club in 1987, which was aimed at enabling farmers to buy fertiliser. The club collapsed because of high charges, which they had to settle in transporting his crop to Auction Holdings in Mzuzu. In 1999 he joined another club that is specifically for tobacco unlike the first one that was generally to buy inputs in bulk in order to get a discount.

OPPORTUNITIES

His garden is in fertile soil, which is mainly, clay-loam to sandy soils. This is soil suitable for most crops.

Firewood is plentiful in the area. These resources are important in construction and as a source of energy. The trees are both natural as well as exotic (bluegum, Gmelina).

PROBLEMS

The only reliable water source is Lufina River, which is 15 kilometres away. It is along this river that he constructs his nursery for planting tobacco. Shallow wells dry out earlier soon after the rains in May. There is only one borehole in a nearby village, which they scramble for domestic purposes.

There is one main road (Chitipa-Karonga road). This road is in bad repair such that there is no bus that operates in the area. The people just use private vehicles as a reliable means of transport. This contributes to the delay in getting inputs. The nearest tobacco satellite depot is at Kapoka, some 30 kilometres away from the village. The only health centre in the area has neither a telephone nor an ambulance.

CASE STUDY FOR VILLAGE HEADMAN NAKHETE (FPG3)

Village headman Nakhete tills late because he is not settled since he normally visits relates who are in another district. He normally visits them soon after harvesting and he returns late. He does not have livestock because estates surround their village therefore grazing land is scarce. Because of estates, he has a small farm. Also, livestock diseases infest the area and most people do not have money to buy medicine.

He does not have enough farm tools and implements due to lack of cash. He does not have enough seed for planting on his garden. He normally uses up his harvest through eating or selling. Unfortunately, he can not afford to buy seed from the market.

CASE STUDY FOR MR. AND MRS. LEKISONI GILIMOSI OF DETE VILLAGE IN DEDZA DISTRICT (FARMING PRACTICE GROUP 1)

Mr. Gilimosi normally tills his land soon after harvesting. He incorporates crop residues in the soil. He thinks that by so doing he reduces the need to use fertiliser. They buy only top dressing fertiliser. He also uses his own-farm saved seed. The main crops grown are maize, millet, beans, groundnuts and soybeans. They practice crop diversification in order to reduce crop failure. When they have to buy seed, especially maize

seed, they buy them from Chipiku, ADMARC, and Farmers World. The main maize varieties they plant include NSCM 41, Chitute and Zambia MM 604.

The main cash crops are tobacco, maize and soybeans. He uses the money to buy seed and fertiliser. His farmland requires 38 bags of fertiliser. Last year, they bought 15 bags. He acquires fertiliser through his membership of a farmers club of Malawi Rural Finance Corporation.

On crop rotation, he rotates maize, tobacco, and groundnuts. The rotation is aimed at improving the soils so that their crops should grow well and thereby increase their yield.

The crops they mix are maize and beans, maize and soybeans, maize and millet. They mix because they want to improve the yield and also because they have small landholdings so they want to harvest two crops within the garden.

They also have livestock as a source of manure and income. They apply manure to tobacco only so that they have a good quality tobacco. In the tobacco field, they apply manure before tiling the field. In maize field, they apply fertiliser and also till the land.

They also practice some land husbandry techniques they were taught by the field assistant. However they have not planted grass as advised because they do not have the seed. They even do not know where to get the seed.

The field assistant has helped then get some loans. From Starter Pack, they received groundnut seed and last year they harvested 2 x 50 kg bags. They kept the seed for planting this season. They were sure they were going to harvest more groundnuts than last year. The groundnuts have helped them especially conduct crop rotation. The maize variety they got from the Starter Pack was however a poor variety. The yield was poor, not poundable and it had no taste. They would prefer to get beans instead of groundnuts since they kept the seed from the previous year.

CASE STUDY FOR MR. BONVENTULA ANDRYA OF MODESITO VILLAGE IN MCHINJI (FARMING PRACTICE GROUP 3)

Mr. Andrya's family has seven children and all are boys. Before he started farming on his own land, he worked as a tenant farmer in Kasungu for six years before returning home in 1990. On his farm he grows maize, groundnuts, and beans. He uses maize, beans, and groundnuts as a food crop. His garden has clayey red soils. This soil dries up easily such that he only gets better yield in a longer rain season than when the rainy season is short.

The type of manure which he uses is only farmyard manure which is made from ashes and clearings around the house. These are heaped in a pit and after rotting he transports them to the garden. He does not use animal manure because he does not have any animals. He tried to keep some chicken but they all died of Newcastle disease. He did not know how to protect his chickens and did not have a veterinary assistant in the area.

The following are some factors that hinder him to progress in farming:

Poor soil fertility: Although he works hard in his garden, he often harvests little produce because his garden has lost its natural fertility. He believes that if he can only have access to fertiliser or high quality manure, his crop yields can improve. In 1998/99 season, he had a better yield of maize because of the Starter Pack fertiliser and hybrid maize (MH 18), and a longer growing season. During the 1999/00 season, he also received Starter Pack but he will not harvest as much because the rainfall season has been shorter.

No Access to Credit: He does not want to join any credit program for fear of defaulting.

Ganyu: Although he tries to keep some seed for planting, normally he runs out of produce by October/November. This makes him engage in ganyu from December to February. They usually alternate, i.e. when the wife goes for ganyu, he goes to the garden. They do this to avoid draining much of their labour for their garden.

The family's children go to school but most of the times they fail to attend classes because they lack some necessities such as soap, and clothes. Also the children go for ganyu.

Extension advice: Since he started farming on his own, he has never had any extension advise from the agricultural extension officer. The land husbandry techniques that he uses were from Kasungu where he worked as a tenant.

A CASE STUDY OF BENADETTA IGNASIO IN CHIMIMBA VILLAGE IN CHIRADZULU DISTRICT (Female Headed Household)

The lady is one of the people in the community taking part in the application of fertiliser to their crops. She applies fertiliser to 80% of her maize garden. She said she has enough land to feed herself but she has been cultivating the same piece of land for the past 3-4 years. She has now opened new plots where she planted potatoes and peas.

Sources of Materials:
Fertiliser: She buys fertiliser after doing her small business of selling vegetables and other farm produce.

Seed: She stores some seed for herself and buys other seed. She is able to store enough seed for maize and beans. However, she is not able to store enough seed for groundnuts. She buys additional seed from the markets. Normally she mixes the crops. This helps reduce labour requirements.

Implements: She buys implements after selling some farm produce.

Manure: She does not use any manure because she does not have means of transporting manure to the gardens.

She is able to do the above farming practices because she tried her best to get money and she gets a higher yield for maize some of which she has sold in the past. She does not belong to any farmers club but relied on Starter Pack to get seed and fertiliser. She says the impact of Starter Pack has been so great and positive. Without Starter Pack, she could not have uplifted her life to what it is at the moment.

In order to improve Starter Pack she suggested that fertiliser amounts should be increased. On maize, she prefers MH18 maize variety because of its storage characteristics and high yielding.

CASE STUDY FOR LIKOKO WANJA OF KAZAMBWE VILLAGE

He does not till his garden, he only clears, and burns the residue before ridging. He spends much of the time doing ganyu such that he has no time to till his garden. They have no livestock. He does not practice agroforestry in his garden. There is one Msangu (*Alcacia albida*). Land husbandry techniques are not practised. He has only one hoe, which is mostly used for ganyu.

He does not keep seed. In order to get seed for planting he goes for ganyu. He has a small piece of land where he cannot grow more than one crop. He cannot afford to buy fertiliser since he has no money. He grows maize and cassava only. He does not mix crops due to lack of seed.

He does not apply chemicals to his crops. He is not a member of any club since clubs need deposits and he can not afford to pay any. On Starter Pack, which he received last year, he says it helped him since he had seed and fertiliser, which he could not afford to buy otherwise. He says Starter Pack should continue to help such needy farmers as him.

CASE STUDY OF MR. BIZALIYELE MZOTI OF CHIMBALU VILLAGE IN NKHOTAKOTA (FARMING PRACTICE GROUP 3)

Mr. Mzoti was born in 1971 in Chiponda village. He went to school at Miyandi School near his village. He left school in Standard 8. He got married in 1989. However he started farming in 1987 while still in school. The very same year he started farming he bought a bicycle. When he started farming, the extension worker advised him to use manure in order to improve his yield. He has been getting better yields as compared to other farmers. In subsequent years, he was able to buy fertiliser. He has been able to buy goats and there are four goats at the moment.

In 1998/99 he received Starter Pack. Initially he wanted to sell the inputs but the wife refused. He noted that the maize he harvested kept them longer than in the previous years. He also harvested much soybeans but failed to market it. As a result, he was using the soybeans at home.

Mr. Mzoti has only a hoe as a farm implement for his 2 hectare of garden. He only uses 0.5 hectare for farming. He practices crop rotation and he reserves his own seed and makes ridges across the slope. He fails to buy enough inputs like fertiliser, seed, chemicals, and sprayers. He does not belong to a farmers club because he is not worthy of joining any.

In 1998/99 he received Starter Pack but never received any in 1999/00 season. There was no impact on his farm implements because they were never part of the pack. However, he managed to practice crop rotation because there was seed to do this. He also planted seed on a larger garden since there was extra seed. He suggested that groundnuts be part of the Starter pack since they fetch more money than soybeans. He further suggested that Starter pack should be distributed early.

CASE STUDY FOR MR. D.T. JAMES FROM NKALO VILLAGE

Mr. James has two children and he started full time farming in 1995 with the following crops: maize, cassava, sugarcane, pigeon peas, sweet potatoes, and bananas. Currently he is growing other crops such as soybeans and groundnuts from the seed he got from Starter Pack. His garden is 1.5 hectares big. He also grows fruits such as papaws, avocado pears, masuku, and mpoza.

As regards indicators of sustainability, he has enough land and enough implements even though he could do with extra.

Appendix 5

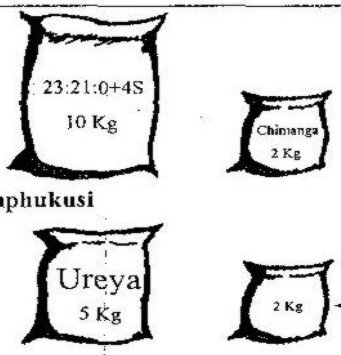
PHUKUSI LA CHIMANGA CHA HAYIBULIDI

Unduna wa Malimidwe ndi Chitukuko cha Ulimi Wothilira

PHUKUSI LOYAMBILA CHIGAWO CHACHIWIRI

Phukusi

① SPS Osagulitsa → Zomwe zili nphukusi



Kukula kwa munda

② Mizere italikirane masentimita 90

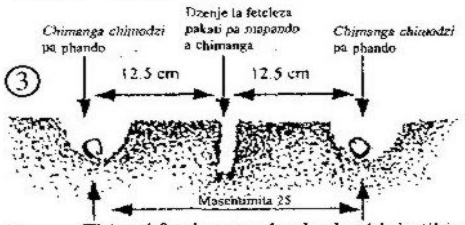
Mundawu utha kukhala okula chonchi:-

Mamita 100 mulitali ndi 10 mulifupi, mizere ikwana11.

Mamita 50 mulitali ndi 20 mulifupi, mizere ikwana 22.

Mamita 40 mulitali ndi 25 mulifupi, mizere ikwana 27.

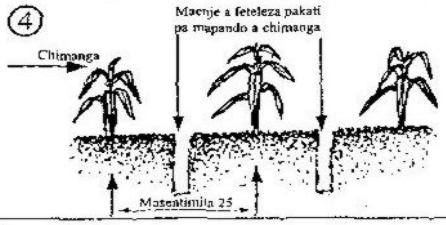
Bzalani ndi kuthira feteleza wa 23:21:0+4S nthawi imodzi



- Thirani feteleza wodzadza kachivindikiro kamodzi ka botolo la Kokakola kapena Fanta kosachotsa chamkati.

- Thirani feteleza wa Ureya wodzadza mosefula kachivindikiro kamodzi ka botolo la Kokakola kapena Fanta patatha masabata atatu kuchokera tsiku lobzalira.

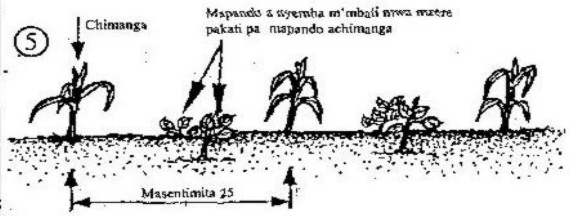
④



Kubzala nyemba limodzi ndi chimanga

- Bzalani nyemba tsiku limodzi ndi chimanga,

⑤



Koma mukhoza kukolola nyemba zambiri mukabzala pazokha.

Kubzala mtedza ndi soya

Mtedza ndi soya bzalani pazokha.

Alimi tsatirani malangizowa kuti mudzakolole zochuluka chaka cha mawa.

Chonde mubzale mbewuyi pamalo awokha kuti mudzathe kudziwa m'mene phukusili lakupindulirani.

Produced and printed by Agricultural Communication Branch

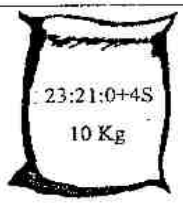
THUMBA LA MPUNGA

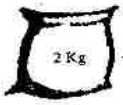
Unduna wa Vya Ulimi na Chitukuko cha Ulimi Wanthirira

THUMBA LAKWAMBIRA CHIGABA CHA CHIBIRI

① Thumba

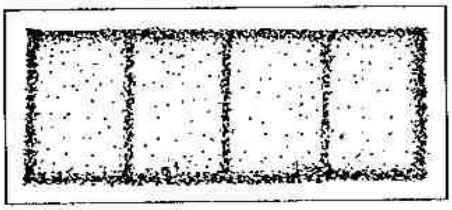
→ Ivyo vili m'thumba





Ukulu wa munda

②



Munda uwu ungaba ukulu ntheura:-

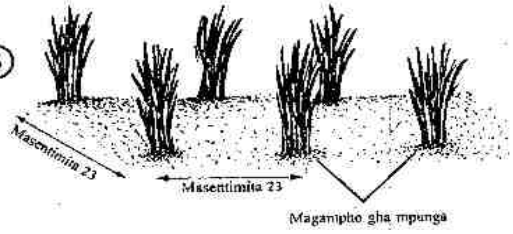
Mamita 100 muwutali na 10 muwufupi, panyakhe

Mamita 50 muwutali na 20 muwufupi, panyakheso

Mamita 40 muwutali na 25 muwufupi.

Pandani mwa ntheura

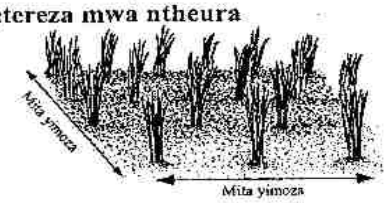
③



- Pandani mpunga unkhondi na umoza pa gampho.
- Patulirani nakukhala unayi pa gampho pala pajumpha madazi 15 pala wamera.

Thirani fetereza mwa ntheura

④



- Wazgani fetereza wa 23:21:0+4S wakuzula tuvibenekerero tutatu na hafu pamalo ghakukwana mita yimoza.
- Wazgani pala pajumpha madazi 21.
- Wazganiso fetereza waUreya pala pajumpha madazi 60.
- Wazgani tuvibenekerero tubiri na hafu pamalo ghakukwana mita yimoza.

Kupanda skaba

- Pandani skaba pazekha.
- Magampho ghatalikirane masentimita 15.
- Pandani skaba yimoza pagampho

Balimi londezgani ulongozgi uwu kuti muzakolole vuna yinandi vula yino.

Balimi tikumubeyani kuti mupande mbewu izi zili m'thumba ili pazekha mwakuti muzakamanye makora umo thumba ili lamovwirirani.

Produced and printed by Agricultural Communication Branch

Appendix 6: List of Village selected for Module 4

add	rdp	district	epa	section	village	farmers in SPS2 Register
Blantyre	Mwanza	Mwanza	Lisungwi	Kanono	Chipanga	96
Blantyre	Phalombe	Phalombe	Waruma	Chimbiri	**Nantapo**	191
Blantyre	Shire Highlands	Chiradzulu	Mombezi	Chilembwe	**Chimimba**	65
Blantyre	Thyolo	Thyolo	Thyolo Centre	Nachipere South East	**Nakhethe**	199
Karonga	Karonga	Karonga	Karonga Centre	Wiliro	**Marko Mwenechilanga**	143
Kasungu	Dowa East	Dowa	Nachisaka	Namwiri 2	**Kasakula**	143
Kasungu	Dowa West	Dowa	Chisepo	Kantchentche	**Chingalande**	39
Kasungu	Kasungu	Kasungu	Chamama	Chamama	**Chikosa**	100
Kasungu	Mchinji	Mchinji	Chioshya	Zulu East	Modesito	66
Kasungu	Mchinji	Mchinji	Mlonyeni	Navikali	**Mkwamba**	58
Kasungu	Ntchisi	Ntchisi	Chikwatula	Mtsiro	**SANINGA**	58
Lilongwe	Lilongwe West	Lilongwe	Malingunde	Mphangwe	**Makunje**	110
Lilongwe	Lilongwe West	Lilongwe	Ming'ongo	Kampatsa	**Chalusa**	100
Lilongwe	Ntcheu	Ntcheu	Kandeu	Chigodi	**Zuze**	195
Lilongwe	Ntcheu	Ntcheu	Tsangano	Jumbe	**Mpando 2**	118
Lilongwe	Thiwi Lifidzi	Dedza	Chafumbwa	Kadala	**Dete**	41
Machinga	Kawinga	Machinga	Nanyumbu	Chiuja	**kazambwe**	47
Machinga	Mangochi	Mangochi	Mthiramanja	Kongwe	**Safali**	104
Machinga	Zomba	Zomba	Chingale	M'mambo North	**Tebulo**	76
Machinga	Zomba	Zomba	Dzaone	Mwenye	**Kazembe**	299
Machinga	Zomba	Zomba	Malosa	Nkalawire	**Nkalo**	196
Machinga	Zomba	Zomba	Mtubwi	Kwilapo	**Matandika**	89
Machinga	Zomba	Zomba	Nsondole	Machilika	**Ngomano**	147
Mzuzu	Nkhata Bay	Nkhata Bay	Chintheche	Chintheche East	**Msilamoyo**	77

Mzuzu	Rumphi North Mzimba	Rumphi	Bolero	Lundu	**Matupi GVH**	55
Mzuzu	Rumphi North Mzimba	Mzimba	Zombwe	Lupaso	**Jalanthowa 2**	87
Salima	Bwanje Valley	Ntcheu	Bilila	Mwalawoyera	**Sanjani 3**	258
Salima	Bwanje Valley	Dedza	Mtakataka	Mtakataka South	**Nsolo**	78
Salima	Nkhotakota	Nkhotakota	Zidyana	Mkhula	**Chimbalu**	97
Shire Valley	Nsanje	Nsanje	Mpatsa	Nkhande	**Chituwi**	56