

Evaluating Land Management Options (ELMO): a participatory tool for assessing farmers' sustainable land management decision preferences and trade-offs

The Challenge

Recent years have witnessed a gradual – and welcome – shift in the discourse surrounding sustainable land management. There is now a growing recognition that land degradation should not be seen solely as a result of technological or informational failures, but rather as being fundamentally social and economic in its causes, effects and potential solutions. The farming “improvements” and technological “fixes” that have traditionally been offered as solutions have begun to be supplemented with efforts to overcome the market, institutional and governance conditions which serve as constraints to farmers investing in sustainable land management.

Regrettably, the research paradigms and methodologies that are used to diagnose, analyse and inform land management interventions have however been slower to take this broader perspective on board. It is possible to discern something of an over-reliance on (and over-confidence in) the generation of “hard” numbers and data, which describe and classify the effects of land degradation and the characteristics of the farmers that suffer it, but do little to explain the reasons why it occurs in the first place. Agricultural research still tends to be fairly narrowly oriented towards finding the “best” farming techniques and technologies. Meanwhile, received economic wisdom tells us that as long as these options are more profitable in cash terms than (unsustainable) land use alternatives, they will be taken up and sustained by farmers.

Yet it has become increasingly clear that the social and economic drivers of farmers' land use decisions are multifaceted and complex, and that the underlying causes of land degradation go far beyond weak knowledge of the “advantages” of sustainable land management practices, ignorance of the “best” technologies or most “profitable” crop mixes, or lack of access to “appropriate” inputs, equipment and training. As a consequence, research findings are sometimes misplaced, often partial, and frequently fail to adequately identify or explain the factors that serve to drive, encourage or even force farmers into a downward spiral of land degradation and declining agricultural production, worsening livelihoods and intensifying poverty. It is therefore hardly surprising that many of the cleverly-designed, technically-sound and seemingly profitable projects put in place over the years have failed, because they did not in the event prove to be acceptable, feasible or sustainable for the farmers who were expected to adopt them.

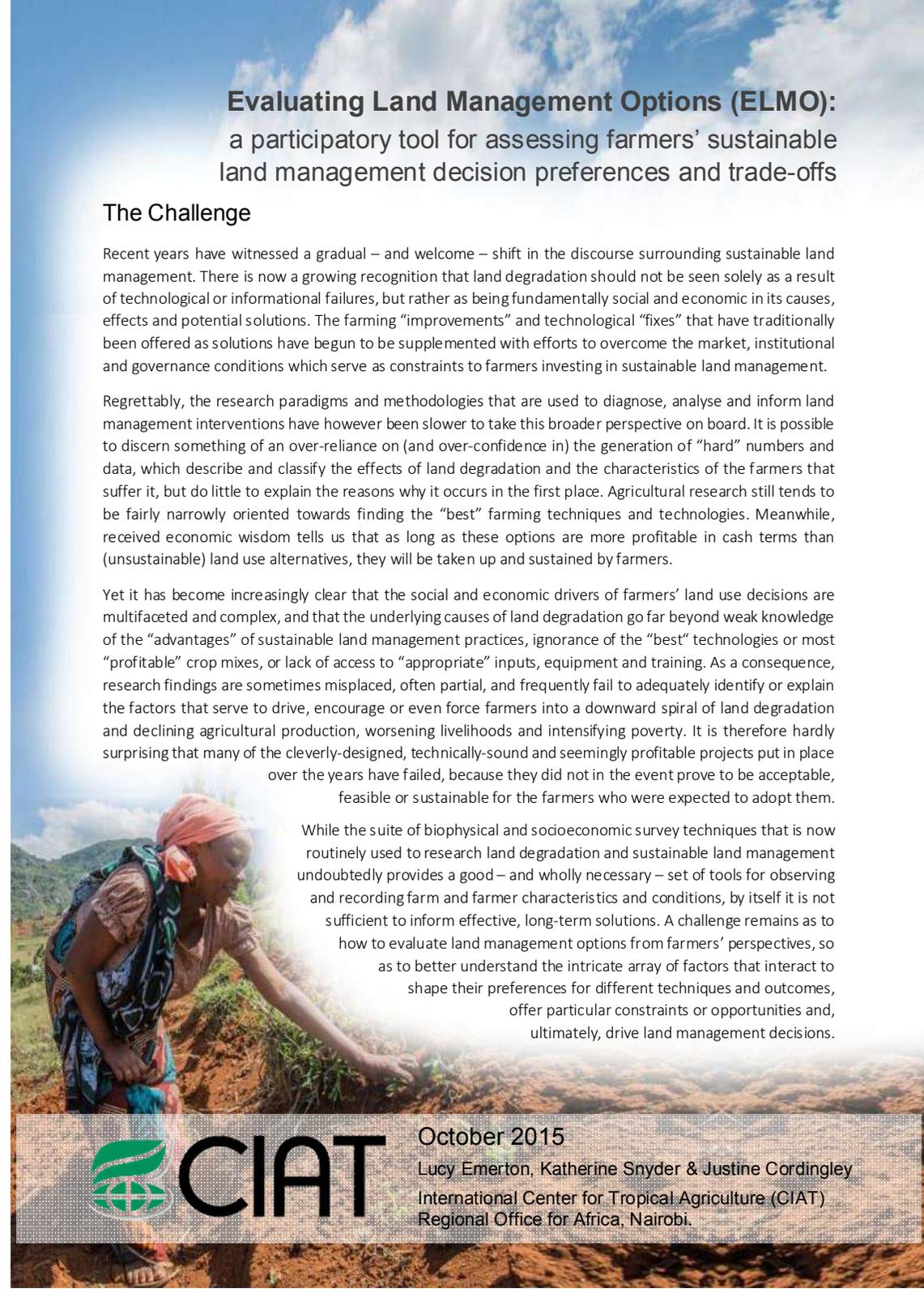
While the suite of biophysical and socioeconomic survey techniques that is now routinely used to research land degradation and sustainable land management undoubtedly provides a good – and wholly necessary – set of tools for observing and recording farm and farmer characteristics and conditions, by itself it is not sufficient to inform effective, long-term solutions. A challenge remains as to how to evaluate land management options from farmers' perspectives, so as to better understand the intricate array of factors that interact to shape their preferences for different techniques and outcomes, offer particular constraints or opportunities and, ultimately, drive land management decisions.



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The Tool

The aim of the Evaluating Land Management Options (ELMO) tool is to assist in identifying the main factors driving land management (LM) decisions and, specifically, to better understand farmers' preferences for different sustainable land management (SLM) practices. It uses participatory techniques to investigate the costs, benefits, motivations and enabling conditions that influence farmers' uptake (or rejection) of SLM.

ELMO thus seeks to generate information to supplement and further explain the data gathered via more conventional biophysical and socioeconomic research methods. The intention is to better understand farmers' own perceptions and explanations of the advantages, disadvantages and trade-offs associated with different LM choices as they relate to their own needs, aspirations, opportunities and constraints. The ultimate goal is to identify ways of changing the economic conditions and circumstances that cause farmers to degrade land in the first place, and instead set in place the opportunities and reward systems which will make SLM a more viable, desirable and profitable option at the local level.

The Field Guide

This document provides guidance on applying the ELMO tool. It is primarily targeted at researchers seeking to collect information about the social and economic drivers of land use decisions, and wishing to investigate farmers' sustainable land management preferences and trade-offs. As illustrated on the facing page, ELMO is organised around three basic questions, and entails 10 steps. Although these steps follow a logical, iterative process, it should be emphasised that the tool can be modified and adapted to the specific needs and context within which it is being applied. It is not always necessary to apply each and every step.

The field guide provides a detailed explanation of each step, explaining what it aims to accomplish, which topics it covers, how it should be carried out, and what information can be recorded. In each section, icons are used to draw the reader's attention to particular issues or topics:

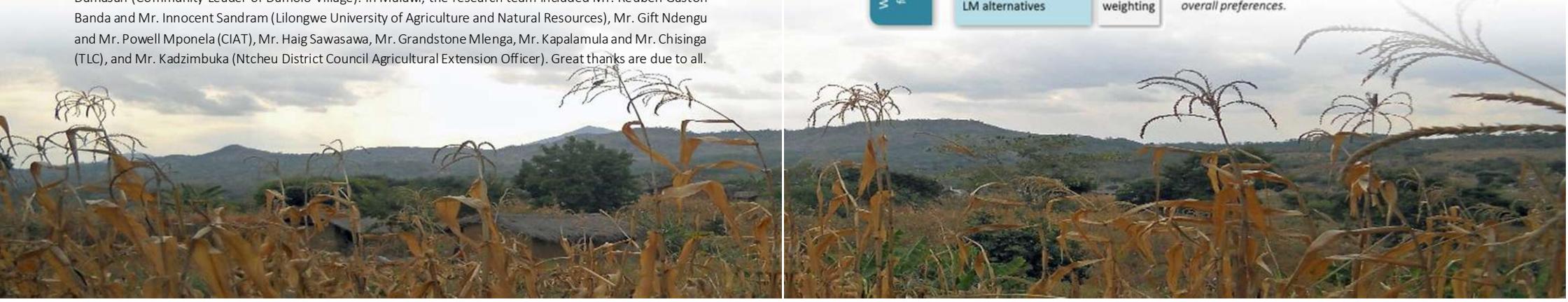


Acknowledgements

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Quick reference summary of ELMO process, content & outputs

Questions	Steps	Tools	Information generated
What are the key biophysical & socioeconomic conditions and characteristics that underpin farmers' land management decisions?	1 Record respondent characteristics	Checklist	• Basic information on the respondent's socio-economic & farming background.
	2 Describe annual livelihood cycle	Seasonal calendar	• List of key livelihood opportunities, constraints & bottlenecks over the course of the year; • Identification of critical times of need, surpluses & shortages.
	3 Define LM techniques to be discussed	Structured discussion	• List of LM alternatives to be discussed in the interview; • Common understanding of what different (S)LM techniques involve & how they are carried out.
	4 Value LM costs & benefits	Checklist	• Quantified/ monetised costs & benefits of each LM alternative.
What is the relative importance of different factors in determining (enabling or constraining) farmers' land management choices?	5 Weigh up LM costs & input requirements	Weighting	• Relative weight of costs incurred to the farmer in each input category, compared across all LM alternatives.
	6 Weigh up LM benefits & desired outcomes	Weighting	• Relative weight of benefits generated for the farmer in each outcome category, compared across all LM alternatives.
	7 Rank LM benefits & desired outcomes	Ranking on scale	• Relative importance of each type of potential LM outcome to the farmer; • Indication of how essential & desirable each type of outcome is to the farmer when making LM choices.
What are farmers' preferences for alternative SLM practices, in relation to their needs?	8 Rank LM advantages & positive attributes	Ranking on scale	• Relative advantages associated with LM alternatives; • Indication of how important each advantage is to the farmer when making LM choices.
	9 Rank LM disadvantages & negative attributes	Ranking on scale	• Relative disadvantages associated with SLM alternatives; • Indication of how important each disadvantage is to the farmer when making LM choices.
	10 Rank and weight LM alternatives	Ranking & weighting	• Relative rank of each LM alternative in terms of farmer's overall preferences.



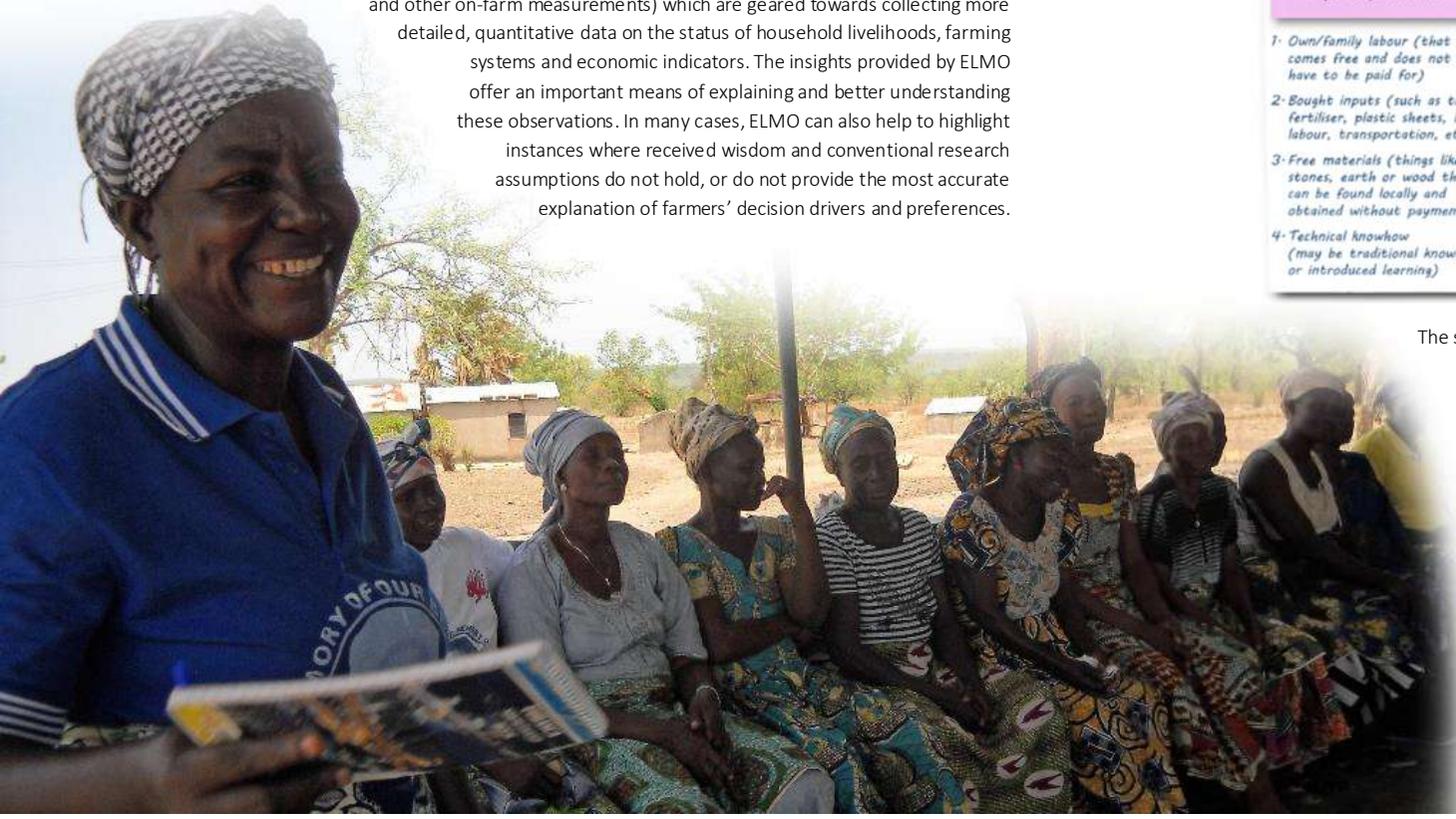
Getting organised

Using ELMO as part of an integrated research process

ELMO is not intended to be a stand-alone method. Rather, it forms one component of an integrated, interdisciplinary toolbox for collecting information to guide the design of land management interventions. It is meant to be used alongside other socioeconomic and biophysical tools, as part of a broader process to characterise farm and landscape-level conditions, identify the drivers of land degradation, assess needs and potentials for capturing agroecosystem values as incentives and rewards for sustainable land management, and appraise the social, economic and technical viability, effectiveness and sustainability of farm and landscape-level interventions. ELMO aims to ensure that such research is informed by a sound understanding of farmers' own preferences and perceptions of the land management constraints, opportunities and trade-offs they face.

In any given case, the other components of this toolbox will of course depend on the specific goals of the research that is being carried out, as well as the resources and capacities that are available to the study team. It is, however, worth emphasising that in most cases ELMO would be preceded by a process of consultation with local community members (for example via a series of focus group discussions, or using tools such as participatory mapping and stakeholder assessment). This dialogue would have helped to build up an understanding of the local conditions under which farmers manage land, undertake farming and pursue other livelihood activities. It also offers a means of defining the main costs, benefits, advantages and disadvantages that are associated with different land use options, and which will be discussed during the ELMO exercise.

It is also often useful to apply ELMO in conjunction with more traditional methods (for example household questionnaires, farm budget analysis, soil surveys, yield analysis and other on-farm measurements) which are geared towards collecting more detailed, quantitative data on the status of household livelihoods, farming systems and economic indicators. The insights provided by ELMO offer an important means of explaining and better understanding these observations. In many cases, ELMO can also help to highlight instances where received wisdom and conventional research assumptions do not hold, or do not provide the most accurate explanation of farmers' decision drivers and preferences.



Choosing the LM features to be weighted and ranked

ELMO is concerned with investigating farmers' perceptions of the characteristics associated with different LM techniques, including:

- costs/inputs (steps 4 & 5): the physical materials that the farmer needs to buy, contribute or otherwise use to undertake the LM technique;
- benefits/outcomes (steps 4, 6 & 7): the results of farming in terms of the monetary and non-monetary outputs and benefits that are produced;
- advantages/positive attributes (step 8): the “pluses” associated with LM practices in terms of their having particular characteristics that make them more appealing, easier to take up and sustain, or assist in overcoming particular bottlenecks or livelihood constraints; and
- disadvantages/negative attributes (step 9): the “minuses” associated with LM practices in terms of their having particular characteristics that make them less appealing, harder to take up and sustain, or contribute towards particular bottlenecks or livelihood constraints.

Each of these four groups of LM features will, in turn, be populated by a number of component elements – the key costs, benefits, advantages and disadvantages that local farmers face in relation to LM. These will be weighted or ranked against different LM options during the course of the interview. It is recommended that between four or six elements should be included in each group – any more runs the risk that the exercise will become unmanageably complex or lengthy, and any fewer leads to the danger of it being too reductionist.

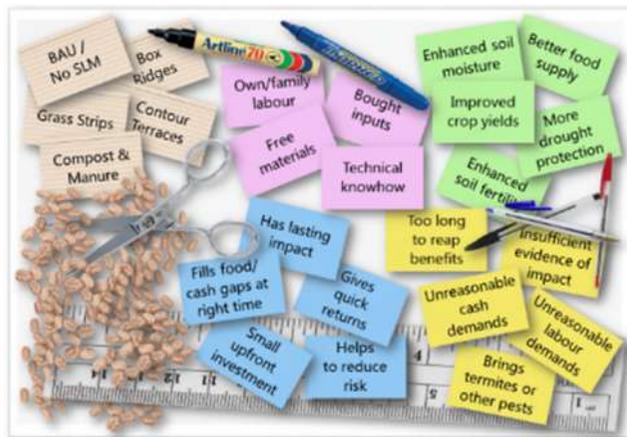
Costs & input requirements	Benefits & desired outcomes	Advantages & positive attributes	Disadvantages & negative attributes
<ol style="list-style-type: none"> 1- Own/family labour (that comes free and does not have to be paid for) 2- Bought inputs (such as tools, fertiliser, plastic sheets, hired labour, transportation, etc) 3- Free materials (things like stones, earth or wood that can be found locally and obtained without payment) 4- Technical knowhow (may be traditional knowledge or introduced learning) 	<ol style="list-style-type: none"> 1- Increased cash earnings 2- Better food supply 3- Improved crop yields 4- Greater protection against drought 5- Enhanced soil fertility 6- Enhanced soil moisture 	<ol style="list-style-type: none"> 1- Helps to reduce risk 2- Only requires a small upfront investment 3- Gives quick returns 4- Has a lasting impact (permanent benefits) 5- Fills food/cash gaps at critical times of the year 	<ol style="list-style-type: none"> 1- Brings termites or other pests 2- Takes too long to reap any benefit or gain 3- Shows insufficient evidence of positive impacts 4- Places unreasonable labour demands (in relation to what is available to farmer) 5- Places unreasonable cash demands (in relation to what is available to farmer)

The same groups and elements should be discussed in all interviews, so as to allow for results to be compared and (in some cases) aggregated. It is therefore necessary to select in advance those cost, benefit, advantage and disadvantage elements that the majority of farmers consider to be the most important, relevant and influential when they make land use decisions. This can be learnt from the community consultations or focus group discussions that have been carried out prior to ELMO (see above), and will of course depend on the local context and conditions under which ELMO is being applied. The elements used to illustrate the field guide are those which emerged during the fieldwork carried out to develop and pilot ELMO in Ghana, Kenya, Malawi and Tanzania. It is interesting to note that, there was a high level of consistency across countries as regards the costs, benefits, advantages and disadvantages that farmers considered to be the most important.

Preparing the materials & equipment

The following basic materials and equipment are required to carry out ELMO: marker pens and flipchart sheets on which to record the seasonal calendar and lay out cards and counters; cards and counters (such as beans, stones, plastic disks or similar) with which to rank and weight the various LM techniques, attributes and characteristics; a notebook to record observations; and a camera to photograph the completed steps.

ELMO asks farmers to rank and weight different LM techniques and attributes by arranging cards and allocating counters. Both the cards and the counters should be prepared beforehand, so that they can then be quickly and easily accessed and when needed, without interfering with the flow and momentum of the interview.



Each weighting exercise involves distributing sets of 20 counters across different LM techniques or characteristics. The counters should be measured out, and divided into as many sets of 20 as will be required during the course of the interview.

Cards should also be prepared for each of the LM techniques, costs, benefits, advantages and disadvantages that will be discussed with the farmer. It is a good idea to use a different coloured card for each category.

The cards must be clear, unambiguous, and immediately understandable. Respondents should be able to quickly and easily discern what each one depicts. Sometimes the LM techniques and characteristics can simply be written on the cards. Note that, where this is the case, it is necessary to think through carefully what would likely be the best (and most widely understood) local language term to be used: it is not always easy to translate SLM terminology or even measures of relative importance or desirability into the vernacular. Not all respondents will, however be proficient in reading – in which case it may be more appropriate to use picture cards. The selection of suitable icons, drawings or photos with which to depict LM techniques and characteristics also typically requires careful thought.

Some cards will be required in more than one step of the interview, or are used more than once in a single step (for example, several sets of LM technique cards are needed from step 5 onwards, while steps 6 and 7 both involve arranging benefit/outcome cards). Multiple sets of these cards should be prepared, so that the cards and counters that have just been used can be left on the completed flipchart once that step is completed. The rapporteur can then record these results while the facilitator goes ahead with the following step.

Introducing the exercise

ELMO usually involves just one respondent. The aim is to elicit information about individual (or, sometimes, household-level) perceptions and preferences, not to simulate debate or discussion or to try and reach group consensus about particular topics or issues. The people participating in ELMO will often have already been involved in prior consultations or focus group discussions, or may form a sub-set of the households in which questionnaires or other farm-level information collection exercises are being administered.

Even where ELMO is working with farmers who have already contributed to earlier information-gathering exercises, it is essential to explain clearly to the respondents both the purpose and the process of the exercise, before starting the interview. This introduction should cover at least the following points:

- The aim of the exercise is to find out what the costs and benefits of different LM options are for farmers, why they prefer particular SLM techniques, and what kind of assistance or interventions might best help to unlock their (LM-related) livelihood constraints and problems;
- This will involve structured discussions, as well as some game playing. The idea of playing games is to enable different LM options to be seen and compared with each other visually, as well as to make the exercise a bit more interesting than just asking the respondent a series of questions;
- The timing of the interview is expected to take between 1½ - 2 hours to complete;
- All the information is completely confidential. There is no need to know the respondent's name or any very personal or private details. The area of interest is her/his farming practices: why they do, think or prefer certain things; and
- If at any point the respondent is becoming confused, irritated, distracted, or does not want to give particular information, s/he should say so. The intention is to avoid placing unreasonable demands.

Facilitating & recording the discussion

ELMO should ideally be carried out by a team of at least two people. One person can then take the role of facilitator (leading the discussions), while the other serves as a rapporteur and assistant (ensuring that the necessary materials are ready and in place, and recording the main points arising from the discussions). These roles may be rotated between interviews. Although it is often useful to have additional helpers (preferably drawn from the local community), it is important to keep a check on the size of the survey team. There is always a risk of overwhelming the respondent, or losing the informal and conversational quality of the interview.

The exercise can be laid out on flipchart sheets – using one sheet for each step. These can then be left after the step is completed, allowing the rapporteur to note the results while the facilitator and respondent move on to start the next step. Photographs are a good way of recording the completed steps (this is much easier, and less time consuming, than copying the results into a notebook). Don't forget to write the interview number and step number on each of the flipchart sheets. It may also be necessary to take some additional notes during the course of the interview – but remember that ELMO is not intended to involve lengthy discussions or to collect voluminous amounts of data. The rapporteur should only note down particularly important points and explanatory comments.



Step 1: record respondent characteristics (checklist)

- ✓ The first step of ELMO aims to establish the respondent's household and farming background. The intention is to understand the context to the information which will be given in subsequent discussions, and to provide an information base against which the responses given can be cross-referenced during the analysis stage.

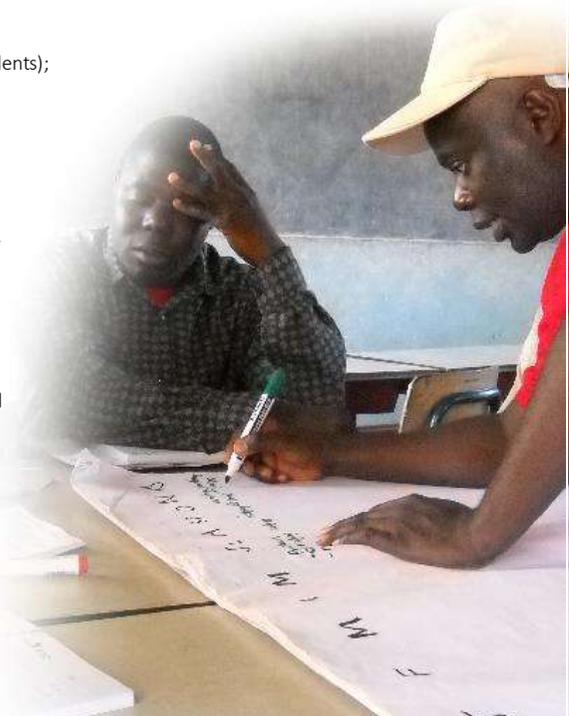
Interview# and date:	
Name of village	
Gender of respondent	
Age of respondent	
Role or position in household	
Household size	
Total area farmed	
Land tenure	
Land condition	
SLM techniques familiar with currently practiced	
practiced in past	
Types of farming carried out	
Orientation of farm production	
Livestock	
Engagement in business/employment	

- ✿ First of all, make sure to assign a number to the interview you are about to carry out. This will provide a unique (and anonymous) identifier for each respondent that can be used in subsequent data coding and analysis. Then record the following basic information about the respondent:

1. Village;
2. Gender, age and position;
3. Size of household (permanent/occasional residents);
4. Farm size (all plots);
5. Land tenure;
6. Land condition (fertile, eroded, sloping, etc.);
7. Knowledge or adoption of SLM techniques;
8. Types of farming carried out (rainfed/irrigated, hillside/riverbank/wetland, etc.);
9. Orientation of farm production (whether for market and/or subsistence);
10. Whether manage livestock; and
11. Whether anyone in the household is employed or carries out business as major occupation.

This is of course an indicative list only. It may well be necessary to add (or subtract) certain elements, in line with local conditions and circumstances.

- ✿ The resulting information can be recorded in your notebook, alongside the assigned interview number.



Step 2: Describe annual livelihood cycle (seasonal calendar)

- ✓ The aims of step 2 are twofold. First, to provide basic information and background about the livelihood opportunities, needs, constraints and bottlenecks that the respondent faces over the course of the year. Secondly, to frame and prepare for the subsequent discussion by opening up a dialogue about the various conditions and pressures that might influence the respondent's LM decisions.

- ✿ Tape together 2 or 3 flipchart sheets and spread them across the table or floor. The months of the year should be written across the top, and the seasonal weather patterns (e.g. rainfall, temperature, floods, etc.) inserted below. The following five elements should then be discussed, so as to show when key activities and events, constraints and bottlenecks, opportunities and surpluses occur over the course of the year:

1. Crop and livestock production (e.g. what activities take place when, when crops are harvested, where livestock are grazed, etc.);
2. Labour (e.g. when and for what household labour is used at different times of the year, when it is sold/hired in, etc.);
3. Income generation and cash demands (e.g. when crops are sold, when school fees are due, times of cash shortage, etc.);
4. Food sources (e.g. when own production is consumed, when food must be purchased, when wild foods are collected, when people have enough to eat, when is the hungry season, etc.); and
5. Times of engaging in NR-based activities (e.g. at what times are fishing, wild food collection, charcoal and firewood production, brick making, sand mining, etc. carried out).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Weather	Very hot & dry	Rains start	Cold & wet	Peak flood	Floods decrease	Rains stop	Temperature increases					
Crop production		Land prep.	Planting	First weeding	Second weeding	Early harvest	Main harvest					
Livestock production	Take cattle to floodplain pasture	On-farm grazing	On-farm grazing	Main milk cut grass	Main milk production	Grazing on harvested fields & crop residue						
Labour demands	Low demand	on-farm labour	Peak farm labour demand	Labour available for other tasks		Share harvest labour in village						
Income generation	...	...	...	...	...	...	...	...	...	...	...	...
Cash needs	...	...	...	...	...	...	...	...	...	...	...	...
Sources of food	...	...	...	...	...	...	...	...	...	...	...	...
Hunger status	...	...	...	...	...	...	...	...	...	...	...	...
NR-based activities				Men make bricks, timber & charcoal (for cash)		Main fishing season	Women/children collect NTFP (for food)					

- ✿ The seasonal calendar will be written on the flipchart, which will provide the main record. A photograph of the completed sheet should also be taken. In addition, after each row of the seasonal calendar is completed, take a minute or two to note the main points made by the respondent on that topic. It is not necessary to write long or detailed notes – just make short bullet points or record a few sentences summarising the main thrust of the discussion.

- ⚠ Don't allow lengthy discussions to emerge. The point is not to conduct a very detailed seasonal calendar exercise which looks at each and every activity or condition faced by the farmer (this can be done as a separate session if required). The intention is to briefly discuss and frame selected livelihood elements.

Step 3: Define LM techniques to be discussed (structured discussion)

 The aim of step 3 is to define clearly the LM alternatives that will be discussed during the interview, so as to ensure that you and the respondent have a common understanding of what different techniques and practices involve, and how they are carried out.

 In step 1, you will have found out which SLM practices the respondent is familiar with and/or is actually practising. In consultation with the respondent, pick between two to four LM techniques that will be investigated during the course of the interview. Spend a few minutes discussing each one. Ask the respondent what they mean by it, how it is carried out, and what it involves. Make quite sure that you both have the same understanding of all of the selected LM techniques, and are using the same language and terminology to refer to them.

Also discuss the baseline or “business as usual” (BAU) situation: that is the farmer’s existing (or previous) practices with no added SLM techniques. This will provide the control or reference point throughout the interview, against which SLM options will be compared and measured.

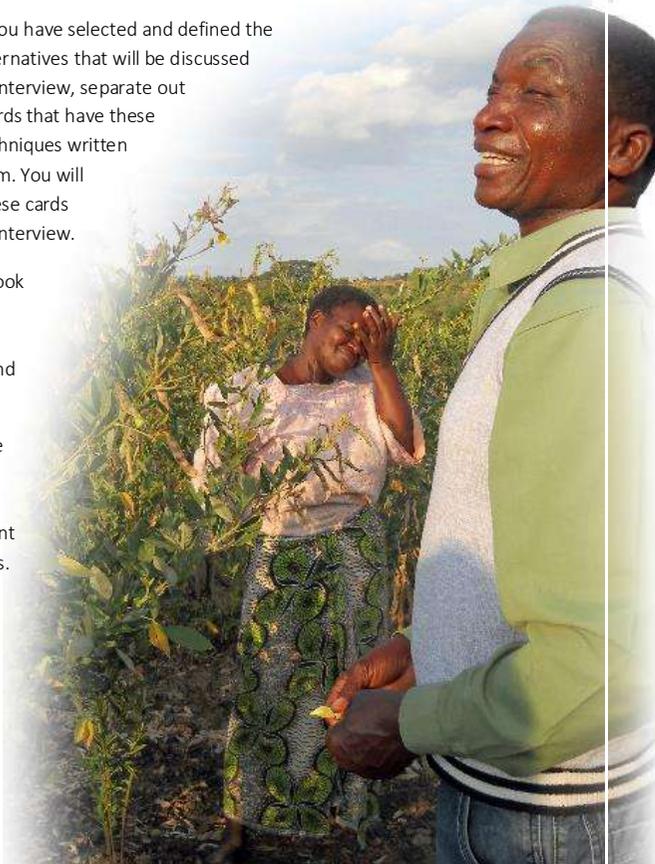
Pick a common unit of farm production that the discussions will refer to. The costs, benefits, advantages and disadvantages of each LM technique will be expressed in relation to this. This should be one acre (or hectare, or other unit of area) of the most common crop or crop mix grown by farmers in the locality (e.g. maize, maize/beans, millet, etc.). This reference crop and area should be the same for all respondents, to allow for comparison and aggregation. Make quite sure that the respondent understands this – that you will always be discussing land management in relation to this basic land area and crop mix.



Once you have selected and defined the LM alternatives that will be discussed in the interview, separate out the cards that have these LM techniques written on them. You will use these cards in the interview.

 You should write a few sentences in your notebook about each of the LM alternatives chosen for discussion, as well as the BAU/no SLM baseline. Also make a note of which reference crop mix and area is being used as a control.

 Don't forget to include the BAU/no SLM baseline in all your discussions. Also remember that the LM techniques you are discussing may not be limited to single technologies: they may represent a series of packages or combinations of practices. It is best to limit yourself to between two and four LM techniques (and an absolute maximum of five). Any more than this runs the risk of leading to very lengthy and complicated discussions later on.



Step 4: Value LM costs and benefits (checklist)

 The aim of step 4 is to come up with quantified (and, preferably, monetised) estimates of the costs and benefits associated with the LM alternatives that are being discussed. This provides additional information on the material returns to farming under different LM arrangements. It is often particularly illuminating to compare this more conventional set of measures of farm profitability with the rankings and indications of preference that the farmer gives later in the interview, so as to identify how these overlap and diverge.

 First of all, we want to know the basic inputs and outputs associated with the BAU/no SLM alternative that represents the farmer’s existing (or previous) practices with no added SLM techniques. To get this information, fill in the first column of the table below. The cells marked with a cross can be left blank.

Then we want to know how these costs and benefits vary for different LM alternatives. To get this information, the other columns should be filled in: one for each of the LM techniques identified in step 3. Please note that it is the relative (not absolute) cost or benefit associated with each LM option that we are interested in – the addition (or reduction) benefit as compared to the BAU/no SLM option. This can be expressed as an amount (e.g. 10 more days a year, 1,000 less units of money a season) or a percentage difference (e.g. 25% less a month, 10% more each harvest).

	BAU / No SLM	SLM technique #1 (e.g. contour terraces)	SLM technique #2 (e.g. box ridges)	SLM technique #3 (e.g. grass strips)	SLM technique #4 (e.g. compost & manure)
No. days/people to establish	×	3 persons worked for 5 days			
No. days/people a year to maintain field		2 persons work for 100 days	50% more time required		
Amount of cash expenditures to establish	×	\$25 on grass seed, \$5 on string and pegs			
Amount of cash expenditures a year to maintain field		\$100 (fertiliser, seeds, plough hire)	Same		
Amount of other (non-cash) materials to establish	×	Rocks and stones (available nearby)			
Amount of other (non-cash) inputs a year to maintain field		None	A few additional stones		
Number of crop harvests a year		1	No change		
Amount of crops produced per harvest		15 sacks of maize, 8 sacks of beans	25% more maize, 10% less beans		
Amount of non-crop products generated a year	×		3 sacks of grass		
Value of non-crop products generated a year	×		Each sack of grass sold locally for \$5		

 Write down the information provided by the respondent in your notebook. Additional notes may be taken, if they are necessary to explain or further elaborate the information provided. If this is the case, try to keep these notes short (i.e. a sentence or two at the most for each point).

 It is important to ensure that the respondent understands that the information that s/he is giving refers to the costs and benefits associated with the reference crop area and mix that you identified in step 3, and that the figures refer to the difference in costs and as compared to the BAU/no SLM alternative. Keep the discussions fairly general and brief. The intention is not to generate very detailed figures with a high degree of exactness, but to give broad, indicative estimates of the physical costs and benefits associated with different LM practices.

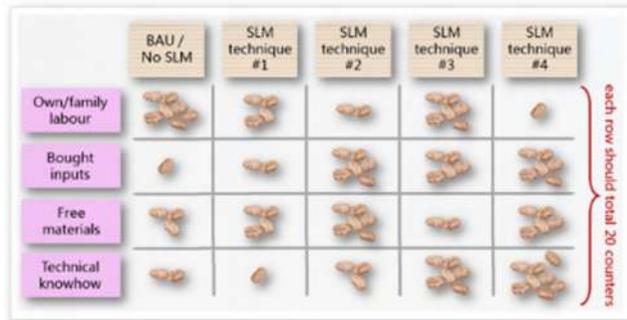
Step 5: Weigh up LM costs & input requirements (weighting)

 The aim of step 5 is to investigate the farmers' perceptions of the relative costs incurred from each LM alternative in terms of the cash and non-cash inputs that are required to establish and maintain it.

 First, make sure that the respondent understands what is meant by costs and inputs. These are the physical materials that the farmer needs to buy, contribute or otherwise use to undertake the LM technique. They may or may not cost money. Then, briefly go over each of the input categories that are to be discussed, just to check that you and s/he have a common understanding of what they refer to. Each of these input categories will be written on a card:

1. Own and family members' labour (that comes free, and is not paid for);
2. Bought inputs (such as fertiliser, tools, plastic sheeting, labour that is hired in and paid for);
3. Free materials (things like stones, earth, leaves and other goods that can be found locally and obtained without payment); and
4. Technical knowhow.

While these four categories should be appropriate to most contexts (see introductory section), there may in exceptional circumstances be a need to modify them. If absolutely necessary, and if the respondent feels strongly that any key costs or inputs are missing, a maximum of one card can be replaced.



	BAU / No SLM	SLM technique #1	SLM technique #2	SLM technique #3	SLM technique #4
Own/family labour	15 counters	5 counters	0 counters	0 counters	0 counters
Bought inputs	2 counters	10 counters	5 counters	3 counters	0 counters
Free materials	5 counters	5 counters	5 counters	5 counters	0 counters
Technical knowhow	5 counters	5 counters	5 counters	5 counters	0 counters

The LM alternative cards and input cards should be laid out on a flipchart sheet as shown. The respondent will be provided with 20 counters for each of the input categories (i.e. a total of 80 counters for the 4 categories referred to above). S/he will be asked to allocate these across the different LM alternatives according to its relative requirement for that input.

 During the exercise, after each row is completed (i.e. once all the LM alternatives have been weighted according to their relative requirements for that cost / input), take a minute to note down the main points made by the respondent as to why they have given that weighting. It is not necessary to write long or detailed notes – just make short bullet points or record a few sentences summarising the main thrust of the discussion. At the end of this step, the number of counters in each "cell" of LM costs and input requirements can be counted and recorded on the flipchart by your assistant, and the completed sheet can be photographed.

 Make sure that the respondent also includes the BAU/no SLM option in the weighting. It may be a good idea to start by placing three or four counters in the BAU/no SLM box, and ask the participant to distribute the rest across the other SLM alternatives relative to that weighting, depending on whether the other alternatives require less or more of that input category than BAU/no SLM.



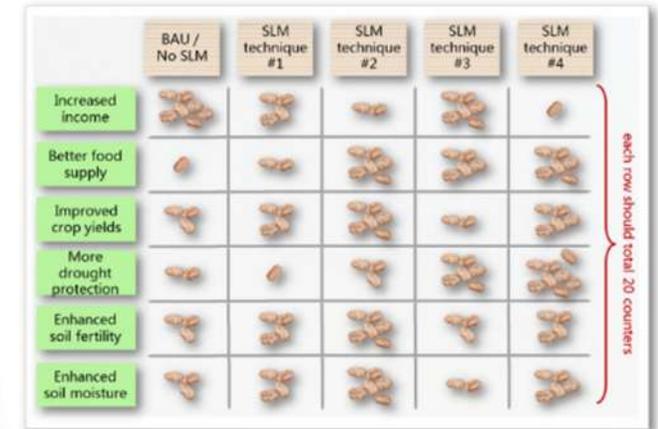
Step 6: Weigh up LM benefits & desired outcomes (weighting)

 The aim of step 5 is to investigate the farmers' perceptions of the relative benefits of each LM alternative in terms of the cash and non-cash outputs that are generated.

 First, make sure that the respondent understands what is meant by desired outcomes. These are the results of farming: what it produces in terms of outputs and benefits – not just physical products (such as grain or vegetables), but also changes in the wellbeing of the farmer (such as better food supply, increased income or enhanced soil fertility). Then, briefly go over each of the outcome categories that are to be discussed, to check that both of you have a common understanding of what they refer to:

1. Increased income;
2. Better food supply;
3. Improved crop yields;
4. Greater protection against drought;
5. Enhanced soil fertility; and
6. Enhanced soil moisture.

As was the case for inputs, if the respondent feels strongly that any key benefit or outcome is missing from the pre-prepared cards, up to one card can be replaced.



	BAU / No SLM	SLM technique #1	SLM technique #2	SLM technique #3	SLM technique #4
Increased income	15 counters	5 counters	0 counters	0 counters	0 counters
Better food supply	2 counters	10 counters	5 counters	3 counters	0 counters
Improved crop yields	5 counters	5 counters	5 counters	5 counters	0 counters
More drought protection	5 counters	5 counters	5 counters	5 counters	0 counters
Enhanced soil fertility	5 counters	5 counters	5 counters	5 counters	0 counters
Enhanced soil moisture	5 counters	5 counters	5 counters	5 counters	0 counters

Just as in step 5 (for inputs / costs), the respondent will be provided with 20 counters for each of the outcome categories. S/he will be asked to allocate these across the different LM alternatives according to its relative achievement of that outcome.

 Over the course of the exercise, the respondent's explanations about the reasons for weighting LM techniques in particular ways as regards their outcome and benefits can be briefly summarised, via a few short bullet points or sentences. At the end of this step, your assistant should count and record on the flipchart the number of counters in each cell, and then photograph the completed sheet.

 Don't forget to include the BAU/no SLM option in the weighting, and remind the respondent of this.

Step 7: Rank LM benefits & desired outcomes (ranking on scale)

The aim of step 7 is to find out how important the different LM desired outcomes are for the farmer: which ones/he considers to be the most essential in terms of her/his needs and wants, and which the least.

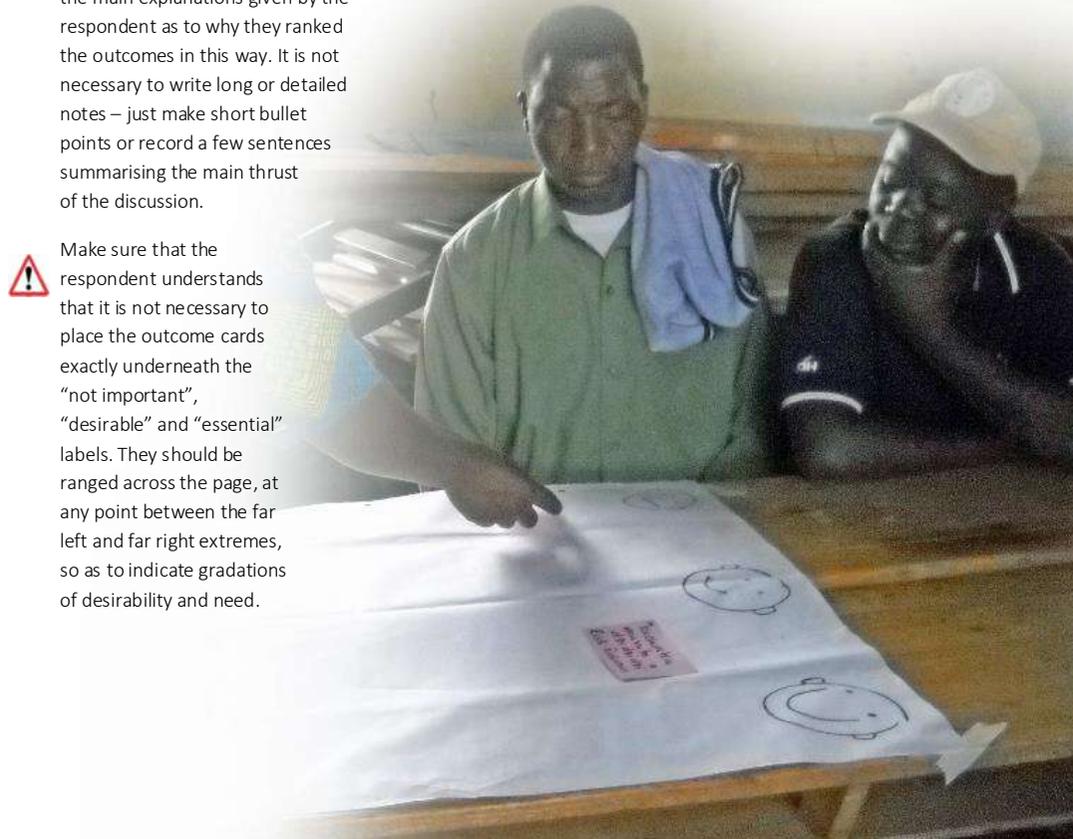
Lay out a scale on a flipchart sheet from “not important” (this could, for example, be illustrated with a straight-mouthed face or other indicator of indifference), through “desirable” (for example a face with a small smile) up to “essential” (for example a face with a very large smile). The respondent should then be asked to distribute the outcome cards along the scale according to how important they consider that desired benefit to be as a factor driving their choice of LM technique. Is it a non-negotiable “essential” which must always be achieved and



without which a SLM practice cannot be entered into? Is it something that is definitely “desirable” and to be sought if at all possible? Or is it something that is “not important” and does not really exert much influence over which SLM practice is preferred?

The relative ranking of LM benefits and desired outcomes can be recorded on the flipchart by your assistant, and a photograph of the completed sheet can also be taken. In addition, after this step is completed, take a minute or two to note the main explanations given by the respondent as to why they ranked the outcomes in this way. It is not necessary to write long or detailed notes – just make short bullet points or record a few sentences summarising the main thrust of the discussion.

Make sure that the respondent understands that it is not necessary to place the outcome cards exactly underneath the “not important”, “desirable” and “essential” labels. They should be ranged across the page, at any point between the far left and far right extremes, so as to indicate gradations of desirability and need.



Step 8: Rank LM advantages & positive attributes (ranking on scale)

The aim of step 8 is to investigate the farmer’s perceptions of the advantages associated with different LM alternatives, as well as indicating how important s/he considers these positive attributes to be: which ones s/he thinks are the most significant in terms of her/his needs and wants.

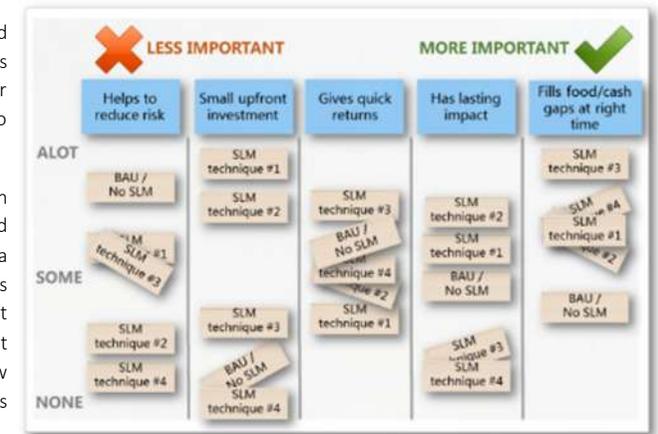
First, make sure that the respondent understands what is meant by advantages and positive attributes. These are the “pluses” associated with LM practices in terms of their having particular characteristics that make them more appealing to the farmer, easier for the her/him to take up and sustain, or assist her/him in overcoming particular bottlenecks or constraints which hinder her/his livelihood. They relate to the basic reasons or incentives why the farmer feels able and interested to take up SLM in the first place.

Then, briefly discuss with the participant each of the advantage categories that are to be considered, just to check that you and s/he have a common understanding of what they refer to:

1. Helps to reduce risk;
2. Only requires a small upfront investment;
3. Gives quick returns;
4. Has a lasting impact (gives permanent benefits); and
5. Helps to fill in cash/food gaps at critical times of the year.

As was the case for inputs and outcomes, if the respondent feels strongly that any key advantage or positive attribute is missing, up to one card can be replaced.

The five advantage cards will be given to the respondent, who will be asked to range them across the top of a flipchart sheet, as shown. The cards should be ordered from left to right from “least important” up to “most important”, according to how significant the respondent considers each positive attribute to be.



Then the five LM choices should be ranked vertically under each advantage card, depending on the extent to which they have that advantage or positive attribute. A vertical scale will be put along the left hand side of the flipchart, ranging from “none”, through “some”, to “alot”.

Once the ranking is completed, the relative advantages/ positive attributes of different LM techniques will be recorded by your assistant, and a photograph of the completed sheet will be taken. In addition, after each column is completed (i.e. once each LM alternative has been ranked according to that advantage or positive attribute), take a minute or two to note down the main points made by the respondent as to why they have given that ordering.



Step 9: Rank LM disadvantages & negative attributes (ranking on scale)

 The aim of step 9 is to investigate the farmer's perceptions of the disadvantages associated with different LM alternatives, as well as indicating how important s/he considers these negative attributes to be: which ones s/he thinks are the most significant in terms of her/his needs and wants.

 First, make sure that the respondent understands what is meant by disadvantages and negative attributes. These are the "minuses" associated with LM practices in terms of their having particular characteristics that make them less appealing to the farmer, harder for the her/him to take up and sustain, or contribute towards particular bottlenecks or constraints which hinder her/his livelihood. They relate to the basic reasons or disincentives why the farmer feels unable and disinterested to take up SLM in the first place.

Then, briefly discuss with the participant each of the five disadvantage categories that are to be considered, just to check that you and s/he have a common understanding of what they refer to:

1. Brings termites or other pests;
2. Takes too long to reap any benefit or gain;
3. Shows insufficient evidence of positive impacts;
4. Places unreasonable labour demands (in relation to what is available to the farmer); and
5. Places unreasonable cash demands (in relation to what is available to the farmer).

As was the case for inputs, outcomes and advantages, if the respondent feels strongly that any key disadvantage or negative attribute is missing, up to one card can be replaced.



The five disadvantage cards and five LM choices will be given to the respondent, who will be asked to arrange them as shown – in exactly the same way as was done for advantages in step 9.

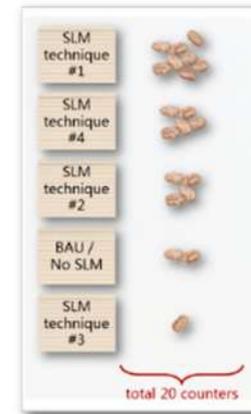
 The relative ranking of LM disadvantages and negative attributes will be recorded by your assistant, and photographed. In addition, after each column is completed (i.e. once each LM alternative has been ranked according to that disadvantage or negative attribute), take a minute or two to note down the main points made by the respondent as to why they have given that ranking.

Step 10: Rank and weight LM alternatives

 The aim of step 10 to assess the farmer's relative preference for each LM alternative, overall. It brings together all the information and discussions held earlier in the interview into a single, final, weighting and ranking of different SLM choices in their entirety.

 The participant should be given the cards depicting each of the LM alternatives (including BAU/no SLM as well as the SLM options), and will also be provided with 20 counters.

First, s/he will be asked to line up the LM cards according to which s/he thinks is the most desirable – with the most preferred LM alternative being placed at the top, and the least preferred at the bottom. Then s/he will be asked to distribute the counters between the cards, to show how much more or less they prefer each LM alternative in comparison to the others.



 The ranking and weighting of LM alternatives will be recorded on the flipchart by your assistant, and photographed. In addition, after the exercise is completed (i.e. once all LM alternatives have been ranked and weighted), take a minute or two to note the main points made by the respondent as to why they have given that weighting.

As this is the final step in the interview, any extra information or points of clarification should now be followed up with the respondent. The respondent should also be asked whether s/he has any additional points to make or questions to ask, and the exercise should conclude by thanking the interviewee for her/his time, patience and assistance.





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